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REFRAMING TOURIST SEGMENTATION:
A PERSONALITY-BASED APPROACH TO
ENHANCE SUSTAINABLE
DESTINATION MANAGEMENT

DELIA GABRIELA MOISA



A thesis submitted for the Degree of Doctor of Philosophy

University of Cumbria

Institute of Business, Industry & Leadership

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Declaration

I hereby declare that this thesis is my own original work and that it has not been submitted, either in whole or in part, in substantially the same form for the award of a degree or other qualification at this or any other institution. All sources of information have been acknowledged appropriately.

Delia Gabriela Moisa

Statement of public output

The following outputs have arisen from the research presented in this thesis:

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Abstract

In an increasingly competitive and dynamic tourism landscape, Destination Management Organisations (DMOs) face the dual challenge of attracting diverse groups of visitors, while also protecting the unique character of their destinations. Market segmentation is key in finding a balance between these two, allowing DMOs to attract the right tourist segments. However, traditional segmentation methods, which rely primarily on socio-demographic and typological approaches, fail to capture the complexity of tourist behaviour. To address this, the current study integrates the Big Five personality traits (openness, conscientiousness, extraversion, agreeableness, and neuroticism) aiming to advance current segmentation models, offering a comprehensive understanding of visitor behaviour and supporting sustainable destination practices.

Conducted in Cumbria, a tourist destination with UNESCO World Heritage Sites including the Lake District National Park and Hadrian's Wall, the research adopted a mixed-method approach, including visitor surveys, focus group discussions with industry practitioners, and interviews with visitors. Five visitor clusters were identified: Reserved Explorers, Culturally Curious, Diligent Adventurers, Social Explorers, and Balanced Explorers, each with unique profiles. Industry experts emphasised the potential of psychographic targeting for sustainable strategies, while visitor interviews revealed additional factors including financial considerations, and travel companions' influence on their activities. Moreover, the findings reinforced the effectiveness of personality-based segmentation, with technology providing continuous and adaptive support to enhance sustainable destination management.

This research contributes significantly to theory and practice. Theoretically, it advances sustainable tourism management by proposing proactive, data-driven strategies which could reshape destination trajectories rather than accepting stagnation and decline as consequences of mass tourism. Moreover, it expands the application of personality traits in tourism segmentation by bridging psychological theories to understand tourist behaviour. Practically, it proposes a forward-thinking model for destination management, one that involves change, employs psychographic insights, and supports the use of technology to enhance visitor experiences while ensuring the destination's long-term sustainability.

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Chapter 1: Introduction

In today's highly competitive and rapidly changing tourism landscape, Destination Management Organisations (DMOs) play a key role in ensuring that tourism provides economic benefits while maintaining the unique character of their destination. While not always clearly stated in the literature relating to the DMO's role, with the 'M' ranging from marketing to management responsibilities, as Pearce (2016) noted, their development from being promotional bodies to strategic governance organisations is widely recognised (UNWTO, 2019). Wagenseil et al. (2022) further stated that DMOs are under greater pressure to manage the complex balance between economic development, environmental sustainability, and social equity.

The principle of sustainability has been defined as the capacity to manage development in a manner that fulfils the needs of present visitors and host communities, while protecting and enhancing the resources for future generations (UNWTO, 2024; Butler, 1991). The operationalisation of sustainability within the framework of DMO, however, remains narrow and environmentally biased, as revealed by Morrison's (2018, p.669) proposal that *"the DMO of the future will be at the forefront in promoting sustainable tourism and other initiatives designed to protect the environment"*. This alongside Wagenseil's (2022) emphasis on the environmental dimension, illustrates a rather simplistic interpretation of sustainability that ignores the equally important economic and social pillars. This opens a broader debate not only about the definitions of sustainability but also about how these definitions shape management strategies and practices. Ogbeide and Mildenerger (2025) further argue that sustainability in DMOs can only be effective if it focuses on environmental issues, as well as economic stability and social inclusion. The challenge for DMOs, therefore, is to develop strategies that are sustainable in the long term for destination attractiveness, without the risks of overtourism, environmental degradation, and cultural appropriation, as affirmed by Davie et al. (2024).

The importance of an integrated approach to sustainable tourism is highlighted in foundational and contemporary models of destination development. For instance, Plog's (2001) typology, which segments tourists into allocentrics, mid-centrics, and psychocentrics based on psychological traits, emphasised how destinations evolve in response to visitor profiles and warned of the risks associated with unmanaged growth

and declining tourist appeal. While his psychographic framework remains useful in anticipating behavioural shifts (Cruz-Milán, 2024), it has also been critiqued for its deterministic outlook, particularly the assumption that destinations inevitably decline once mass tourism dominates. In contrast, Butler's (1980) Tourism Area Life Cycle (TALC) model provides a more dynamic and flexible lens, outlining a sequence of destination stages, from exploration to stagnation, while explicitly recognising opportunities for rejuvenation through adaptive governance, innovation, and strategic interventions (Butler, 2024).

This more optimistic view has been supported and extended by other scholars. Bellato et al. (2023) highlight the importance of adaptive governance, suggesting that destinations capable of collaborative decision-making and multi-stakeholder engagement are better positioned to evolve sustainably. Similarly, González et al. (2017) highlight scenario planning and networked strategies as tools to manage future uncertainty, while Sharpley and Telfer (2015), along with Harrison (2014), advocate for community-embedded models that reflect the values and agency of host populations. Hall (2011) extends this view by situating tourism within broader political and environmental systems, urging integrated policy responses. Adding to this, Milano, Novelli, and Cheer (2020) advocate for strategic demarketing and regenerative tourism, arguing that a shift from volume to value could rebalance destination economies.

This thesis emphasises the role of visitor behaviour in sustainable destination development by building on both established and emerging frameworks. It argues that management of planning, governance, and market alignment determine whether decline is inevitable or not. The study uses Cumbria as a case study to illustrate how a region facing pressure from an increase in tourists could pursue higher-value, lower-impact tourism through focused segmentation and experience design. The thesis proposes a more adaptive management approach by combining insights from lifecycle theory, psychographic segmentation, and strategic planning rather than depending on a single theoretical model. This allows destinations to adapt to changing traveller needs and preserve their distinctive charm, protecting what Plog (2001, p. 24) metaphorically described as the "*golden travel goose*."

Cumbria, a world-renowned tourist destination with UNESCO World Heritage Sites including the Lake District National Park and Hadrian's Wall, attracts around 47

million visitors each year (Cumbria LEP, 2024). The tourism industry contributes substantially to the county's economy, with a Gross Value Added (GVA) of £1.2 billion and supporting approximately 34,300 jobs in the region (Cumbria Tourism, 2024). However, popular areas in the county including Windermere, Ambleside, and Keswick, face significant environmental pressures, congestion, and overcrowding (Lake District National Park Authority, 2024), putting at risk the attributes that make the destination appealing. A solution to these issues might be demarketing, zoning, charging, however, again, doing nothing is not an option.

Central to addressing these challenges is Cumbria's official Destination Management Organisation (DMO), Cumbria Tourism. Like other DMOs, Cumbria Tourism is responsible for managing tourism sustainably, in such a way that maximises economic benefits while minimising social and environmental damage. Beyond its marketing role, it also acts as an advocacy platform, bringing together local businesses, policymakers, conservation agencies, and other stakeholders to support and promote sustainable tourism (Cumbria Tourism, 2024). Researchers such as Gretzel (2022) and Sotiriadis (2021) highlight this evolution in the role of DMOs, with MacEachern et al. (2024) emphasising that modern DMOs integrate sustainability, collaboration, and knowledge-sharing in their roles, addressing issues such as overtourism and evolving visitor expectations.

Although sustainable tourism is widely recognised in academic discussions (MacEachern et al., 2024; Sotiriadis, 2021) its implementation within DMOs remains limited. The principles of sustainable tourism are often emphasised, but they are not consistently translated into practice. For example, Cumbria Tourism's 2024-2030 Destination Management Plan, highlights the county's goal of becoming the UK's leading sustainable rural destination by 2040 (Cumbria Tourism, 2024). While the plan outlines economic growth, sustainability, and a more balanced distribution of visitors throughout the year, the steps on how these objectives will be achieved are unclear. To bring change, more evidence is needed on how practices lead to actual results, and this thesis aims to help make those changes happen.

Gretzel (2022) emphasises that DMOs are evolving into 'intelligent agents,' utilising data analytics, research evidence, and stakeholder collaboration for informed decision-making. Traditionally, data collection and analysis within DMOs have relied on

the use of demographic data. For destination like Cumbria, however, balancing sustainability objectives with global competitiveness requires more advanced data collection and analysis practices. As Dong et al. (2023) further reveals, advanced methodologies could allow DMOs to track visitor patterns more effectively and accurately, and assess their economic, environmental, and social impacts. This thesis investigates the potential of employing advanced data-driven approaches to refine tourist segmentation and form sustainable tourism strategies that balance the destination's development and visitor satisfaction.

A key element of this approach is identifying and targeting visitor segments whose behaviours align with the destination's long-term sustainability, as Plog (2001) highlighted. Understanding these segments could enable DMOs to create more focused marketing and management plans designed to satisfy tourism development needs pertaining equally to visitors and local stakeholders (McKercher et al., 2022). In theory, this could support, enable and assist DMOs to achieve the right balance between the volume of visitors on the one hand and environmental conservation on the other hand, while maintaining cultural and economic vitality for a destination over time. There is, however, little evidence of DMOs turning 'could' from 'should' to 'will do' and 'have done.'

On one hand, Morrison (2023) emphasises that traditional tourism segmentation has predominantly focused on socio-demographic factors like age, gender, income, education level, and family size, as well as geographical differentiations between local and non-local visitors. McKercher et al. (2022) adds behavioural factors like frequency of visits, loyalty, and psychographic factors such as interests, lifestyle, motivations, and personality. More recently, tourism segmentation reflects a growing shift towards behavioural and psychographic approaches, which are suggested to better capture the complexity of modern tourist behaviours (Li & Kovacs, 2024; Otoo, Kim & Park, 2020). However, there is little evidence in the literature as to the validity of these approaches, and their success in relation to DMO's sustainable strategies. This thesis aims to use Cumbria's DMO to test the existing concepts and to develop new paradigms and modelling.

On the other hand, academic research has long utilised tourist typologies to understand behavioural patterns, with a particular focus on underlying motivations (e.g.,

Smith, 1977; Gray, 1970). Added to this are psychological frameworks which have provided insights into the drivers of travel decisions. Plog's (1974) psychographic continuum, which categorises tourists from allocentric (adventurous) to psychocentric (risk-averse), was followed by Cohen's (1979) typology, which distinguishes between organised mass tourists, individual mass tourists, explorers, and drifters. Although these typologies have since been subject to critique (Cruz-Milán, 2024), these pioneering concepts form the basis for further research and model building. Their simplicity was not a limitation but rather a reflection of the available data and analytical tools in the 1970s that made it impossible to capture the complexity of tourist behaviours.

Over the past decades, models like the Five Factor Model, also known as the Big Five personality traits (OCEAN: openness, conscientiousness, extraversion, agreeableness, and neuroticism), have offered a more systematic way of investigating and understanding how personality traits influence travel behaviours, as noted by Costa and McCrae (1992) and Roberts (2019). Allport's (1937, 1961) work on personality traits has been foundational in understanding these stable attributes, rooted in our neuropsychological structures and consistent over time (Roberts & Yoon, 2022; Fajkowska & Kreitler, 2018). Personality traits have been associated with several factors, including life satisfaction, professional achievement, and subjective well-being (Abdel-Khalek et al., 2022; Roberts et al., 2007). Building on these ideas, by incorporating the Big Five traits framework (Goldberg, 1990), contemporary tourism research could, perhaps, provide a more comprehensive view of how personality influences tourist behaviour, enhancing the typological models that have traditionally guided the field of tourism.

A key finding in personality research revealed that traits remain stable over time (Bleidorn et al., 2022; Roberts & Yoon, 2022), making them a reliable framework for analysing behavioural patterns. This stability enables researchers and practitioners to gain deeper and long-lasting insights into how tourists engage with travel, ultimately supporting the development of more tailored and effective strategies (Crompton & Petrick, 2024). By including personality traits into segmentation models, tourism marketers and destination managers could, perhaps, better predict visitor preferences and tailor strategies that resonate with specific visitor types, improving the visitor experience and supporting sustainable destination management.

Moreover, Pappas et al. (2021) argue that mobile technologies have forced a digital transformation in engaging and serving visitors across destinations. As travellers use smart devices to explore, navigate, and share their experiences, the data collected from these digital interactions have become essential tools in destination marketing and management (Parapanos & Michopoulou, 2023). Beyond enhancing visitor experiences, these technologies could facilitate the collection of real-time, continuous data, addressing the limitations of traditional surveys, which are often post visit, therefore improving the accuracy of tourism segmentation (Reinhold, Beritelli, & Laesser, 2023; Beierle et al., 2020).

Advances in digital tracking and data analytics have, therefore, made it increasingly feasible to integrate personality traits into segmentation frameworks, a trend already evident in the gaming industry, where games monitor player behaviour in real-time to personalise experiences (Parapanos, 2023; Parapanos & Michopoulou, 2023; Akbari et al., 2021). This suggests that similar technology-driven methods could transform tourism segmentation by linking visitor behaviours with personality traits, leading to more dynamic and detailed visitor profiles. By bridging established theoretical frameworks with technological innovation, this study aims to address the limitations of traditional segmentation methods and provide DMOs with actionable insights for more effective and personalised tourism strategies.

These strategies, in turn, align with the sustainable strategic planning principles that drive meaningful change forward. The DMO undertakes a leadership role in this by highlighting the economic, social, and environmental benefits of implementing this approach. The insights gained would support the DMOs in making informed decisions and creating sustainable tourism strategies. It is expected that besides the DMOs' positive impact, this approach could also extend to the small and medium-sized enterprises (SMEs) and other sectors of the visitor economy which could access this data, creating a domino effect that stimulates a more integrated and sustainable tourism ecosystem within the whole region.

1.2 Problem statement

Traditionally, Destination Marketing Organisations (DMOs) have been at the forefront of tourism management and marketing, utilising their access to data in support

of strategic decision-making (Wagenseil et al., 2022). As AI-driven personalisation and big data revolutionise visitor segmentation, marketing, and experience curation, DMOs continue to lead destination stewardship, stakeholder coordination, and sustainable tourism development (Gretzel, 2022). However, Sigala et al. (2024) noted that to remain competitive in the digital era, DMOs must innovate and reposition themselves to keep up with the technological developments and tourist expectations. Moreover, rapid changes in the tourism sector add challenges to DMOs in their traditional duties, with increased competition from the digital platforms, real-time and personalised visitor needs, and visitor management. Furthermore, sustainability pressures, coordination among stakeholders, and economic feasibility further challenge their efficiency in their current form (Foris et al., 2020).

To remain relevant in an evolving tourism landscape, DMOs must move towards alternative models that reframe their strategic role and operations. The most significant solutions, as Foris et al. (2020) propose, could involve a transition to data-driven methods, including predictive analytics and real-time measurement, to enhance visitor segmentation, maximise the management of tourism flow, and enhance marketing strategies. These technologies, besides easing pressure on congested areas, could potentially facilitate more sustainable tourism activities (Leung, Buhalis & Viglia, 2024; Brassell, 2022).

Cumbria is an example of a destination facing significant challenges in managing visitor flows, especially in popular areas such as Ambleside and Windermere. Congestion, overcrowding, and environmental damage create issues and threaten the destination's appeal. While these problems are prominent in Cumbria, they reflect a worldwide issue, according to Sotiriadis (2021), where prioritisation of short-term economic profit is being made at the cost of long-term sustainability. To address these problems, innovative solutions are needed, extending traditional approaches of understanding and managing visitors. Foundational work by Plog (1974) and Cohen (1972, 1974, 1979) has provided explanations of tourist behaviour in terms of segmentation that have significantly contributed to academia and practice. However, these typologies have been criticised for their static nature and failing to capture the diversity of modern tourists (Cruz-Milán, 2018).

In addition, the costly and time-consuming data collection methods through interval surveys, based on self-reported data may not necessarily reflect on-ground realities, as Dolnicar (2022) highlighted. This is particularly problematic for destinations like Cumbria, where resource constraints and the demand for real-time insights render traditional methods increasingly insufficient. In response to these limitations, recent research encouraged the application of personality theory, such as the Five Factor Model (Goldberg, 1990; Costa & McCrae, 1992), for a deeper understanding of tourist behaviour (e.g., Alves et al., 2023). The Big Five personality traits (openness, conscientiousness, extraversion, agreeableness, and neuroticism) (Goldberg, 1990) provide a structured framework of understanding the psychological traits that influence behaviour (Costa & McCrae, 1992; Roberts, 2019; Bleidorn et al., 2022). While researchers demonstrated their predictive power in anticipating behaviour across various contexts, including tourism (Crompton & Petrick, 2024; Roberts & Yoon, 2022, Alves et al., 2022), the application of these traits to tourism research remains underexplored.

This study seeks to bridge this gap by integrating the Big Five personality traits into visitor segmentation models, offering a more comprehensive understanding of visitor behaviour. While traditional motivational research examines the *why* of travel decision, such as relaxation, adventure, or cultural needs, the Big Five personality traits examine the *how*, and reveal the underlying patterns of behaviour for these motivations (Goldberg, 1990). This approach not only facilitates more accurate prediction of tourist behaviours, but it could also serve as a foundation for the development of targeted and sustainable policies that may facilitate better management of visitor flows and contribute towards the long-run sustainability of destinations.

1.2.1 The aim of this research

This research aims to advance tourist segmentation by integrating personality traits, providing a deeper understanding of visitor behaviour and supporting sustainable management practices. By investigating predictive relationships and clustering visitors based on psychological and socio-demographic factors, the study integrates visitor data and industry knowledge for a comprehensive framework. Although Destination Management Organisations (DMOs) are the focus, the study has applications outside tourism, and it adds value to other industries like hospitality and events management, which form an integral part of the visitor economy. Ultimately, this study aims to improve

segmentation approaches, enhance customer experiences, and support sustainable development across various sectors.

1.2.2 The objectives of this research

1. To investigate the role of psychological factors in shaping visitor behaviour at the destination.
2. To develop tourist typologies by integrating personality traits into segmentation models.
3. To critically examine tourism industry perspectives about visitor segmentation and sustainable practices, linking theoretical research with practical application.
4. To conduct an in-depth analysis of the tourist typologies identified, exploring how psychological factors influence activity choices, and reveal external factors that influence visitor behaviour.

1.2.3 Research questions

The study is guided by the following research questions:

1. How do psychological factors influence visitor behaviour at the destination? (aligned with Objective 1)
2. What distinct tourist typologies can be identified through the integration of psychological and socio-demographic factors? (aligned with Objective 2)
3. How do tourism industry stakeholders perceive the application and usefulness of personality-based segmentation in practice? (aligned with Objective 3)
4. In what ways do psychological profiles influence visitor activity choices, and what external factors shape these behaviours? (aligned with Objective 4)

1.3 Proposed contribution

This research aims to contribute both theoretically and practically to the study of tourist behaviour, providing insights that will enhance the understanding of visitor segmentation. As personality is domain-independent, meaning that it remains a stable characteristic regardless of the specific industry or context in which it is used (Bleidorn et al., 2022), it can serve as a generic model, making it relevant for cross-domain applications. Previous research identified correlations of preferences across different domains, Cantador et al. (2013) being among the first to analyse the relationships between the Five-Factor Model (FFM) and preferences in movies, TV shows, music, and books

(Tkalcic & Chen, 2015). Building on these ideas, this research will investigate how personality-based segmentation could be applied to tourism, to improve visitor profiling. The expected findings aim to benefit Destination Management Organisations (DMOs), stakeholders across the tourism industry, and other sectors such as hospitality and organisational management. By integrating personality-driven models into visitor segmentation, the research seeks to offer more personalised strategies and promote sustainable practices. Ultimately, these insights will support improved decision-making and customer engagement, ensuring a more sustainable approach to tourism management.

Although the existing literature investigated the relationship between travel behaviours (e.g., Di Fabio & Kenny, 2018), travel intention (e.g., Maghrifani & Sneddon, 2022; Tepavčević et al., 2021), and travel information search (e.g., Jani, 2014) with personality traits, as well as the relationship between travel motivations (e.g., Mishra et al., 2021; Yan & Halpenny, 2019; Tomik et al., 2017) and personality traits, and visitor activities (e.g., Alves et al., 2022; Kovačić et al., 2022), not many studies investigated the interaction of these factors in influencing visitor activities at the destination level. While research such as Alves et al. (2023) integrated personality, travel motivation, and activity preferences of visitors in Portugal, additional research is needed to understand how these factors interact across different visitor segments and in various destination contexts.

In addition, previous research on segmentation has focused on travel motivations (e.g., Lee & Kim, 2023; Rishi & Chatterjee, 2023; Carrascosa-López et al., 2021), benefits sought (e.g., Tessema et al., 2022; Pesonen et al., 2011), destination perceptions (e.g., Øgaard et al., 2019), satisfaction (e.g., Baniya et al., 2021; Carrascosa-López et al., 2021; Romão et al., 2015), and psychographic lifestyle typologies (e.g., Bayarsaikhaet al., 2020; Srihadi et al., 2016). However, these studies overlooked the role of personality in influencing segmentation, which could potentially provide a more comprehensive understanding of visitor behaviour. This study builds on existing research, and it investigates these relationships within the context of Cumbria, offering insights into the factors that influence tourist behaviour. It contributes to the development of more effective and sustainable tourism practices in the region.

Theoretically, the integration of personality traits into models of tourism segmentation marks a significant development towards an understanding of both tourism and consumer behaviour. While earlier models, such as Plog's (1974) psychographic

typologies, Cohen's (1972) tourist typologies, and Gibson and Yiannakis's (2002) tourist roles helped us understand tourist behaviour, they do not capture the complexity of individual tourists. For example, Plog's model has been criticised for being static in not capturing the dynamic and situational nature of tourist behaviours (Cruz-Milán, 2018), while Cohen's typology does not account for evolving motivations (Cruz-Milán, 2024). This study addresses these limitations by incorporating the Big Five personality traits, offering a structured framework to enhance the understanding of how tourists interact with destinations and capturing more insightful information on their travel preferences.

From a practical perspective, the findings have significant implications for DMOs and tourism practitioners, particularly in rethinking the role of the DMO in a digitalised industry. By recognising the role of personality in travel decision-making, DMOs could improve segmentation strategies to better cater to specific types of travellers. The stability of personality traits (Bleidorn et al., 2022; Roberts & Yoon, 2022) enables DMOs to provide recommendations across life stages, even when socio-demographic factors like age or income change. This personalised approach not only stimulates repeat visitation and loyalty, but it could also allow DMOs to more effectively anticipate and adapt to travellers' preferences (Alves et al., 2020).

Furthermore, the identification of clusters within traveller groups allows DMOs to uncover distinct patterns of behaviour, which are crucial for tailoring marketing and demarketing strategies to specific segments, support sustainable practices. Additionally, by using technology and continuous data collection, this research overcomes the limitations of traditional survey-based segmentation, which tend to be based on static and time-sensitive data (Beierle et al., 2020). Real-time data collection through digital channels and mobile applications allows for more dynamic and reactive segmentation (Reinhold, Beritelli & Laesser, 2023), with DMOs being able to manage trends more precisely. It renders tourism approaches more reactive, with marketing efforts, product development, and destination management decisions remaining aligned with the evolving visitor expectations. Moreover, segmentation based on clustering could help DMOs in optimising the allocation of resources, promoting sustainable tourism behaviour, and supporting destination competitiveness in an increasing dynamic tourism setting.

Finally, clustering and segmentation techniques are not exclusive to the tourism industry; they can also be applied across closely related sectors such as hospitality and

events management, which together form an integral part of the visitor economy. As an example, in the hospitality industry, clustering can be used to structure experiences that are appropriate for the specific needs of different categories of visitors. In events management, personality and behaviours patterns could inform marketing, and enhance visitor satisfaction. Moreover, by integrating AI and big data, businesses could develop customer-centric strategies that enhance innovation, competitiveness, and sustainability. The industry collaboration, as represented by DMOs in tourism, can serve as an example for other industries aiming to achieve environmental, social, and economic sustainability.

1.4 Thesis structure

This thesis comprises six main chapters, guiding the reader through the introduction, the literature review, methodology, findings, discussion, and conclusion (see figure 1).

Chapter one, Introduction, provides the background and context of the study, outlining its overall significance. The aim and objectives of the research are defined, as well as the proposed theoretical and practical contributions of the study.

Chapter 2, Literature Review, critically reviews the existing relevant research and main theories. The first section introduces the Destination Management Organisations (DMOs), market segmentation, the strategies and challenges in a dynamic tourism landscape. The second section discusses foundational travel motivation theories, tourist typologies, and tourist roles. The third section introduces the Big Five traits (Goldberg, 1990), and how personality traits could be used as predictors for tourist behaviour. The chapter further includes a hypotheses development section, and lastly, it proposes a framework for sustainable destination management.

Chapter 3, Research Methodology, discusses the research design and methodological approach adopted in this study. It highlights the philosophical foundations of the study, and justification for the employed mixed-methods design. The three phases including visitor surveys, focus group discussions with tourism industry practitioners, and semi-structured visitor interviews are discussed. Finally, ethical considerations are addressed.

Chapter 4, Findings, presents the findings of the study, divided into three sections. The first section presents the analysis of quantitative survey data, providing statistical

findings revealing insights into visitor behaviour, and identifying visitor segments in Cumbria. Section two presents the qualitative findings of the industry focus groups, offering practitioner insights into visitor segmentation, destination management, and sustainability strategies. Section three presents the findings from the semi-structured visitor interviews, exploring individual experiences in greater depth. The findings are interpreted with reference to the literature throughout the chapter, highlighting key trends and implications for Destination Management Organisations (DMOs) and sustainable tourism development.

Chapter 5, Discussion, places the findings in context to the broader study. It examines the role of personality traits and travel motivations as predictors of visitor activities. It also provides an overview of the use of psychological factors within segmentation methods, and how they could supplement traditional market segmentation methods. The discussion also covers how the research findings may be applied in further destination management and sustainable tourism operations such that DMOs could understand and cater to specific visitor groups as well as encourage responsible tourist behaviour.

Chapter 6, Conclusion, consolidates the main findings and their theory and practice implications. It restates the research aim and objectives, outlining how these have been addressed in the research. The chapter also states the study limitations, such as sample limitations, and potential bias. It then recommends future research directions, including suggesting themes such as cross-cultural analysis, and digital behavioural data integration to further segmentation approaches.

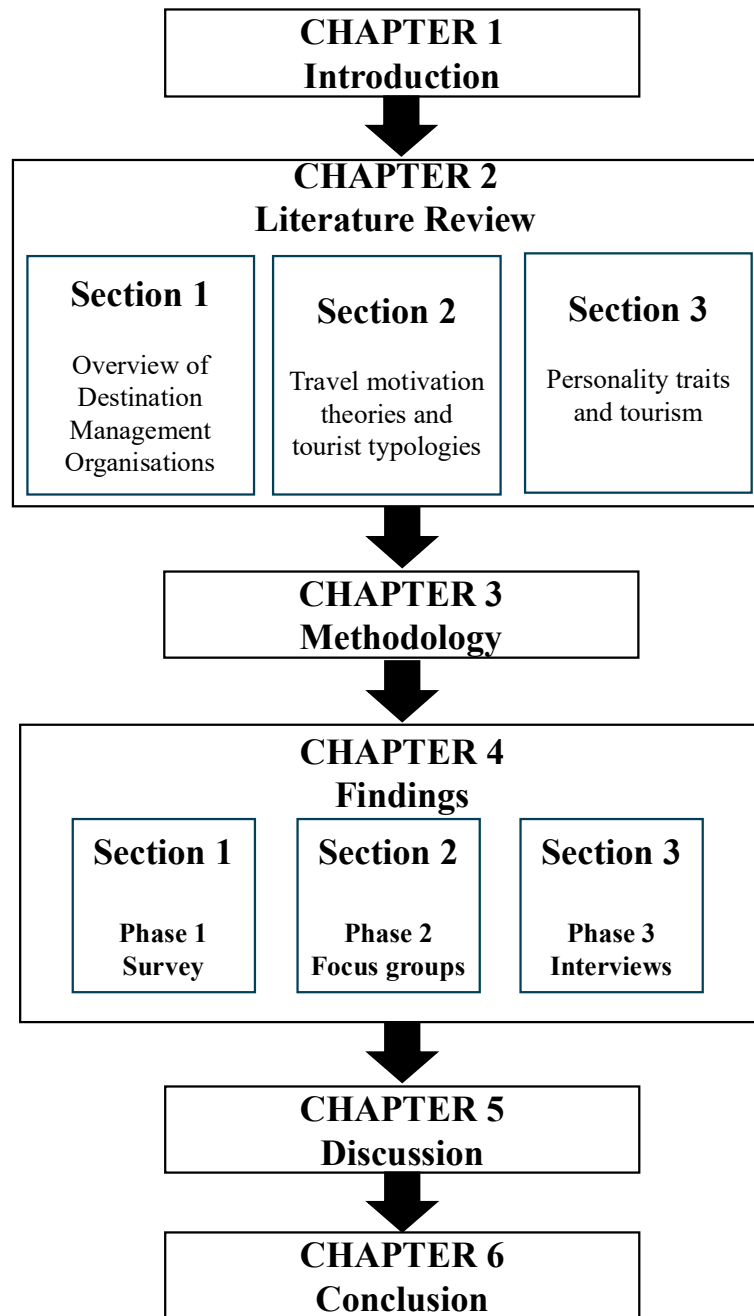


Fig. 1. Thesis structure

Chapter 2: Literature Review

Introduction

The literature review centres around the role, strategies and challenges faced by Destination Management Organisations (DMOs), alongside travel motivations, tourist typologies, and the role of personality traits as predictors of tourist behaviour. While interdependent concepts, it essentially explores, and critiques, current thinking around the premise that understanding visitor behaviour is central to the effectiveness of DMOs in developing sustainable and thriving local visitor economies, as summarised by Morrison, Cheah & Kumar (2024). It is assumed that by adopting tailored strategies to target specific market segments, DMOs could enhance their operational efficiency, support tourism development, and promote regional development aligned with sustainable principles. This intended outcome was set in the Department for Culture, Media & Sport's report published in 2022. To achieve this, Volchek et al. (2020) and Gertner and Freire (2019) assert that a comprehensive knowledge of tourist behaviour is key as it is the foundation of developing strategies that drive customer satisfaction and loyalty.

As a working hypothesis, this literature review starts by introducing the definition of tourist behaviour proposed by Kovačić et al. (2022), which encompasses both observable actions and underlying cognitive and social processes. These behaviours are categorised into attraction visits (e.g., museums, galleries), entertainment (e.g., concerts, cultural events), and physical activities (e.g., sport, recreation). However, the definition can also be expanded to relate to the wider experiential and symbolic dimensions of tourism. For example, the concept of the *flâneur* highlights the contemplative and passive engagement with the environment in the form of unstructured gazing and strolling (Tester, 1994). Similarly, experiences of visiting 'the Other', a concept in social science theory, explains the tourist's encounters with people, cultures, and traditions perceived to be different or unfamiliar (Said, 1978). Such interactions tend to be at the core of shaping meaning and authenticity in tourist experiences.

According to Urry's (1990) sociological interpretation, people and places are visually and symbolically consumed experiences that are influenced by what he refers to as the sacred and the profane. Whereas the profane encompasses the commonplace and recognisable elements of daily life, like local customs or streetscapes, the sacred refers to culturally unique or exceptional features, like historic monuments or iconic landmarks.

These differences have an impact on how visitors perceive their environment and help to create authenticity and meaning in the travel experience. However, the frameworks for tourism management put forth by academics like Leiper (1990), whose tourism system model provides a more functional and structural approach, diverge from this symbolic perspective. According to Leiper (1990), tourism is a network of interdependent components, including the tourist, generating region, transit route, destination region, and attractions, providing a framework through which destinations can manage flows, optimise infrastructure, and anticipate market behaviour.

By distinguishing between these theoretical approaches, Urry's (1990) cultural-symbolic lens and Leiper's (1990) systems-based model, this literature review reflects the dual nature of tourist behaviour as both socially constructed and operationally managed. While the systems approach supports the strategic role of DMOs in coordinating complex tourism ecosystems, the symbolic dimension emphasises how people interact with places through meaning-making processes. This study's segmentation framework is strengthened by acknowledging this theoretical divergence, which acknowledges that both applied planning mechanisms and interpretive understanding are necessary for efficient tourism management.

Furthermore, the literature noted the significant role played by tourist activities in destination performance. Morrison, Cheah, and Kumar (2024) argued that the integration of activities is crucial to a destination's success, as it affects visitor satisfaction. Hwang et al. (2019) also believed that the diversity and quality of such activities make the overall tourist experience, therefore making the destination attractive and leading to long-term loyalty. However, while a broad range of activities will enhance the attractiveness of a destination (Vujičić et al., 2020), this must be managed with local resources extremely sensibly. In addition, Gertner (2019) suggested that diversity could compromise the authenticity of the destination, leading to commodification and cultural appropriation. Sustainability strategic planning is therefore essential to ensure that the investment on tourism development is optimised while minimising impacts on cultural, social, and environmental integrity.

Considering the complexities of managing various tourist needs and sustainability, the chapter critically examines the challenges facing DMOs in managing ever-evolving market conditions. These include process challenges, such as effective data collection,

creating targeted strategies, and managing tourism. The chapter proceeds into the complexity of understanding tourist motivation and typologies, as well as the role of personality traits in visitor behaviour. These form part of the DMOs' efforts at developing and adopting strategic plans to align tourism growth with sustainability. The chapter continues to suggest how, through addressing such challenges, DMOs can more closely align strategic aims to evolving market demand and therefore ensure resilient tourism growth in harmony with socio-economic and environmental goals. This, however, requires strategic thinking to change. DMOs need to follow cause and effect through examining the *why*, *how*, and *when* of decision-making. Without this shift, new innovations risk being circumscribed by previous paradigms of marketing and conservative thought. To remain relevant, DMOs must embrace new ways of strategic thinking, to adopt more adaptable and responsive strategies that reflect evolving visitor behaviours and market conditions.

2.1 Overview of Destination Management Organisations (DMOs)

This section introduces the concept and evolving role of Destination Management Organisations (DMOs), emphasising their importance in influencing the growth of tourism, bringing together various stakeholders, and carrying out strategic marketing campaigns. It critically evaluates the traditional and modern roles of DMOs and places them in the context of this study's emphasis on sustainable tourism and visitor segmentation. The discussion also considers the ways in which DMOs are adjusting to the digital revolution, changing visitor demands, and more general sustainability requirements. DMO duties must be interpreted considering local priorities, results, and future strategic directions because they differ greatly depending on the destination context. This lays the groundwork for comprehending how visitor data and segmentation techniques could support destination management that is more proactive, integrated, and responsive.

Pearce (2016) noted that there is no universally accepted definition of DMOs, so their functions variously range from marketing to broader management and development roles. UNWTO (2019) are also vague when they argue that DMOs traditionally focused on promotional activities, without clearly defining their evolving roles. In contrast, Dredge (2016) categorised DMO activities into three primary areas: market-improving policies (marketing, promotion, branding), product-improving policies (product

development, investment attraction), and policies aimed to address market failures, such as enhancing industry coordination, productivity, managing resources, and fostering positive community relations. While UNWTO (2019) acknowledged that DMOs have increasingly adopted strategic management approaches to enhance destination competitiveness and sustainability, it fails to outline how these translate into practice. Sustainability, in this context, is understood as the long-term ability of a destination to balance economic growth with the preservation of its environmental and social assets (UNWTO, 2024; Butler, 1991). Yet, there is a lack of clarity regarding how DMOs can effectively integrate these principles into their strategic and operational frameworks.

As these organisations operate under diverse governance models, including public entities, public-private partnerships, and, less commonly, private organisations the governance can often be complicated by changing political influences and potential lack of support from the private sector (Gretzel, 2022). Again UNWTO (2019) stated that regardless of their structure, DMOs are primarily responsible for strategic planning, policy formulation, and the development and implementation of tourism initiatives, but are vague as to the inter-relationships of these responsibilities, potential development strategies and implementation of those strategies. This shift highlights their evolving, organic and pragmatic roles as strategic entities that need to balance economic growth, environmental conservation, and social equity within tourism destinations (Wagenseil et al., 2022). This thesis, therefore, begins to explore methods and methodologies to achieve greater control in those balances outlined by Wagenseil et al. (2022). By prioritising sustainability, DMOs aim to ensure that tourism development does not exceed the destination's capacity, hence preserving the destination's resources and social wellbeing for future generations while supporting the local economy.

Research consistently highlighted the efforts of DMOs in enhancing destination competitiveness, yet how this translates into practice remains unclear. Hall and Veer (2016) acknowledged the significance of DMOs in destination attraction and representing industry's interests, but it fails to account for the inherent tensions between commercial success and social and environmental responsibilities. Similarly, while Volgger and Pechlaner (2014) identified stakeholder coordination a critical success factor, they oversimplify the complexities of managing often conflicting stakeholder agendas. In this context, Beritelli et al. (2015) highlighted the importance of effective collaboration,

however, how this can be achieved is itself an under-explored area, especially in fragmented tourism industries.

Furthermore, Blackman and Ritchie (2008) focused on organisational and crisis management for destination governance, yet their emphasis on responsive measures overlook the need for proactive governance. Morgan (2012) argued the inclusion of social responsibility in destination management, but its practical application within the structures of DMOs is not evident. More recent studies, such as Pechlaner et al. (2019) and Wagenseil and Zemp (2016), argued that resilience building is currently at the centre of DMO activities, advocating for clear sustainability roles. However, this raises the question of whether DMOs have the capacity to integrate sustainability into their operational frameworks, given that DMOs have traditionally had a focus on short-term economic gains (Dredge, 2016). These insights suggest that DMOs must implement adaptive strategies that balance immediate tourism industry concerns with long-term sustainability goals.

The integration of technology has further transformed the role of DMOs, providing them with tools to improve decision-making, enhance visitor experiences, and optimise marketing efforts (Gretzel, 2022; Buhalis, & Michopoulou, 2010). Technologies such as data analytics, artificial intelligence, and digital platforms are increasingly used in monitoring real-time visitor flows, personalising tourist services, and promoting destinations more effectively (Buhalis, Lin & Leung, 2023; Dwivedi et al., 2023). Buhalis, Papathanassis, and Vafeidou (2022) noted that the adoption of new technology is now more than ever an important way of being competitive in the tourism sector. Nevertheless, Oktadiana (2019) cautions that they need to be carried out in ways that are responsive to cultural and environmental issues in an aim to ensure authenticity, enhance accessibility, and prevent reinforcement of existing inequalities.

Gretzel (2022) further conceptualised DMOs as ‘intelligent agents,’ emphasising their evolving role in the digital transformation of tourism management. This implies that DMOs must evolve from the typical marketing roles to be smart agents of acquiring, processing, and sharing knowledge in the tourism sector. In their role as intelligent agents, DMOs are envisioned to employ advanced data analytics and smart technologies to interpret complex tourism information, enable data-based decision-making, and drive innovation among stakeholders. The use of technology, therefore, not only boosts

effectiveness in operations but it could also enhance the DMOs' commitment to tourism sustainability so that their actions are both evidence-driven and aligned with long-term environmental, social, and economic goals.

The literature revealed that one of the main challenges DMOs face in becoming sustainable is overtourism, where the number of tourists exceeds the sustainable carrying capacity of a destination (Lindberg & Seeler, 2021). Adding to this, UNWTO (2018) defines overtourism as the tourism phenomenon at a destination, which negatively impacts the quality of life of residents and the tourist experience. As researchers (Martín et al., 2018; Seraphin et al., 2020; Giordano, 2022) further confirm, these issues are intensified by low-cost air travel, online booking platforms, and the popularity of sharing economy platforms like short-term accommodation, which have increased the volume of tourists to already crowded places. In Cumbria, the COVID-19 pandemic added a new dimension to this challenge, as international travel restrictions increased the numbers of domestic tourists. This visitor pressure added more strain on the region's infrastructure, natural environment, and communities, highlighting the critical importance for innovative strategies (Pappas, Michopoulou & Farmaki, 2023). It was, perhaps, a wake-up call for the DMO after years of focus on 'growth without boundaries.'

In response to the problems caused by overtourism, Destination Management Organisations (DMOs) globally use demarketing strategies along with traditional marketing strategies to manage tourist flows and avoid undesirable impacts. While traditional marketing is trying to generate demand, demarketing aims to reduce or manage demand to preserve resources and ensure long-term sustainability for destinations (Lindberg & Seeler, 2021; Kotler & Levy, 1971). There are three categories of demarketing: general, selective, and ostensible. General demarketing is decreasing the demand as a whole, for example, in places like the Great Barrier Reef where the number of visitors is limited in peak seasons to reduce environmental and societal pressure (Seraphin et al., 2020). Selective demarketing focuses on specific market segments, encouraging off-season tourism or responsible tourism, for instance, Bhutan's 'High Value, Low Impact' policy, where tourists are charged a daily fee to limit numbers and maintain exclusivity (Schroeder, 2015). Ostensible demarketing, on the other hand, creates the illusion of scarcity, making a destination seem more exclusive and desirable by limiting access. Timed entry systems at Machu Picchu and the Louvre exemplify this

approach, encouraging tourists to value their experiences more highly while controlling access (Hugo, 2020).

As various destinations implemented policies to control overtourism, their effectiveness, cost, and broader consequences remain open to debate. For example, Barcelona's restrictions on new tourist accommodations and campaigns for responsible tourism aim to encourage respectful visitor conduct (López, 2020). However, as Barrios (2020) noted, there are still concerns over how effectively these efforts will be enforced and what the long-term impact will be on local people and businesses. Similarly, measures in Iceland and the Azores to spread visitor numbers more evenly, by restricting access and running off-season promotions, might only shift the problem of overcrowding to areas with less capacity, rather than resolving the root problems of congestion (Sæþórsdóttir et al., 2020). Additionally, Amsterdam's strategy of marketing its outlying regions tries to decrease pressure on the city, but it will, perhaps, shift the problem of overtourism to somewhere else instead of solving it (Pasma, 2022). These examples illustrate the challenges of managing tourism, where policy changes could have unforeseen repercussions, raise problems surrounding equity, and must be regularly reviewed rather than being assumed successful.

As illustrated earlier, most Destination Management Organisations (DMOs) make environmental sustainability their priority through visitor caps, green initiatives, and conservation efforts. Nevertheless, most of these interventions do not have a real-time measurement, hence challenging the question of whether they are effective or simply symbolic measures towards mitigating environmental issues (Ogbeide & Mildenerger, 2025). A balanced approach, integrating environmental, social, and economic sustainability, is required. This must not only aim at reducing the environmental impact of tourism but also at ensuring that the local people benefit, achieve inclusive economic growth, and protect cultural heritage (MacEachern et al., 2024). With more access to real-time information, DMOs could move beyond fixed policies and enable more adaptive, responsive decision-making. This could, in turn, allow them to manage tourism issues as they arise, rather than relying on old or ineffective practices.

2.1.1 Market segmentation

Kennedy et al. (2022) explained that effective tourism management is not just about controlling the number of tourists, but it involves attracting the kind of tourists who

align with the long-term vision of the destination. In today's competitive tourism landscape, this equilibrium is paramount, and DMOs must target specific types of visitors while maintaining the unique characteristics of their destinations. Sotiriadis (2021) further noted that whereas mass marketing might enhance exposure, it can, in turn, reduce a destination's attractiveness and lead to inadequate use of resources. To address these issues, DMOs increasingly employ market segmentation strategies. This enables the DMO to segment specific types of visitors and tailor their promotion campaigns to the specific interests of the target segments, as McKercher et al. (2022) acknowledged. By employing targeted strategies, destinations could enhance their competitiveness and address the limitations of generic marketing methods (Buhalis & Michopoulou, 2010; Dolnicar, 2008).

Market segmentation is described by McKercher et al. (2022) as the process of dividing a market into distinct groups that share the same characteristics, allowing DMOs to formulate personalised strategies to cater to the individual needs and wants of each group. Theoretically, this method has major advantages over simply increasing the number of visitors, especially when encouraging sustainable tourism. Mihalic (2020) added to this, stating that by strategically distributing visitors across different seasons and directing them to less-frequented areas, segmentation can help to alleviate pressure on popular sites, promoting environmental sustainability. However, many destinations continue to face the challenge of overtourism, where short-term economic priorities and conflicting stakeholder interests often undermine sustainability efforts (Butler & Dodds, 2022). It is, perhaps questionable whether these so-called answers to the problems using segmentation work in practice. Addressing these issues requires a long-term strategy that carefully aligns visitor profiles with a destination's infrastructure, cultural and environmental goals (McKercher et al., 2022). However, this approach overlooks the reality of today's social media-driven tourism, where a single influencer post could rapidly shift travel patterns, as noted by Siegel et al. (2023). As such, a more flexible, adaptive approach may be needed, moving beyond traditional, static models to account for the rapid changes in visitor patterns.

Morrison (2023) emphasised that effective segmentation relies on the understanding of the demographics, preferences and the behaviours of the targeted groups of tourists. Beritelli and Reinhold (2021) also highlighted the selection of the right group of visitors to enhance resilience. By attracting visitors whose values correspond with the

sustainability objectives of the destination, DMOs could create an equitable tourism system. The integration of demarketing strategies could enhance this approach by attracting only the targeted tourist segments, whilst discouraging the ones whose behaviours may harm the destination. An example of Venice charging day trippers an admission fee and reducing cruise liner traffic is one case where demarketing has been employed to preserve cultural and natural heritage (Bertocchi et al., 2020). Early results suggested partial success in stemming overtourism and reducing pressure on the city infrastructure, with cruise ships reduced in number and increased funds generated for conservation (Travel and Tour World, 2024). The actions have, however, been criticised for negatively impacting local businesses, while their long-term effectiveness in preserving Venice's heritage remains uncertain (Travel and Tour World, 2024). By combining demarketing and market segmentation, DMOs could pursue a more strategic and sustainable tourism management approach, attracting visitors with positive contributions and avoiding the negative impacts of overtourism or unsuitable markets. This balanced approach could allow destinations to sustain economic growth while protecting their cultural and environmental heritage and thereby improve their long-term resilience.

2.1.2 Strategies employed by DMOs

Socio-demographic factors such as income, education level, family size, age, and gender, and geographical factors distinguishing local tourists and non-local tourists have formed the basis of segmentation in the past, as Morrison (2023) acknowledged. Behavioural variables including brand loyalty, frequency of travel, and preferences, and psychographic characteristics such as motivation, interests, activities, personality, and lifestyle can also be used (McKercher et al., 2022). But this conventional approach is increasingly being challenged as tourism segmentation moves away from socio-demographic factors, towards behavioural and psychographic models that better reflect tourist behaviour. This change shows a growing recognition of the complexity and fluidity of tourist behaviour, which cannot be captured through static demographic characteristics (Li & Kovacs, 2024; Otoo, Kim & Park, 2020).

Although motivation has become a crucial criterion for market segmentation (Shi, Liu, & Li, 2018), this approach continues to treat tourists as homogeneous groups defined by broad categories, which remains problematic. For example, recent research by Pan and

Shang (2023) highlighted the psychological and physiological drivers of tourist behaviour, but the challenge lies in the superficial application of these insights. Segmenting based on motivations could provide DMOs with opportunities to design tailored experiences, but it also risks oversimplifying the diversity of tourist preferences, reducing them to basic categories that may not reflect contemporary travel preferences, as noted by Li and Kovacs (2024). For instance, VisitScotland's segmentation into groups such as adventure seekers, curious travellers, and food-loving culturalists (VisitScotland, 2024), while useful for targeted marketing, it fails to account for the overlap and fluidity between these categories. Similarly, Destination Canada's focus on segments like free spirits and cultural explorers also risks placing restrictive labels that do not adequately understand the dynamic nature of tourists (Destination Canada, 2024). Although these segmentation techniques help DMOs to target their market more effectively, they also risk commodifying the tourist experience.

Nonetheless, Beritelli and Reinhold (2021) advocated for diversifying tourist flows for the resilience of destinations. A diversified tourist flow, spread across different seasons and areas, can enhance a destination's resilience to external pressures than one focused on a mass visitor base. This was highlighted at the 5th Advances in Destination Management Forum, where the vulnerabilities of such destinations, naming Lucerne, Switzerland, facing significant challenges due to its over-reliance on specific markets, such as the Asian tour groups (Reinhold, Beritelli & Laesser, 2023). While segmentation of tourists based on interests or motivations such as adventure, wellness, or cultural tourism may attract a more diverse range of travellers all year round, it also poses certain drawbacks. It has the potential to dilute the complex and dynamic character of tourist behaviour. The final test is not so much expanding market coverage but creating authentic and sustainable experiences which resonate with individual tourist profiles. While segmentation supports directed marketing and sustainability, it may prove to be short-sighted in the long term if it fails to identify the evolving drivers of today's tourists.

In Cumbria, for instance, the natural surroundings and outdoor activities available in the area are significant tourism motivators (Cumbria Tourism, 2022). The 2022 Cumbria Tourism visitor survey revealed that 50% of visitors are attracted by a desire to spend time with friends and relatives, and 40% by the health and well-being aspects of engaging in activities such as walking (Cumbria Tourism, 2022). However, despite these insights, there is no overarching plan to monitor and act upon shifting visitor behaviour

on a continuous basis. This is a significant drawback. Motivations are generally well understood, but a lack of continuous behavioural analysis means that planning will be reactive rather than proactive. Deciding based on static, brief information risks overlooking new patterns and behaviour shifts that might be of long-term consequence to the region's sustainability and competitiveness.

2.1.3 Challenges and opportunities for DMOs in the digital era

The challenges faced by DMOs in adapting to changing market conditions are a direct result of their segmentation strategies to address the complexities of modern tourism markets. As earlier discussed, segmentation enables DMOs to better understand different visitor profiles and develop targeted marketing strategies. However, the effectiveness of segmentation is largely dependent on the ability of DMOs to collect, analyse, and utilise meaningful data (McKercher et al., 2022). This is intensified by the dynamic and rapidly evolving character of tourist behaviours and expectations, as well as technological and market disruptions requiring adaptive response.

Being 'intelligent agents,' (Gretzel, 2022), for DMOs obtaining visitor data to segment is among the most important aspects. Advances in data collection technologies, such as time and geotagged data, provide opportunity to track and map visitors' movements along space and time (Zhao et al., 2022). These have been extended to include sentiment analysis and activity patterns, giving insights into tourist motives and behaviour to a greater extent (Giglio et al., 2019). For example, Amsterdam uses data from the I Amsterdam City Card to identify visitor patterns, providing real-time recommendations to reduce congestion and promote lesser-known areas, demonstrating how data-driven strategies enhance segmentation efforts and visitor management (I Amsterdam, 2024).

Despite these technological advancements, DMOs face persistent challenges in data collection, particularly in terms of cost, access, and strategic application. Destinations with limited budgets often struggle to acquire proprietary data held by large corporations such as Google or credit-card firms (Reinhold, Beritelli & Laesser, 2023). Furthermore, while the volume of available data continues to grow, converting this data into actionable insights remains a significant challenge. For instance, time-indexed visualisations of visitor frequencies provide an initial understanding of behaviours, but meaningful segmentation requires insights into why tourists act as they do and how these behaviours translate into experiences (Reinhold, Beritelli & Laesser, 2023). Without a

clear analytical framework, even advanced technologies may fall short of supporting the strategic objectives of segmentation and destination management.

Traditional methods of data collection, such as visitor surveys, remain useful but are often constrained by scalability and accuracy (Reinhold, Beritelli, & Laesser, 2023). For example, Cumbria Tourism collects visitor data from questionnaires on the visitors' socio-demographic profile, visit purpose, travel behaviour, sources of information, transport, spending, activities, overall opinion, and trip satisfaction. The most recent one, the 2022 Cumbria Visitor Survey, involved more than 2,000 visitors at over 60 locations throughout the county (Cumbria Tourism, 2022). However, considering that Cumbria attracts 47 million visitors each year (Cumbria LEP, 2023), this method has its disadvantages in terms of the sample size and efficiency. These limitations, including reliance on self-reported data and strict timelines, highlight the need for DMOs to adopt more dynamic and scalable approaches to segmentation, a notion supported by Dolnicar (2022). Additionally, technologies such as mobile apps and location-based services enable real-time tracking and analysis of tourist movements and preferences, providing DMOs with detailed data that could support more precise segmentation strategies (Beierle et al., 2020; Hinds & Joinson, 2019).

2.1.3.1 Smart Tourism Destinations (STDs)

The integration of technology into destination management frameworks has advanced significantly with the creation of smart tourism destinations (STDs). A smart destination incorporates real-time data analytics, participatory governance platforms, and interconnected digital infrastructures to provide a smooth and flexible visitor experience (Buhalis and Amaranggana, 2015). As researchers confirm, in order to co-create meaningful tourism experiences, STDs maximise resource use, encourage sustainability, and facilitate multi-stakeholder collaboration (Sustacha et al., 2023; Errichiello & Micera, 2021; Gretzel et al., 2015).

Using systems-thinking and cutting-edge ICT solutions like cloud computing, artificial intelligence, and the Internet of Things (IoT), smart destinations go beyond simply implementing digital tools (Gursoy et al., 2024; Neuhofer, Buhalis & Ladkin, 2015). These technologies provide DMOs the ability to proactively address the effects of tourism and offer individualised recommendations by enabling predictive demand management and ongoing visitor flow monitoring (Núñez, 2024; Ballina, 2022; Buhalis,

2020). Through geofencing and mobile feedback mechanisms, smart destination models provide opportunities for crowd management, dynamic zoning, and sustainable transport initiatives for rural and environmentally sensitive destinations such as Cumbria (Buhalis & Amaranggana, 2015).

Moreover, by using cooperative digital platforms to link visitors, companies, locals, and government representatives, smart destinations promote inclusive governance (Abdelmalak, 2024). Continuous feedback loops that improve tourism resilience and innovation are fostered by this multi-stakeholder engagement (Gretzel et al., 2015). In this way, smart tourism acts as a link between sustainable destination development and technological innovation, enhancing DMOs' strategic ability to match tourism growth with long-term ecological and socioeconomic goals (Boes, Buhalis & Inversini, 2016).

Dong et al. (2023) further illustrated the transformative potential of technology in overcoming segmentation challenges through the integration of digital footprints, referring to data generated through interactions with digital platforms. Through analysing activities such as website visits, social media interactions, and mobile app usage, destinations could gain more insights into tourist behaviours (Montag et al., 2021). Amsterdam, for instance, uses GPS tracking to monitor tourists' locations to recommend activities according to individual choice while minimising traffic in congested areas (Beierle et al., 2020). Still, while specific information confirming the efficacy of GPS monitoring in controlling flows of tourists into the city remains scarce, this example illustrates enhanced utilisation of technology not just for enhancing segmentation, but also towards addressing issues in managing visitor flows and supporting the destinations' sustainability.

2.1.3.2 Strategic adaptability and innovation

DMOs must also remain flexible towards responding to changes in the market and adjusting tourist expectations. The COVID-19 pandemic highlighted the importance of this flexibility, with destinations like Malta, Sabah, and Tourism Australia pivoting their strategies to focus on domestic tourism, nature-based experiences, and high-value travellers (Au-Yeung, Tung & Tsz Tse, 2022). These examples support the critical role of segmentation in enabling DMOs to target specific groups effectively, even under unique situations.

Advanced tools like artificial intelligence further enhance the ability of DMOs to refine segmentation strategies and respond dynamically to shifting market conditions

(Leung, Buhalis & Viglia, 2024; Brassell, 2022). Huang et al. (2022) noted that AI algorithms analyse vast amounts of visitor data, predict trends, and generate personalised marketing strategies that align with specific traveller behaviours, enabling DMOs to uncover insights that inform more effective campaigns and operational decisions. As the tourism industry becomes increasingly reliant on digital technologies, Sigala et al. (2024) acknowledges that DMOs that integrate AI, machine learning, and big data analytics into their segmentation efforts will gain a significant competitive edge. These tools enable DMOs to monitor and optimise visitor flows, allocate resources efficiently, and enhance the overall tourist experience (Guerrero & Dias, 2024).

Ultimately, technological innovation could potentially empower DMOs to enhance market segmentation and solve key issues such as overtourism, which is a significant problem in destinations such as Cumbria. While traditional methods of segmentation such as surveys remain effective, supplementing them with advanced technologies, and real-time monitoring has now become necessary to create more accurate visitor segmentation and manage tourism flows (Suanpang & Pothipassa, 2024). These innovations enable DMOs to develop more precise visitor profiles, identify emerging travel patterns, and predict demand shifts, making it possible to proactively manage overcrowding and resource allocation. By using these data-driven approaches, DMOs could employ dynamic, targeted marketing strategies that distribute visitor flows more evenly, alleviate pressure on congested sites, and promote sustainable tourism development (Leung, Buhalis & Viglia, 2024; Brassell, 2022). Foris et al (2020) further highlighted that as the tourism sector rapidly evolves, it is unlikely that DMOs will maintain their current role, and thus, tourism research urgently needs to explore new models of reinstating their future focus and strategic missions. Therefore, the adoption of technological innovation not only improves the ability of DMOs to respond to shifts in the markets but also holds prospects of long-term competitiveness and resilience in an increasingly complex tourism landscape.

2.1.4 Summary

Destination Management Organisations (DMOs) are at the core of destination promotion and management, and they play a key role in defining the tourism profile. Through market segmentation, DMOs are able to target diverse groups of tourists while maintaining the attractiveness of their destinations. As McKercher et al. (2022) and Mihalic (2020) noted, effective segmentation could enhance competitiveness, while also

contributing to sustainable tourism by addressing issues such as overtourism and directing tourists to less popular areas and during periods of low demand.

However, while traditional segmentation methods, such as demographic profiling based on age, gender, or income, remain relevant, increasingly complex tourist activities highlight the need to shift to psychographic segmentation. This could allow DMOs could develop marketing strategies targeting specific visitor segments (Theodorakopoulos & Theodoropoulou, 2024; McKercher et al., 2022). Nonetheless, conventional data collection tools, in the format of static surveys, fail to capture the dynamic nature of tourist behaviour. Advanced technologies like mobile app tracking, GPS data, and social media analytics could offer DMOs real-time insights, allowing them to create more detailed visitor profiles (Montag et al., 2021).

As technology continues to transform the tourism sector, the role of DMOs is evolving rapidly. Artificial intelligence, big data, and algorithmic marketing have revolutionised visitor segmentation, experience design, and tourism management. However, while these digital tools could enhance personalisation and efficiency, they also raise questions about the long-term relevance of traditional DMOs (Buhalis et al., 2023; Pearce & Oktadiana, 2019). To remain relevant, DMOs might need rebranding and repositioning, incorporating digital solutions to continue operating in their strategic role in destination management. Those that adapt technology-informed approaches will be more able to adapt to swift market change and changing visitor expectations. Those that do not embrace digital transformation, on the other hand, risk being gradually replaced, potentially marking the end of DMOs in their current form.

2.2 Travel motivation and tourist typologies

Introduction

This section examines key theoretical perspectives on travel motivation and the evolution of tourist typologies to support effective market segmentation. The development of typologies that group tourists according to psychological, behavioural, or demographic factors has been influenced by both traditional and modern models of tourist motivation. Whereas earlier frameworks frequently relied on strict classifications or narrowly defined socio-demographic factors, more recent approaches take a multifaceted approach. These developing models encourage the integration of psychological concepts into more flexible segmentation techniques in addition to highlighting the relationship

between motivation and personality. This section lays the theoretical groundwork for understanding and classifying tourists, which directly contributes to sustainable and responsive destination management.

Recent studies highlighted the importance of DMOs adopting new technology and building an in-depth understanding of tourists' needs and behaviour (Buhalis et al., 2023). However, an understanding of tourist typologies, as illustrated in foundational works of Cohen (1972, 1974, 1979), Plog (1974), and Mehmetoglu (2004), are crucial in guiding strategic planning and creating tailored experiences for different types of travellers. As DMOs aim to balance economic growth with cultural and environmental sustainability, the integration of behavioural insights sets the foundation for achieving their long term-goals (UNWTO, 2019; Dolnicar, 2022; Mihalic, 2020). Typologies such as those developed by Cohen (1972, 1979) and Plog (1974, 2001) categorised tourists in terms of behaviours, offering a systematic structure to understanding the heterogeneity of tourism markets. Such typologies are not only the subject of scholarly research but also find practical application, as they enable tourist practitioners to create experiences that align with their sustainable goals. Additionally, researchers such as Smith (1977) and Redfoot (1984) expanded on these typologies, highlighting the importance of external drivers and dynamic social forces that shape tourist preferences.

Building on these typologies, the concept of tourist roles adds further depth by capturing varied expressions of motivations through distinct behavioural characteristics (Gibson & Yiannakis, 2002). These roles emphasise the diverse ways individuals engage with travel, shaped by their context, experiences, and socio-cultural backgrounds (Gretzel et al., 2004; Park et al., 2010). As such, the integration of motivational theories with typologies and roles offers a multi-dimensional framework for understanding travel behaviour, providing tourism researchers and DMOs with the tools to implement precise strategies that align with tourist expectations while fostering sustainable practices (Delić, Neidhardt, & Werthner, 2016; Neidhardt et al., 2014, 2015). This chapter explores these early typologies and tourist roles and their relevance to contemporary tourism management. Through the critical evaluation of these concepts, the chapter reveals how understanding tourist motivations, typologies and roles could support the adaptability and resilience of today's tourism industry.

2.2.1 Travel motivation theories

Motivation, as a foundational psychological and physiological state, lies at the core of the understanding of travel behaviour and decision-making, an argument supported by Pan and Shang (2023). Originating etymologically from the Latin term *movēre*, or 'to move', motivation is a term used to describe the influences that initiate, direct, and sustain human action (Ryan & Deci, 2017). Murray's (1938) conceptualisation positions motivation as an inward force that stimulates, organises, and drives behaviour with the aim of alleviating a dissatisfactory state. Building on these early conceptualisations, Pereira, Gupta, and Hussain (2022) emphasised that travel motivation itself is about the traveller's belief that a destination will likely fulfil inner desires, a notion supported by Verma and Sarangi (2019).

As Reeve (2024) further suggested, motivation can be most effectively understood as a process rather than a fixed state. Wu et al. (2019) also emphasised that travel motivation is understood by viewing it as an adaptive process, relying on changing cultural values, life stages, social class, earlier experiences, and environmental factors. The literature highlights some of the key theoretical frameworks that expand this notion. For instance, Maslow's (1943) hierarchy of needs provides a broad psychological framework that focuses on the pursuit of various needs, from physiological to self-actualisation. Dann's (1977, 1981) push-pull model distinguishes internal stimuli, such as the desire for escape, and external pull factors like destination features. Crompton's (1979) work emphasises novelty and escapism, whereas Iso-Ahola's (1980–1989) social-psychological theory describes motivations for recreation as fulfilling personal and needs. These concepts were further refined by Beard and Ragheb's (1983) leisure motivation scale and Pearce's (1988, 2019) travel career ladder and travel career pattern, which revealed how motivation evolves with travel experience.

Although the theoretical foundations of traditional and contemporary models of tourist motivation differ, they all emphasise how complex and dynamic travel motivation is. Some focus on external, sociocultural influences (Dann, 1977; Crompton, 1979), while others emphasise internal psychological needs (Maslow, 1943; Iso-Ahola, 1980). Maslow's (1943) hierarchy of needs outlines a progression of needs from basic survival to self-actualisation, whereas Dann's (1977; 1981) push-pull framework highlights the interaction between intrinsic desires (such as escape) and extrinsic destination attributes.

While Crompton (1979) emphasises novelty-seeking and escape as the main travel motivators, Iso-Ahola (1980–1989) frames motivation as a dual pursuit of personal rewards and avoidance of negative states. These observations are expanded by Pearce's (1988, 2019) Travel Career Ladder and Travel Career Pattern models, which show how motivations change with travel experience. Beard and Ragheb's (1983) Leisure Motivation Scale expands the discussion by combining intellectual, social, and physical motivations into a comprehensive framework.

Despite having different points of emphasis, these models agree that a variety of situational, social, and personal factors that vary over time influence people's motivation to travel. This knowledge is particularly relevant for Destination Management Organisations (DMOs), which must adapt to the evolving needs and expectations of tourists. By applying these theories, destinations could develop more adaptable and sustainable tourism strategies that consider the evolving motivations of travellers (Volchek et al., 2020; Gertner & Freire, 2019). This section introduces and assesses these perspectives to serve as a foundation for more advanced segmentation methods in contemporary tourism research.

Abraham Maslow (1943)

Maslow's (1943) five-level hierarchy of needs remains one of the most widely used models among researchers to understand human behaviour (Yousaf et al., 2018). According to Maslow's (1943) theory presented in figure 2 below, travellers initially seek destinations that fulfil physiological needs, such as accommodations, food, and water. Once these are fulfilled, safety becomes a priority, with tourists opting for secure locations. Social belonging follows, where individuals travel to belong to other groups, be it family, friends, or local communities. Once these needs are met, the motivation evolves to self-esteem, where travel choices reflect a desire for social recognition. Lastly, self-actualisation drives travellers to seek experiences that challenge them as individuals or contribute to society (Maslow, 1943).

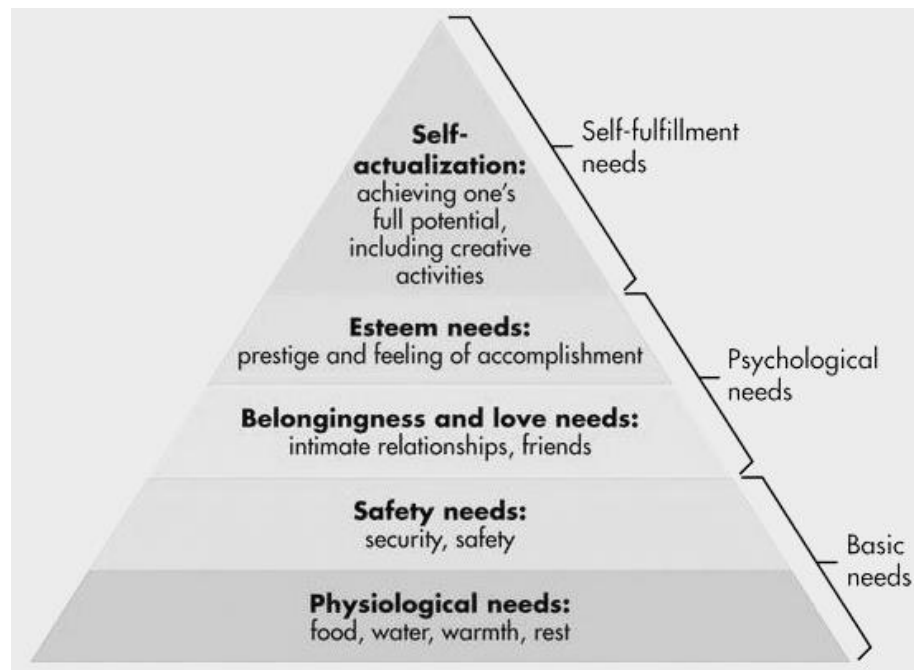


Fig. 2: Hierarchy of needs (Source: Maslow, 1943)

Although Maslow's (1943) hierarchical model was a valuable framework during its time, offering a structured understanding of human motivation, in today's age of modern travel, where motives are more varied and are often pursued simultaneously, this model is overly simplified (Pearce, 2005). With technology dominating the tourism industry, such traditional models like Maslow's (1943) can no longer capture the complexity contemporary travel behaviours, led nowadays by data and real-time interaction (Gretzel et al., 2015). While DMOs in the past might have been guided by Maslow's (1943) theory to shape destination planning, their application today over-simplifies the multifaceted nature of tourist decision-making. Xiang et al. (2021) further highlighted that new, more responsive and dynamic models along with technological advances offer more insightful and accurate ways of understanding the motivations of today's tourists.

Graham Dann's (1977; 1981) push-pull theory

Dann's (1977; 1981) push-pull theory of motivations is another acknowledged theoretical framework with a more tourism specific focus. According to Dann (1997), there are multiple variables that motivate travellers to visit specific areas or destinations, and these can be classified as either push or pull motives. At their most basic level, push factors can be described as intrinsic motivations or internal drives that motivate people to travel. These are linked to desires for leisure, recreation, adventure, and escape, as well as a desire to overcome the sense of isolation that comes with modern living (Klenosky,

2002). Pull factors, on the other hand, are usually related to destination amenities such as service quality, and infrastructure. When these elements are applied to tourism, researchers discovered that push forces are more physiological and inward in nature (Lee et al., 2002).

According to Lee et al. (2002), push factors determine *whether* to travel, while pull factors dictate *where* to travel. Pull factors originate within destinations, but they can also assist in generating push forces. Visitors' expectations in terms of costs, amenities (e.g., accommodation, transportation, food, restaurants), and, most importantly, the degree of quality offered should all be met by destinations. Although they cannot completely control how visitors build images of their locations, Morrison (2023) noted that DMOs and tourism sector stakeholders have the most power over the pull forces. Yousef et al. (2018) further argued that when properly understood and used by destination planners, push forces can be transformed into pull factors, which are external in origin and attract more tourists to specific areas.

John Crompton (1979)

Crompton (1979) highlighted that a disruption of an inner balance, defined as equilibrium, is what drives individuals to take actions. Hence, Crompton's (1979) study focused on in-depth interviews to identify the states of tension causing the disequilibrium and how these influenced respondents in the United States to select vacation destinations. Contradictory to Dann's (1981) assumption that tourists are drawn to a destination primarily based on its specific attributes or cultural opportunities, Crompton's (1979) study showed that for some respondents, the destination itself was rather irrelevant. According to Crompton (1979), respondents did not travel to specific regions in search of cultural insights. Instead, they did it for sociological and psychological reasons, and the location was only a means to an end for these goals to be achieved. Crompton (1979) identified nine motives for pleasure vacations, seven of them being socio-psychological, push motivations: escape from a seeming dull environment, self-examination, relaxation, prestige, regression, strengthening of relationships, and social interaction. The other two cultural motives, include novelty and education, pull motivations, concerned with the destination rather than internal individuals' motivations.

These insights remain crucial for DMOs, as it highlights the importance of understanding the underlying psychological and emotional needs of potential visitors. In

this context, traditional marketing strategies that focus on destination attributes may fail to capture the multifaceted motivations driving contemporary tourists. Moreover, with the rise of advanced technologies, DMOs could gain deeper insights into the psychological drivers of tourism behaviour, moving beyond static, mass messaging (Gretzel et al., 2015; Xiang, Fesenmaier, & Werthner, 2021). By understanding what motivates visitors, DMOs could create more targeted and personalised communications, presenting destinations not only as attractions, but as places that fulfil specific psychological and sociological needs.

Seppo Iso-Ahola (1980, 1982, 1983, 1989)

Iso-Ahola (1980, 1982, 1983, 1989) criticised and expanded on Dann's (1981) theory on tourist motivation. He asserted that Dann's (1981) definition of tourist motivation was only partly correct. He agreed to Dann's (1981, p. 205) definition that tourist motivation is "*a meaningful state of mind which adequately disposes an actor or group of actors to travel*" but asserted that the latter part of the definition "*has nothing to do with the process of motivation and is therefore ignored*" (Iso-Ahola, 1982, p. 257). Iso-Ahola (1982) questioned Dann's (1981) emphasis on motivation as a sociological concept, as motivation is just a psychological term. Therefore, the researcher stated that individuals' motives are formed when they contemplate on future activities that potentially create satisfaction, proposing the socio-psychological model. According to Iso-Ahola (1982), the two main motives in leisure tourism involve 'seeking intrinsic rewards' and 'escaping the everyday environment'. These motives can exist simultaneously, and both have personal (psychological) and interpersonal (social) elements (Snepenger et al., 2006). The escaping/seeking hypothesis is a four-quadrant model that considers personal rewards and interpersonal situations. Personal rewards include self-determination, a sense of competence or mastery, challenge, learning, exploration and relaxation, while interpersonal rewards arise from social interaction. However, both escape and seeking motives are linked to the push-pull variables proposed by Dann (1977, 1981) and Crompton (1979).

Jacob Beard and Mounir Ragheb's (1983)

Further, Jacob Beard and Mounir Ragheb (1983) aimed to identify the psychological and sociological determinants that drive individuals to participate in recreation. Their research led to the development of the Leisure Motivation Scale, a 48-question measure that is designed to assess the motives of leisure pursuits. It focuses on four distinct dimensions of motivation: intellectual, social, competence-mastery, and

stimulus-avoidance, each defining a unique concept of what motivates individuals to seek leisure.

The intellectual subscale addresses motivations of cognitive stimulation, such as exploration, learning, and creativity, derived from an intrinsic need for mental stimulation. The social subscale focuses on the social aspects of leisure regarding friendship, interpersonal relationships, and social acceptance. The competence-mastery subscale concerns a person's motivation to accomplish, learn new skills, master tasks, and compete, addressing motivations associated with personal development and accomplishment. Lastly, the stimulus-avoidance subscale examines the desire for evading trivial life, resting, solitude, or escape from everyday pressures.

Beard and Ragheb's Leisure Motivation Scale builds upon foundational insights from earlier works by Dann (1977, 1981), Crompton (1979), and Iso-Ahola (1980, 1982), offering a structured and quantifiable tool for examining leisure and tourism motivations. Their four-dimensional framework translates the qualitative theories of these predecessors into measurable constructs. For instance, the intellectual and competence-mastery subscales align with Iso-Ahola's (1980, 1982) seeking dimension, while the stimulus-avoidance subscale reflects his concept of escaping. Similarly, the social subscale resonates with Crompton's (1979) emphasis on sociopsychological motivations and Dann's (1977, 1981) push factors.

Edward Deci & Richard Ryan (1985)

The Self-Determination Theory (SDT) developed by Deci and Ryan in the mid-1980s is another motivational theory of psychology that focuses on intrinsic and extrinsic determinants of development, well-being, and motivation (Deci & Ryan, 1985). SDT highlights three essential psychological needs: autonomy, competence, and relatedness (Deci & Ryan, 2008). Autonomy is the need to control oneself, competence is the need to be competent and effective, and relatedness is the need for support and interpersonal connections. According to Ryan and Deci (2019; 2017) satisfaction of these needs results in higher motivation and overall well-being.

However, Nalipay et al. (2020) noted that while these needs are universal, they are expressed differently across cultures. In Western societies, autonomy is tied to personal freedom, competence with personal achievement, and relatedness with relationship awareness. In Eastern societies, autonomy is paired more with the interests

of the group, competence with social role performance, and relatedness with family ties (Nalipay et al., 2020). But these are general tendencies, and intra-cultural variation also exists. Nonetheless, SDT provides a universal foundation in several disciplines, including tourism (Deci & Ryan, 2008; 1985; Ryan et al., 2021), where it assisted in examining tourist motivation, satisfaction, and involvement (Sie et al., 2021). Autonomy, competence, and relatedness are emphasised as crucial in travel behaviours and general experience (Buzinde, 2020).

This theory also challenges the traditional DMO approaches that revolve around extrinsic factors such as destination features and promotions, by highlighting psychological satisfaction as significant driver of tourist behaviour. This calls for a change in segmentation and engagement by DMOs with tourists from broad demographic segmentations to psychographic segmentation of more profound motivational drivers. Understanding what motivates different tourist segments could inform policies to encourage responsible behaviours, promote longer stays, and distribute visitor flows more effectively, ultimately finding the balance between economic, environmental and social sustainability.

Charles Pearce (1988; 2019)

Based on Maslow's (1943) five-level hierarchy of needs, Pearce (1988) proposed the Travel Career Ladder (TCL) model, which identifies five travel objectives linked with relaxation, stimulation, relationship, self-esteem, and development or fulfilment. According to the model, travel motivations are divided into two groups: self-centred, and motivations directed towards others, as displayed in figure 3 below.

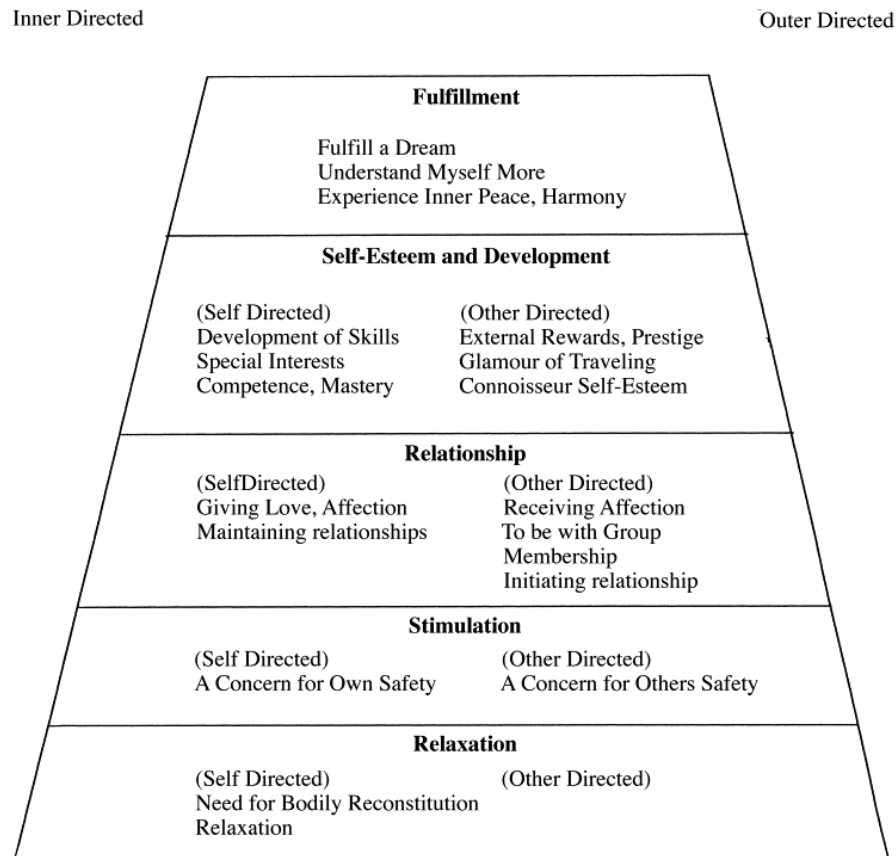


Fig. 3: Travel Career Ladder (Source: Pearce, 1988)

The model suggests a career ladder in tourism behaviour, and as travellers become more experienced, they seek satisfaction of higher needs (Ryan, 1998, Pearce & Caltabiano, 1983). As a result, as these travellers gain more travel experience, their motives shift. Different levels of experience, however, are insufficient to explain all tourist motivations because they are also influenced by social, psychological, technical, and demographic factors such as family size, education, and a longer average life expectancy (Tanrisever et al., 2016). Some authors highlighted that traveller demands also shift as educational levels improve (Çeken et al., 2008; Tanrisever et al., 2016). The use of the term 'ladder' in Pierce's (1988) theory has been criticised by other researchers as it has caused misunderstanding by implying that needs only ascend from the lowest to the highest level, a criticism similar to Maslow's (1943) theory (Ryan, 1998; Kim et al., 1996). Travellers can start at any TCL level and work their way up or down according on their previous experiences, knowledge of the activity, and level of involvement in the given activity, or go from one side of the ladder to the other.

Built around the idea of the travel career, Peace and Lee (2005) proposed the Travel Career Pattern model (TCP), one of the most influential theoretical frameworks

based on Maslow's (1943) hierarchy of requirements. According to TCL theory, travellers ascend the travel motivations ladder as their level of travel experience grows, whereas TCP theory views these motivations as a complex and dynamic process involving multiple levels at the same time. The TCP framework comprises the following motivational factors: novelty, escape/relax, relationship strengthening, autonomy, seeking nature, self-development (host-site and personal development), stimulation, relationship security, self-actualisation, isolation, nostalgia, romance, and recognition (Peace & Lee, 2005).

Novelty involves different and fun experiences, escape/relax refers to the need to get away from the daily routine and stress, strengthening relationships is the desire to associate and interact with family and friends, autonomy reflects the desire to be independent, seeking nature involves scenery appreciation. Self-development involves personal growth, skill development and interaction with host cultures, while stimulation involves adventuresome experiences. Relationship security involves respectful company and personal safety, while self-actualisation is about gaining a fresh perspective on life and understanding more about oneself. Isolation is the need to be away from crowds of people, nostalgia involves reflecting on memories, romance involves engaging in romantic partnerships, and recognition refers to the desire of having others know about the trip (Wannasan & Jianvittayakit, 2022). According to Peace and Lee (2005) three of these motivations (escape, novelty, and relationships) form the backbone of the TCP, and they are highly important in shaping individuals' travel choices and experiences.

The TCP was further revised to suggest that while kinship and self-enhancement lose significance as travel experience rises, self-improvement and nature gain value, as represented in figure 4 below (Pearce, 2019).

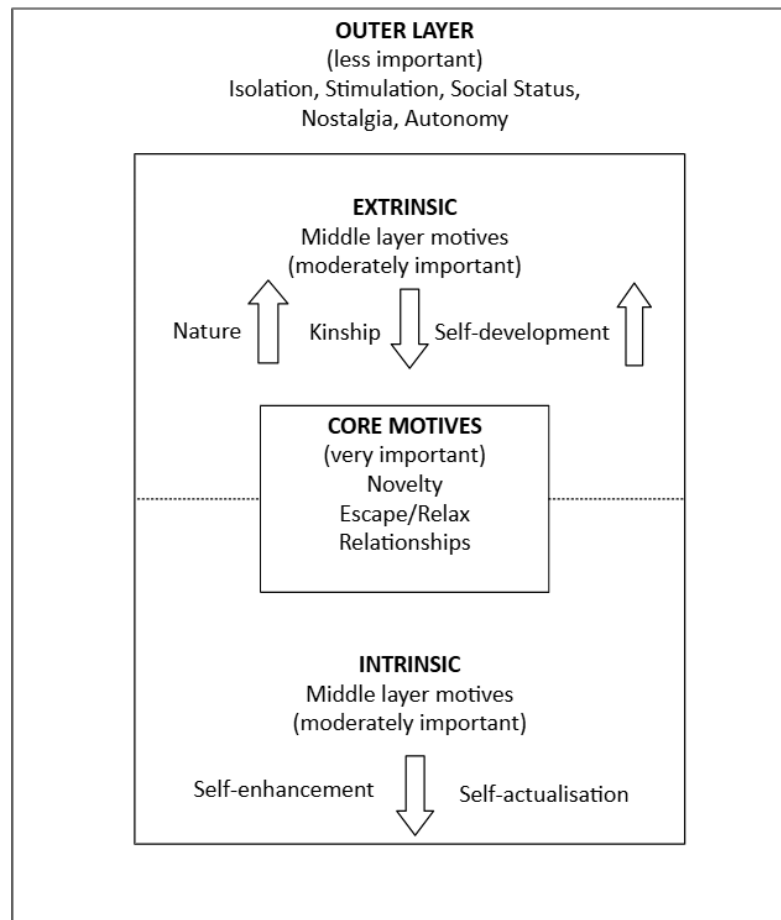


Fig. 4: Updated Travel Career Pattern (Adapted from Pearce, 2019)

MacInnes, Ong, and Dolnicar (2022) demonstrated the versatility of the TCP theory as a framework for understanding travel motivations across diverse tourist groups. Its applicability was reinforced by studies examining specific subgroups, such as study-abroad students (Song & Bae, 2018) and individuals from different religious and cultural backgrounds (Hassani & Moghavvemi, 2020; Oktadiana & Pearce, 2018). While Li, Pearce, and Zhou (2015) observed that inexperienced tourists find all three levels of the TCP framework useful, experienced tourists prefer the middle level, and this might suggest that increased travel experience leads to a shift in motivational focuses. MacInnes, Ong, and Dolnicar (2022), however, counter this perception showing that travel experience is not always an influence on motivations or travel behaviour, highlighting the heterogeneity and complexity of travel decision-making.

Travel motivations also play a critical role in shaping outcomes such as destination satisfaction, revisit intention, and willingness to recommend, as highlighted by Bayih and Singh (2020) and Wen and Huang (2019). Motivations also shape behavioural intentions

(Lu et al., 2016), destination loyalty (Sato et al., 2018), and marketing strategies (Wen & Huang, 2019; Ying et al., 2018). Taecharungroj and Mathayomchan (2019) emphasise the significance of destination image to initiate visitor interest, and Li et al. (2023) cautioned against potential mismatches between anticipated and perceived destination images, which could influence tourist perceptions and satisfaction. Despite the destination specific nature of travel motivations identified by Morrison (2023), recurring themes such as novelty and escape emerge consistently across diverse travel contexts (Maghrifani, Liu & Sneddon, 2022). Novelty-seeking, particularly, has been identified as a key driver for international travel among varied tourist groups and destinations (Dayour & Adongo, 2015).

These findings emphasise the importance of travel motivation theories in understanding tourist behaviour and developing marketing and management strategies in tourism. However, these theories are limited by their static nature and not accounting for digital platforms and real time data, hindering their relevance in today's tourism landscape. The table below summarises the most frequently researched travel motivation theories in tourism.

Table 1: Summary of key travel motivation theories

Author (Year)	Theory Name	Contribution
Maslow (1943)	Hierarchy of needs theory	Explains that human behaviour is the outcome of various needs that occur in a hierarchal order and the fulfilment of one need leads to an awareness of the next level of need. Provides a better understanding of how human needs are a crucial underlying factor in any context
Dann (1977)	Push and pull theory of tourist motivation	Builds a theoretical framework based on two concepts: anomie and eco-enhancement. Defines the anomie factor as the desire to transcend feelings of isolation, while eco-enhancement derives from personal needs.
Crompton (1979)	Socio-psychological motivations to travel	Identifies seven socio-psychological motives and two cultural motives that drive individuals to travel
Iso-Ahola (1982)	Social psychology model of tourism	Based on push and pull effects, asserts that personal escape and search and interpersonal escape and search motivate tourism and recreation. Combines the main elements (e.g., escape and reward) depending on the situation and tourists' goals.

Beard and Ragheb (1983)	Psychological and sociological factors	Identified four-subscales: intellectual, social, competence-mastery, and stimulus-avoidance, relating to the psychological and sociological factors that influence people's decision to engage in recreational activities. Developed a 48-item scale measuring leisure motivation.
Deci & Ryan (1985)	Self-Determination Theory (SDT)	SDT emphasises three basic psychological needs: autonomy, competence, and relatedness, as essential for fostering intrinsic motivation and well-being.
Pearce (1988)	Travel Career Ladder (TCL)	Lists five travel motivations: relaxation, stimulation, relationship, self-esteem and development or fulfilment. Categorises travel motivations into two groups: needs that are self-centred and needs that are directed at others.
Pearce and Lee (2005)	Travel Career Patterns (TCP)	Centres on 14 motivational factors: 1) Self-actualisation – internal 2) Self-enhancement – internal 3) Romance – internal 4) Belonging – internal 5) Autonomy – internal 6) Self-development (i.e., host site involvement) – external 7) Nature – external 8) Escape/relax – most important 9) Novelty – most important 10) Kinship – most important 11) Nostalgia – less important 12) Stimulation – less important 13) Isolation – less important 14) Recognition and/or social status – less important

Source: Adapted from Yousef et al. (2018); Pearce and Lee (2005); Pearce (1988); Deci & Ryan (1985); Beard and Ragheb (1983); Iso-Ahola (1982); Crompton (1979); Dann (1977); Cohen (1972); Maslow (1943)

2.2.2 Tourist typologies

Tourist typologies have long provided a structured model for categorising travellers based on their characteristics and travel patterns, offering insights into the diversity of tourist behaviour. Researchers such as Boorstin (1992), Cohen (1972, 1974, 1979), Gray (1970), Plog (1974), Redfoot (1984), and Smith (1977) were influential in developing typologies, which enriched our understanding of tourist behaviours. Scholars and practitioners have used these typologies to segment the tourist market and to formulate strategies tailored to specific traveller interests. Although their limited ability in capturing today's dynamic nature of tourist experiences, these models provide the foundation for travel behaviour analysis, and a basis for further research.

2.2.2.1 Daniel Boorstin (1964)

Daniel Boorstin (1964), a prominent historian and tourism critic, emphasised the decline of the traditional traveller who was interested in genuine cultural experiences. Boorstin (1964) categorised tourists based on their connection with authenticity in his typology, ranging from travellers who actively pursue authentic experiences to tourists who experience pre-packaged, commodified attractions passively, typically known as 'pseudo-events'. He also mentioned anti-tourists, who attempt to escape mainstream tourism but end up with commodified 'off-the-beaten-path' experiences that are still not authentic.

Boorstin (1964) described the modern mass tourist, who was characterised as preferring spectacle and entertainment over true cultural participation. To him, tourists get to participate in pseudo-events, events that are manufactured to meet their expectations rather than offer true culture. For instance, he hypothesised that the tourists might not care if the Salsa classes they visit are adapted to their entertainment purposes rather than presenting the real art form (Boorstin, 1964). This argument appeals to Boorstin's (1964) belief in objective authenticity, emphasising how tourists would ignore the inauthenticity of such staged experiences. His views were supported by researchers such as Dovey (1985) and Fussell (1980), who also stated that modern tourism often does not provide authentic cultural experiences. Through its exposure of the commodification of travel, Boorstin's (1964) work remains an influential source in discussions on the authenticity and meaning of modern tourism practice.

2.2.2.2 Erik Cohen (1972, 1974, 1979)

In response to Boorstin's (1964) critical stereotyping of tourists as a single, undifferentiated group, Cohen (1972) expanded the understanding of tourist behaviour and pioneered the development of a typology. Cohen's (1972) sociologically based tourist typology remains relevant in modern research. According to Cohen (1972), tourist experiences have dimensions of novelty and familiarity and are determined both by individual preferences and by the institutional context of the visit. Cohen (1972) proposed that tourists travel along a continuum between familiarity and novelty, with their experience falling somewhere in between. By analysing how tourists balance their desire for new experiences against elements of the familiar, Cohen (1972) identified four tourist roles: the organised mass tourist, the individual mass tourist, the explorer, and the drifter. The first two, the organised mass tourist and the individual mass tourist, are described as

institutionalised tourists, who opt for familiarity and structured experiences. The drifter and the explorer, on the contrary, are described as non-institutionalised tourists, who opt for new, less conventional experiences. This distinction, as illustrated in figure 5 below, is a fundamental theoretical framework for understanding different tourist behaviours.

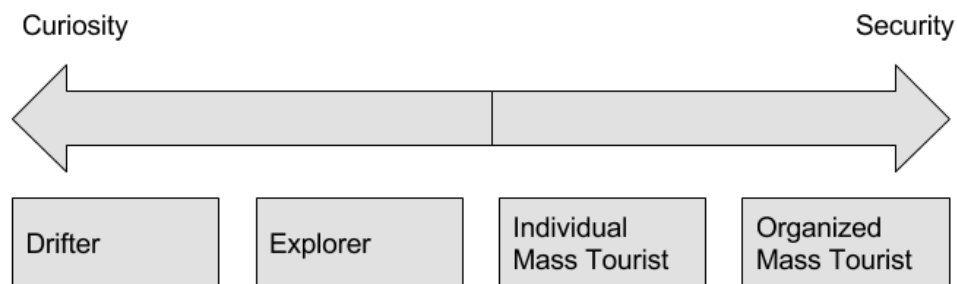


Fig. 5: Typology of tourists (Adapted from Cohen, 1972)

Importantly, Burns (1999) further observed that Cohen's (1972) typology is also a powerful framework of analysing the impacts of different types of tourists on destinations. Cohen's (1972) typology supports this in identifying specific behaviour patterns and their respective effects, including local resource pressure, infrastructure, and impacts on local cultural practices and community dynamics. For example, organised mass tourists who typically choose packaged activities might add different pressures on destinations, compared to explorers who prefer less visited destinations. By recognising the various impacts of each type of visitor, stakeholders could then implement practices that address diverse preferences, while supporting sustainable tourism.

Cohen's (1972) theory also suggests that tourists' familiarity and novelty desires are represented on a continuum, and these desires determine where they travel. Svein et al. (2019) expanded this by demonstrating that the most appealing destinations are where familiarity and novelty find their middle ground, and tourists interpret their experience through a mix of the two. While explorers and drifters identify themselves as unique compared to ordinary tourists due to their novelty-seeking nature, research revealed that they may share the same motivations as other tourist types (Svein et al., 2019).

Building on Cohen's (1972) typology, Fan et al. (2017) focused on social interactions between locals and tourists, and identified five typologies: Dependents, who prefer minimal interaction; Conservatives, who engage passively; Criticizers, who reinforce dominant cultural views; Explorers, who try to change perceptions; and

Belonging Seekers, who immerse in local cultures. Complementing Cohen's (1972) typology, this model captures variation in degrees of interaction with hosts, from superficial to profound, and highlights the role of motivations in shaping interaction dynamics. Similarly, Kusumawardhana et al. (2023) applied Cohen's (1972) typology to Indonesian tourists, highlighting the significance of novel experiences and cultural interaction to travel decision-making. These recent expansions of Cohen's (1972) typology reaffirm its foundational insights along with the need for advanced methodologies in analysing visitor behaviour to create more effective sustainable tourism strategies.

2.2.2.3 Valene Smith (1977); Donald Redfoot (1984); Peter Gray (1970); Mehmet Mehmetoglu (2004)

Cohen's (1972) tourist typology has been instrumental in shaping all later attempts to categorise tourists and understand their behaviours. Following Cohen's (1972) typology, Smith (1977) developed a typology of seven tourist types: explorers, elite tourists, off-beat tourists, unusual tourists, incipient mass tourists, mass tourists, and charter tourists. Explorers seek unknown, authentic experiences with minimal reliance on infrastructure, while elite tourists prioritise luxury and selectivity. Off-beat tourists and unusual tourists prefer less mainstream destinations, the latter seeking unique, unconventional experiences. Incipient mass tourists are an interim category, leaning towards semi-packaged travel, while mass tourists prefer established, standardised packages. Charter tourists are most structured in that they enjoy pre-packaged tours emphasising costs and convenience (Smith, 1977). Sharpley (1999) criticised Smith's (1977) categories, claiming that some of them overlap, and they have limited applicability.

By 1979, Cohen had developed further his earlier work by incorporating MacCannell's (1976) idea of authenticity as a response to the superficiality of modern life. Drawing on Alfred Schutz's phenomenology (Dann & Cohen, 1991), Cohen (1979) constructed a continuum of tourist experience based on the preferred as opposed to actual tourist behaviour. He identified five forms of experiences: recreational, diversionary, experiential, experimental, and existential, with varying levels of tourists' engagement in authenticity and meaning. The categories reflect a progression from superficial recreation to deeper existential searches for identity and meaning through tourism.

Similarly, Redfoot (1984) also developed a theory of authenticity with his typology of 'touristic realities' to examine how tourists seek meaning and authenticity. He identified four types: the first-order or 'true tourist', concerned with typical tourist activities; the second-order or 'Angst-ridden tourist', responsive to inauthenticity but lacking the ability to escape from it; the third-order or 'anthropological tourist', concerned with cultural sensitivity; and the fourth-order or 'spiritual tourist', seeking profound self-discovery. Each of them was, nevertheless, criticised by Redfoot (1984) as being in their own way seeking inauthenticity, and therefore highlighting the paradox of authenticity-seeking.

A simpler binary typology was introduced by Gray (1970) as sunlust or wanderlust types. Sunlust tourist represents a desire for exposure to things that one may not have back home, such as facilities, while wanderlust is a search for the novel and unknown. Similarly, Gottlieb (1982) categorised tourists as 'peasant for a day' or 'queen/king for a day', reflecting motivations for a break from ordinary life or living in luxury. Graburn (1983) also encompassed the themes of 'self-testing tourism' and 'modal tourism', while Urry (1990) introduced the idea of romantic gaze, representing individuated experiences, and collective gaze, focusing on shared, social encounters.

While these typologies provide insights into tourist behaviour, they have some limitations. Lowyck et al. (1992) criticised such typologies since they are based on one dimension, for instance, psychographics or specific travel motivations, which are often etic (researcher-driven) as compared to emic (tourist-driven) understanding. Addressing these limitations, Mehmetoglu (2004) developed a typology based on psychographic factors and empirical data. Single travellers, with individualist mindsets and personal travel philosophies, were compared to group tourists, with collectivistic mindsets and a preference for organised, communal experiences. Mehmetoglu's (2004) individualistic to collectivistic orientation scale provides a more comprehensive understanding of tourist motives, bridging the gap between theoretical typologies and empirically based categorisations. This multi-dimensional approach enriched the study of tourist behaviour by including heterogeneous travel motives, values of travellers, and travel philosophies, providing scope for more inclusive models in tourism research.

2.2.2.4 Stanley C. Plog (1974)

Stanley C. Plog's psychographic model is extensively utilised in tourism studies (Litvin, Guttentag, & Smith, 2022; Bayarsaikhan, Kim, & Gim, 2020; Kim, Yilmaz & Choe, 2019; Cruz-Milán, 2018; Goeldner, 2016). Initially created in 1967 during a research project funded by 16 companies including airlines, airframe manufacturers, and various magazines, the model aimed to understand the psychology of specific tourist segments (Plog, 1974). Plog has consistently refined this model over the decades. As depicted in figure 6, Plog's (2001) psychographic personality type model categorises personalities into five groups: psychocentric, near psychocentric, mid-centric, near allocentric, and allocentric (Plog, 2001; 1974). The psychocentric type is characterised by a cautious and passive personality, preferring familiar tourist destinations. In contrast, the allocentric type is adventurous, confident, and curious, favouring unique sites less frequented by others (Plog, 2002; 2001). Generally, the extreme psychocentric and allocentric types each represent about 2%–4% of the population. The near psychocentric/allocentric and mid-centric types comprise 16% and 62%, respectively (Merritt et al., 2016; Morakabati & Kapuściński, 2016; Park & Jang, 2014; Plog, 2002; 2001; 1974).

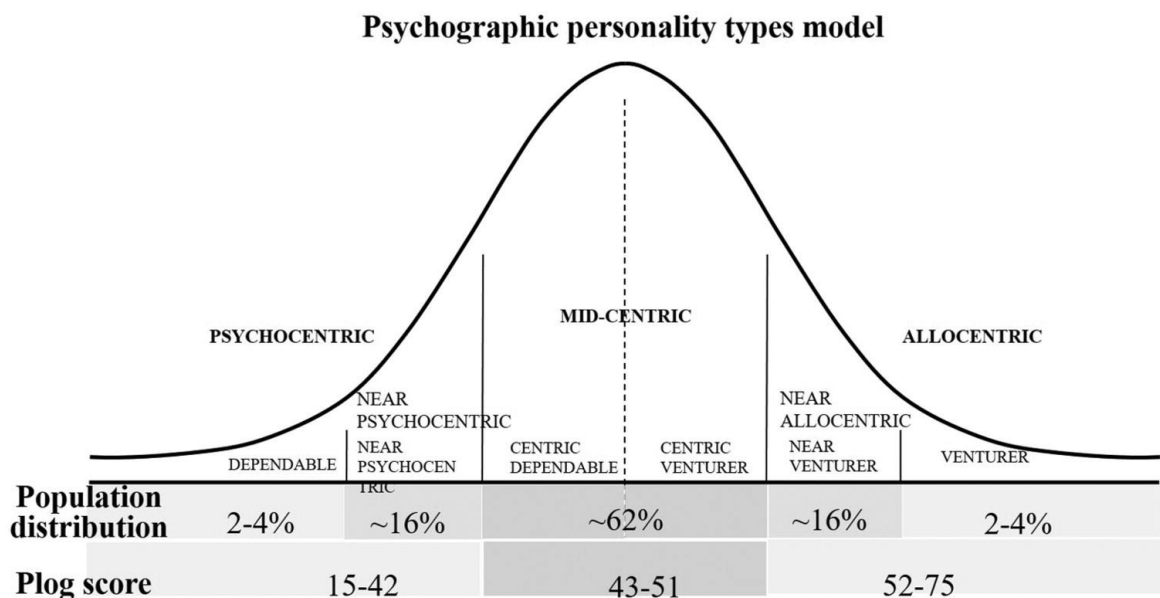


Fig. 6: Plog's psychographic personality type model (Adapted from Plog, 2002; 2001)

Kim et al. (2019) reinforced the relevance of Plog's (1974) psychographic model by demonstrating how travellers' behavioural intentions and attitudes towards travel are influenced by the compatibility between their travel personality and the perceived

attributes of a destination. Their experimental research showed that tourists are drawn to those destinations that most closely fit their underlying travel personality, thereby validating Plog's (1974) typology as an explanatory paradigm of tourist behaviour. They emphasised the pragmatic value of personality-based approaches to marketing, which can suitably respond to different audience groups by offering appropriately matched messages to psychographic profiles (Kim et al., 2019). For example, marketing messages designed for psychocentric and allocentric segments (as shown in figure 7) highlight the elements that match the specific preference of each segment. Psychocentric travellers responded positively to messages that emphasised comfort, security, and familiarity, while allocentric travellers were more receptive to materials that promoted adventure, novelty, and discovery (Kim et al., 2019). These findings established that personality-marketing strategies enable destination marketers to craft focused, segmented marketing strategies, tailoring communications to inherent travel preferences and maximising their promotional efforts.

Message 1. Psychocentric	Message 2. Allocentric
Enjoy Tef Island – one of the most popular sites of South Korea. This beautiful island is at the top of the list for tourists from all over the world. You can take English-speaking guided tours to iconic spots on the island, enjoy popular world cuisine and stay at comfortable Western-style hotels, all internationally certified with service excellence. So that while on the other side of the world, you still have the comfort you are accustomed at home.	Explore Tef Island – one of the most unusual sites of South Korea. This beautiful island is the haven for the true adventurer. You can embark on your own journey of exploration, discover hidden treasures of history and nature, experience the warmth of the local people and taste the magical local food. So that when you break out of the ordinary, you witness first hand the wonders in the horizon.

Fig. 7: Message stimuli for psychocentric and allocentric (Source: Kim et al., 2019)

Empirical evidence further supported the predictive utility of Plog's (1974) model in segmenting tourist behaviours. Weaver (2012) identified distinct psychographic profiles among visitors to a protected natural area, correlating with Plog's (1974) psychocentrics-allocentrics. Similarly, Morakabati and Kapuscinski (2016) illustrated differences in risk perceptions, according to Plog's (2001) theory, whereby allocentric travellers are less risk averse and psychocentrics are more risk sensitive. Further, Litvin, Guttentag, and Smith (2022) examined the applicability of Plog's (1974) psychographic model in target market selection in the context of the COVID-19 pandemic, supporting these findings. These studies support the relevance of psychographic segmentation in forecasting travel preferences, and its validity as a tool for strategy in tourism marketing.

Despite its contributions, Plog's (1974) typology faced significant criticism. One major limitation is the model's oversimplification of traveller behaviour, confining individuals to rigid psychographic categories and potentially overlooking the diversity and fluidity of motivations and preferences (Piuchan, 2018). The classification of tourists as allocentric or psychocentric fails to account for dynamic shifts in travel choices. For instance, Hudson (2008) noted that preferences can vary significantly over time, such as when a traveller seeks cultural immersion on one trip but chooses a familiar package holiday on another, challenging the model's assumption of static profiles.

Another critique relates to the model's limited predictive power (Cruz-Milán, 2018). Plog's (2001) focus on psychological factors does not consider socio-economic status, or culture influences on travel decisions. The homogenous segmentation also risks overlooking individual preferences within each category, limiting its practical use for marketing and management strategies. Additionally, cultural adaptability is another significant shortcoming of Plog's (2001) model. Traveller behaviour is deeply influenced by cultural norms, which a universal psychographic framework may not adequately capture (Piuchan, 2018). Further, Cruz-Milán (2024) emphasised that the model has not evolved sufficiently to reflect modern travel trends, changing consumer behaviours, and technological progress. These limitations highlight the need to actualise Plog's (2001) typology to better address the complexities of contemporary traveller behaviour, ensuring its relevance in an evolving tourism landscape.

Recent research (see table 2) shows a shift in tourism typology towards more varied conceptualisations, emphasising the ongoing deconstruction of established typologies to highlight the diversity of tourism experiences within them (Uriely, 2005). For example, Wickens (2002) identified five micro-types of tourists in Chalkidiki, Greece, based on Cohen's (1979) individual mass tourist type. These micro-types include the Cultural Heritage type, interested in the area's cultural, natural, and historical aspects; the Raver type, drawn to sensual pleasures, beaches, and nightclubs; the Shirley Valentine type, seeking romantic encounters with locals; the Heliolatrous type, focused on relaxation and sunbathing; and the Lord Byron type, who returns annually for familiarity, nostalgia, and a sense of home. Similarly, Øgaard et al. (2019) expanded Cohen's (1979) tourist classification, while Bayarsaikha et al. (2020) developed typologies based on destination choice, drawing from Plog's (1974) framework. Additional research on ecotourism (Carrascosa-López et al., 2021), domestic tourists (Rishi & Chatterjee, 2023),

creative tourism activities (Remoaldo et al., 2020), and sensitive destinations (Jeong et al., 2018) further diversified insights into tourist clustering. Despite the valuable segmentation provided by these studies, broad typologies may not fully capture the complexity of tourist behaviour, suggesting a need for more comprehensive approaches.

Table 2: Psychographic tourist segmentation studies

Authors	Main factors	Destination	Methodology	Identified Segments
Carvache-Franco et al. (2023)	Evaluation of attractions Willingness to recommend	Mexico City, Lima, Buenos Aires, and Bogota	Surveys Cluster analysis	Lodging and restaurant services Multiple attractions Passive tourists
Lee & Kim (2023)	Wellness tourism motivation Satisfaction Revisit Recommendation Flow	Chungju, Korea	EFA Cluster analysis One-way ANOVA	Novelty-seeking Comprehensive motivation-seeking Neutral wellness-seeking Exploratory wellness-seeking
Rishi & Chatterjee (2023)	Travel motivations of domestic tourists	India	Surveys Cluster analysis	Self-enhancers Pleasure tourists Sensation seekers
Tessema et al. (2022)	Benefit attributes sought	Lake Tana region in Ethiopia	Surveys Factor analysis Cluster analysis	Activity–Nature Lovers Culture Lovers Nature–Culture Lovers Want-It-Alls
Carrascosa-López et al. (2021)	Ecotourism motives Satisfaction and loyalty	Posets-Maladeta Natural Park, Spain	Surveys Cluster analysis	Reward and escape Nature Multiple motives
Vargas et al. (2021)	Temperament and Character Lifestyle	Valencia, Spain	Surveys Cluster analysis	The Socials The Activists The Cautious The Adolescents
Baniya et al. (2021)	Purpose of visit and activities Motivations Satisfaction	Gaurishankar Conservation Area, Nepal	Surveys Factor analysis Cluster analysis	Local art and culture enthusiast Escapist Nature adventure
Bayarsaikha et al. (2020)	Plog's personality types Destination choices Travel-related variables	Mongolia	Multinomial logistic regression	Psychocentric tourists: Prefer urban tourist attractions. Mid-centric tourists: Inclined towards natural-rural areas. Allocentric tourists: Likely to visit primitive areas.
Chebli et al. (2020)	Personal factors (gender, age, motivation, geographic region of origin) on tourists' perception of the attractions	Unspecified international tourists visiting various urban destinations	Levene's test, Kruskal-Wallis's test Mann-Whitney test	Leisure tourists Business and professional activities tourists

Mordekhai, & Cownie (2020)	City Branding Hexagon: presence, prerequisite, place, people, potential and pulse	Jakarta, Indonesia	Surveys Cluster analysis	On Duty Traveller Deja Vu Traveller New Face Traveller
Remoaldo et al. (2020)	Travel motivations Perceptions Evaluation of activities	Portugal	Surveys Cluster analysis	Novelty-Seekers Knowledge and Skills Learners Leisure Creative-Seekers
Wen et al. (2020)	Tourism motivations Behavioural intentions	Amsterdam	Surveys Cluster analysis	Cannabis enthusiasts Diversionists/recreationists The curious
Jeong et al. (2018)	Travel motivations Attitudes Travel-related characteristics	Lao People's Democratic Republic	Surveys Factor analysis Cluster analysis	Nature and Cohesion-Seeking Tourists Nature-Seeking Tourists Passive Nature-Seeking Tourists Want-It-All Tourists
Øgaard et al. (2019)	Travel preferences, Destination valuations, Destination perceptions	Norway	Surveys Factor analysis Cluster analysis	Cohen's (1972) typology (organised mass tourist, individual mass tourist, the explorer, the drifter) with an additional segment: Lone Explorer, with less emphasis on cultural immersion and social contact
Pulido-Fernández et al. (2016)	Expenditure Travel-related characteristics Cultural activities at the destination	Andalusia, Spain	Poisson regression analysis	Cultural Events Gastronomic
Srihadi et al. (2016)	Psychographic lifestyle typologies (activities, interests and opinion)	Jakarta, Indonesia	Surveys Factor analysis Cluster analysis	Culture interest shopaholic Sporty culture explorer Aspiring vacationer Want-everything vacationer
Chiang et al. (2015)	Travel motivations, Tourism behaviour	Taiwan	Surveys, Cluster analysis	Casual travel seekers Sightseeing seekers, Novel knowledge seekers
Romão et al. (2015)	Motivations Satisfaction	Amsterdam	Factor analysis Structural equations model (SEM)	Cultural Business Entertainment
Chen, Bao, & Huang (2014)	Backpackers' travel motivation	China	Surveys Factor analysis Cluster analysis	Self-actualizers Destination experiencers Social seekers
Newman et al. (2014)	Travel motives of Taiwanese tourists	Hong Kong	Surveys Factor analysis Cluster analysis	Knowledge/expenditure seekers Sightseeing seekers Accessibilities/relax seekers Novelty seekers Facilities/hi-tech seekers
Li et al. (2013)	Travel motivations, Destination attributes	China	Surveys, Canonical correlation analysis	Entertainment/Adventure Seekers Life-seeing Experience/Culture Explorers Relaxation/Knowledge Seekers

Pesonen (2012)	Travel motives for rural holidays Destination attributes	Finland	Surveys, Cluster analysis	Social travellers Well-being travellers, Home region travellers Family travellers
Prebensen & Tkaczynski (2012)	Preferred nature-based activities	Norway	Surveys, Cluster analysis	Active Youngsters Single Nature Explorer High Scales Active Couples Retired Nature and Culture Seekers
Pesonen et al. (2011)	Benefits sought in wellbeing holidays	Savonlinna, Finland	Surveys Cluster analysis	Outdoor types Nature enthusiasts Sightseers Culturals
Wickens (2002)	Choice of holiday, types of activities, views about the host community	Chalkidiki, Greece	Qualitative analysis	Cultural Heritage The Raver The Shirley Valentine The Heliolatrous The Lord Byron
Cohen (1979)	Modes of tourist experience	Not specified	Qualitative analysis	Organised mass tourist Individual mass tourist The explorer The drifter
Plog (1974)	Psychographic characteristics of tourists (personality-venturesomeness vs dependability, values, attitudes, interests, lifestyles)	United States	interviews and observation Focused on identifying key factors influencing non-fliers' decisions	Psychocentric tourists Near-psychocentric tourists Mid-centric tourists Near-allocentric tourists Allocentric tourists

In today's rapidly evolving landscape, technology has taken a pivotal position in market segmentation, providing detailed insights into the ever-changing behaviours and preferences of modern-day tourists (Nilashi et al., 2021; Ahani et al., 2019). Mobile technology has revolutionised interaction, which can now utilise advanced segmentation methods that go beyond traditional demographic and psychographic methods. For instance, Ahani et al. (2019) utilised machine learning algorithms to analyse TripAdvisor data and uncover detailed customer profiles in the niche area of spa hotel travellers. Similarly, Nilashi et al. (2021) employed preference learning to identify segments of tourists within Malaysian spa hotels and offer a differentiated understanding of their behaviour. In Saudi Arabia, Alsayat (2023) applied social data analysis for the study of hotel choice behaviour, while Yadegaridehkordi et al. (2021) employed Multi-Criteria Decision Making (MCDM) and clustering analysis for segmenting eco-friendly tourists based on online reviews. These technology-driven advances provide evidence of increased accuracy and applicability of segmentation tools, transforming the capability of the tourism and hospitality sector to align to current customer demands.

2.2.3 Tourist roles/travel personae

While data-driven segmentation methods are helpful to distinguish behavioural patterns, the concept of tourist roles or travel personae introduces a complementary perspective by categorising the diverse participation forms of individuals in tourism. This perspective shifts the focus from quantitative analysis alone to one that is qualitative in exploring motives, preferences, and socio-cultural aspects, thereby complementing the information on the multi-faceted nature of travel behaviour. Building on earlier typologies (e.g., Cohen, 1972; Plog, 1974), subsequent studies by Gibson and Yiannakis (2002), Gretzel et al. (2004), and Park et al. (2010) also described the role of motivations and socio-cultural settings in influencing travel behaviour. Segmenting tourists based on their roles offers a more detailed approach, enabling destination planners to develop more specialised and targeted tourism strategies.

Gibson and Yiannakis (2002) based their research on foundational psychological theories and linked psychological needs to travel behaviour (e.g., Levinson et al., 1978; Crompton, 1979; Dann, 1981; Ryan & Glendon, 1998; Wahlers & Etzel, 1985; Yiannakis & Gibson, 1992). Identifying a gap in research on the differences between work-based and leisure-based travel roles, they proposed 17 distinct tourist roles to categorise the varied behaviours and interests of tourists (see table 3). These roles cover a wide range of motivations, activities, and interests, offering a more thorough understanding of the complex nature of travel behaviour.

Table 3: Tourist roles

Tourist Role	Description
1.Sun Lover	Enjoys beach holidays and sunbathing
2.Action Seeker	Pursues adventurous and adrenaline-inducing activities
3.Anthropologist	Interested in exploring different cultures and ways of life
4.Archaeologist	Fascinated by historical sites and ancient civilizations
5.Organized Mass Tourist	Prefers well-organized tours with minimal independence
6.Thrill Seeker	Interested in risky, exhilarating activities which provide emotional highs
7.Explorer	Enjoys discovering new and less-travelled destinations
8.Jetsetter	Prefers luxury travel and high-status destinations
9.Seeker	Looks for meaningful and self-enriching experiences
10.Independent Mass Tourist I	Prefers organized tours but likes some degree of independence
11.Independent Mass Tourist II	Seeks a mix of independence and organized activities
12.High Class Tourist	Values luxury and high-quality services
13.Drifter	Seeks off-the-beaten-path experiences and avoids mainstream tourism
14.Escapist I	Seeks to get away from daily life, choosing remote or tranquil destinations
15.Escapist II	Similar to Escapist I but with a focus on nature and solitude
16.Educational Tourist	Focuses on learning and educational experiences during travel
17.Active Sport Tourist	Engages in and travels for sports-related activities

(Adapted from Gibson and Yiannakis, 2002)

Gibson and Yiannakis (2002) highlighted that psychological needs are not fixed; they change over time and interact with different life stages, influencing the roles individuals take on while travelling. For instance, younger adults may focus on adventure and exploration, while older adults may prioritise relaxation and cultural experiences. Their study also found that cultural factors could delay the fulfilment of psychological needs, revealing that women might take on certain tourist roles later in life than men (Gibson & Yiannakis, 2002). Building upon Gibson and Yiannakis (2002), Gretzel et al. (2004) proposed a typology of travel personalities and explored whether these personality types could serve as the basis for destination recommendations. Their 12 travel personality types (see table 4) were adapted from a commonly used typology on travel websites, which categorises individuals based on their activity-related preferences.

Table 4: Travel personality types

Travel Personality Type	Description
1. Culture Creature	Loves cultural experiences such as theatre, museums, festivals, and local culture.
2. City Slicker	Enjoys urban environments, nightlife, clubs, and the vibrant pulse of the city.
3. Sight Seeker	Always ready to explore landmarks, events, and attractions.
4. Family Guy	Values time spent with family over the destination itself.
5. Beach Bum	Prefers relaxing on the beach, enjoying sun and leisure activities.
6. Avid Athlete	Engages in sports and physical activities, always looking for a game or competition.
7. Shopping Shark	Enjoys shopping and seeks out retail experiences.
8. All Rounder	Likes a variety of activities and experiences, seeking a well-rounded trip.
9. Trail Trekker	Enjoys outdoor activities like hiking, walking, and exploring nature.
10. History Buff	Focuses on learning about history through visits to historical sites and museums.
11. Boater	Loves activities related to water, such as boating and fishing.
12. Gamer	Enjoys gaming experiences, including casinos and entertainment venues.

(Adapted from Gretzel et al., 2004)

Gretzel et al. (2004) found that while the types of travel personality differed in relation to the psychographic variables which characterised them, the actual travel behaviour of the travellers in these categories was not that different. This would mean that while personality types are useful in understanding traveller motivations, they are not necessarily very effective in predicting specific travel behaviours or choices. The findings have important implications for destination managers, indicating that both psychographic differences and behavioural similarities must be considered when formulating recommendations.

To refine the travel role concept, Park et al. (2010) introduced the 'travel personae', which comprise the travel styles that individuals come to adopt over time. Based on their study of American tourists, they determined that there is a core homogeneity in domestic leisure travel and concluded that sightseeing, family vacations, and beach relaxation are the primary travel motivations. However, when analysing the travel behaviours that define individual travel personas, the results revealed strong heterogeneity. The study identified 955 distinct travel personas, for example, archetypes of Culture Creature, Sight Seeker, and History Buff. The finding provides valuable input for destination strategies, allowing a deeper understanding of the variety of patterns by which travellers interact

with destinations. Yet, as Jani (2014) pointed out, the practice of making use of such a large range of combinations proves to be problematic for marketers, who must balance complexity with actionable insights.

The core role of travel motivations in determining tourist activity choice brings more complexity to the conceptualisation of travel behaviour. Research in specific contexts, such as active sports tourism (Mishra et al., 2021; Tomik et al., 2017), vacation travel motives (Kara & Mkwizu, 2020), wellness tourism (Damijanić, 2020), and event participation (Yan & Halpenny, 2019), captured the diverse drivers of travel preferences. For example, Taecharungroj and Mathayomchan (2019) demonstrated that motivations do not only influence the selection of activities but also what individuals purchase, whereas Ying et al. (2018) highlighted their influence on holistic travel behaviours. These studies complement each other to highlight the complex interconnection between motivations and behaviour, while also highlighting the significance of understanding such dynamics towards effective tourism marketing and management.

2.2.4 Summary

Tourist behaviour can be explained by motivations, typologies, and roles that provide frameworks for analysing the different ways individuals engage with travel. The literature highlighted that motivation is the foundation of tourist behaviour analysis, encompassing the psychological and physiological drivers behind travel choices. Theories such as Maslow's (1943) hierarchy of needs, Dann's (1977, 1981) push-pull theory, and Pearce's (1988, 2019) travel career ladder provide explanations of why people travel, from needs fulfilment at the basic level to self-actualisation and novelty seeking. Motives such as novelty and escape are recurring themes in tourism literature, though their relevance is often destination and context-specific (Morrison, 2023; Maghrifani, Liu & Sneddon, 2022).

Following motivational findings, tourist typologies developed by researchers like Cohen (1972, 1974, 1979), Plog (1974), and Smith (1977) classified travellers according to their behaviour patterns and preferences. These typologies, for example, Explorer or Mass Tourist, recognised market segments, enabling the development of personalised tourism products and experiences. Boorstin (1992) and Redfoot (1984) provided further insights as they discussed the impact of environmental and social influences on tourist behaviour, opening new possibilities for segmentation and research.

In addition to typologies, studies on tourist roles or travel personae, such as those by Gibson and Yiannakis (2002), Gretzel et al. (2004), and Park et al. (2010), provided a deeper understanding of tourist behaviour. Tourist roles explain how motivations are expressed in travel personae, which show various levels of involvement and interaction inclinations. While typologies offer a broad categorisation of tourist attributes, roles provide a context-specific insight that considers the nuances of human behaviour and situational contingencies.

Despite their contributions, tourist motivation models, typologies, and roles are not exempt from criticism. While developmental, these frameworks over-simplify the complexity of tourist behaviour in the categorisation of individuals into broad categories that fail to represent the dynamic interplay of personal and situational factors. Moreover, as critics (Cruz-Milán, 2024; 2018; Piuchan, 2018) highlighted, they have not evolved sufficiently to include contemporary travel patterns and the implications of technological advancement.

Crompton, James, and Petrick (2024) further argued that there is no theory that can fully grasp the psychological and physiological complexities of tourist motivation, resonating with Kelly's (1955) argument that human behaviour cannot be fully explained by any single framework. However, to address the limitations of existing frameworks, this research proposes incorporating personality traits as a foundation for segmentation to provide a more comprehensive understanding of tourist behaviour. As predictors of behaviour (Bleidorn et al., 2022), personality traits reflect stable individual variations that influence engagement with various experiences (Roberts, 2017).

Moreover, by using technologies like AI and big data analytics, DMOs could gain a better understanding of tourists' psychological profiles and preferences. This would allow them to move beyond traditional typologies and create more personalised strategies. With real-time data tracking and predictive analytics, DMOs could offer tourism experiences that respond to changing traveller needs, while also supporting sustainable tourism development. The concept of personality trait and its integration with technology is discussed in the following section.

2.3 Personality Traits and Tourism

Introduction

This section examines the role of personality traits in tourism behaviour, highlighting their value as stable psychological constructs that go beyond conventional models based only on motivation or socio-demographics. This section aims to investigate how personality affects traveller decision-making and how it could improve segmentation models. It supports the study's aim of incorporating psychological factors into visitor profiling by reviewing theoretical frameworks and empirical research, and it lays the groundwork for creating more thorough tourist typologies that could guide DMOs in their efforts to manage visitor flows sustainably and personalise experiences.

In recent years, personality has received substantial attention in tourism as a tool in helping explain the actions of tourists beyond the traditional motivation and typology-based constructs (Alves et al., 2023). Personality traits, as enduring and stable characteristics shaping individuals' behaviours and preferences (Allport, 1961), offer an insightful lens in exploring the reason why travellers choose specific activities and how they connect with destinations. By focusing on these traits, scholars and practitioners could understand individual variability that influences travel decisions, providing a foundation for better segmentation as well as personalised tailored tourism planning.

Personality has been studied through various theoretical approaches. Foundational studies, for example, Freud's (1923) psychoanalytic theory, focused on unconscious processes and childhood experiences. Later theories, for example, Sheldon's (1940) body-type theory, associated personality with physical attributes, while humanistic theorists like Rogers's (1951) emphasised self-actualisation and personal growth. Over time, the field became more empirical with the development of trait theory by researchers like Gordon Allport (1937), Raymond Cattell (1946), and Hans Eysenck (1967). These researchers used statistical methods like factor analysis to identify and measure personality traits.

In tourism, trait theory provides an effective way of describing travel choices based on personality (Funder, 2013). By focusing on stable and measurable patterns of behaviour, Cattell's (1946) and Eysenck's (1967) research helped with identifying traits that influence tourist behaviour. To this end, the examination of individual differences not

only enhances our understanding of tourist behaviour but could also help in developing more effective tourism policy.

2.3.1 Theoretical foundations of personality traits

Gordon Allport, a renowned psychologist, contributed to the understanding of personality concept (Maltby et al., 2017). He defined personality as a dynamic system present in every human being that influences the way individuals think, feel, and behave (Allport, 1961). John and Srivastava (1999) also highlighted that personality is the reason behind differences in people's emotions, social lives, and motives. Pervin and Cervone (2010) suggested that personality traits control our behaviour and emotions, whereas Funder (2013) examined the psychological mechanisms underlying these traits. Eysenck (1998) proposed that genetics and experiences both play a role in personality development. Twin studies by Verwij et al. (2010), Vernon et al. (2008), and Bouchard et al. (2003) confirmed this, showing that genes explain 40–60% of variation in personality. Most recently, the American Psychological Association (2024) offered a simpler definition, describing personality as the *"individual differences in characteristic patterns of thinking, feeling, and behaving,"* a widely perspective adopted today.

Personality trait theory, a subdomain of personality psychology, is key in explaining individual differences that predict behaviour (Bäckström et al., 2020). According to trait theory, individual personalities are composed of broad dispositions (Worthy et al., 2020). Each person's personality emerges from the interaction and combination of various traits, with the goal of trait theory being to identify and quantify these unique personality traits (Fajkowska & Kreitler, 2018). Studies associated personality to life outcomes, including mortality, divorce, and professional growth (Roberts et al., 2007), and one of the most consistent findings in this field is the connection between personality and life satisfaction, and other aspects of subjective wellbeing (Abdel-Khalek et al., 2022; Steel et al., 2008).

While defining personality traits can be challenging, there is general agreement that they are stable psychological factors that shape how we think, feel, and behave (Condon et al., 2020; Baumert et al., 2017; Wood et al., 2015). Funder (2013) explained that traits represent individuals' characteristic thought, emotion, and behavioural patterns,

and that these are rooted in the neurological system, forming a psychological foundation for our actions (Worthy et al., 2020).

Hans Eysenck emerged as a leading personality and individual differences theorist in the 20th century (Revelle, 2016). His three-dimension theory, encompassing Extraversion, Neuroticism, and Psychoticism, remains one of the most well-known trait theories (Taub, 1998). Eysenck (1947) based his definitions of Neuroticism-Stability and Introversion-Extraversion on empirical observations of actual behaviour. His study involved 700 soldiers at Mill Hill Emergency Hospital, recommended by psychiatrists due to neurotic symptoms. The study's uniqueness sets in its reliance on behavioural evaluations rather than self-report questionnaires, incorporating variables such as age, employment status, profession type (skilled vs. unskilled), familial psychological abnormalities, and alcohol consumption (Revelle, 2016). Eysenck (1947) concluded that behaviour could be represented by two dimensions: Introversion/Extraversion (E) and Neuroticism/Stability (N). These dimensions combine in numerous ways to form an individual's unique personality. Later, Eysenck (1991; 1992) introduced a third dimension, Psychoticism, encompassing traits like aggression, empathy, and sociability, forming the PEN model, represented in figure 8 below.

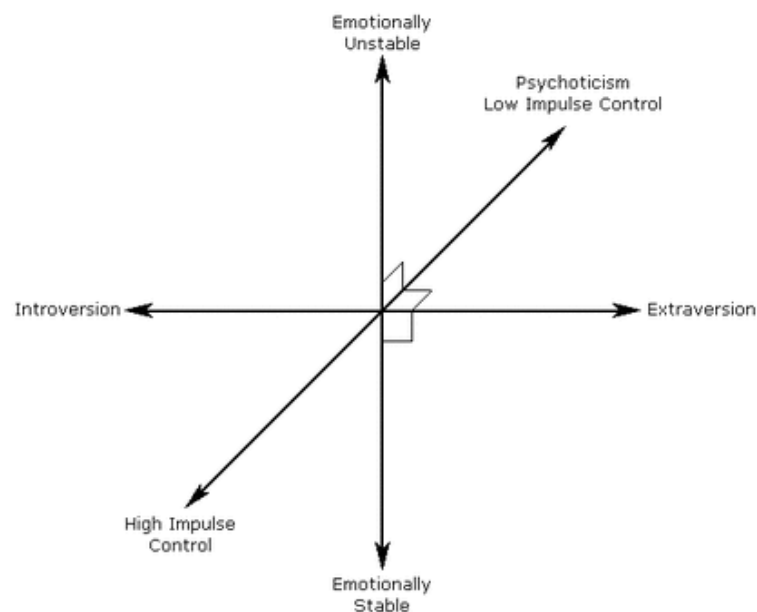


Fig 8: PEN Model (Source: Eysenck, 1992)

Eysenck (1947, 1991) proposed that these three dimensions are rooted in biological processes and are genetically based. The model emphasises that personality

traits are the result of genetic factors and environmental influences that lead to stable patterns of thought, feeling, and action across situations and over time. For instance, Eysenck (1947, 1991) replicated that extroverts and introverts engage in various activities, such that extroverts prefer social activity and spontaneous behaviour, and introverts avoid social activity and exhibit more serious and reserved patterns of behaviour.

The stability of personality traits is controversial in psychological research. Many researchers claimed that traits are stable and enduring patterns of behaviour across situations and over time (Woszczyński et al., 2002; Möttus et al., 2012; Leon et al., 1979; McCrae & Costa, 1999). However, other studies revealed that personality remains in a continuous, but minor change over the lifespan, often in response to changing environments and life contexts, such as the beginning of romantic relationships, moving, or leaving school and entering work (Harris et al., 2016; Bleidorn et al., 2018). Social network changes also affect these variations, as well as other life stages such as parenthood, cultural influences, and the effects of educational and work settings (Bleidorn et al., 2018). Roberts et al. (2017) further revealed that certain interventions, such as goal setting, behaviour activation, and coaching, could also alter personality traits. Despite proof of the malleability of traits, there is a common consensus that core aspects of personality are relatively stable throughout life (Roberts & Yoon, 2022), this being supported by longitudinal studies (Bleidorn et al., 2022).

2.3.1 The Five Factor Model (FFM)

The Five Factor Model (FFM) is rooted in Sir Francis Galton's (1884) pioneering application of the lexical hypothesis to psychology. Galton (1884) asserted that individual differences are embedded in language. Building on this premise, Allport and Odbert (1936) conducted a rigorous search of dictionary definitions of words relating to personality and behaviour. The results revealed approximately 18,000 entries of which about 4,500 captured personalities, creating the foundation of modern trait-based models of personality. Further refining this lexical approach, psychologist Raymond Cattell (2001; 1945; 1943) reduced the number of personality descriptors to 171 traits. Employing computational methods and factor analysis, Cattell identified 16 primary personality factors and developed the 16 Personality Factor Questionnaire (16PF), a foundational tool in personality assessment, represented in the table below.

Table 5: Personality factors measured by the 16PF Questionnaire

Factor	Low Score	High Score
Warmth	Reserved, detached	Outgoing, supportive
Intellect	Concrete thinker	Analytical
Emotional stability	Moody, irritable	Stable, calm
Aggressiveness	Docile, submissive	Controlling, dominant
Liveliness	Sombre, prudent	Adventurous, spontaneous
Dutifulness	Unreliable	Conscientious
Social assertiveness	Shy, restrained	Uninhibited, bold
Sensitivity	Tough-minded	Sensitive, caring
Paranoia	Trusting	Suspicious
Abstractness	Conventional	Imaginative
Introversion	Open, straightforward	Private, shrewd
Anxiety	Confident	Apprehensive
Open-mindedness	Closeminded, traditional	Curious, experimental
Independence	Outgoing, social	Self-sufficient
Perfectionism	Disorganised, casual	Organised, precise
Tension	Relaxed	Stressed

(Source: Cattell, 2001)

The pioneering work of Raymond Cattell, alongside the availability of a relatively concise list of variables, encouraged subsequent researchers to explore the dimensional structure of trait ratings. In the early 1960s, researchers from the United States Air Force extended Cattell's (1945) efforts. Tupes and Christal (1961) analysed personality across various samples, uncovering "*five relatively strong and recurrent factors and nothing more of any consequence*" (Tupes & Christal, 1961, p. 14). Building on this foundation, Warren Norman (1963) conducted a comprehensive review and replication of these findings, further solidifying the five-factor structure. Norman (1963) labelled these factors as follows:

- (I) Extraversion or Surgency (talkative, assertive, energetic)
- (II) Agreeableness (good-natured, cooperative, trustful)
- (III) Conscientiousness (orderly, responsible, dependable)
- (IV) Emotional Stability versus Neuroticism (calm, not neurotic, not easily upset)
- (V) Culture (intellectual, polished, independent-minded)

Lewis Goldberg's (1990; 1981) research played a fundamental role in revitalising interest in these factors. He demonstrated that these five factors remained consistent across various methods of factor extraction and rotation (Goldberg, 1981; 1990). These factors, collectively termed the 'Big Five' (Goldberg, 1981), underscore their broad scope rather than their intrinsic significance. The Big Five framework does not imply that personality variations are confined to only five traits; rather, it describes personality at the most abstract level, with each dimension encompassing a multitude of specific traits.

While lexical researchers accumulated evidence for the Big Five, those employing questionnaire scales to study personality sought a more integrated framework (John & Srivastava, 1999). The work of Costa and McCrae in the late 1970s and early 1980s was transformative in this regard. Beginning in 1976, Costa and McCrae employed cluster analysis on Cattell's (1943) 16PF, identifying Extraversion, Neuroticism, and Openness as significant factors. By 1983, they found that their NEO model closely aligned with three of the Big Five dimensions but lacked the components of Agreeableness and Conscientiousness.

To refine their model, Costa and McCrae (1992) developed the NEO-PI-R. This version was produced using a variety of methodologies, including self-reports, peer evaluations, Q-sort techniques, 16PF data, and both self-reports and observer reports, to assess the frequency of specific behaviours (Costa & McCrae, 1992; 2008). These comprehensive methodologies culminated in the Five Factor Model (FFM), establishing the presence of five overarching personality components. Although the exact names and definitions of these five factors varied (Digman & Takemoto-Chock, 1981; McCrae & Costa, 1987; Peabody & Goldberg, 1989; Tupes & Christal, 1961), the Big Five model and conceptually identical Five-Factor Model consistently name the factors Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness. Every item was characterised by six characteristics/facets (Costa & McCrae, 1992), totalling 30 characteristics that could be used to describe a person, as illustrated in figure 9.

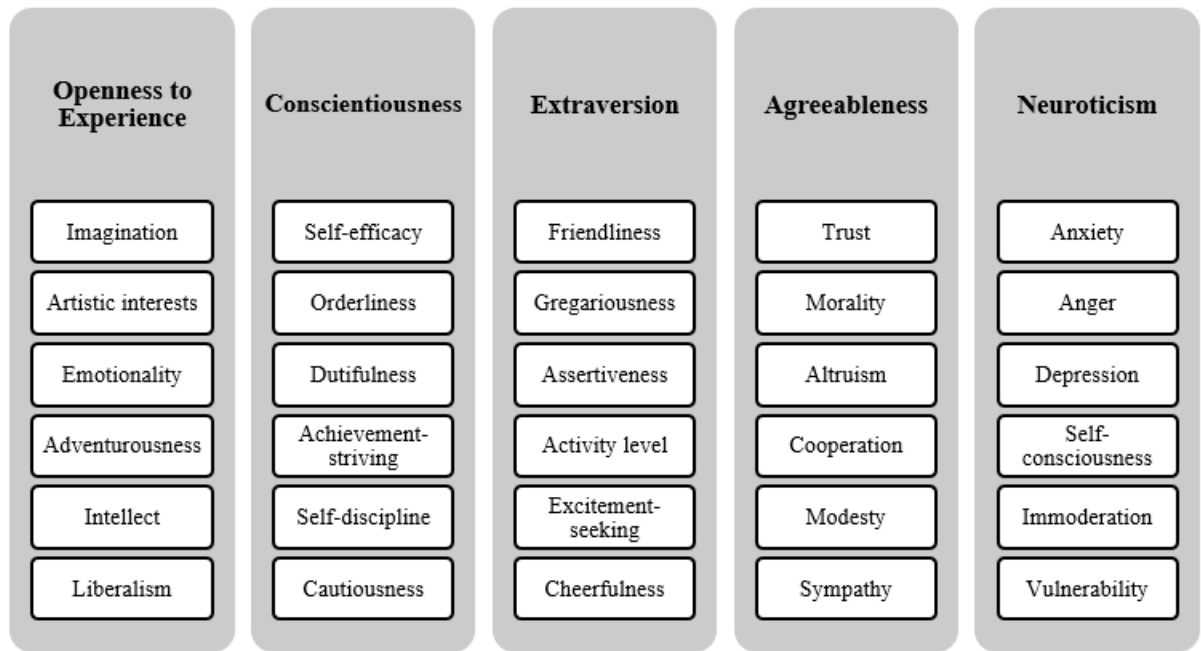


Fig. 9: Personality dimensions and their respective six traits (Adapted from Costa & McCrae, 1992)

Openness to Experience is defined by a curiosity to learn, sensitivity to beauty, and openness to new ideas (Costa & McCrae, 1992; John & Srivastava, 1999). Individuals with high levels of openness are creative thinkers and tend to have artistic inclinations. McCrae (2007) explained that heightened emotional sensitivity to aesthetic experiences, such as listening to music or looking at a work of art, are good indicators of high openness. Kaufman (2013) similarly associated the personality trait with an intrinsic search for knowledge and appreciation for beauty and art, which relates to cultural activities. The relevance of this characteristic to tourism is evident in research by Kovačić et al. (2022), which highlighted that people with high openness value full-sensory, firsthand experiences that provide them with a deeper understanding of destinations. Openness captures an inclination towards varied experience, through art, or education, reflecting a broad spectrum of interests that enriches travel behaviour and preferences (John, Naumann & Soto, 2008).

Conscientiousness is defined by the ability to suppress distractions towards the achievement of long-term goals and adherence to internal and external standards (DeYoung & Blain, 2020). It is an indicator of self-control, persistence, and high organisational skills (Roberts et al., 2014), driven by achievement orientation and enduring performance (Costa, McCrae & Dye, 1991). Also referred to as constraint, this

trait is represented by goal-directed behaviour, dutifulness, careful planning, and the capacity for delayed gratification and inhibition of impulses (John et al., 1999). Individuals who are conscientious tend to be responsible, organised, and systematic, making plans and adhering to them (Yunus et al., 2018). High conscientious travellers prefer organised schedules and will avoid spontaneous, dangerous activities, instead choosing planned and predictable events (Alves et al., 2020). This is because they have a goal-orientation tendency to enjoy exact planning and control, resulting in higher satisfaction derived from highly structured travel experiences. Research in tourism conducted by Çelik and Dedeoğlu (2019) found that conscientiousness was closely related to relaxation-oriented motives, confirming the personality traits association with systematic, relaxing experiences. Additionally, Yurcu et al. (2017) confirmed that conscientiousness significantly influences tourism students' leisure motivation, testifying further to the association of this personality trait with enjoyment for systematic tourist activities.

Extraversion is characterised by high energy, sociability, seeking excitement, and expressiveness, with high social orientation (John et al., 1999). Highly extraverted individuals are sensitive to reward and are attracted to group-oriented activities and lively settings (Costa & McCrae, 1992; Allen & DeYoung, 2015). This dimension captures an assertive style of action in relation to social and material aspects of life, which translates as confident, energetic, and outgoing behaviour (John, Naumann & Soto, 2008). Extraverts, as Yunnus et al. (2018) claimed, are likely to be action-oriented, capturing readiness to lead, take initiative, and remain foreground in group settings. Alves et al. (2020) further noted that extroverts are drawn to highly social and sensorially engaging experiences, and they prefer destinations and activities that offer interactive and lively settings, such as beaches, pool activities, and social events. Their own intrinsic thrill-seeking behaviour tends to drive them to pursue adventure tourism experiences by which they can interact with new people and participate in active activities (Li & Tsai, 2013). Interestingly, Rafiq et al. (2022) observed that extraverts showed strong ecotourism intentions, while Kesenheimer and Greitemeyer (2021) confirmed that highly extraverted tourists incur more expenditure on ecotourism to balance their carbon footprint, underscoring their proactive engagement in sustainable tourism.

Agreeableness is characterised by interpersonal orientation with community and prosocial-minded attitudes (John et al., 2008). Agreeable individuals are polite and

compassionate (John, Naumann & Soto, 2008; DeYoung, Quilty & Peterson, 2007), reflecting a desire for harmonious and supportive interactions. Individuals who have low agreeableness tend to be cynics and display uncooperative behaviour, as confirmed by Costa and Widiger (2002). However, high agreeableness individuals show cooperative, patient, and sociable inclinations, and therefore tend to be adaptable and willing to join group work and exchange experiences (Kovačić et al., 2022). This trait is related to a likelihood for nature-themed attractions and is in accordance with the ecologically focused altruistic interests common in agreeable individuals (Kvasova, 2015; Alves et al., 2020). Di Fabio and Kenny (2018) noted that agreeable tourists seek destinations that highlight natural beauty, which induces a greater sense of affinity with the environment, a trend also noted by Cavusoglu and Avcikurt (2021) in their research on escapism and desire for nature appreciation.

Neuroticism is characterised by heightened vulnerability to stress (John et al., 1999) and sensitivity to unpleasant emotions (John, Naumann & Soto, 2008; DeYoung, Quilty & Peterson, 2007). Costa and McCrae (1992) and John et al. (2008) revealed that neurotic individuals are more likely to develop states of depression and anxiety. Since neuroticism shows the degree to which sensitivity to emotion influences behaviour, highly neurotic individuals tend towards more structured and routine environments. Alves et al. (2022) also suggested this, with a study showing that neurotic tourists tend to be drawn towards low-risk areas, such as trips to beaches or swimming pools, as these create a feeling of familiarity and security.

In summary, these five traits provide a framework for understanding individual differences. As discussed earlier, the development of the Five Factor Model (Goldberg, 1990; Costa & McCrae, 1992) is a fundamental advancement in personality research, and various researchers have contributed significantly toward its formulation. This is illustrated in figure 10 below, highlighting the pioneering work of researchers who made the model a widely accepted tool for quantifying personality traits across various context, including tourism.

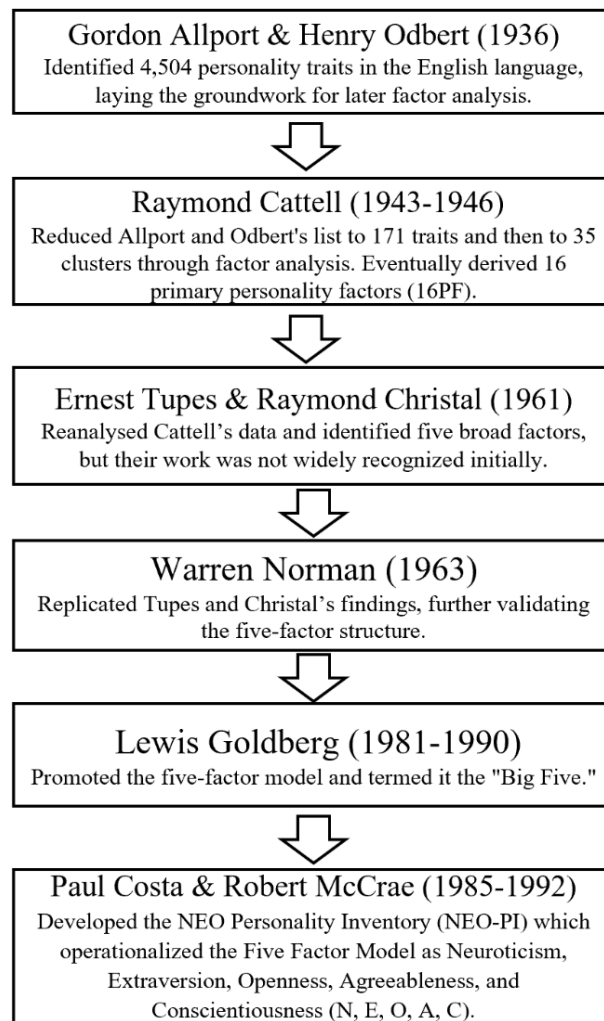


Fig. 10: The origins of the Five Factor Model (FFM) (Created by author)

2.3.1.1 Extending personality frameworks to destinations

Building on the Big Five model of human personality, Aaker (1997) proposed the Brand Personality Scale (BPS) that describes the personality attributes of products and brands. Since then, Aaker's (1997) scale has been widely employed as a measure of product brand personality. Aaker's (1997) framework identifies five dimensions and fifteen facets of brand personality: sincerity (down-to-earth, honest, wholesome, and cheerful), excitement (daring, spirited, imaginative, and up to date), competence (reliable, intelligent, and successful), sophistication (upper class and charming), and ruggedness (outdoorsy and tough). By creating the theoretical framework for understanding how consumers ascribe human-like qualities to brands and products, this adaptation served as a vital link between human personality theory and commercial branding applications.

Another important development in this theoretical progression involved the shift from brand personality to destination personality. Ekinci and Hosany (2006, p. 128) define destination personality as *"the set of human characteristics associated with a destination as perceived from a tourist viewpoint,"* based on Aaker's (1997) framework. This indicates that tourist destinations are especially rich in symbolic values and personality traits because of their mix of tangible and intangible elements, such as attractions, accommodation, local culture, and historical significance. The growing recognition that destinations, like brands, can embody human qualities that emotionally connect with tourists is reflected in the application of personality theory to travel destinations (Scuotto, et al., 2024; Pradhan, Moharana & Malik, 2023; Souiden et al., 2017).

However, there are questions regarding the stability and applicability of personality traits when applied to cities, nations, or destinations because neither the Big Five Model (Goldberg, 1990; Costa & McCrae, 1992), nor Aaker's (1997) Brand Personality Scale were initially created to assess destination brand personality. According to research by Ekinci and Hosany (2006), tourists recognised three different aspects of destination personality when using Aaker's (1997) scale: sincerity (reliable, sincere, intelligent, successful, and wholesome), excitement (exciting, daring, original, and spirited), and conviviality (friendly, family-oriented, charming). This implies that destinations may require specialised personality frameworks that better capture their unique characteristics.

Moreover, in modern tourism marketing, the strategic significance of destination personality is becoming more widely acknowledged. According to Souiden et al. (2017), in competitive travel markets, destinations that are only positioned on functional characteristics become less distinctive and more readily interchangeable. Conversely, Morgan and Pritchard (2002) argued that destination personality provides extra tools for differentiation. Successful destinations have distinct personality traits, such as Paris being romantic, London being open-minded and lively, and Spain being welcoming and family friendly. These examples show how destination personality could develop into a useful metaphor for destination branding and positioning, allowing locations to establish emotional bonds with prospective tourists that go beyond practical considerations (Morgan & Pritchard, 2002).

Despite this growing recognition, significant research gaps remain in understanding destination personality's role and importance in destination branding. Murphy et al. (2007) point out that although interest in destination branding in general is growing, little research has been done on whether travellers attribute brand personality traits to tourist destinations and how this affects their travel habits. Recent research by Li (2024) has started to fill these gaps by investigating how destination personality influences destination relationship quality, which includes factors like attachment, commitment, trust, and satisfaction. This illustrates how destination personality research is becoming more complex and how it could help guide strategic destination management practices. However, reliable measurement tools are necessary for the successful application of personality theory to destinations, necessitating a review of the fundamental instruments created for personality assessment.

2.3.1.2 Measurement instruments

The 1990s marked the development of various personality measurement instruments aimed to create a widely recognised taxonomy of traits (Ostendorf & Angleitner, 1994). Among them, Costa and McCrae's (1992) NEO Personality Inventory (NEO-PI) stands out, consisting of 240 items on six facets of each of the Big Five dimensions and taking about 45 minutes to complete. For shorter measures, Goldberg's (1992) Trait Descriptive Adjectives (TDA) offers a 100-item measure with an approximate 15-minute test completion. Other instruments include the 60-item NEO Five-Factor Inventory (NEO-FFI; Costa & McCrae, 1992), the 50-item International Personality Item Pool – Five Factor Model (IPIP-FFM; Goldberg, 1999), the 44-item Big Five Inventory (BFI; John & Srivastava, 1999), and the 40-item Big Five Mini-Markers (Saucier, 1994). While these scales showed adequate psychometric characteristics, current research contexts such as web surveys, longitudinal research, and surveys with large samples required even shorter yet valid measures.

To meet these needs, Gosling et al. (2003) developed the Ten-Item Personality Inventory (TIPI), a brief Big Five-dimension questionnaire. Furthermore, multilingual adaptations were developed, for example, French BFI-10 (Courtois et al., 2020) and Urdu BFI-10 (Ahmad & Hussain, 2022). Gouveia et al. (2021) constructed a 20-item version of the BFI for Brazilian contexts, while single-item scales such as the Single-Item Measures of Personality (SIMP; Roiz et al., 2022) and its German equivalent (SIMP-G;

Spörrle & Bekk, 2014). While these shorter measures are practical in time-constrained research, they usually come at the cost of measurement accuracy and facet specificity, raising validity concerns (Soto & John, 2017).

Noting advancements in personality theory and the need for improved measurement tools, Soto and John (2017) revised the Big Five Inventory to develop the Big Five Inventory - 2. The BFI-2 takes less than 10 minutes to administer and assesses core facets of the Big Five domains using simple language and improved psychometric properties. Soto and John (2017) developed the BFI-2 through a three-step process. They initially created a hierarchical framework and a preliminary item pool. Then they refined the items into domain-specific scales. Finally, they tested the measurement accuracy, its correlations with external variables (including motivation, emotional well-being, and social behaviours), and overall structure, confirming its reliability and theoretical alignment.

The BFI-2 is based on previous frameworks, including the original Big Five Inventory (John et al., 1991, 2008), trait-descriptive adjectives (Goldberg, 1992), and the International Personality Item Pool (IPIP; Goldberg, 1999). Its facets were selected to align with current hierarchical models (McCrae & Costa, 2010; DeYoung et al., 2007; Saucier & Ostendorf, 1999; Hofstee, De Raad & Goldberg, 1992), to ensure its validity and consistency (see table 6). By broadening the scope of each domain while maintaining continuity with previous models, the BFI-2 offers a revised, efficient tool for measuring personality traits, facilitating research in diverse settings while retaining theoretical strength.

Table 6: The BFI-2 facets aligned with previous hierarchical Big Five models

BFI-2 domains and facets	NEO PI-R facets (McCrae & Costa, 2010)	AB5C facets (Goldberg, 1999; Hofstee et al., 1992)	Lexical subcomponents (Saucier & Ostendorf, 1999)	Big Five aspects (DeYoung et al., 2007)
Extraversion				
Sociability	Gregariousness	Gregariousness	Sociability	Enthusiasm
Assertiveness	Assertiveness	Assertiveness	Assertiveness	Assertiveness
Energy Level	Positive Emotions/Activity	—	Activity-adventurousness	Enthusiasm
Agreeableness				
Compassion	Altruism	Understanding	Warmth-affection	Compassion
Respectfulness	Compliance	Cooperation	Gentleness	Politeness
Trust	Trust	Pleasantness	—	—
Conscientiousness				
Organization	Order	Orderliness	Orderliness	Orderliness
Productiveness	Self-Discipline	Efficiency	Industriousness	Industriousness
Responsibility	Dutifulness	Dutifulness	Reliability	—
Negative Emotionality				
Anxiety	Anxiety	Toughness (R)	Emotionality	Withdrawal
Depression	Depression	Happiness (R)	Insecurity	Withdrawal
Emotional Volatility	Angry Hostility	Stability (R)	Irritability	Volatility
Open-Mindedness				
Intellectual Curiosity	Ideas	Intellect	Intellect	Intellect
Aesthetic Sensitivity	Aesthetics	Reflection	—	Openness
Creative Imagination	Fantasy	Ingenuity	Imagination-creativity	—

(Source: Soto & John, 2017)

The original Big Five Inventory (BFI), while widely used, was developed without explicit consideration for facet-level distinctions, leading to uneven representation across facets (John et al., 2008). For example, the Conscientiousness scale disproportionately emphasised Productivity over Organisation, with some items, such as "Does a thorough job," overlapping multiple facets. As a result, post hoc facet scales derived from the original BFI were often overly broad and lacked clear differentiation (Soto & John, 2009). To resolve these issues, Soto and John (2017) introduced the BFI-2, which incorporated balanced content at both the domain and facet levels. Each BFI-2 scale includes an equal number of positively and negatively keyed items to improve reliability and reduce response bias. The new instrument comprises 60 questions, 18 of which are identical to the original BFI, 14 are revised, and 28 are new. The reorganisation makes the tool more accurate and viable by providing enhanced representation and discrimination of facets. The full list of BFI-2 items is provided in figure 11 below.

<i>I am someone who . . .</i>	
1. ☐ Is outgoing, sociable	31. ☐ Is sometimes shy, introverted
2. ☐ Is compassionate, has a soft heart	32. ☐ Is helpful and unselfish with others
3. ☐ Tends to be disorganized	33. ☐ Keeps things neat and tidy
4. ☐ Is relaxed, handles stress well	34. ☐ Worries a lot
5. ☐ Has few artistic interests	35. ☐ Values art and beauty
6. ☐ Has an assertive personality	36. ☐ Finds it hard to influence people
7. ☐ Is respectful, treats others with respect	37. ☐ Is sometimes rude to others
8. ☐ Tends to be lazy	38. ☐ Is efficient, gets things done
9. ☐ Stays optimistic after experiencing a setback	39. ☐ Often feels sad
10. ☐ Is curious about many different things	40. ☐ Is complex, a deep thinker
11. ☐ Rarely feels excited or eager	41. ☐ Is full of energy
12. ☐ Tends to find fault with others	42. ☐ Is suspicious of others' intentions
13. ☐ Is dependable, steady	43. ☐ Is reliable, can always be counted on
14. ☐ Is moody, has up and down mood swings	44. ☐ Keeps their emotions under control
15. ☐ Is inventive, finds clever ways to do things	45. ☐ Has difficulty imagining things
16. ☐ Tends to be quiet	46. ☐ Is talkative
17. ☐ Feels little sympathy for others	47. ☐ Can be cold and uncaring
18. ☐ Is systematic, likes to keep things in order	48. ☐ Leaves a mess, doesn't clean up
19. ☐ Can be tense	49. ☐ Rarely feels anxious or afraid
20. ☐ Is fascinated by art, music, or literature	50. ☐ Thinks poetry and plays are boring
21. ☐ Is dominant, acts as a leader	51. ☐ Prefers to have others take charge
22. ☐ Starts arguments with others	52. ☐ Is polite, courteous to others
23. ☐ Has difficulty getting started on tasks	53. ☐ Is persistent, works until the task is finished
24. ☐ Feels secure, comfortable with self	54. ☐ Tends to feel depressed, blue
25. ☐ Avoids intellectual, philosophical discussions	55. ☐ Has little interest in abstract Ideas
26. ☐ Is less active than other people	56. ☐ Shows a lot of Enthusiasm
27. ☐ Has a forgiving nature	57. ☐ Assumes the best about people
28. ☐ Can be somewhat careless	58. ☐ Sometimes behaves irresponsibly
29. ☐ Is emotionally stable, not easily upset	59. ☐ Is temperamental, gets emotional easily
30. ☐ Has little creativity	60. ☐ Is original, comes up with new Ideas

Fig.11: BFI-2 items (Source: John & Soto, 2017)

The development of the BFI-2 faced substantial challenges, particularly with the Neuroticism and Openness to Experience facets (Soto & John, 2017). Neuroticism has historically been linked with clinical constructs such as disorders of the nervous system and psychological distress (Widiger, 2009; Eysenck, 1967; John et al., 2008). To avoid the clinical implications of the trait in everyday life, the BFI-2 renamed it Negative Emotionality, emphasising its focus on emotions like sadness and worry (Clark & Watson, 2008). Similarly, Openness to Experience, introduced by Rogers (1951) and subsequently revised by McCrae and Costa (2010), was widely misunderstood as social openness rather than cognitive flexibility and curiosity (Sneed, McCrae, & Funder, 1998). To clarify its cognitive focus, the BFI-2 adopted the term Open-Mindedness (Soto & John, 2017).

Facet scores within the BFI-2 hold more predictive power than general domain scores for a wide range of criteria, including behavioural outcomes, psychological states, self-reported values, and life satisfaction (Denissen et al., 2019). The BFI-2 has been linked to significant life outcomes including education, income, and health (Abdel-Khalek et al., 2022; Danner et al., 2020). Cross-language validity tests also prove its

robustness with high convergent and divergent validity with other established personality measures. These include the Big Five Aspect Scales (BFAS), Revised NEO Personality Inventory (NEO PI-R), NEO Five-Factor Inventory (NEO-FFI), and Big Five Mini-Markers in English (Soto & John, 2017), NEO PI-R in German (Rammstedt et al., 2018), Big Five Mini-Markers in Danish (Vedel et al., 2021), International Personality Item Pool (IPIP) in Dutch (Denissen et al., 2008), and Big Five factor traits in Russian (Shchebetenko et al., 2020). Subsequent research has also confirmed the reliability and validity of the BFI-2 across diverse cultural backgrounds, including Norwegian (Føllesdal & Soto, 2022), and Chinese participants (Zhang et al., 2021), making it increasingly established for cross-cultural studies.

Addressing contemporary research demands, shorter versions of the BFI-2 were developed, including the BFI-2-XS (15 items) and the BFI-2-S (30 items), alongside the original BFI-10 (10 items). These measures preserve the hierarchical factor structure of the Big Five but vary in length to suit various research contexts. Validation studies confirmed the psychometric properties of these translations across language populations, including German (Rammstedt et al., 2021), Spanish (Gallardo-Pujol et al., 2021), and Slovak (Halama et al., 2020), with high reliability and test-retest stability.

2.3.1.3 Criticism to the Five Factor Model

Critics of the Five Factor Model (FFM) (Goldberg, 1990; Costa & McCrae, 1992) highlighted a multitude of limitations that created doubts on its completeness and effectiveness. The lexical hypothesis that personality traits is rooted in language resisted extensive empirical tests, as Uher (2013) noted. This focus on linguistically grounded attributes is likely to ignore person-specific behaviours and observable attributes and hence test the strength and explanatory power of this hypothesis regarding cross-cultural differences in personality. Rolland (2002) emphasised that the FFM remains a subject of considerable controversy in psychological literature, drawing adverse critiques from scholars such as Block (1995, 2001), Cattell (1996), Eysenck (1992), and McAdams (1992). These critics have argued that the reductionist quality of the model can oversimplify the complexities of human personality. Secondly, Pervin (1994) and Loewinger (1993) also expressed concerns by the inability of the model to represent the dynamic and multi-dimensional nature of personality.

Despite these criticisms, the FFM influenced other alternative personality frameworks. Such models often integrate aspects of the FFM, adapting by reorganising the core traits or expanding them with additional dimensions to enhance explanatory power and cultural relevance (Rolland, 1996). For instance, Thalmayer and Saucier (2014) proposed the Big Six model as a cross-cultural update to the FFM. Their Big Six inventory, an expansion of the Big Five and Big Two models, was tested and refined using samples from 26 countries clustered into three subsets for cross-cultural applicability. The Big Two condenses personality into two wide dimensions: Plasticity, which combines openness and extraversion qualities to convey adaptability and engagement with novelty, and Stability, which integrates conscientiousness, agreeableness, and emotional stability to express consistency, cooperation, and emotional regulation. On these bases, the Big Six model reconceptualises and adds to the FFM with factors that include Conscientiousness, Honesty/Propriety, Agreeableness (Even Temper and Kindness), Resiliency versus Internalising Negative Emotionality, Extraversion (Positive Emotionality and Gregariousness), and Originality/Talent (Thalmayer & Saucier, 2014).

Other models to the FFM have been proposed over the years. For example, the HEXACO model, based on lexical research on multiple languages, and it identifies six factors: Honesty-Humility, Emotionality, Extraversion, Agreeableness, Conscientiousness, and Openness to Experience (Ashton & Lee, 2007). Cross-cultural studies showed evidence for the inclusion of Honesty-Humility as a sixth factor outside of the Big Five (Ashton, Lee & De Vries, 2014; Ashton & Lee, 2008). However, high correlations between HEXACO and FFM dimensions showed that there was large overlap (Gaughan et al., 2012; Ashton et al., 2008), suggesting that its differentiation from the Big Five is debatable.

Another alternative to the Big Five is the Supernumerary Personality Traits framework (Paunonen, 2002), which disputes the idea that the Big Five capture the complete range of personality traits (Saucier & Goldberg, 1998; Paunonen & Jackson, 2000). Paunonen et al. (2003) selected ten traits: Conventionality, Seductiveness, Femininity, Manipulativeness, Integrity, Thriftiness, Humorousness, Religiosity, Egotism, and Risk-Taking, and grouped them into three more broad categories: Traditional, Machiavellian, and Masculine-Feminine. Supernumerary Personality Inventory (SPI) also proved to be a stronger predictor of some behaviours, such as materialism, unethical decision-making (Hong, Koh, & Paunonen, 2012), drug use, and

unsafe driving in students (Hong & Paunonen, 2009). The traits of Egotism and Manipulativeness have also been shown to predict leadership ability in military cadets (Paunonen et al., 2006). Comparative studies with the Big Five and HEXACO indicate that although some of the traits overlap, the Masculine-Feminine factor is unique, indicating the uniqueness of SPI (Lee, Ogunfowora & Ashton, 2005).

Other personality models, such as the Dark Tetrad, Self-Defeating Personality Style, and Trait Emotional Intelligence (Feher & Vernon, 2021), also share similarities with the Big Five. The Dark Tetrad (Buckels, Jones, & Paulhus, 2013) builds on the Dark Triad (Paulhus & Williams, 2002), including Machiavellianism, psychopathy, narcissism, and sadism, highlighting antisocial characteristics. The Self-Defeating Personality Style (SDPS) encompasses negative concepts of self, dysfunctional relationships, and mistreatment (Atkinson & Vernon, 2018). Trait EI relates to self-perceptions of emotional and social competencies and behaviours encompassing the ability to express, perceive, understand, and manage emotions, alongside social skills and personal traits such as optimism (Petrides, 2011).

While these other models like HEXACO, the Supernumerary Personality Inventory (SPI), and the Dark Tetrad are useful in terms of information they offer about specific aspects of personality, their application is limited compared to the Big Five Personality Inventory (BFI). These models are more specialised and have fewer validation indices, as researchers confirmed (Paunonen et al., 2006; Lee & Ashton, 2004). For example, the HEXACO model incorporates dimensions like Honesty-Humility, providing additional information but only partially covering the Big Five Model (Lee & Ashton, 2004). The SPI, targeting dimensions like Egotism and Manipulativeness, addresses specialty areas like leadership and unethical behaviour but lacks broader empirical support and application (Paunonen et al., 2006). The Dark Tetrad, which examines maladaptive traits such as Machiavellianism and Narcissism, captures some of the undesirable personality traits but fails to have a broad perspective on the Big Five personality dimensions (Paulhus & Williams, 2002). This niche focus combined with utilitarian reasoning and the Big Five's deeply ingrained dominance result in the low rate of these alternative models being adopted.

Moreover, the Cybernetic Big Five Theory (CB5T) and the Whole Trait Theory both have made significant extensions and additions to the original Big Five personality

traits by emphasising the significance of contextual factors. The CB5T, introduced by DeYoung (2015), explored the cybernetic mechanisms of the Big Five traits, with the emphasis on the dynamic interaction between the traits and environmental circumstances. This approach emphasises that personality is not simply a set of stable traits but a dynamic system where traits continuously interact with the environment, changing and responding to different contexts (DeYoung, 2015). Similarly, the Whole Trait Theory proposed by Fleeson and Jayawickreme (2015) identified the dual importance of stable traits and characteristic adaptations. While core personality traits create a stable baseline, this theory asserts that psychological processes composing characteristic adaptations such as a person's goals, motives, and strategies vary in response to situations. Hence, personality is seen as a mix of long-standing dispositions and adaptive responses to situational needs (Fleeson & Jayawickreme, 2015).

Despite the theoretical advancement of the Cybernetic Big Five Theory (CB5T) and the Whole Trait Theory (WTT), neither has developed a proprietary measurement tool. They both employ available Big Five inventories such as the Big Five Inventory (BFI) and the NEO Personality Inventory-Revised (NEO-PI-R) to measure personality traits. These inventories provide reliable and empirically based estimates of the underlying attributes in the centre of both CB5T and WTT. For instance, to assess the cybernetic processes (e.g., processes whereby traits translate into interactions with the environment), researchers would apply other measures like the Behavioural Inhibition System/Behavioural Activation System (BIS/BAS) scales, self-regulation questionnaires, or cognitive tests that assess attention, goal setting, and feedback processing (Friedman & Banich, 2019; Carver & White, 1994). Similarly, to measure characteristic adaptations (e.g., the motivational and situational aspects of personality), researchers could use scales that test for specific plans, motives, and goals, with examples such as the Personal Projects Analysis (PPA) or Goal Assessment tools.

Regardless of these theoretical advancements, the predictive power of the Big Five personality traits is acknowledged across various domains. Zulkarnain et al. (2018) found that the Big Five traits are effective in predicting purchase behaviours in diverse settings and over time. This enduring predictive capability underscores the practical utility of the Big Five framework while also benefiting from the nuanced insights provided by theories like the CB5T and the Whole Trait Theory. Moreover, the Five Factor Model (Goldberg, 1990; Costa & McCrae, 1992) remains the most widely

recognised in personality psychology, and recent studies continue to affirm its dominance in the field (Feher & Vernon, 2021). The five-factor theorist, Robert McCrae (2005) provided substantial evidence supporting the five-factor personality model across diverse cultural contexts (McCrae, Terracciano, & 78 Members of the Personality Profiles of Cultures Project, 2005). In 1981, leading psychologists convened at a symposium in Honolulu and concluded that the Big Five Model is the most robust and reliable personality framework, accounting for approximately 80 percent of personality variation (Yunus et al., 2018).

Decades on, the Big Five (Goldberg, 1990) remains a foundational framework of personality psychology, found consistently to be present across diverse cultures and settings. The Big Five Inventory (BFI) has been translated into over 25 languages and administered across more than 50 national cultures, illustrating its broad applicability and relevance (Genise et al., 2020; Palsson et al., 2020; Rammstedt & Farmer, 2013; Plaisant et al., 2010; Denissen et al., 2008; Schmitt et al., 2007; Benet-Martínez & John, 1998). Furthermore, a nonverbal protocol demonstrated the FFM's generalisability across cultures (Paunonen, Ashton, & Jackson, 2001).

Despite ongoing debates regarding the interpretation of cross-cultural differences in the structure, mean levels, and correlates of the BFI (Chan et al., 2012; Heine, Buchtel, & Norenzayan, 2008), many personality psychologists concur that the five domains of the FFM capture the fundamental individual differences in personality traits (Soto & Jackson, 2020). This model's scalability allows for mapping individuals along a continuum from low to high on each factor. Extensive testing, involving tens of millions of participants worldwide, demonstrated the high repeatability and consistency of the FFM, solidifying its status as the preeminent model for representing personality patterns (Matz et al., 2016). Given its comprehensive structure and empirical validation, this research adopts the Big Five model as a framework for examining the influence of personality on tourist behaviour.

2.3.2 Personality as predictor of tourist behaviour

As highlighted earlier, the Five-Factor Model (FFM) is a highly influential model in the explanation and prediction of tourist behaviour across a broad set of contexts. Research applied it successfully in areas including adventure tourism (Vespestad & Mehmetoglu, 2017) and eco-tourism (Degnet et al., 2022), illustrating its effectiveness in

determining how travel choices are affected by individual personality traits. Recent work by Alves et al. (2023; 2022) highlighted that tourist preferences and motivations are largely influenced by the Big Five dimensions. For example, people high in openness to experience are drawn to exotic and cultural destinations, whereas people high in conscientiousness are drawn to highly organised, well-structured activities.

Despite the significance of these traits, research that fully explores the correlation between all five personality dimensions and tourist behaviour remains limited. Existing studies suggest that extraverted individuals are more likely to participate in adventurous activities (Alves et al., 2022; Vargas et al., 2021; Oehler & Wedlich, 2018; Huang, Gursoy & Xu, 2014; Li et al., 2015), while those with higher agreeableness tend to avoid such activities. This could be explained by their increased risk aversion and concern about potential consequences (Akhrani & Najib, 2020; Joseph & Zhang, 2021). Cultural activities, such as museum visits, are generally associated with higher levels of openness (Kaufman, 2013) and conscientiousness (Kovačić et al., 2022; Matzler et al., 2011), whereas extraversion shows a negative correlation with participation in these activities (Kovačić et al., 2022).

Personality traits also influence the degree to which destination pull factors appeal to tourists. Cavusoglu and Avcikurt (2021) revealed that tourists with high extraversion and agreeableness are particularly drawn to the destination's facilities, natural beauty, climate, safety, accessibility, and atmosphere of the destination. Likewise, Kvasova (2015) investigated the relationship between personality traits and environmentally friendly tourist behaviour and found agreeableness to be the strongest predictor of eco activities, followed by conscientiousness and neuroticism. The results align with previous research studies of Hirsh (2010), Markowitz et al. (2012), and Milfont & Sibley (2012). Openness to experience was ambiguously correlated: high imagination with environmental unfriendliness and high intellect with environmental friendliness (Markowitz et al., 2012).

Several studies explored the relationship between tourist roles and the Big Five personality factors, providing valuable insights on the influence of personality on travel behaviour (Gretzel et al., 2004; Gibson & Yiannakis, 2002). Neidhardt et al. (2015, 2014) conducted a factor analysis of Gibson and Yiannakis's (2002) 17 tourist roles together with the Big Five dimensions and identified seven factors that reflect tourist behaviours

in terms of personality traits (see table 7). Openness was linked with Knowledge & Travel, Independence & History, Culture & Indulgence, and Nature & Recreation roles and showed a preference for culturally enriching, educational, and varied experiences. Conscientiousness was associated with planned and organised activity in Knowledge & Travel and Independence & History, and extraversion with active and social activities, especially in Social & Sport and Action & Fun. Agreeableness was linked to communal and peaceful activities, such as Nature & Recreation and Culture & Indulgence, and neuroticism was linked to the Sun & Chill-out dimension, where individuals seek low-stress, relaxing environments.

Table 7: Seven-factor model

Factor	Description
<i>Sun & Chill-Out</i>	A neurotic sun lover, who likes warm weather and sun bathing and does not like cold, rainy or crowded places
<i>Knowledge & Travel</i>	An open minded, educational and well-organized mass tourist, who likes traveling in groups and gaining knowledge, rather than being lazy
<i>Independence & History</i>	An independent mass tourist, who is searching for the meaning of life, is interested in history and tradition, and likes to travel independently, rather than organized tours and travels
<i>Culture & Indulgence</i>	An extroverted, culture and history loving high-class tourist, who is also a connoisseur of good food and wine
<i>Social & Sports</i>	An open minded sportive traveller, who loves to socialize with locals and does not likes areas of intense tourism
<i>Action & Fun</i>	A jet setting thrill seeker, who loves action, party, and exclusiveness and avoids quiet and peaceful places
<i>Nature & Recreation</i>	A nature and silence lover, who wants to escape from everyday life and avoids crowded places and large cities

Source: Neidhardt et al. (2015)

Further analysis by Neidhardt and Werthner (2017) highlighted how demographic factors, such as age, gender, income, and education, influence the categorisation of tourists within these behavioural factors. Their subsequent study (Serkan, Neidhardt & Werthner, 2018) identified six distinct types of tourism destinations, each characterised by attributes that resonate with different traveller profiles. These include the ‘passionless suburb,’ ‘energetic city,’ ‘peaceful village’, ‘ordinary town’, ‘vibrant beach resort’, and ‘tranquil seaside resort’. Serkan, Neidhardt and Werthner (2019) claimed that by clustering destinations, accommodations, and activities according to these factors, destination marketers could develop more precise strategies tailored to the preferences and motivations of distinct traveller segments.

Moreover, Delic et al. (2016) explored the relationship between the Big Five personality traits and tourist roles, identifying specific correlations such as the Sun Lover role being associated with high neuroticism, the Archaeologist with extraversion, and the Drifter with low conscientiousness. They also found that while tourist roles vary with age, the Big Five traits remain relatively stable across age groups, with minimal gender influence on tourist roles. This consistency underscores the value of personality traits as reliable predictors of travel behaviour, rather than socio-demographic factors, a finding supported by Alves et al. (2022) and Kovačić et al. (2022). By understanding personality insights, tourism practitioners could anticipate preferences, and develop strategies that align with individual traits, such as offering organised activities for conscientious travellers or social experiences for extraverts.

Jani (2014) extended this work by linking the Big Five to the twelve travel personalities outlined by Gretzel et al. (2004), revealing notable differences across travel types. For instance, individuals who enjoy activities like gaming, historical exploration, shopping, and water sports (e.g., the Athlete and Boater types) scored high on openness, while those preferring beach holidays or family-oriented travel (e.g., the Beach Bum and Family types) scored lower. Conscientiousness was more pronounced in the Shopping and Family types, while Athlete and Gamer types displayed lower levels. Extraversion was associated with socially engaging roles such as the Trekker and All Things Travel types, while lower levels were seen in the Cultural, Beach Bum, and Boater types. Agreeableness correlated with the Boater and Family types, while lower neuroticism characterised emotionally stable roles such as the Family and All Things Travel types.

These personality-driven categorisations provide actionable insights for tailoring tourism marketing. The practical applications of these findings are evident in tourism marketing, where aligning communications with personality-driven preferences could improve engagement. For example, extraverts may respond well to social experiences, while conscientious travellers prefer detailed, organised itineraries (Jani, 2014; Tan & Tang, 2013). Moreover, tourists high in openness often value word-of-mouth and printed information, whereas those high in conscientiousness favour on-site resources (Tan & Tang, 2013). Such insights underscore the importance of strategically selecting communication platforms that resonate with different personality profiles.

However, Gretzel et al. (2004) highlighted the limitation of categorising tourists by interests. While grouping tourists based on activities such as hiking or sightseeing allows some flexibility, this method lacks the predictive power of models based on the Big Five. Similarly, Alves et al. (2023) noted that conventional typologies (e.g., Plog, 2002) explain behaviour, but they do not predict preferences, whereas more specific psychological models such as sensation-seeking or extraversion (Bujisic et al., 2015; Li et al., 2015; Jackson et al., 2001) do not capture the complexity of individual personality. As such, the integration of the Big Five provides a more detailed and inclusive model, extending predictive power with regards to preferences and travel experiences.

Technological advancements, particularly in mobile devices, offer new avenues to enrich our understanding of how digital behaviours align with personality traits (Beierle et al., 2020). Digital footprints are generated through users' online activities, such as location history, app usage, search queries, and social media interactions (Montag et al., 2021). By analysing this data, algorithms offer insights into actual behaviours, such as how users interact with various apps and functions on their devices (Beierle et al., 2020; Hinds & Joinson, 2019). For example, mobile applications can track GPS data to monitor tourists' movements and identify the places they visit. In addition, in-app behaviours can be analysed to understand user preferences, while social media activity can offer further insights into users' personalities (Stachl et al., 2017).

Previous studies found a positive correlation between personality traits and mobile phone usage patterns. For instance, extraverted individuals tend to make more frequent calls and engage more intensively with photographing applications, whereas conscientious users interact less with entertainment apps and focus more on work related tasks (Beierle et al., 2020; Stachl et al., 2017). Further, highly extraverted and neurotic individuals are most likely to check their phones more regularly, while agreeableness relates to a greater frequency of calls (Beierle et al., 2020; Chittaranjan et al., 2013). Researchers also found strong correlations between social media digital footprints and personality (Marengo & Montag, 2020), with extraversion being particularly linked to higher Facebook usage (Montag et al., 2021). Such results support the feasibility of using digital behaviour data in personality-based tourist segmentation. This could transform how destinations managers understand travellers' behaviour and preferences, enhancing tourists' experiences and supporting destination sustainability.

2.3.3 Summary

Personality traits are widely recognised as predictors of behaviour (Costa & McCrae, 1992) and have recently been of interest to tourism research as well, providing valuable insights regarding how individuals interact with travel experiences (Alves et al., 2022). The Five Factor Model (FFM), the most widely accepted theoretical model of personality, reveals that differences in personality can be categorised into five overarching dimensions: Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism (Goldberg, 1990; Costa & McCrae, 1992; John et al., 2008). These characteristics influence a variety of life outcomes, including consumer choice and travel behaviour (McCrae & Costa, 2004). In tourism, the FFM has been employed in studying interactions among personality dimensions and travel preferences, with consistent results showing, for example, that Openness predicts engagement in cultural and adventure activities, while Conscientiousness reveals a preference for organised travel experiences (Kovacic et al., 2022; Alves et al., 2020).

Measurement of personality traits has also changed over time, and tools such as the NEO Personality Inventory (Costa & McCrae, 1992) offered a structured approach to measuring personality dimensions. More recently, Soto and John (2017) developed the Big Five Inventory-2 (BFI-2), a psychometrically reliable and shorter measure of personality traits.

More recent theories such as the Cybernetic Big Five Theory (CB5T) and the Whole Trait Theory (WTT) offered different perspectives on personality, by emphasising the interaction between stable traits and situational influences. Nevertheless, they continue to rely on measures from established inventories, such as the BFI, to assess intrinsic personality traits (DeYoung, 2015; Fleeson & Jayawickreme, 2015). These theories advocate for integrating additional tools to capture the context-dependent aspects of personality, but proprietary measurement instruments have not yet been developed. The current study builds on the comprehensive Big Five framework by incorporating travel motivations, which have been shown to significantly influence tourist behaviour (Morrison, 2023; Maghrifani, Liu & Sneddon, 2022). By combining measurements of the Big Five traits, travel motivations, and visitor activities, the study aims to provide a deeper understanding of tourist behaviour.

Despite ongoing criticisms and the need for refined models, personality traits remain crucial predictors of tourist behaviour, allowing researchers and practitioners alike to understand the way individuals approach travel, and enhance tourism management strategies (Rolland, 1996; McCrae & Costa, 2004; Mihalic, 2020). When integrated with other factors, namely motivation and tourist role theories, researchers could better comprehend the complexity of tourist behaviour. This view highlights the importance of personality in travel behaviour and the need for advanced measurement tools to capture the complexity of visitor behaviours (Alves et al., 2023). Additionally, technological advancement, particularly in mobile technologies, is transforming research on personality and travel behaviour. Technology derived data collection allows researchers to associate digital footprints such as location history, app usage, search history, and social media activity, with personality, offering a more dynamic understanding of tourists, leading to more accurate and effective tourism management practices (Beierle et al., 2020; Hinds & Joinson, 2019; Montag et al., 2021).

2.4 Hypothesis development

A critical step in this research was the development of hypotheses that establish the foundational relationships between personality traits, travel motivations, and visitor activities. These hypotheses provide a structured framework for analysing tourist behaviour in Cumbria, ensuring that subsequent large-scale data collection and segmentation are both theoretically and empirically grounded. Considering the increasing emphasis on psychological segmentation in tourism (McKercher et al., 2023, Agarwal & Singh, 2021) understanding the extent to which personality and motivations shape visitor behaviour is essential.

Several studies highlighted gender differences across activity preferences, such as Rosa et al. (2020) and Meng and Uysal (2008) finding that women generally have a stronger affinity for nature and tranquillity, other research suggested that age influences activity preferences. Pomfret & Varley (2019) revealed that younger individuals tend to prefer physically challenging and adventurous activities, whereas older visitors are more drawn to cultural and wellness experiences (Richards, 2018). However, personality traits and travel motivations have been widely acknowledged as stronger predictors of behaviour, compared to socio-demographic factors (e.g., (Alves et al., 2022; 2023; Kovačić et al., 2022).

In this context, understanding the relationship between psychological factors and visitor behaviour is particularly important before progressing to a comprehensive study aimed at developing data driven visitor typologies. This initial phase enables the refinement of analytical models, ensuring that future research can effectively categorise visitors based on meaningful dimensions.

Figure 12 presents the conceptual model guiding this research, highlighting the interaction between personality traits, travel motivation, and tourist activities at the destination. The model suggests that personality traits, stable psychological dispositions (Roberts, 2019), shape both motivations and activity inclinations. Travel motivation, which is regulated by internal drivers and external circumstances (Pan & Shang, 2023), also plays a role in delineating the kinds of activities individuals engage in during their travels. On the other hand, observed visitor activities provide an insight into the underlying psychological and motivational processes involved. By mapping these inter relationships, the model allows the development of tourist typologies that embed psychological dimensions in segmentation.

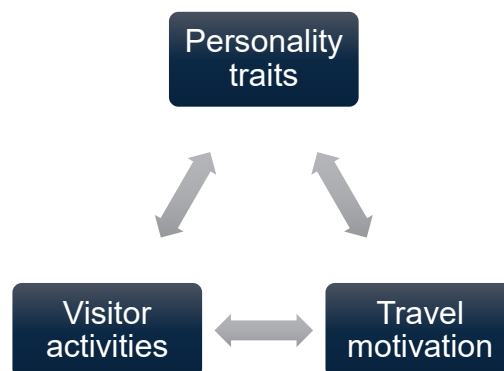


Fig. 12: Conceptual model

As research confirms, tourist behaviour is shaped by a complex set of psychological factors, and past research demonstrated that personality traits and travel motivations influence visitor activity preferences (Alves et al., 2022; Çelik & Dedeoğlu, 2022; Yurcu et al., 2022). The relationship between these factors, however, is complex, in which different personality dimensions predict various preferences for traveling. For example, Alves et al. (2022) found that neuroticism and openness predict specific travel preferences and concerns, while Çelik and Dedeoğlu (2022) revealed a correlation between relaxation motives and conscientiousness. Similarly, Yurcu et al. (2022)

highlighted the significance of the trait conscientiousness in predicting leisure motivations among students.

Further research also identified direct correlations between tourist activity interests and personality (Alves et al., 2022; Rafiq et al., 2023; Kesenheimer & Greitemeyer, 2023). Alves et al. (2022), for example, found that tourists high in openness are more likely to engage in cultural tourism activities, such as visiting museums and historic sites, whereas extraverts would be less inclined to participate in these activities. Rafiq et al. (2023) further revealed that extraverts had greater ecotourism intentions compared to neurotic tourists. Kesenheimer and Greitemeyer (2021) also established that extraverted tourist spent more on ecotourism sites to minimise their impact on the environment.

In addition, researchers emphasised the role of travel motivation in shaping tourist activity choices (Mishra et al., 2020; Tomik et al., 2021; Kara & Mkwizu, 2021; Damijanić, 2021; Yan & Halpenny, 2022). For example, Mishra et al. (2020) and Tomik et al. (2021) investigated motivation in active sports tourism, whereas Kara and Mkwizu (2021) examined factors that affect recreational tourism choices. Similarly, Damijanić (2021) focused on wellness tourism motivations, while Yan and Halpenny (2022) studied the motivations for attending events. Additionally, researchers such as Taecharungroj and Mathayomchan (2022) and Ying et al. (2022) highlighted the significance of motivation in decision-making.

However, research on the combined effects of personality traits and travel motivations on tourist behaviour is limited. While Alves et al. (2022; 2023) explored the relationship between personality traits and travel motivations, they have not applied this understanding to visitor segmentation models. Existing literature treated these factors separately rather than as components of an integrated model. Addressing this shortfall is important to developing a more comprehensive conceptualisation of visitor behaviour, particularly in the context of destination management. This study therefore seeks to investigate how personality and travel motivations shape visitor activity preferences, aiming to inform the development of data driven tourist typologies. By combining these perspectives, the current study proposes a more comprehensive model of tourist behaviour, offering practical implications for segmentation strategies and sustainable tourism planning.

2.5 An integrated framework for destination management

The literature revealed that traditional destination management practices could be enhanced through a better understanding of visitor behaviour, along with the application of digital tools. This led to the development of a model that integrates these elements for more responsive, data informed, sustainable destination management practices, illustrated in figure 13 below, offering a potential solution to the issues faced by DMOs in contemporary tourism.

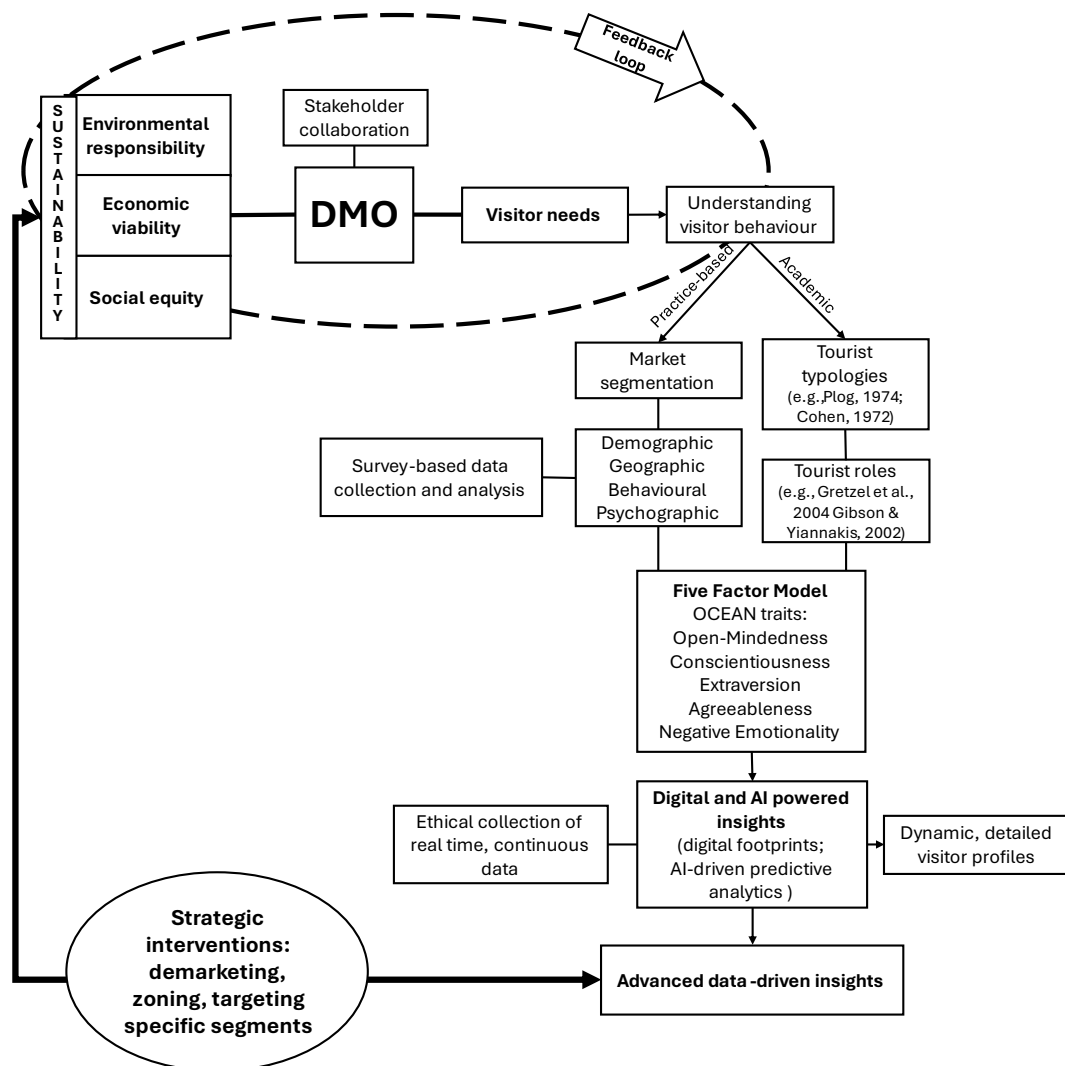


Fig. 13 An integrated framework for destination management (Created by author)

This figure presents a conceptual model for reframing destination management by integrating psychological segmentation, digital innovation, and management strategies into a more responsive, resilient, and responsible model of tourism development. At the centre of the model is the Destination Management Organisation (DMO), which is key in balancing visitor satisfaction with sustainability goals (Sotiriadis, 2021; Hall & Veer, 2016). As a link between the various stakeholders at the destination, the DMO aligns stakeholders' interests with visitor demands, while supporting sustainable development. Through adaptive governance, the DMO, creates a feedback loop that is continuous, and real-time visitor behaviour data collection and analysis drive it. This feedback mechanism enables dynamic updating of strategies in response to change in trends, shifts in visitor behaviour, and the success of sustainability measures. It ensures that destination management is responsive to short-term change and long-term sustainability objectives.

Visitor behaviour is key to this framework, and a deeper understanding of this behaviour is achieved through a combination of academic and practice-based insights. Drawing from established tourist typologies (e.g., Plog, 1974; Cohen, 1972) and tourist roles (e.g., Gretzel et al., 2004; Gibson & Yiannakis, 2002), the framework integrates traditional segmentation approaches, with practice-based approaches that rely on demographic, geographic, behavioural, or psychographic factors, and digital tools. These tools, such as AI analytics and digital footprint analysis, could enable the DMO to create dynamic, data-driven visitor profiles. Through ethical collection and real-time data analysis, the DMO could gain a deeper understanding of visitor preferences and behaviours, which could then inform more tailored and effective management strategies.

At the core of the psychographic dimension of this framework lies the Five Factor Model (OCEAN personality traits) (Goldberg, 1990). These traits are predictors of tourist behaviour (Alves et al., 2022; Kovačić et al., 2022), allowing the DMO to anticipate visitor needs and create personalised experiences that align with the destination's sustainability goals. By segmenting tourists based on psychological factors, the DMO could tailor marketing and management strategies to cater to specific visitor profiles.

Additionally, digital technology enhances this approach, allowing DMOs to manage destinations more responsively. AI analytics, which interpret digital footprints could allow DMOs to forecast visitor behaviour and identify trends (Huang et al., 2022). This could then allow industry stakeholders to improve visitor experiences, allocate

resources more efficiently, and more effectively manage visitor flows. For example, through segmentation and predictive analytics, DMOs could implement strategies such as demarketing to discourage over-visitation in sensitive locations, zoning to redirect tourists from highly visited sites to less visited ones, or incentive schemes that encourage environmentally friendly behaviour (Lindberg & Seeler, 2021). These actions are directed to targeted visitor profiles in a way that they are not just effective, but also engaging to tourists, and hence more likely to be adopted.

Finally, this model suggests an innovative destination management model that is based on ongoing adaptation, behavioural knowledge, and digital innovation. By integrating psychological segmentation and digital technologies, DMOs, such as Cumbria Tourism, could develop tourism strategies that address evolving visitor behaviours, while achieving sustainability objectives.

2.6 Chapter Summary

This chapter examined the evolving roles of Destination Management Organisations (DMOs) in managing contemporary tourism. In their central roles for promoting and managing destinations, DMOs need to adapt to the dynamic behaviour of modern tourists. Conventional segmentation approaches, which usually emphasise socio-demographic characteristics like age, gender, and income, are inadequate to describe changing tourist behaviours (McKercher et al., 2022). To improve marketing and management strategies, DMOs need to gain a better understanding of the factors that drive tourist behaviour.

Foundational theories including Maslow's (1943) hierarchy of needs, Dann's (1977) push-pull model, Iso-Ahola's (1980) social-psychological model, and Pearce and Lee's (2005) Travel Career Pattern recognised the complexity of travel motivations, which are dependent on internal and external determinants. The tourist typologies and roles developed by Cohen (1972), Plog (1974), and Smith (1977) expanded on tourist behaviour, and enhanced marketing practices tourist engagement. Moreover, Gibson and Yiannakis's (2002) tourist roles, later expanded by Gretzel et al. (2004), revealed how travel behaviour is shaped by context, personal motivation, and experience, highlighting the dynamic nature of tourist behaviour.

However, these models were criticised for oversimplifying tourist profiles by placing individuals in static categories. For example, Cruz-Milán (2024) contended that

Plog's (1974) model had not evolved enough to reflect the nature of modern changes in travel behaviour, and technological innovation, highlighting the necessity of more sophisticated models. This was a critique that introduced a wider argument, as Piuchan (2018) stated that standard models were helpful in highlighting overall trends, yet they do not capture individual-specific processes which shape tourist behaviour.

The literature further emphasised the multifaceted interplay between personality dimensions, travel motivation, and activity preferences. Personality traits have been linked to specific tourist behaviours (e.g., Alves et al. 2023; 2022) and motivations (e.g., Yurcu et al., 2017; Çelik and Dedeoğlu, 2019). Additionally, Rafiq et al. (2022) identified extraverts as having greater interest in ecotourism, and Kesenheimer and Greitemeyer (2021) reported their greater expenditure on eco-tourism for reducing environmental effects. Yet, personality traits have not been fully integrated into segmentation research, which this study aims to address by suggesting a combined approach to better understand tourist behaviour.

Furthermore, research increasingly supported how technological advancement, and especially mobile technologies, provide new possibilities to enhance understanding about the way digital behaviour is linked to personality. By examining digital footprints derived from social media, mobile app use, and communication patterns, researchers could better understand how psychological profiles of visitors connect with their actions through digital technology. This could enable targeted, data-driven strategies to be matched with various visitor profiles, ensuring tourism campaigns are more effective (Beierle et al., 2020; Stachl et al., 2017). As a result, DMOs must go beyond traditional segmentation methods, adopt modern technology, and design data-driven strategies to stay relevant and competitive in the digital tourism landscape.

In conclusion, this chapter proposes that incorporating the Big Five personality traits into a comprehensive segmentation framework, one that combines motivations, activities, and socio-demographic factors, addresses critical gaps in existing models. While seminal frameworks such as Plog's (1974) model and Cohen's (1979) typologies significantly advanced the understanding of tourist behaviour, they fall short of capturing individual preferences influenced by personality traits. By adopting psychological profiling, DMOs could gain a powerful tool to predict and cater to diverse tourist preferences, surpassing the limited relevance of demographic segmentation (Delic et al.,

2016; Neidhardt et al., 2015). Finally, the chapter concludes with the development of a conceptual framework presenting an integrated approach which brings together psychological segmentation, digital innovation, and sustainable destination management to create a more adaptive, resilient, and responsible model of tourism development.

Chapter 3: Research Methodology

Introduction

Building on the foundation established in Chapter 2: Literature Review, this chapter presents the research methodology applied in this study to advance the tourist market segmentation model by incorporating personality traits for a deeper understanding of visitor behaviour and supporting sustainable practices. Studies revealed that effective market segmentation is key in managing and marketing tourists sustainably (McKercher et al., 2021). Understanding tourist motivations is a significant component of segmentation, with scholars like Shi, Liu, and Li (2018) and Pan and Shang (2023) highlighting both psychological and physiological influences of travel behaviour. Early typologies developed by Cohen (1972) and Plog (1974) provide valuable insights but simplify the diversity of traveller behaviour (Cruz-Milán, 2018). In contrast, the Five Factor Model (FFM) (Goldberg, 1990; Costa & McCrae, 1992) provides a more comprehensive framework for understanding behaviour through personality traits, which have been shown to predict activities and decision-making across a range of situations (Roberts et al., 2017).

Cumbria, with a diverse cultural and natural heritage including the Lake District National Park and Hadrian's Wall, is a worldwide renowned tourist destination. With approximately 47 million visitors each year, tourism brings £1.2 billion to the local economy (Cumbria Tourism 2024), but it creates seasonality and sustainability concerns. The region attracts a diverse mix of travellers, ranging from nature lovers and outdoor enthusiasts and social experience seekers, as outlined in the 2022 Cumbria Tourism Visitor Survey. The survey revealed that key reasons for visiting are the physical scenery (80%), walking opportunities (61%), the desire to be outdoors (56%), familiarity with the area (54%), social connections (29%), water-based activities (18%), and remoteness of the area (18%) (Cumbria Tourism, 2022). This diversity makes Cumbria a valuable destination for investigating tourist behaviours.

While the research is geographically centred on Cumbria, its findings are transferable to broader contexts. Various structural and operational characteristics of tourist destinations around the world are reflected in the region, including a reliance on small and micro-enterprises (99.8% of local businesses are SMEs; Cumbria Observatory,

2021), significant seasonal fluctuations, and mounting strain on natural and cultural resources. These elements help to explain the dynamics of tourism more broadly. Additionally, Cumbria's present use of developing digital tools, like location-based services, shows the opportunities and difficulties many DMOs encounter when converting conventional data collection techniques to real-time behavioural insights (Beierle et al., 2020; Hinds & Joinson, 2019). Cumbria is therefore more than just a local example; it is a strategic location that provides lessons that could be applied to other destinations in terms of visitor segmentation, destination management, and technology integration.

In addition, this research benefits from direct access to Cumbria's local DMO, providing industry insights, stakeholder perspectives, and tourism statistics to add a richer understanding of tourist segmentation and destination management strategies. The research is inspired by theoretical frameworks like Plog's (1974) psychographic theory and Cohen's (1972) tourist typology, which highlighted the role of psychological profiles in shaping tourism strategies for long-term sustainability. By integrating the Big Five personality traits (Goldberg, 1990), which are more stable predictors of behaviour (Roberts, 2019), the research aims to identify tourist clusters that are aligned with Cumbria's offering, making practical recommendations to the DMO and local businesses. Finally, the study aims to enhance the experience of the visitors while promoting sustainable development goals, protecting Cumbria's landscape, heritage, and tourism sector.

This chapter provides a clear description of the research process, which is the foundation of the study (Saunders, Lewis, & Thornhill, 2019). It starts with outlining the philosophical basis of the research paradigm, justifying the adopted research methodology. This is followed by a description of the research design, data collection methods, sampling techniques, and analysis. By linking the research methodology to the study aims, this chapter presents coherence and rigor, paving the way for understanding the visitor typologies in Cumbria and how this approach could support sustainable destination practices.

3.1 Research philosophy

Research philosophy forms the foundation for understanding how knowledge is developed and interpreted within a study (Saunders, Lewis, & Thornhill, 2019). It encompasses the adoption of abstract ideas and beliefs that guide the research process, shaping the researcher's approach to understanding the world (Creswell, 2021; Collins, 2019). These philosophical assumptions guide the research strategy, offering a rationale for the selection of methodologies and shaping the entire research process. As Saunders, Lewis, and Thornhill (2019) revealed, philosophical assumptions affect almost every part of a research project, from developing research questions to choosing analytical methods. Similarly, Gray and Webb (2013) argued that a researcher's epistemological stance and chosen inquiry paradigm influence the methodological framework and specific techniques for data collection and analysis.

In social science research, these considerations often involve complex philosophical debates. Crotty (1998) suggested an integrated approach, encouraging researchers to link ontology, epistemology, inquiry paradigm, methodology, and procedures. This guideline influenced a template adapted from Saunders, Lewis, and Thornhill (2019), Collis and Hussey (2014), Howell (2013), and Crotty (1998) and upon which the appropriateness of methodologies and procedures of this research were determined. The methodological structure outlined in this chapter underpins the subsequent sections which discuss these concepts. The suggested connections between social science research are depicted in figure 14 below, offering a visual representation of the interconnected philosophical considerations shaping this study.

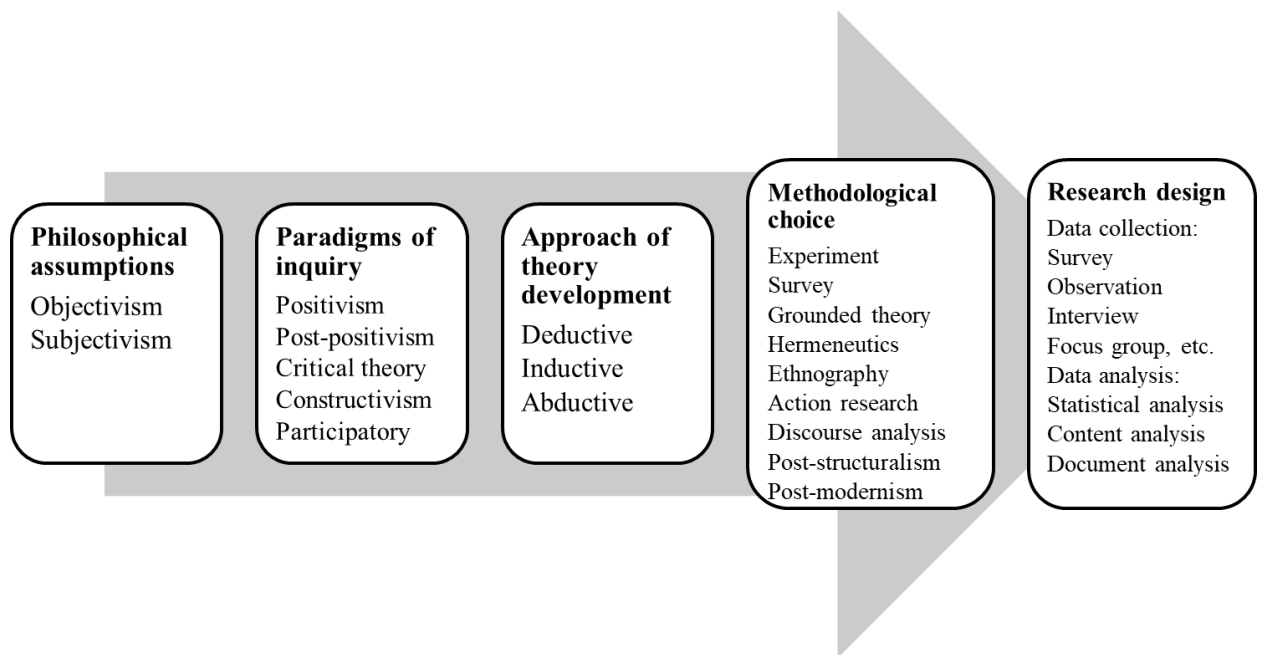


Fig. 14: Proposed philosophical relationships for social science research (Adapted from Saunders, Lewis and Thornhill, 2019 Collis & Hussey, 2014, Howell, 2013; Crotty, 1998)

The subsequent sections of this chapter build on these foundational concepts to establish a comprehensive methodological framework, exploring the relationships between key philosophical assumptions and their practical applications.

3.1.1 Research paradigm

In social research, the term ‘paradigm’ refers to the philosophical beliefs and assumptions that shape a researcher's perspective and approach (Lincoln et al., 2011). Introduced by Thomas Kuhn (1970), the paradigm concept describes the shared generalisations, beliefs, and values within a community of specialists about reality and knowledge. The term ‘worldview’ is often used interchangeably with ‘paradigm’ (Creswell & Clark, 2018; Rossman & Rallis, 2003), and Patton (2002, p. 69) defined it as “*a way of thinking about and making sense of the complexities of the real world*”.

Various researchers categorised philosophical approaches to guide inquiry. Saunders, Lewis, and Thornhill (2019) identified five major research philosophies: positivism, critical realism, interpretivism, postmodernism, and pragmatism. These paradigms offer different perspectives for approaching research problems and suggest various methods for understanding and conducting research, and they are summarised in table 8 below.

Table 8: Research philosophies

	Positivism	Critical Realism	Interpretivism	Postmodernism	Pragmatism
Ontology	Real, external, Independent; One true reality	Stratified External, independent Objective structures Causal mechanisms	Complex, rich; Socially constructed through culture and language; Multiple meanings and interpretations	Nominal, complex, rich Socially constructed through power relations Some meanings and interpretations are dominated and silenced by others	Complex, rich, external ‘Reality’ is the practical consequences of ideas
Epistemology	Scientific method Observable and measurable facts Law-like generalisations Numbers	Epistemological relativism Knowledge is historically situated and transient Facts are social constructions	Theories and concepts too simplistic Focus on narratives, stories, perceptions, and interpretations New understandings	What counts as ‘truth’ and ‘knowledge’ is decided by dominant ideologies Focus on absences, silences, and oppressed/interpretations and voices	Practical meaning of knowledge in specific contexts ‘True’ theories and knowledge are those that enable successful action
Axiology	Value-free research Researcher is detached, neutral, and independent of what is researched Researcher maintains an objective stance	Value-laden research; Researcher acknowledges bias by world views, cultural experience, and upbringing Researcher tries to minimise bias and errors Researcher is as objective as possible	Value-bound research Researchers are part of what is researched, subjective Researcher’s interpretations are key to contribution; Researcher is reflexive	Value-constituted research Researcher and research embedded in power relations Some research narratives are repressed and silenced at the expense of others	Value-driven research; Research is initiated and sustained by the researcher’s doubts and beliefs Researcher is reflexive

Source: Adapted from Saunders, Lewis and Thornhill (2019)

Moreover, Creswell and Clark (2018) outlined four main paradigms: postpositivism, constructivism, participatory research, and pragmatism. Each paradigm aligns with various assumptions about knowledge and research processes. For example, postpositivism values precision, control, and objectivity, usually paired with quantitative research and formal rhetoric (Creswell, 2013). Constructivism is founded on personal meanings and subjective perceptions, which are aligned with qualitative methods and informal rhetoric (Creswell & Clark, 2018). Participatory research is focused on empowering the oppressed and marginalised people by collaborating and advocating on

their interests, while pragmatism reflects between the old and the new by focusing on the practical applications of the research findings (Creswell, 2013). Although they are different from one another, paradigms share common philosophical elements such as assumptions about reality (ontology), how knowledge is acquired (epistemology), the values in research (axiology), the best methods of inquiry (methodology), and the research language (rhetoric). Together, these elements form the philosophical foundation for understanding the complexities of social research (Vibha & Walsh, 2019; Lincoln et al., 2011; Creswell, 2009).

Positivism asserts that reality is objective, external, and it exists independent of human perception. It emphasises the use of scientific methods to measure and observe facts, and it is concerned with finding universal laws and generalisations, often using quantitative data and statistical analysis (Saunders, Lewis & Thornhill, 2019). Within positivism, the researcher is objective, maintaining distance from the study to be impartial and unbiased. Knowledge is regarded as independent from individual experience or cultural setting, and it focuses on empirical facts and patterns that can be generalised across settings. This approach is unsuitable for this current study since it overlooks the subjective character of tourist behaviour. The current study requires a more flexible, context-sensitive research style, which positivism's rigid framework and emphasis on objective quantification cannot deliver.

Critical realism offers a more complex view of reality, acknowledging both observable phenomena and deeper, often hidden structures that shape social dynamics. This paradigm recognises a layered reality where causal mechanisms and power relations influence the way people experience the world (Saunders, Lewis & Thornhill, 2019). While critical realism appreciates the complexity of social realities and the importance of context in shaping knowledge, it places significant emphasis on uncovering hidden causal mechanisms, which are often not directly observable. For the current study, which seeks practical and actionable insights into visitor profiles, critical realism's focus on uncovering these underlying forces is not necessary. The level of abstraction it introduces could divert attention from the more immediate goal of generating relevant, context-specific recommendations for tourism strategies and destination sustainability.

Interpretivism seeks to understand the subjective meanings people assign to their experience, emphasising context, story, and social constructions. It embraces the fact that

reality is socially constructed and that individuals interpret their world from their unique viewpoints (Bell, Bryman & Harley, 2022). Within this paradigm, the researcher's role is to make sense of these unique experiences, typically embracing their own biases and perspectives along the way. While interpretivism yields rich descriptions of individuals' experiences and perceptions, it is not entirely compatible with the objectives of the current research. This study aims to complement objective facts and subjective opinions to generate usable information for destination marketing and management. Interpretivism's focus on the individual and the narrative, rather than generalisable trends, limits its ability to provide the practical, actionable guidance required in this study.

Postmodernism challenges the conventional constructs of reality and truth, and argues that knowledge is fragmented, fluid, and constructed by power dynamics and dominating ideologies. Postmodernism dispenses with universal truths but instead stresses that knowledge is a social construct by way of discourse, narrative, and language (Saunders, Lewis & Thornhill, 2019). One of the central concerns of postmodernism is the investigation of silences, absences, and marginalised voices that are typically omitted from mainstream research (Bell, Bryman & Harley, 2022). While postmodernism offers reflexive critique of the socio-political construction of knowledge, it is not the optimal for this research. The aim of this research is to develop practical recommendations for destination management. Postmodernism's focus on power deconstruction and resistance to essential knowledge, as helpful as it is, could be deflecting attention away from this research objective of providing useful recommendations to DMOs and other stakeholders.

While each of the paradigms in question offer intriguing perspectives on the complexities of social research, none are particularly appropriate for the purposes of this research. Positivism's objectivity and quantification overlooks the complex, subjective nature of travel motives and personality traits. Critical realism's pursuit of tacit causal processes and structures is accompanied by undue complexity, detracting from the research goal of providing practical implications. Interpretivism, while well-suited to exploring individual perspectives and lived experiences, does not support the generation of broadly applicable insights required for this research. Similarly, the postmodern inclination to deconstruct dominant discourses is misaligned with the study's intent to produce actionable knowledge grounded in real-world phenomena. In contrast, pragmatism is the most appropriate paradigm for this study. Its versatility in accepting

both objective and subjective sides of inquiry is the source of a balanced methodology that aligns with the dual concern of the study for theoretical understanding and practical application. This paradigm supports methodological flexibility in which the researcher can employ quantitative and qualitative investigation methods to achieve a better understanding of the research problem.

The pragmatist philosophical movement developed in the late 19th and early 20th centuries, focuses on the practical implications and results of social reality. Based on scepticism about the idea of absolute knowledge or truth of positivist scientific approaches (Ormerod, 2006), pragmatism challenges assumptions of certainty and emphasises the practicality of ideas in solving real problems. The classical pragmatists that initiated the movement include Charles Peirce (1878), who founded the pragmatic maxim, William James (1890), who emphasised subjective experience, and John Dewey (1929), who used pragmatism in everyday human experiences and social inquiry (Kelly & Cordeiro, 2020). Pragmatism's emphasis on action and application makes it particularly suitable to address the complexities of tourism research, where practical, context-dependent knowledge is essential for sustainable and effective results.

Charles Peirce (2014; 1878) asserted that a concept is important if it is connected to practical effects. In 1878, he developed the 'pragmatic maxim', a guideline for explaining concepts and hypotheses by investigating their practical implications, hence making inquiry relevant to human concerns (Peirce, 1878). The pragmatic maxim invites researchers to examine how a concept or theory occurs in practice and ask themselves what difference it would make in real-life situations. For Peirce (1878), conceptual value lies in the power to inform action and solve problems, situating pragmatism as a bridge between theoretical abstraction and empirical use. This requirement not only aligns knowledge with its practical implications but also highlights the iterative nature of inquiry, where ideas are sharpened continually through experience and experimentation (Peirce, 1878).

William James (2010; 1890) extended Charles Peirce's (1878) pragmatic philosophy by emphasising the place of subjective and individual experience in understanding meaning. While Peirce (1878) connected ideas to their practical effects, James (1890) emphasised how individual experience shapes the use and interpretation of such ideas so that pragmatism is a tool for answering intricate philosophical issues. For

James (2010), the pragmatic maxim did not minimise the significance of philosophical disagreements but instead indicated the meaningful, actional issues, bridging abstract reason with actual realities. Pragmatism, to him, was a method of making concepts more precise and a way of understanding how people think, write ideas, test them out, and build new habits (Ormerod, 2006). This experimentation-habituation cycle, which was at the core of James's (1890) work, placed pragmatism as an action philosophy by enabling individuals and societies to adapt and innovate to new circumstances.

Later on, John Dewey (2008; 1929) developed pragmatism from individual experience to collective human experiences, and he focused on the social and interpretive character of human action. His view was that all human experience involves interpretation: interpretation of knowledge and beliefs directs action, and reflection on action develops into new knowledge and ways of acting (Morgan, 2014a). Dewey (1929) regarded this continuous process of interpretation and reflection as key to human progress, noting that it is through this interactive process that humans and societies grow and innovate. Unlike traditional philosophical thinking, which is inclined to view human action and behaviour as detached from understanding, Dewey (1929) argued that reflective and systematic examination of this interpretive process offers deeper insight into social realities. By framing experience as a social and continuous conversation between thought, action, and reflection, Dewey's (1929) pragmatism emphasises its usefulness in addressing complex societal issues and facilitating collective growth.

Pragmatism seeks to bridge the divide between objectivism and subjectivism, facts and values, and diverse contextual experiences (Creswell, 2021). It evaluates theories and concepts based on their practical implications rather than abstract principles, emphasising their utility in solving real-world problems (Creswell, 2021). Morgan (2014a) identified three core principles of pragmatism: first, the prioritisation of experience over abstract reality; second, the dynamic relationship between actions and contexts; and third, the role of social worldviews in shaping actions and outcomes. Similarly, Kaushik and Walsh (2019) highlighted that pragmatism recognises multiple, evolving realities influenced by individual and collective actions and experiences. Unlike positivist approaches, pragmatism does not adhere to a single method but supports diverse inquiries to encompass varying perspectives (Lewis, Saunders, & Adrian, 2009). This flexibility makes pragmatism particularly valuable for research aimed at addressing complex social and organisational issues. It values knowledge for its practical utility and

its capacity to guide effective actions (Saunders, Lewis, & Thornhill, 2019). This is particularly relevant to the current research, which aims to gain a better understanding of tourist behaviour through personality traits, while supporting sustainable destination management strategies.

To understand how pragmatism informs research, it is essential to explore its foundational assumptions, including ontology, epistemology, axiology, and methodology. These are discussed in the following sections, and they provide a clear structure for understanding how the researcher engages with and interprets reality.

3.1.1.1 Ontology

Ontology refers to the fundamental assumptions about the nature of reality, emphasising what exists and how it can be known (Veal, 2018; Collins, 2019). As researchers confirm, ontology presents two perspectives: objectivism and subjectivism (Saunders, Lewis, & Thornhill, 2019). Objectivism assumes that reality is external, structured, and separate from human experience. In this view, knowledge can be observed, measured, and transferred from one individual to another (Saunders, Lewis, & Thornhill, 2019; Collins, 2019). For example, from an objectivist point of view, students are expected to memorise and repeat what educators or experts teach (Collins, 2019). On the other hand, subjectivism claims that reality is socially constructed, defined by individuals' perceptions and actions (Bell, Bryman, & Harley, 2022). According to this perspective, the world is dynamic and can be interpreted in various ways, depending on personal experiences.

Ontology in this research is approached pragmatically, integrating objectivist and subjectivist elements. Pragmatism is suited to the ordered nature of social systems and subjective experience that build individual and collective realities (Collins, 2019). The dual perspective supports the study's aim of uncovering actionable suggestions for tailoring tourism strategies to tourist profiles to enhance destination sustainability. Through combining empirical observations, e.g., psychological profiles, with participants' narratives, the research investigates the interactions among ordered systems and subjective action. For instance, understanding how personality and travel motivations shape tourist behaviour helps DMOs and the tourism industry tailor strategies and practices to specific visitor profiles, while supporting long-term destination sustainability.

This pragmatic ontological stance places individual tourist behaviours in Cumbria's tourism sector in a broader organisational and social context. By connecting large-scale structures, including destination management plans, to the smaller, individual tourist experiences, the study could address significant practical concerns. These involve increasing tourist satisfaction, fostering sustainable development of the area, balancing visitors' interests and nature and culture conservation, and meeting the evolving expectations of the tourists with the offerings of the destination. This dual focus provides a balanced understanding of the Cumbria tourism system, in that the study's findings are not only theoretically grounded but also directly applicable to the real issues facing DMOs and local stakeholders.

3.1.1.2 Epistemology

Pragmatism offers a dynamic and practical epistemology making it particularly suited to research addressing complicated systems like Cumbria's tourism sector. Unlike philosophical discourse regarding abstract theories of truth and reality, pragmatism emphasises practical knowledge and outcomes that address actual issues (Patton, 2005). Its practice-based orientation is consonant with qualitative interpretivist paradigms, in which reality is viewed as being socially constructed and the focus is on the implications of research findings for practice (Morgan, 2014b). Pragmatism is adaptable, meaning that researchers can incorporate different methods and perspectives into their individual research, without adhering rigidly to one specific approach (Onwuegbuzie & Leech, 2005). This adaptability is particularly relevant to the current study, which aims to advance tourist segmentation by incorporating personality traits, offering a more comprehensive understanding of visitor behaviour and providing useful insights that could enhance destination strategies.

One of the distinctive features of pragmatism is conveyed by its focus on learning and knowing's dynamic processes rather than fixed notions of knowledge (Biesta, 2010). It also confirms John Dewey's (2008) perception that knowledge is being dynamically constructed through continuous interaction with the world. Pragmatism's emphasis on adaptive inquiry in this research provides a robust framework for examining how typologies of tourists manifest different behaviours at the destination. By focusing on 'what works', pragmatism ensures that research outcomes are both theoretically driven and practically oriented, particularly in formulating actionable plans for DMOs and stakeholders in the Cumbrian tourism. This approach bridges the gap between theory and

practice through enabling sustainable tourism management as well as understanding the complexities of tourist behaviours.

Pragmatism also evaluates knowledge according to its functional effects and utility, a notion Dewey (1938) termed 'warranted assertibility', where claims are justified by their consequences in the external world. This epistemological stance permits the combination of general theoretical models, such as the Five-Factor Model (FFM) (Goldberg, 1990) of personality traits, with locally relevant outcomes about tourist behaviours in Cumbria. Through focus on the dynamic interaction between outcomes, actions, and beliefs, pragmatism allows for advanced understanding of the way in which individual behaviours become intertwined with larger systemic structures, including destination marketing strategies and visitor management (Farjoun et al., 2015). This focus ensures that the research informs not only academic theory, but also practical strategies in managing visitor experiences and enhancing sustainable tourism development in Cumbria.

3.1.1.3 Axiology

Axiology focuses on the study of values and ethics and their utilisation within the research process (Bryman, 2016). It examines how choices within research are made based on personal beliefs, emotions, as well as ethical concerns, and it affects all the stages of the process (Clark et al., 2021; Saunders, Lewis & Thornhill, 2019). Axiology aims to bring together value discourse, for example, contentious issues of truth, effectiveness, goodness, and moral behaviour, with ethical considerations central in the research design. By making their values explicit and known, researchers enable readers and participants alike to understand more clearly the context and foundation of their work and to welcome critical scrutiny of its ethical underpinnings. As Saunders, Lewis and Thornhill (2019) claimed, the researchers' values lie at the heart of their study's credibility and integrity, and they influence both the research process and the way findings are interpreted.

Within the pragmatist paradigm, axiology plays a central role by recognising the significance of values in shaping and guiding the research process. Pragmatist research is value-led in nature, a result of the researcher's scepticism, beliefs, and practical concerns with the world (Saunders, Lewis & Thornhill, 2019). Rather than adhering strictly to pre-specified philosophical paradigms, pragmatism embraces the dynamics of values and

their influence on the research process. They influence not only the choice of research problems and methods but also the interpretation of findings, requiring reflexivity, a continual examination of one's own assumptions and their influence on the research (Elkjaer & Simpson, 2011). By engaging with their own beliefs and moral stance, pragmatist researchers also maintain proximity between their research and real-life circumstances, bridging the theory-practice divide and actively solving emerging problems (Bell, Bryman, & Harley, 2022).

In this study, axiology supports the value-based and ethical approach to identify tourist typologies in Cumbria. The moral perspective of this study is motivated by the researcher's commitment to destination sustainability and balancing the demands of a diverse stakeholder base, such as local businesses, tourists, and sustainable efforts. These values guide choices about research questions, approaches, and interpretation of findings so that the study contributes to both theoretical knowledge and practical developments in tourism management. Reflexivity has been an ongoing process throughout the research, with the researcher consistently reflecting on their assumptions and biases to maintain transparency, credibility, and alignment with the study's objectives. This supports the contribution of the study to real-world tourism challenges and its ability to inform actionable, ethical solutions.

3.1.1.4 The current study

This study aims to advance tourist segmentation by integrating personality traits, offering a more comprehensive understanding of visitor behaviour and supporting sustainable management practices. A positivist approach, grounded in objective observation and measurement (Saunders, Lewis & Thornhill, 2019), would not capture subjective elements such as personal attitudes. Similarly, an interpretivist approach, focused on determining the subjective meanings people place upon their experience (Bell, Bryman & Harley, 2022), is also unsuitable, as the objective is outside of interpreting subjective understanding to developing a practical tool for more effective strategies. A pragmatist approach offers a more suitable alternative, as it integrates objective and subjective factors and it is concerned with outcomes in the real world (Saunders, Lewis & Thornhill, 2019). Pragmatism's adaptability allows the use of mixed methods for data collection and analysis, enabling hypothesis development and theoretical model building. This approach aligns with the dual objectives of establishing tourist typologies while also

developing actionable knowledge to guide DMOs and stakeholders to tailor their offerings more effectively.

The researcher's critical thinking and insight into traditional research paradigms shaped the decision to adopt a pragmatic approach. Pragmatism was chosen as the most suitable approach because it balances theoretical depth with practical application, overcoming the limitations of positivism and interpretivism in fully capturing the complexities of visitor behaviour. Guided by the belief regarding the need for actionable findings relevant to real-life contexts, the researcher employed mixed methods to achieve an understanding of visitor behaviour and how it could inform destination strategies. This process of inquiry and refining once again ensured pragmatism's ability in addressing the dynamic and complexity of tourist experience, ensuring that the research delivers both theoretical and practical value.

Moreover, the researcher's academic and professional experience in tourism and hospitality played a crucial role in formulating the philosophy of the study. The academic education provided a theoretical foundation in the theory and practice of tourism, whereas firsthand experience in the industry across various cultural backgrounds highlighted the inadequacy of current models to understand visitor behaviour. These findings reiterated the need to incorporate personality traits to better reflect the dynamic aspects of tourism experiences. Additionally, the personal tourist experience fostered a reflective, pragmatic orientation that integrates theoretical understanding with practical application. This aligns with the pragmatic research philosophy, which begins with the realisation of real-world problems and focuses on practical solutions that can be employed to inform future practices (Bell, Bryman & Harley, 2022). By embracing a range of methodologies and understandings, pragmatism is an adaptable but comprehensive approach to comprehending complex issues concerning tourism behaviour (Creswell, 2021; Kelemen & Rumens, 2012).

The pragmatic research paradigm employed in this study offers a structured framework for tourist typologies in Cumbria, supporting destination sustainable management practices. By combining objective facts with subjective data, the research provides a comprehensive understanding of visitor profiles and their interaction with the destination, offering practical recommendations for managing responsive sustainable

tourism. The focus on application and flexibility in pragmatism ensures that the research makes a valuable contribution to both academic literature and industry practice.

3.2 Research approach

The inquiry of whether research involves theory testing or theory construction leads to an essential consideration regarding the research design (Creswell, 2021). According to Saunders, Lewis, and Thornhill (2019), the selection of deductive, inductive, or abductive approaches in research depends on whether the study starts with existing theories or with data collection. These distinctions are summarised in the table below.

Table 9: Research approaches

	Deduction	Induction	Abduction
<i>Logic</i>	When the premises are true, the conclusion must also be true	Known premises are used to generate untested conclusions	Known premises are used to generate testable conclusions
<i>Generalisability</i>	Generalising from the general to specific	Generalising from the specific to the general	Generalising from the interactions between the specific and the general
<i>Use of data</i>	Data collection is used to evaluate propositions or hypothesis related to an existing theory	Data collection is used to explore a phenomenon, identify themes and patterns and create a conceptual framework	Data collection is used to explore a phenomenon, identify themes and patterns, locate these in a conceptual framework and test this through subsequent data collection and so forth
<i>Theory</i>	Theory falsification or verification	Theory generation and building	Theory generation or modification; incorporating existing theory where appropriate, to build new theory or modify existing theory

Source: Adapted from Saunders, Lewis and Thornhill (2019)

3.2.1 Deduction

The deductive approach, which is mathematical and logical in nature, is very much aligned with the positivist paradigm due to its systematic and objective nature (Park, Konge & Artino, 2019). This method is theory-based and relies on established categories and codes from past research to guide the inquiry (Saunders et al., 2018). Deductive reasoning follows a top-down approach with a broad statement or hypothesis

from prior knowledge or literature, which is subsequently tested against empirical data to confirm or refute the initial proposition (Yale, Nisbet & Miner, 2017). The deductive method therefore moves from the general to the specific and offers a systematic path to knowledge acquisition.

At the core of the deductive approach is the development of a theoretical framework through a critical review of the literature, which becomes the foundation and structure for the research (Yale, Nisbet & Miner, 2017). Throughout the research process, methodological concerns such as sample size need to be considered in order to allow results to be representative and generalisable to a broader population (Collins, 2019). Among the most significant attributes of this methodology is objectivity, as the researcher must be impartial towards the phenomena under investigation, without any personal prejudice that could influence the findings. Therefore, the conclusions of the research are based on observable and measurable facts, and logically concluded facts based on true premises (Saunders, Lewis & Thornhill, 2016). The deductive approach's focus on theory testing highlights its scientific rigor and systematic approach (Collins, 2019).

In this study, the deductive approach was employed in the first phase to apply established methodologies from the literature to examine the clustering of visitors based on psychological and socio-demographic factors. By drawing on existing theories such as the Five Factor Model (Goldberg, 1990; Costa & McCrae, 1992), this phase focused on testing and analysing concepts through empirical evidence. However, this research was not strictly positivist or exclusively theory-driven in nature. While the deductive methodology dominated the first data analysis stage, it did not dictate the research design for the entire study. Instead, it was strategically used as a starting point, providing a structured framework for examining visitor behaviour within Cumbria's tourism context. This allowed for a systematic investigation of personality traits, motivations, and socio-demographic variables, and a better understanding of the dynamics that shape tourism in the region.

3.2.2 Induction

Bryman and Bell (2021) confirm that an inductive approach involves collecting data to develop theories by progressive analysis, closely related to the interpretive paradigm. The process begins with empirical evidence developed from tangible contexts

so that researchers can construct broader generalisations through systematic observation (Collins, 2019). As opposed to deductive logic, where hypotheses are tested against data, inductive logic facilitates understanding to develop organically from the data, paying attention to contextual richness of the research environment beyond simplistic cause-and-effect relationships (Lincoln & Guba, 2000). Commonly described as a 'bottom-up' approach, inductive studies focus on abstracting understandings from patterns and meanings identified through close observations (Bryman & Bell, 2021).

Inductive research is best suited to investigating context-specific factors that influence events and behaviours. It uses qualitative data and smaller samples, allowing for detailed understanding of the varied views in the research environment (Mason, 2018). The analysis process may start with inductive coding, a process where text is segmented into meaningful units, labelled, and categories formed that capture the embedded meanings in the data (Saldaña, 2016; Proudfoot, 2023). Once categories are created, the researcher can link them into networks, hierarchies, or causal sequences, constructing an in-depth understanding of the phenomenon under investigation (Saldaña, 2016). This cyclical process ensures that theories remain connected to the data, which capture the depth and richness of the research setting.

In this study, the inductive approach was applied during phase two (industry focus groups) and phase three (visitor interviews), where data collection preceded theory development. These phases focused on uncovering patterns and themes related to industry perspectives on visitor segmentation and sustainable tourism practices in Cumbria. The visitor interviews further complemented the findings from phase one, enriching the results by offering deeper insights into visitor clusters. This inductive process allowed for the emergence of findings which could inform both theory development and practical applications. In contrast to the deductive approach used in phase one, the inductive reasoning in later phases highlight the study's reliance on mixed methodologies.

This application of mixed methodologies further indicates an abductive design is more appropriate for the fulfilment of the objectives of the study, as the abductive reasoning allows for the integration of both inductive and deductive approaches to create a holistic form of understanding of the research question. In addition, Bingham (2023) asserts that the use of systematic and careful analysis processes entailing both deductive and inductive methods improves analytic transparency and allows for the integration of

theoretical and literary concepts. This, in turn, as Bingham and Witkowsky (2022) confirm, improves the trustworthiness and applicability of the study's findings.

3.2.3 Abduction

Abduction, as described by Peirce (1901), is a fundamental mode of reasoning alongside induction and deduction, playing a crucial role in generating new insights and expanding the scope of inquiry (Kapitan, 1992). Unlike deduction, which validates conclusions within a predefined theoretical framework, or induction, which generalises patterns from observations, abduction explores how something might be, offering plausible explanations for unexpected findings (Curry et al., 2009; Habermas, 1978). This exploratory approach allows researchers to identify relationships and formulate hypotheses that extend beyond established structures, fostering creative connections and advancing knowledge (Danermark et al., 2019). Uher (2013) further explains that abduction involves developing hypotheses that, if true, provide coherent explanations for surprising findings, enabling researchers to move beyond rigid theoretical constraints and explore novel relationships. While deductive reasoning tests theories and inductive reasoning identifies patterns, abduction bridges gaps by generating new theoretical insights. This iterative process not only broadens understanding but also challenges existing paradigms, making abduction an essential tool for studies that aim to uncover complex dynamics (Valsiner, 2012; Weber, 1949).

In this research, abduction plays a crucial role in integrating insights from the quantitative and qualitative phases, particularly in the application of Big Five personality traits (Goldberg, 1990) within segmentation models. The initial quantitative phase utilised existing theories to identify patterns in tourist clusters. However, abduction allows for the exploration of unexpected findings that may not align with traditional segmentation frameworks. The second phase, involving qualitative data from both industry stakeholders and visitors, builds on these insights by contextualising patterns within real-world tourism practices and experiences. Engaging with industry professionals provides a strategic perspective on how segmentation insights translate into destination marketing and management strategies, while visitor narratives offer a deeper understanding of individual experiences. This abductive approach enables the study to move beyond validating known relationships to uncovering emergent trends and interactions, generating actionable recommendations for DMOs to enhance destination appeal and

support sustainable tourism strategies in Cumbria. Through an iterative process of hypothesis refinement, the study ensures a comprehensive, practice-informed understanding of tourist behaviour that bridges theoretical models with industry application.

3.3 Research methods

Exploratory and explanatory research are two distinct but complementary methodological approaches that both address research objectives. Exploratory research is often applied when the subject of study is novel or underexplored, with the goal of researching phenomena without predefined hypothesis (Swedberg, 2020). It aims to uncover patterns and create knowledge that serves as a foundation for further research. This approach is characterised by its flexibility and adaptability, often incorporating qualitative, quantitative, or mixed methods to investigate newly arising themes and relationships in an adaptive and context-sensitive manner (Swedberg, 2020).

Explanatory research, on the contrary, is concerned with establishing and testing cause-and-effect relationships between variables (Bowen, Rose & Pilkington, 2017). Its primary purpose is to produce detailed explanations of phenomena as they are observed, explaining why and how particular outcomes happen. Explanatory research must be formally and systematically planned, normally in experiments, longitudinal research, or statistical analysis. Hypothesis testing, precision in data collection, and causality are principal features of explanatory research (Bowen, Rose & Pilkington, 2017). However, its reliance on a well-established foundation of prior knowledge highlights the importance of exploratory research as a precursor, particularly in areas where existing understanding is limited or fragmented.

Considering the innovative application of Big Five personality traits in segmentation frameworks, the study in this research adopts an exploratory design to identify patterns and to generate insights that enhance theory development as well as application in the field of tourism. Integrating quantitative analysis of tourist profiles with qualitative information from industry practitioners and tourists, the study aims to investigate how personality-based segmentation could be applied to guide destination management and marketing strategies. While the study primarily explains emergent relationships, it also provides exploratory insights by contextualising industry

perspectives and visitor experiences. Not only does this build tourism segmentation models but it also serves as a framework that could be adapted and applied in other industries seeking to enhance customer segmentation and customise offerings, contributing to sustainable and targeted strategies.

In order to address the exploratory design of this research and the shortcomings in the literature, a mixed-methods strategy is employed, as advocated by Creswell and Clark (2018). It involves quantitative (visitor surveys) and qualitative methods (industry professionals' focus group discussions and in-depth visitor interviews). By combining these approaches, the study aims to provide an integrated view of visitor behaviour at the destination, quantifying both measurable trends and the nuanced, contextual appreciation necessary to inform theory and practice. Through integration, the results are both valid and actionable, and they respond to the complex interplay of factors that shape visitor experience.

The quantitative phase involves systematic visitor questionnaires to collect data on personality traits, travel motivation, visitor activities, and socio-demographic factors. The primary objective is to develop data-driven tourist typologies, providing a statistical foundation for the research. On the other hand, the qualitative phase will complement the quantitative data through two primary methods. First, industry expert focus group discussions will offer an insight into the operational implications of psychological factors on visitor behaviour and decision-making. Second, visitor interviews will explore visitor experiences in more depth and uncover subjective attitudes that are not likely to emerge from survey questionnaires alone. Through integration of these methodologies, qualitative findings will contextualise the quantitative results and enrich them to deliver an in-depth insight into the interaction between socio-demographic and psychological variables that drive the visitor experience.

Building on Rasoolimanesh et al.'s (2021) convergent design, this research collects complementary data to obtain a deeper insight into visitor segmentation and destination management strategies. As highlighted by Morse (1991), the integration of diverse types of data offers a complete picture of complex phenomena. Employing a mixed methods design, this study examines how psychological and socio-demographic factors influence tourist behaviour with the goal of contributing to the development of sustainable tourism strategies. By bringing together quantitative and qualitative findings,

the research forms an integrated image of visitor behaviour so that DMOs and local businesses can align destination offering with specific tourist profiles and enable long-term sustainability objectives.

3.3.1 Quantitative methods

Quantitative research empirically measures and quantifies characteristics of individuals or events, focusing on the relationships among variables through statistical and graphical analysis (Saunders, Lewis, & Thornhill, 2019). Quantitative research aims to generalise from specific instances to broad contexts or test cause hypotheses, making it a deductive technique (Thomas, 2003). Creswell (2021) complements that in this framework, theories are viewed as scientific explanations or predictions, composed of interrelated constructs or variables that form hypotheses about their relationships, providing a foundation for explaining or predicting phenomena, and shaping the research arguments and rationale. Thomas (2003) adds that the goal is to develop generalisable explanations and predictions applicable in different populations and environments.

The strength of quantitative research lies in its objectivity and minimising researcher bias. By precise measurement and observation of variables, researchers avoid misrepresenting the data by being personally involved with participants (Thomas, 2003). This positivist philosophy agrees with systematic and pre-determined sampling techniques when conducting data collection (Saunders, Lewis, & Thornhill, 2019). To ensure generalisability of findings, quantitative research employs strict sampling measures and experimental study designs (Thomas, 2003). Bell, Bryman and Harley (2022) further add that standardised data collection is crucial, with clearly formulated questions to ensure consistency in participant responses, and effective sampling techniques allow researchers to determine the statistical significance of subgroup differences (Bamberger, 2000).

A key aspect of quantitative research is its use of standardised surveys for data collection, with responses typically pre-coded numerically or into categories to allow efficient management and analysis of large datasets (Check & Schutt, 2012). Surveys are particularly effective for collecting data from large populations using consistent methods, while measurements and statistics play a crucial role in converting empirical observations into mathematical relationships. Random sampling, which ensures each participant has

an equal or known chance of selection, further enhances the ability to generalise findings to the broader population (Check & Schutt, 2012). Ultimately, these elements work together to produce reliable, generalisable insights that advance understanding of the studied phenomena. Nevertheless, whereas one of these phases involved a quantitative approach, this research is not based solely on a quantitative design, as it integrates qualitative methods to capture the rich contextual considerations necessary in an exploratory investigation.

3.3.2 Qualitative methods

Qualitative methods, as outlined by Thomas (2003), focus on understanding the characteristics of people and events without relying on quantitative comparisons. Grounded in interpretive philosophy (Saunders, Lewis & Thornhill, 2019), these methods aim for an in-depth exploration of social behaviour. Researchers adopting interpretivism, social constructionism, and inductivism seek to uncover new ideas and patterns within their data (Bell, Bryman, & Harley, 2022). While qualitative methods are often associated with these philosophical frameworks, Sirakaya-Turk et al. (2017) observed that positivists, post-positivists, and post-modernists also use these approaches, although each paradigm shapes how data is collected and interpreted (Tomaszewski, Zarestky, & Gonzalez, 2020).

Qualitative research is inherently interpretive, and naturalistic, examining phenomena in their real-world settings (Thomas, 2003). It prioritises understanding the meanings individuals construct within their specific contexts (Tomaszewski, Zarestky, & Gonzalez, 2020). This approach integrates data collection, analysis, and reporting, often incorporating words, images, and sounds as part of the research process (Creswell, 2021; Veal, 2018). Sampling in qualitative research is flexible and purpose-driven, with data often collected through semi-structured interviews or observations and presented in unstructured or semi-structured formats (Bell, Bryman, & Harley, 2022).

Veal (2018) noted the increasing use of qualitative methods in leisure and tourism research, as they allow researchers to gather detailed data about individuals, locations, or institutions, and providing in depth understanding of behaviours, sentiments, or experiences. However, the time and effort required in qualitative data collection and analysis often limits the number of participants, compared to quantitative methods that

provide more generalised results (Veal, 2018). Although two phases of this research use a qualitative approach, the whole research is not qualitative. Instead, the study uses a mix of qualitative results along with numeric data in a mixed-method design in order to gain better and more in-depth understanding of the topic of the research (Creswell, 2013; Tashakkori, Johnson & Teddlie, 2020).

3.3.3 Mixed methods

Recognised as the third major approach alongside qualitative and quantitative methods, mixed methods are particularly effective when the depth of qualitative data complements the breadth of quantitative findings (Palinkas et al., 2011). This approach is especially useful in the current study focused on developing tourist typologies by integrating personality traits and understanding how this approach could support sustainable tourism strategies. By applying mixed methods to visitor behaviour in Cumbria, the study delivers findings that neither qualitative nor quantitative methods alone could provide.

Based on pragmatist philosophy, mixed methods embrace flexibility as well as mixing of various perspectives in resolution of practical problems (Johnson, Onwuegbuzie & Turner, 2007). Creswell (2003) argued that social and behavioural sciences require the mix of qualitative and quantitative approaches for solving complex research problems. Building on this recommendation, the study follows a sequential design, starting with a quantitative survey (phase one) to identify tourist typologies based on psychological and socio-demographic factors. This is followed by focus groups with tourism practitioners (phase two) and semi-structured interviews with tourists (phase three) to provide deeper context and enrich the survey findings. The integration of these methods offers triangulated analysis, which enhances the validity and reliability of the research through complementary sources of data.

Triangulation, as described by Bryman (2012), involves cross-validating findings from different methods to ensure credibility. This study employs triangulation not only to enhance quantitative survey results with qualitative insights but also to explore complementary findings that deepen the understanding of visitor behaviour. For instance, semi-structured interviews uncover personal and contextual influences that may not emerge in structured surveys, while focus group discussions with industry professionals provide a broader perspective on how psychological factors influence destination

management strategies. By situating these findings within existing literature and theory, the research enhances its credibility, confirmability, and transferability (Tierney & Clemens, 2011). This comprehensive approach ensures that the study contributes meaningful insights into sustainable tourism development while addressing the complexities of visitor segmentation.

Furthermore, Creswell and Tashakkori (2007) note that the studies and their findings must be integrated in some way, following a logic of integration. Tashakkori, Johnson and Teddlie (2020) confirm that different approaches exist for combining quantitative and qualitative methods across different stages of research, with two common dimensions being the time ordering (concurrent or sequential) and the degree of dominance of either approach. The present study adopts an exploratory sequential design, where quantitative data collection and analysis guide subsequent qualitative methods, enhanced by elements of a cyclical approach to allow iterative refinement and integration of findings (Creswell, 2014) (see figure 15).

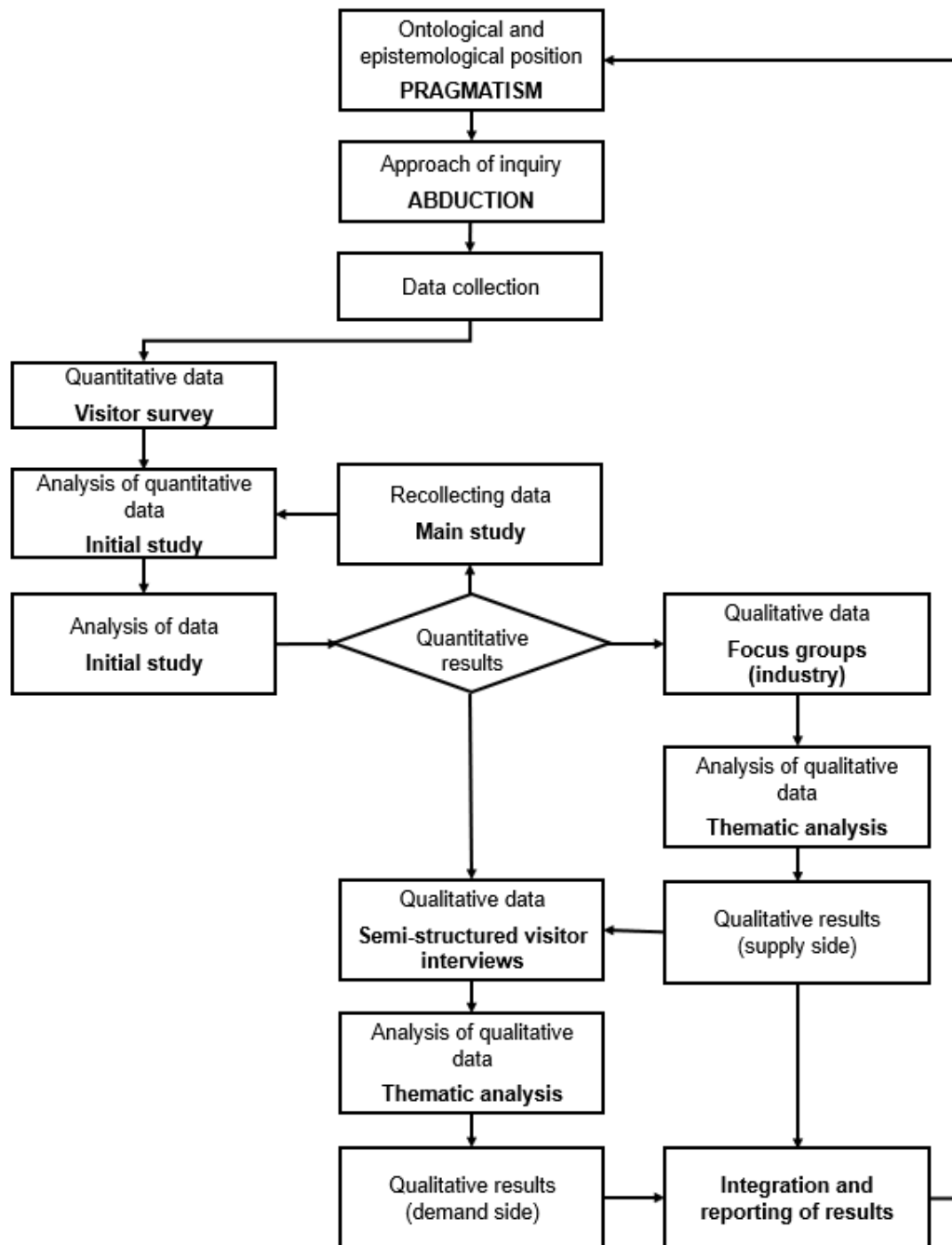


Fig. 15: Workflow of mixed-method research (Created by author)

The research employed a multi-phase, mixed-methods approach that was based on a pragmatic epistemology and directed by an abductive approach. The design evolved to support both theoretical advancement and practical understanding through ongoing reflection and data integration. The study began with a preliminary visitor survey that provided quantitative data to investigate broad behavioural patterns and guide the direction of additional qualitative research. Following initial analysis, industry focus groups were used to examine supply-side viewpoints on segmentation and sustainable

visitor management. The themes that surfaced had an impact on the next stage of data collection. A second round of survey data collection (main study) and an additional focus group were used to further explore and refine key constructs.

Semi-structured interviews with visitors were then conducted to obtain in-depth, demand-side insights into the relationship between visitor activities, motivations, and personality traits. Throughout the study, data integration was iterative and not restricted to a single phase. Abductive reasoning states that one approach's outcomes impacted the next design and interpretation. The thematic synthesis of both qualitative and quantitative data in the final stage allowed for a comprehensive understanding of personality-informed tourist typologies and practical recommendations for industry application. This allowed for cross-validation of insights, maintained flexibility to adapt to new findings, and ensured methodological rigour.

By combining deductive and inductive methods, the research ensures a dynamic interaction between quantitative and qualitative phases, providing flexibility and deeper insights. The deductive analysis first begins with the formulation of specific hypotheses, based on existing literature, regarding personality traits, motivations, visitor activities, and socio-demographic factors. This phase is complemented by the inductive approach, where broader, open-ended questions are designed for focus groups and interviews to gain deeper insights into visitor experiences from the industry and the visitor perspectives. The integration of results occurs as the quantitative findings from the survey inform the development of qualitative questions, and the qualitative data offers explanations for the trends identified in the survey (Östlund et al., 2011). Through iterative analysis, quantitative findings are cross-referenced with qualitative insights, enhancing understanding by connecting statistical relationships to personal narratives (Leech & Onwuegbuzie, 2007).

The interpretation of findings involves synthesising both approaches, with survey results highlighting trends and qualitative data uncovering new insights about visitor behaviours and industry implications. As a result, the research questions are refined throughout the process, with each cycle providing feedback to both the quantitative and qualitative elements of the study, ensuring continuous refinement and adaptation (Creswell & Plano Clark, 2017). The final stage integrates the findings into actionable recommendations that draw on the strengths of both deductive and inductive approaches,

providing a comprehensive understanding of visitor experiences and practical solutions for industry stakeholders. This cyclical process enables the study to maintain flexibility, incorporating emerging insights and continuously enhancing the research design and focus (Creswell, 2014).

3.4 Research design

A research design dictates the strategic approach to addressing research problems, with the definition of congruence between purpose and methodological choice (Saunders, Lewis, & Thornhill, 2012). Researchers tend to choose either qualitative, quantitative, or mixed methods, and choose a design most appropriate for the purpose of their study (Creswell, 2009). Although there are specific approaches that are generally linked to paradigms, such as deduction with positivism and induction with interpretivism, the interconnectedness of these strategies implies that there is no single design that is inherently superior (Saunders et al., 2012). Instead, the focus is on achieving congruence among the research strategy, methods, and objectives.

In mixed-methods studies, integration and timing are key considerations. Creswell and Clark (2011) mention that a 'strand' involves the large-scale processes of either qualitative or quantitative research, such as building questions, collecting data, and interpreting results. A study qualifies as mixed methods if it involves at least one quantitative and one qualitative strand. Timing refers to the time and mode at which such strands are combined, contemporaneously (at the same time), consecutively (one after the other), or in multiphase aggregation (Creswell, 2003). For this research, the adopted design is the sequential mixed methods with a quantitative phase first to test the hypotheses and then qualitative phases of further inquiry of industry practitioners and tourists. This structure is consistent with the paradigm of pragmatism, with flexibility in using both qualitative and quantitative techniques to address the research questions effectively.

Tourism and personality studies have predominantly employed quantitative methods based on questionnaires to measure tourists' personality traits and motivation (e.g., Alves et al., 2023; Vargas et al., 2021; Kovačić et al., 2022; Kvasova, 2015; Jani, 2014; Pesonen, 2012; Huang & Petrick, 2010). Such studies depend on statistical data to identify patterns and relations, leaving a gap for capturing qualitative insights. This study not only addresses this gap by incorporating qualitative data but also introduces a novel

element by including industry perspectives, offering a more holistic understanding of how personality traits influence tourism behaviour from both visitor and industry perspectives.

The study is divided into three phases, each designed to address distinct research objectives (see figure 16). Phase 1 involves a quantitative survey to develop tourist typologies, using random sampling to ensure generalisability. Phase 2 employed focus group discussions with industry practitioners to explore insights from survey findings, focusing on segmentation practices, the role of psychological factors in visitor behaviour, and their application in tourism strategies. Phase 3 involved semi-structured interviews with visitors, expanding upon the survey data to explore deeper psychological influences and factors not captured in the initial quantitative phase. By employing triangulation, the study ensures the reliability of findings while integrating deductive and inductive reasoning to balance theory testing with theory building (Creswell & Plano Clark, 2018). This design ensures that diverse perspectives are incorporated, providing actionable insights for sustainable tourism development in Cumbria.

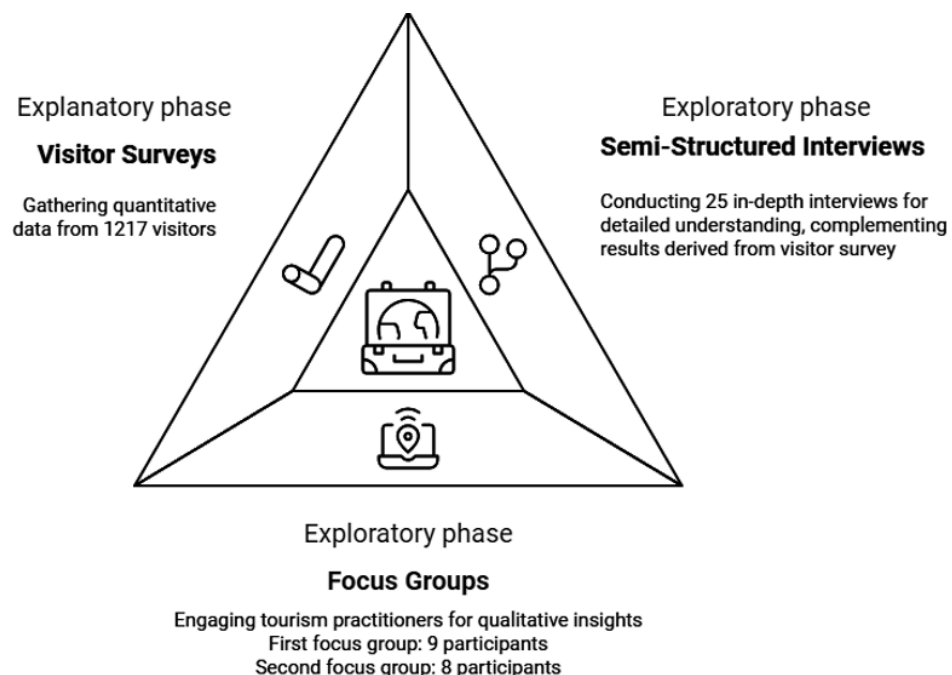


Fig. 16: Research design (Created by author)

3.5 Research strategies

This research aims to advance tourist segmentation by integrating personality traits, offering a more comprehensive understanding of visitor behaviour and supporting

sustainable management practices. Through the integration of visitor perspectives and industry research, the study provides a comprehensive explanation of how socio-demographic and psychological factors influence visitor behaviour. The research outcomes will inform the development of destination management and marketing practices, equipping the local DMO and tourism operators with real-world tools to tailor services, and enable sustainable tourism practice. To achieve these objectives, the research employs a mixed method, enabling a comprehensive evaluation of the research problem through a multifaceted analysis of data. The study is structured into three distinct phases, and the following section outlines the strategic approach employed in each phase.

3.5.1 Phase 1: Survey with visitors

Bell, Bruman and Hartley (2022) noted that the effectiveness of a survey depends on its ability to accurately measure the characteristics of the target population. To ensure this validity, a pilot study was conducted as a preliminary test to evaluate the questionnaire's design, identify potential issues, and estimate response rates (Veal, 2018). Pilot surveys are essential for enhancing the efficiency of the main data collection process, providing insights into potential challenges, and familiarising researchers with respondents' patterns and preferences (Veal, 2018).

The survey used in this study consists of four sections (see Appendix 1), and questions have been adapted from the literature (see Appendix 2). The data collected was anonymised, and no personal identifiable details were collected, ensuring that the study is compliant with the General Data Protection Regulation (GDPR). Moreover, informed consent was provided by participants through a consent form, and they consented to their data being used for research purposes.

A total of 1,217 valid responses were collected using random sampling, ensuring a representative sample (Saunders, Lewis & Thornhill, 2012). Serkan and Bougie (2013) noted that surveys are particularly useful for systematic data collection, which can be analysed using descriptive and inferential statistics to identify patterns and relationships. Bryman and Bell (2015) further confirm that this approach is widely used in business and management research for describing, explaining, or comparing knowledge, attitudes, and behaviours of individuals (Bryman & Bell, 2015).

Empirical data collection for this study used online surveys, a widely recognised systematic method of collecting information from respondents (Balvanes & Caputi, 2001). Digital technologies facilitated more extensive reach and successful data collection, reflecting the dynamic visitor experience by gathering real-time information on travel motivation, activities, and personality. Online surveys offer numerous advantages, including being cost-effective, allowing control of the research process, and having the capability to yield findings representative of a larger population (Saunders, Lewis & Thornhill, 2016). Through the implementation of a rigorous methodological approach, comprising orderly data collection and pilot testing, this methodology ensures the credibility, reliability, and practical usefulness of the findings, making a valuable contribution to tourism studies and industry practice.

The choice of survey

The initial step of the research was to identify a suitable population for the study, building a research instrument, and determining how the research was to be delivered (Bryman & Bell, 2015). Among various alternatives, questionnaires administered via the internet and intranet, distributed either by email or through an internet website, were being considered (Saunders, Lewis & Thornhill, 2016). Email surveys rely on distributing a link to the survey based on an existing list of addresses (Saunders, Lewis & Thornhill, 2016). Web surveys offer advantages for the present research, though, such as full customisation facilities for presentation, including varied colours and styles within closed questions, which contributed to the overall appearance and user experience of the survey (Bryman & Bell, 2015). Additionally, the web survey design allowed for completeness through inviting the respondents to answer all the questions before proceeding to the next section. Considering these benefits, a web survey was selected as the most suitable data collection technique for this stage of the study, in accordance with the study's objectives in terms of efficiency, user interaction, and validity of data.

Instrument Development

Constructing valid measurement instruments forms a central aspect of research as it directly influences the reliability and validity of the data. Bryman and Bell (2015) emphasise utilising well-established measures that have been rigorously tested in previous research. In order to follow this principle, the survey instrument in this study was developed by adapting measures from previous literature aligned with research

objectives. This process ensured that the measures were not only applicable to the study but also comparable with previous research, making the findings more robust.

The questionnaire was designed to measure personality traits, tourist motivation, tourist activities, and socio-demographic visitor characteristics to Cumbria. Theoretical constructs were translated into surveyable items through a literature-based approach. Each construct was clearly defined and operationalised by the selection of pre-validated items from previous studies for compatibility with established theoretical frameworks. This systematic method ensures that the survey questions are not just theoretically valid but also practically useful, allowing reliable and meaningful data to be collected to study visitor behaviour. Details of the survey items and their sources are provided in Appendix 2, ensuring transparency and rigour in the instrument's design and selection.

Personality research recognises that personality comprises complex dimensions beyond what is captured in survey responses alone (Möttus et al., 2020). Alternative methodologies like behavioural observations also provide valuable perspectives (Back, 2020; Möttus et al., 2020; Rauthmann, 2020); however, surveys, especially self-reports and informant reports, remain foundational in personality and psychological research. This approach supports significant findings in these fields, grounded in established practices for survey design and data analysis (Condon et al., 2020). For this study, personality traits were measured using the Big Five Inventory-2 Short Form (BFI-2-S), a 30-item measure that is efficient yet robust. Soto and John (2017) emphasised its utility in large-scale, multi-variable studies, as it reduces participant burden and minimises fatigue without sacrificing psychometric integrity. The BFI-2-S (Soto & John, 2017) was selected in this study to maintain high response quality while balancing assessment depth and respondent engagement.

To increase the validity of the travel motivation measures, this study incorporated items from Pearce and Lee's (2005) Travel Career Pattern (TCP) framework. The TCP framework was created through theoretical saturation and thorough empirical testing, resulting in a 72-item inventory that covers a wide range of motivational constructs. To maintain theoretical coverage and reflect the Cumbrian context, a particular subset of 23 items was selected for this study. The selection process focused on items that had demonstrated strong psychometric qualities in previous studies. Items were specifically chosen due to their high internal consistency, as evidenced by reported Cronbach's alpha

values of ≥ 0.70 for related subscales, high factor loadings (≥ 0.50) in initial and follow-up TCP validation studies; and theoretical relevance to rural, nature-based, and heritage tourism settings.

This selective process preserved 9 core motivational dimensions, including novelty and stimulation, escape/relaxation, relationship, recognition, nature, autonomy, self-development, self-actualisation, and nostalgia, which are widely supported in tourism motivation research (e.g., Capar et al., 2022; Maghrifani et al., 2022; Jeong et al., 2018; Oktadiana et al., 2017; Sung et al., 2016; Wong et al., 2013; Pearce & Lee, 2005). According to accepted methods in motivational research, it is methodologically sound to modify validated scales to meet context-specific requirements without sacrificing their psychometric integrity (MacInnes, Ong, & Dolnicar, 2022; Song & Bae, 2018). Additionally, the smaller set of high-loading items improved data quality, decreased participant fatigue, and maintained the construct validity and reliability of the travel motivation measures used in this study.

Visitor activities at the destination were measured using 22 items grouped into 9 thematic factors, adapted from previously validated instruments (Kovačić et al., 2022; Alves et al., 2020, 2022, 2023). These studies' original scales cover a broad spectrum of activities, from entertainment and nightlife to cultural and nature-based experiences. Nonetheless, an adaptation process was required to ensure contextual fit because of Cumbria's unique tourism character, which is primarily rural, rich in heritage, and focused on outdoor and nature-based experiences. Activities unrelated to the regional offer, such as visiting a theme park, nightlife, or shopping at a mall, were excluded from the meticulous adaptation process. Activities like hiking, walking, wildlife observation, heritage site visits, cultural engagement, and scenic touring were prioritised because they enhanced Cumbria's primary attractions.

The items that have been retained reflect sustainable and location-appropriate visitor experiences, which align with the environmental and cultural values emphasised by regional tourism strategies. This approach aligns with the practice of tourism research, which promotes scale adaptation to take contextual nuances into account without compromising the reliability and integrity of the original frameworks (Alves et al., 2022; Kovačić et al., 2022). By allowing the measurement tool to represent realistic and contextually relevant visitor behaviour in Cumbria, this approach supported the study's

objectives of ensuring academic rigour and practical relevance to sustainable destination management.

Scale used

The choice of using a 5-point Likert scale to conduct the survey was due to its wide application in tourism and social science fields as an effective measure to assess opinions and attitudes (Saunders, Lewis & Thornhill, 2016; Kozak, 2002). Likert scales can estimate the degree to which one concurs or disagrees with a presented statement, prompting respondents to both carefully read positive and negative statements. Including the possibility of a midpoint response marked as 'neutral' provides flexibility for respondents with no strong feelings, reducing response bias and making it possible to capture a broader range of opinion. This systematic method enhances the comprehensiveness, consistency, and comparability of the data being collected, making it highly suitable for studying complex attitudes in a structured manner (Saunders, Lewis & Thornhill, 2016).

The survey employs this established 5-point scale to assess the Big Five personality traits, a widely used model of personality research with demonstrated reliability across numerous studies (Soto & John, 2017). By providing methodological consistency, the scale enables strong measurement and aligns with previous research designs for personality testing. The 5-point scale was also employed consistently in other areas of the survey, including travel motivation and activity preferences, to offer consistency in response formats. This uniformity enhances data integration and simplifies comparative analysis, as recommended by Saunders, Lewis and Thornhill (2016).

Employing a 5-point scale aligns with best practices in tourist motivation and attitude measurement, as demonstrated in studies by Rishi & Chatterjee (2023) and Remoaldo et al. (2020). It allows for standardised responses, improving the ease of analysis while maintaining reliability and validity. Furthermore, research indicates that 5-point scales yield comparable quality to those with more extensive response options, offering a balance between response precision and participant engagement (Revilla, Saris, & Krosnick, 2014; Hair et al., 2010). By adopting this approach, the study achieves methodological rigor and facilitates meaningful insights into the tourist typologies based on psychological and socio-demographic factors, contributing to a comprehensive understanding of tourist behaviour.

Questionnaire layout

After defining the measurement items, the survey layout was designed to enhance clarity and respondent engagement. The opening page introduces the survey, its research objectives, and procedural guidelines, with information about risks, benefits, confidentiality, and participation rights. Ethical considerations comply with university guidelines, and contact information is provided to address participant inquiries (see Appendix 1).

The questionnaire comprises four sections, each dedicated to distinct aspects of the study. The first section gathers demographic data, including age, gender, nationality, education level, work status, travel frequency, travel companion, and trip purpose, aligned with the data format used by the local DMO, Cumbria Tourism, in their surveys. The second section measures personality using the Big Five Inventory-2 Short Form (BFI-2-S), capturing Openness, Conscientiousness, Extraversion, Agreeableness, and Negative Emotionality. This short-form measure allows detailed assessment at the facet level for each trait (e.g., Extraversion includes Sociability, Assertiveness, and Energy). To counter potential limitations of shortened scales, such as reduced content coverage, tools like the BFI-10 and the Ten-Item Personality Inventory (TIPI) were considered but ultimately set aside for the BFI-2-S, which offers a balance of brevity, reliability, and validity (Credé et al., 2012; Dhelim et al., 2022; Thalmeyer et al., 2011).

The third section, travel motivations, includes 23 items structured around Pearce and Lee's (2005) framework, which addresses both functional and emotional travel needs. This design allows for high-quality data collection with minimised fatigue effects by focusing on items with strong loadings in previous studies (Dolnicar, 2013). The fourth section assesses visitor activities at the destination, capturing a range of relevant behaviours in the context of Cumbria. Items from previous studies were modified to exclude options irrelevant to the destination, ensuring context-sensitive measurement.

The survey adheres to GDPR standards, fully anonymising all data collected and omitting identifiable information. The consent process is defined on the initial page of the survey, wherein implied consent is granted by moving on to the survey, and a further explicit consent form is provided. Furthermore, a participant debrief upon the completion of the survey is provided so that the respondents may be made aware of the reason behind the study and questions addressed or concerns resolved. The whole survey design is found

in Appendix 1 presenting item structure, organisation, and layout to facilitate replication and transparency in future studies.

Scale validity assessment

Reliability testing ensures homogeneity among sets of repeated measurements of variables, which is critical in ensuring reproducibility in research (Hair et al., 1998). There are three primary methods for measuring reliability. Test-retest reliability, using repeated measurement on the same subjects, is the most ideal but usually impractical due to time and financial constraints (Vaz et al., 2013). Split-half reliability, where the sample is divided into two halves and correlated, is also not ideal because it is impossible to determine an effective split. Cronbach's alpha (α), however, is a highly prevalent method in that it averages all possible split-half coefficients (Pallant, 2020). A Cronbach's alpha of more than 0.70 ensures reliability, with values of 0.80 and above being outstanding (Nunnally & Bernstein, 1994). This is a test of internal consistency, wherein higher α values indicate higher correlations between items and therefore more ability to observe construct correlations with other variables (Hair, 1995; Reisinger & Turner, 1999). Cronbach's alpha was employed in this study on all the survey's constructs, ranging from personality traits, travel motivation, and activity interests, to ensure internal consistency. The study results exceeded the threshold level of 0.70 that is advised and hence confirmed that the scales used in the research were consistent and reliable in measuring the correlations between these variables (Pallant, 2020).

Population and sampling

The simple random sample is a fundamental probability sampling method, designed to select individuals who represent the broader population or a specific subgroup (Bryman & Bell, 2015). It ensures that everyone in the target population has an equal chance of being selected (Creswell & Clark, 2018). Sample size plays a crucial role in determining the statistical power of a study, directly affecting the ability to detect significant results (Baggio & Klobas, 2017).

The study targeted visitors who engaged in leisure activities in Cumbria, using random sampling to select participants who had visited the destination within the past year. This approach ensured that recent experiences of tourists were captured, through online questionnaires. They had to be more than 18 years of age and must have engaged in recreational tourism during their visit.

Cumbria attracts approximately 47 million tourists each year (Cumbria LEP, 2024). To establish an appropriate sample size for this study, the sample size equation proposed by Aaker and Day (1986), as cited in Bayih & Singh (2020), was utilised. This equation is widely recognised among social science researchers and accounts for the desired confidence level, sample error, the proportion of population characteristics within the sample (assumed to be 50% in social sciences), and the overall population size. The equation for determining sample size, as described by Aaker and Day (1986), is as follows:

$$S = Z \sqrt{\frac{P(1-P)}{N}} \sqrt{\frac{N-n}{N-1}}$$

Where: Z = degree of confidence (95% confidence corresponds to Z = 1.96); S = sample error (5% error, S = 0.05); P = ratio of population characteristics in the sample (assumed to be 50%, P = 0.5); N = population size (47 million); n = sample size (the value to be determined). By applying the formula with the given values, the required sample size for this study is 384 participants. This sample size ensures a balance between statistical reliability and practical feasibility in gathering data on tourist behaviour in Cumbria.

Furthermore, Dolnicar et al. (2014) emphasise the importance of calculating appropriate sample sizes for data-driven market segmentation analyses within tourism research. They suggest that the minimum sample size should be at least 70 times the number of variables to ensure sufficient statistical power, a guideline that exceeds the typical sample sizes found in current tourism segmentation studies. In the present study, 16 variables were utilised in the main survey, including the Big Five personality traits (OCEAN), six travel motivations (nature escape, self-development, relationship and recognition, autonomy, nostalgia, and novelty and stimulation), and five visitor activities (local culture, thematic activities, recreation and adventure, entertainment, and wellness). Following this guideline, the recommended minimum sample size would be 1,120 (16 × 70).

The survey achieved a final sample size of 1,217 responses, reflecting a 10% response rate. This sample size meets statistical recommendations for adequate representation, considering a 50% variance, a 95% confidence level, and a 3% margin of error (Taherdoost, 2016). As a result, the findings regarding the diverse visitor population of Cumbria are enhanced in terms of reliability and generalisability.

To reduce sampling bias and increase demographic diversity, a multi-channel survey distribution strategy was used. 1,217 valid responses in all were gathered. The survey was designed so that participants were required to answer all questions before progressing, ensuring that each submission was complete and usable for analysis. Using the researcher's institutional accounts and partner networks, the survey was distributed online via Facebook, Instagram, X (formerly Twitter), and LinkedIn. Importantly, Cumbria Tourism, the local Destination Management Organisation supported the study by sharing the survey on the Visit Lake District Facebook page (with over 200,000 followers) and including it in an email newsletter sent to their visitor database.

In addition to digital outreach, offline distribution involved posting posters with QR codes in busy places like visitor centres, museums, memorial sites, public transportation hubs, accommodation establishments, and venues for community events. A broader range of visitors, including those who are less likely to use online channels, were encouraged to participate by this tactic.

This approach helped to reduce sampling bias by enabling wide representation across age, nationality, type of travel party, and purpose of visit. Targeting a wide range of visitors while avoiding over-representation from one group, the strategy followed a random approach. The survey engagement timeline is shown in Figure 17, with notable peaks occurring during Cumbria Tourism's online distribution periods.

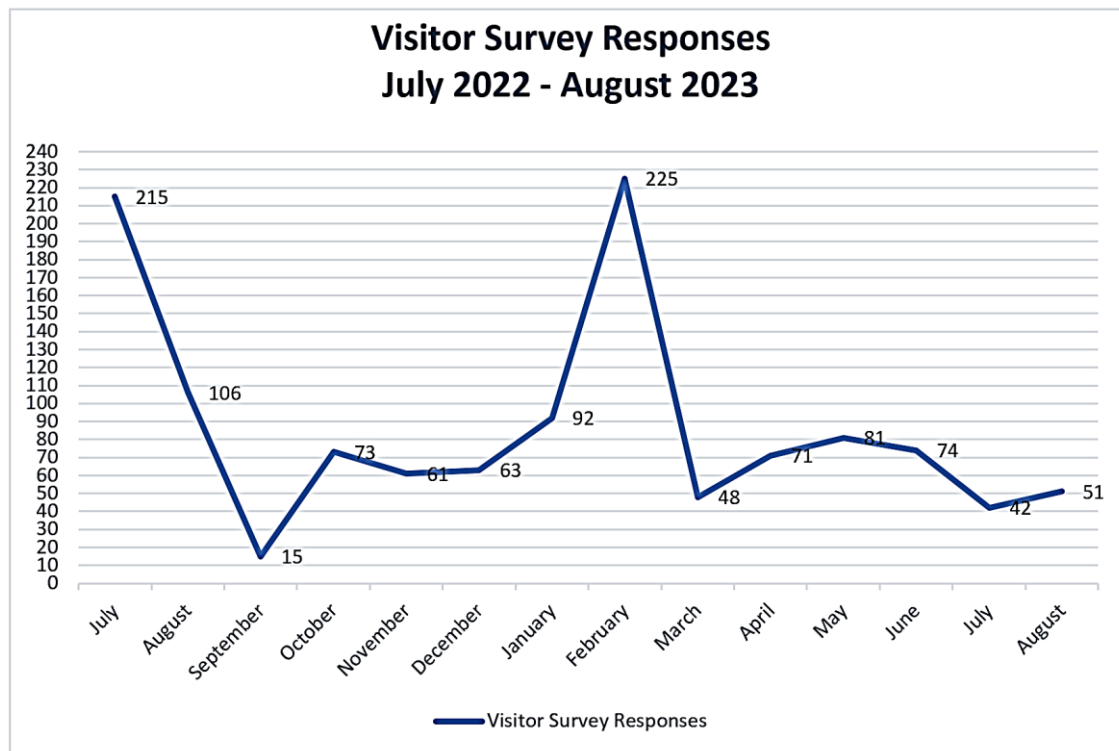


Fig. 17: Visitor survey responses

Data analysis

The data analysis process consisted of two stages: an initial study and the main study. The initial study was conducted to test the measurement instrument and to identify predictors for engagement in visitor activities. This phase helped refine the survey and ensure its effectiveness. In the initial study, a total of 330 valid questionnaires were used to assess the reliability and validity of the measurement scale. Factor analysis identified key dimensions of travel motivations and visitor activities, with data suitability confirmed through high Kaiser-Meyer-Olkin (KMO) values of 0.805 for travel motivations, and 0.809 for visitor activities, and Bartlett's test of sphericity significant at .000. To enhance scale reliability, items with low factor loadings (below .4), cross-loadings, or poor internal consistency were removed. Specifically, three items from the motivations scale ('Physically rest and relax', 'Have romantic relationships', and 'Do things with my partner/family/friends') and two items from the activities scale ('Observe natural habitats: birds/animals/wildlife' and 'Taste local products') were removed due to inadequate factor loadings, ensuring a more robust and valid scale for further analysis (Hair et al., 2014; Pallant, 2020). The main study, conducted on a larger sample size, aimed to identify distinct visitor segments based on personality traits, travel motivations, visitor activities,

and socio-demographic factors. Both stages contributed to the comprehensive understanding of visitor behaviour and segmentation for the research.

For the data analysis in this study, SPSS 24.0 was employed. The analysis process began with a factor analysis (FA) to assess the reliability and validity of the survey items, ensuring that each variable was reliable. The Varimax method was applied for factor rotation, and factors with an eigenvalue of 1.0 or higher were extracted. Next, a combined non-hierarchical and hierarchical cluster analysis was performed to segment visitors based on personality traits, tourist motivations, and preferred activities. Cluster analysis is a technique used to group a sample into clusters by verifying homogeneity within sub-groups (Bryman & Bell, 2011). The hierarchical cluster analysis, using Ward's method, was first conducted to determine the optimal number of clusters, followed by K-means cluster analysis for further refinement (Baggio & Klobas, 2017). Based on the dendrogram results, the tourist market was divided into five distinct groups, with five clusters selected for the K-means analysis. Further, a one-way ANOVA was used to identify significant differences between the clusters. The analysis revealed substantial differences across all psychological factors, with highly significant F-values ($p < 0.001$). Finally, chi-square tests, were employed to analyse demographic differences in the identified clusters. The combination of crosstab analysis and K-means clustering, as described by Ceylan, Çizel and Karakaş (2021), was used to create tourist typologies and interpret patterns. The table below summarises the statistical techniques used in this research:

Table 10: Statistical techniques used in this research

Technique	Analysis method	Purpose
Descriptive statistics	Frequency and percentage for nominal and ordinal data Mean and standard deviation for interval and ratio data	To describe trends in the data set.
Cluster analysis	Hierarchical clustering K-means cluster analysis – produce the best possible groupings based on nominated number of clusters	To group individuals based on similar characteristics and to understand the data structure. To produce the best possible groupings based on a specified number of clusters. To classify individuals into smaller, more homogenous groups based on patterns of responses across variables.
Inferential statistics EFA	Exploratory Factor Analysis	To identify underlying relationships between variables and to reduce data dimensionality.

CFA	Confirmatory Factor Analysis	To test a predefined factor structure or to test the hypothesis that a relationship between observed variables and their underlying latent constructs exists.
Multivariate analysis of strength of relationship among the variables	Multiple Linear Regression	To determine the degree to which two or more independent variables are related to one dependent variable. To answer causal relationship questions and test hypotheses.
Mann-Whitney U Test	Rank-based test	To compare two independent groups when normality cannot be assumed.
Kruskal-Wallis Test	Extension of the Mann-Whitney U Test	To compare three or more independent groups when normality cannot be assumed.
Bivariate analysis of association between two variables	Chi-square Test	To test the relationship between two categorical variables.

Adapted from: Pallant (2020); Hair et al. (2014); Hair & Black (2000)

Pre-test and initial study

Pre-test and initial study phases helped to refine the visitor survey instrument to be clear, trustworthy, and valid before conducting significant data collection. To enhance validity, eliminate ambiguous language, and ensure complete domain coverage, a preliminary check by an expert panel of 10 researchers and experts from the tourism industry was conducted, as proposed by Douglas et al. (2024) and Godovykh and Tasci (2022). This professional review led to wording changes to make it simpler to comprehend and utilise and an estimate of completion time (approximately 10 minutes). The revised survey was trialled with a group of visitors to test comprehension, response option, and questionnaire flow even more (Hair et al., 1998; Bryman & Bell, 2011). Study data supported internal consistency of the survey through Cronbach's alpha and enabled initial analyses to examine how personality factors and motivations could influence visitor behaviour at the destination.

These early results empirically validated theories of personality traits and tourism activity and provided insight into established models. In the literature, personality traits as well as traveling motivations are regarded as key factors influencing visitor choice of activity. For example, Alves et al. (2020) named neuroticism and openness as significant predictors of specific travel preferences, while Çelik and Dedeoğlu (2021) linked conscientiousness with relaxation-type motivation. Similarly, Yurcu et al. (2017) found that conscientiousness plays a significant role in leisure motivation among tourism students. Other studies confirm that openness and extraversion traits align with activity choice (Alves et al., 2020; Çelik and Dedeoğlu, 2019) While motivations themselves are

well-documented drivers of activity selection, especially in sports and wellness tourism (e.g., Mishra et al., 2021; Kara & Mkwizu, 2020; Tomika et al., 2017), there is limited research examining the interplay between personality and motivation.

While Alves et al. (2022; 2023) examined the relationship between personality traits and travel motivations, they have not integrated these insights into visitor segmentation models. To address this gap, this study explores how personality traits and travel motivations interact to influence tourist behaviour in Cumbria. Establishing these relationships at this stage was essential before moving forward with a more comprehensive study focused on developing data-driven visitor typologies. The findings from the study also informed focus group discussions with tourism practitioners, offering a practical foundation for refining personality-based segmentation approaches in the region. This iterative process of expert review, pilot testing, and preliminary analysis strengthened the survey instrument's validity and reliability, establishing the foundation for the main data collection phase (Godovykh & Tasci, 2022).

The initial study, conducted with 330 respondents, was designed to provide a representative sample of the visitor population in Cumbria, ensuring that the findings would offer a basis for understanding tourist behaviours within the region. This sample size provided adequate statistical power to assess internal consistency via Cronbach's alpha and conduct preliminary analyses on personality traits and visitor behaviour, aligning with best practices for survey validation (Hair et al., 1998; Nunnally & Bernstein, 1998). These results informed survey modifications and provided a base for focus group discussions with tourism practitioners, enhancing its relevance. This approach improved the validity and suitability of the survey, offering a solid basis for the main phase of data collection using a larger sample size of 1,217 participants to ensure generalisability of the results.

3.5.2 Phase 2: Focus groups with industry practitioners

The second phase of the research involved focus group discussions with industry practitioners. Focus groups are a widely recognised qualitative research methods, valued for their ability to obtain rich, nuanced information through structured group discussions (Bryman, 2016; Berg, 2004). By using participants' conversation with one another, focus groups enable experience sharing and co-constructed knowledge, offering deeper understanding of complex issues (Morgan, 1997; Krueger & Casey, 2015). This method

is particularly helpful in researching attitudes, opinions, and experiences in specific groups, in this case, tourism sector practitioners (Barbour, 2018).

While the focus group technique offers useful information, it presents limitations, among them being the time-consuming effort of scheduling participants to be in a particular time and location. Second, the success of focus groups largely depends on the expertise of the moderator in conducting the discussion, eliciting active participation, managing loud voices, and getting real responses (Hawkins, Best & Coney, 2004). These limitations were addressed in this study by the close interactions between industry and academics at the University of Cumbria. The experienced academics were present in each focus group to help the researcher in co-moderating the sessions jointly and efficiently in a way that would ensure the integrity and efficacy of the discussions.

In this study, two focus groups at two different points in time were conducted with industry experts to gather practical insights from professionals actively engaged in the tourism sector. Their experiential knowledge provides perspectives that academic research alone may overlook, ensuring the findings are grounded in real-world contexts (Barbour, 2018). Collaborating with stakeholders in this way not only enriches the research but also aligns with best practices in applied research, particularly in dynamic sectors like tourism. Such participatory approaches are essential for developing actionable solutions that address industry challenges and contribute to destination sustainable development (Veal, 2018).

The first focus group centred on discussing the findings from the initial study, emphasising the relevance of marketing strategies tailored to personality traits and tourist motivations. This session allowed practitioners to critically engage with initial findings and explore their implications for visitor segmentation and engagement strategies. The second focus group delved into the visitor clusters identified from the main survey, facilitating discussions on how these clusters could inform marketing initiatives and operational strategies, supporting sustainable destination practices.

By integrating the collective expertise of industry professionals, the research enhances its practical applicability. Insights from these sessions offer actionable guidance for Cumbria Tourism DMO and other stakeholders, ensuring that strategies are effectively aligned with the evolving needs of both the destination and its visitors. The focus groups

ultimately contribute to developing innovative, sustainable approaches to tourism management, supporting long-term destination success.

Focus group planning

To address the study's objective of examining tourism industry perspectives on visitor segmentation and sustainable practices, a qualitative focus group approach was employed. This method used open-ended questions to elicit in-depth understandings, enabling industry practitioners to reflect critically on the model presented and challenge and adapt assumptions held by specific stakeholders (Veal, 2018). Focus group discussions aimed to facilitate collaboration among participants in Cumbria's strategic planning to enable interaction across diverse perspectives and encourage innovative solutions to destination management (Soulard et al., 2018).

Participants were initially invited through an email that presented a brief background of the objectives of the study and indicated how their contribution would be appreciated. A subsequent email was later sent with the date, time, and venue for the focus group, namely, the campus of the University of Cumbria. This ensured that the participants were informed and prepared, facilitating meaningful discussions. The focus group scripts used to guide these discussions can be found in Appendix 3.

The discussion started by presenting findings of the quantitative phase of the research, offering participants a foundational understanding of the proposed model, explaining the predictive power of psychographic factors, namely personality traits and travel motivations influencing visitor activities. This allowed the participants to be able to add informed and thoughtful contributions, enabling them to reflect on the meaning of the findings in relation to their own practice and strategic agendas (Veal, 2018). By situating research findings in context, focus groups enriched discussion in general with practitioner insights, deepening knowledge of the model and its practical implications.

To ensure ethical compliance, consent was obtained from all participants before their involvement, in line with GDPR regulations. Participants were informed of the study's purpose, how their responses would be utilised, and the rights of confidentiality and data protection (Saunders, Lewis & Thornhill, 2019). This ethical principle provided a considerate and credible environment to enable open and honest communication among stakeholders. The collaborative nature of these sessions, combined with ethical standards

being adhered to stringently, ensured that the focus groups provided actionable insights for developing targeted and sustainable Cumbrian tourism policies.

Population and sampling

The focus groups targeted key stakeholders within Cumbria's tourism and hospitality sector, particularly small and medium-sized enterprises (SMEs), as these constitute 98.8% of all enterprises in the region (Cumbria LEP, 2024). SMEs form the foundation of the tourism sector in Cumbria but often face challenges such as limited research resources and constrained marketing budgets. Therefore, these enterprises are highly reliant on the DMO for strategic advice and updates to gain an understanding about their visitors and enhance strategies. This reliance is also highlighted by the fact that 97% of Cumbria's DMO assistance originates from commercial input from member businesses, reflecting the collaborative strategy toward tourist development within the region (Cumbria Tourism, 2024).

The focus group discussion sample included managers, directors, and consultants who play central roles in shaping tourism services, marketing strategies, and tourist experiences. To gather rich and significant information, a purposive sampling technique was employed, applying expert sampling to choose individuals with expert knowledge and extensive experience in the tourism and hospitality industry (Moser & Korstjens, 2017; Creswell & Plano Clark, 2011). Participant recruitment was drawn from diverse sectors, including accommodation management, activity provision, and consultancy tourism, to ensure that qualitative data gathered from the focus groups was credible, contextually grounded, and representative of the complexity of the industry (Patton, 2005).

Potential participants for the focus groups were identified through established professional networks within Cumbria's tourism sector and contacted via email. Each invitation included a comprehensive overview of the study's aims, ethical considerations, and the expected nature of participation, allowing individuals to make informed decisions about their involvement. Because Cumbria's tourism industry is small and interconnected, a purposive sampling strategy was used to guarantee representation from a range of stakeholder perspectives, such as those of destination management organisations, accommodation providers, cultural institutions, and activity providers.

Notably, there was partial participant overlap between the two focus groups, with some individuals taking part in both sessions. This was a deliberate and strategic decision made to facilitate continuity between research phases and enable more in-depth analysis of new themes. By contributing ongoing perspectives that improved the coherence and depth of the data, returning participants were able to expand on previous conversations. To bring in new viewpoints and prevent becoming overly dependent on one group, attempts were made to include additional participants in the second session. In studies involving specialised populations, where repeated engagement can contribute to thematic saturation and analytical richness, this mix of consistency and diversity is in line with accepted qualitative research practices (Palinkas et al., 2015).

Two focus groups were conducted: the first with nine and the second with eight participants. The sample size was optimal to facilitate active involvement and comprehensive debate, according to focus group research guidelines (Stewart, 2021). Expert sampling facilitated the enrolment of participants with extensive experience in the industry, thereby a deeper understanding of the segmentation practices within the context of tourism in Cumbria. By incorporating the perceptions of experienced practitioners, the study enhanced the validity and context sensitivity of the findings, providing actionable recommendations for developing sustainable tourism (Patton, 2005).

Appendix 3 details the questions used in the focus group that were designed to explore participants' perceptions of market segmentation, and personality-based strategies, in relation to Cumbria's tourist market. These questions were used to identify participants' familiarity with the concept of personality-based segmentation, evaluate its usefulness to their organisations, and learn both the advantages and challenges to embracing this approach. Furthermore, the questions were also framed to find out how knowledge of identified visitor clusters could be employed to inform marketing strategies and business practices and elicit views about the potential implementation of a destination app that could provide personalised trip planning and suggestions based on visitor profiles. Through such debates, the focus groups aimed to gain more in-depth insights into how personality segmentation can be practically implemented to contribute to industry strategy and visitor experience in the region supporting destination sustainability.

The focus group discussions were recorded digitally and transcribed verbatim for accuracy and to maintain the richness of the inputs from the participants. The software

used as a primary interface to conduct the sessions was Microsoft Teams, as it was secure and stable platform. In addition, Microsoft Teams was used for its alignment with the data protection guidelines of the University of Cumbria. The recordings were stored securely in OneDrive, following institutional norms of ethical research practice and data storage. This approach ensured that both the confidentiality of the participants and the integrity of the data were maintained throughout the research process.

Data analysis

Qualitative data, derived from interview transcripts, open-ended questionnaires, and focus group records, present rich human experiences but are analytically challenging due to their richness and lack of standardisation (Sekaran & Bougie, 2016; Saunders, Lewis, & Thornhill, 2019). As compared to quantitative data, in which analysis involves applying standardised statistical methods, Bryman and Bell (2015) noted that qualitative data analysis is less formal, requiring an interpretative process of meaning extraction from words, stories, and photographs. Interpretation generally involves dealing with several, often unclear meanings contained within the data (O'Gorman & MacIntosh, 2014).

Saunders et al. (2019) acknowledged the abundance and diversity of qualitative data, such as documents, audio recordings, and digital records, and highlighted that researchers must navigate through and transform the information into meaningful context that can serve to meet the research objectives. Bryman and Bell (2016) further added that the most significant step in transforming the information is coding, where the data set is organised and tagged methodically for purposes of analysis. There is a variety of qualitative methods by which coding may be structured, including thematic analysis, template analysis, grounded theory, narrative analysis, and content analysis, as outlined in the following table.

Table II: Qualitative analysis techniques

Analytical Technique	Description
Thematic Analysis	Identifies recurring themes or patterns in qualitative data through iterative coding, offering flexibility for rich descriptions and deeper interpretations.
Template Analysis	Utilises a structured coding framework with predefined themes, adjusted as needed to capture insights, balancing structure and flexibility for comparative studies.
Explanation Building	Develops explanations for observed phenomena through iterative data collection and analysis, creating coherent narratives to explain complex issues.

Grounded Theory	Develops theory from qualitative data by iterative comparison, to ensure that theories are applicable to participants' own experiences.
Narrative Analysis	Examines the content, structure, and context of personal stories to understand how individuals make sense of their lives within personal and cultural frameworks.
Content Analysis	Analyses text, images, or media to identify themes, patterns, or trends, often combining qualitative and quantitative approaches for in-depth insights.

(Adapted from Saunders, Lewis & Thornhill, 2019; Bryman, 2016; Denzin & Lincoln, 2011)

For this study, thematic analysis was the most appropriate technique for the analysis of focus group interviews involving industry practitioners. Braun and Clarke (2006) assert that thematic analysis is a rigorous and adaptable technique by which researchers can discover, analyse, and interpret patterns or themes within qualitative data. The technique is best applied to the purpose of the study to provide an insight into visitor behaviour and segmentation practices from the perspective of the industry practitioners. Through the systematic identification of recurring ideas and opinions, thematic analysis provides a broad framework for the investigation of the high-quality qualitative data collected through focus group discussions.

To enhance rigor and transparency, qualitative data analysis software NVivo 12 was employed. NVivo 12 provides efficient management of data and structured thematic analysis, ensuring a structured and replicable process (Salmona & Kaczynski, 2024). Analysis started by transcribing the focus group discussions to acquire an appropriate representation of the debate. The transcriptions were subsequently imported into NVivo 12, where open coding was employed. This involved labelling text parts systematically and grouping them to extract significant ideas and concepts aligned with the research aim. Thematic analysis provided a structured approach to identifying themes that captured industry practitioners' experiences, perceptions, and strategic insights. This method ensured a rigorous analytical framework, offering actionable insights while integrating practical and theoretical perspectives into sustainable tourism practices.

3.5.3 Phase 3: Semi-structured interviews with visitors

Interviews are a central qualitative research method for uncovering individuals' perceptions, meanings, and constructions of reality (Knott et al., 2022). They provide extensive analyses of the participants' experiences, where researchers gain in-depth insights. Compared to structured survey-based interviews, qualitative interviews are

responsive and adaptive, enabling a deeper understanding of the subject (Saunders, Lewis & Thornhill, 2016; O'Gorman & Macintosh, 2014). They can range from unstructured, open-ended interviews to structured interviews, with semi-structured interviews offering a balance between responsiveness and structure. As Bryman and Bell (2015) confirm, this makes them particularly useful in exploratory research that seeks to acquire rich, context-dependent understanding. In this research, the semi-structured interviews explore the complex interrelations between psychological factors and visitor behaviour by building on the results from the quantitative phase, gaining richer understanding of the visitor clusters that have been identified.

Researchers confirm that the choice of interview format is crucial to the success of any research project (O'Gorman & Macintosh, 2014). Unstructured interviews, while offering open-ended conversation, may lack the specificity for projects with specific aims or where resources are constrained. Highly structured interviews, conversely, are too restrictive in providing depth and richness required for exploratory studies. For the purpose of this research, aiming to advance tourist segmentation with the integration of personality traits, semi-structured interviews are best method for building on the quantitative data from the phase 1 visitor survey. This format allows flexibility in exploring themes without diverging from the objectives of the study, using a pre-listed theme and questions (Saunders, Lewis & Thornhill, 2016; Bryman & Bell, 2015). The semi-structured method also enables the researcher to explore topics not yet defined in the literature, to ensure that essential insights are not overlooked.

Moreover, this phase aligns with calls for more robust empirical research in tourism that integrates multiple dimensions of traveller behaviour (Lowyck et al., 1992; Creswell & Plano Clark, 2018). While earlier tourist typologies provided valuable insights into behaviour, they have been criticised for their reliance on single-dimensional psychographic or motivational categories, often reflecting *etic* (researcher-driven) rather than *emic* (tourist-driven) perspectives (Lowyck et al., 1992). Addressing these limitations, this study employs semi-structured interviews to investigate the interplay between personality traits, motivations, and activities, generating insights that extend beyond conventional typologies. Visitors were asked about their travel preferences, reasons for visiting Cumbria, and experiences in Cumbria, with specific reference to personality traits defined by the Five Factor Model (FFM) (Goldberg, 1990; Costa & McCrae, 1992). By combining open-ended questioning with targeted prompts, the

approach elicited rich, emic perspectives while situating findings within existing theoretical frameworks. Not only do interviews fill critical research gaps in deconstructing the complexities of tourist behaviour but they also complement the survey quantitative data in offering a broader perspective that can inform sustainable tourism strategies within the context of Cumbria.

Interview Planning

The present study used semi-structured interviews to assess personality traits, inspired by Trull et al.'s (1998, 2001) structured approach to assessing the Five-Factor Model of Personality (FFM) (figure 18). This method provides a balance between structure and flexibility in that the researcher can pursue participants' answers in detail while having a systematic focus on relevant themes. Semi-structured interviews address criticisms against self-report questionnaires, namely method variance and construct validity, in that they provide a richer context for interpreting personality traits. Following Larkin, Watts, and Clifton's (2006) emphasis on providing voice to participants and understanding their experiences, this approach complements conventional self-reports in that it enables closer exploration of the Big Five traits within different contexts. The flexibility to use follow-up questions and probes enhances the possibility of clarifying responses and uncovering elaborate insights, which is particularly suitable for understanding the intersection of psychological constructs and activities at the destination.

Measure	NEO-PI-R	SIFFM
Neuroticism		
High	"I often worry about things that might go wrong"	"Do you worry a lot about the future or things that might go wrong?" [If yes:] "What kinds of things do you worry about?" [After response] "What proportion of the time?"
Low	"It takes a lot to get me mad."	"Is it unusual for you to have feelings of anger or bitterness?" [If yes:] "Is it difficult for you to get angry even when it's appropriate?"
Extraversion		
High	"I have often been a leader of groups I have belonged to."	"Would you describe yourself as a leader?" [If yes:] "Please give me some examples of yourself as a leader." [After response] "Do others ever consider you to be bossy or domineering?"
Low	"Many people think of me as somewhat cold and distant."	"Are you more distant or reserved than most people you know?" [If yes:] "Has this affected the number of friends that you have?" [If yes:] "How so?"
Openness		
High	"I have a very active imagination."	"Is your imagination so vivid that you sometimes confuse imagined things with real things?" [If yes:] "Does this ever make you feel uncomfortable or cause any problems?" [If yes:] "Give me some examples."
Low	"I seldom pay much attention to my feelings of the moment."	"Are you generally unaware of how you feel?" [If yes:] "Would you say that you are at times oblivious to the feelings of yourself and others?"
Agreeableness		
High	"I go out of my way to help others if I can."	"Do you often go out of your way to help others who are in need?" [If yes:] "Do you do this at the sacrifice of your own best interests?" [If yes:] "Give me some examples."
Low	"I pride myself on my shrewdness in handling people."	"Would you describe yourself as typically cunning or shrewd?" [If yes:] "Have you ever gotten into trouble because of this?" [If yes:] "Give me some examples."
Conscientiousness		
High	"I plan ahead carefully when I go on a trip."	"Are you the type of person who prefers to plan ahead?" [If yes:] "Do you often ruminate or worry about all possible consequences or problems that might occur?"
Low	"I never seem to be able to get organized."	"Are you a disorganized person?" [If yes:] "Do you have so much trouble keeping things in order that you often become confused, overwhelmed, or distressed?" [If yes:] "Give me some examples."

Fig. 18: Illustrative NEO Personality Inventory – Revised (NEO-Pi-R) and Structured Interview for the Five-Factor Model of Personality (SIFFM) Items (Source: Trull et al., 2001, p. 232)

Effective planning was central to conducting these interviews. The researcher developed an interview guide, comprised of overarching themes and questions for personality traits, motivators, and preferences in the context of the study. As Saunders, Lewis, and Thornhill (2016) recommended, the guide included opening statements, prompts to encourage dialogue, and closing comments, alongside planned and spontaneous probes designed to elicit detailed responses. Follow-up questions, such as 'why not?' or 'why is that?' proved particularly useful for delving into participants' thoughts and emotions, ensuring a genuine and focused conversation (see Appendix 4). This dynamic exchange empowers both interviewer and interviewee to explore new ideas while systematically addressing the research objectives (Bryman & Bell, 2015).

The qualitative interviews were organised into five structured sections, opening with participants selecting one of five predefined activity packages that best aligned with their interests (see Appendix 5). These packages were designed to mirror activity combinations used in the quantitative survey, ensuring continuity between research

phases and enabling a comparative understanding of preferences across methods. The five packages were developed guided by trends found in the survey data, which showed that tourists frequently participated in groups of related activities that represented more general experiential themes like physical challenge, wellness, cultural immersion, and nature-based exploration. Additionally, these trends aligned with earlier research on activity-based segmentation (e.g., Alves et al., 2020, 2022; Kovačić et al., 2022).

Although some activities (like going to museums, going on boat trips, and attending performances) are included in more than one package, this reflects their universal appeal and the various ways that different kinds of tourists combine and interpret them. To identify psychological, motivational, and contextual factors that distinguish otherwise similar behaviour, the interviews were designed to investigate not only what activities visitors chose, but also why. Additionally, clarifying the applicability and popularity of a specific activity type in the Cumbrian context was another benefit of the interview discussions. Participants considered whether some activities were appealing or irrelevant, justifying their selections based on their own preferences. This helped reveal which activities were popular, which were more specialised or underutilised, and how motivations and personality traits affected activity participation for various visitor profiles.

The second part of the interview discussed travel motivations for visitors in Cumbria and their engagement in various activities at the destination. Moreover, questions related to their personality traits were incorporated, inspired from Trull et al.'s (1998, 2001) structured approach to assessing the Five-Factor Model of Personality. These questions were designed to link personality traits with specific visitor activities. For instance, questions about extraversion included: *“Do you generally enjoy socialising and engaging in group activities, or do you prefer more solitary experiences?”* This was followed by activity-related inquiries such as: *“Can you provide specific examples of activities that you have enjoyed or participated in during your trip that align with your need for socialising/solitary experiences?”* Further, the interview also explored participants' use of travel technology. Finally, participants were invited to share any underexplored aspects of their travel preferences that they felt were relevant to the study.

Furthermore, qualitative cluster insights also provided a fundamental link between qualitative results and clusters developed through statistical methods like factor and

cluster analysis (Hair et al., 2019). This step confirmed that quantitative clusters represented distinctive profiles, such as those who were seeking cultural enrichment or those for whom relaxation was more important. The qualitative data also refined these clusters by identifying sub-motivations and behaviours, adding explanatory power to the segmentation model. This approach is in accordance with Creswell and Plano Clark's (2017) principles of mixed-methods research, whereby the synthesis of quantitative breadth and qualitative depth offers a more holistic understanding of complex phenomena. By identifying statistical clusters within rich personal narratives, the study produced results that are methodologically valid and pragmatically significant, with valuable implications for tourism management and strategy development.

Population and sampling

Purposive sampling in qualitative studies is a methodical technique applied in selecting participants relevant to the objectives of the study. It can also be referred to as 'purposeful selection' or 'judgmental sampling' (Bryman & Bell, 2011). In this technique, importance relies on including persons who can bring out detailed facts to solve the research problems convincingly (Saunders, Lewis, & Thornhill, 2016). Researchers apply professional judgment in identifying those participants most likely to generate rich, context-specific information so the study can be matched with its purpose.

This research employs purposive sampling to gain a deeper understanding of the visitor clusters, namely understanding how personality traits and motivations of the visitors influence their activity preferences in Cumbria. Drawing on Cohen's (1974) conceptualisation of tourists as "*'voluntary, temporary travellers... seeking pleasure from novelty and change'*" (p. 533), the study targeted participants with recent experience at the destination. Inclusion criteria required participants to have visited Cumbria within the past year, be aged over 18 years, and be proficient in English to share their experiences in semi-structured interviews. This inclusion criteria were to ensure participants were able to provide rich qualitative data to achieve the study's objectives.

Purposive sampling was designed to complement phase 1 quantitative data by offering a more detailed exploration of differences between individuals and how they contribute to tourism experiences. By involving participants from a range of visitor profiles, the study aimed to uncover more meaningful insights beyond what standard survey responses typically provide. Saturation was achieved by a recursive and systematic

procedure of participant analysis and recruitment. The selection of participants started with the recruitment of varying backgrounds and demographics to fully represent the spectrum of potential viewpoints. The first eight interviews provided a solid foundation by capturing key variations within the dataset. To further enrich the depth and breadth of insight, an additional 10 interviews were conducted. At the final phase of seven interviews, no new themes or observations were noted, and patterns observed remained consistent. This continuous process ensured that the dataset had reached stability, with no significant new information being added.

The interviews were conducted during the period of February to August 2024, varying in duration from 40 to 75 minutes, and were recorded using digital tools and transcribed verbatim. The interview platform utilised was Microsoft Teams as it offered secure options and had university permission for the storage of recordings in OneDrive. Online interviews provided significant advantages, including crossing geographical distances, enabling participation from various locations, and reducing the logistical challenges of in-person meetings (Lo Iacono, Symonds & Brown, 2016; Bell, Bryman & Harley, 2022). Remote interviewing also improved participant engagement and response rates through the ability to accommodate various schedules (Joshi et al., 2020). This method proved especially effective in capturing detailed, qualitative data from a diverse group of participants, ensuring the richness and relevance of the findings.

Data analysis

Thematic analysis was employed to interpret the semi-structured interviews, providing a systematic way of finding, analysing, and interpreting patterns in qualitative data (Naeem et al., 2023). The technique, similarly, applied during the focus group discussions, is particularly well-suited for probing complex information. As Braun and Clarke (2006), Saunders, Lewis, and Thornhill (2019), and Bryman (2016) defined, thematic analysis plays a vital role in revealing underlying patterns in the interview data. From this process, overall motivations such as the need for adventure, cultural experience, or relaxation were revealed, outlining the psychological reasons underlying visitor choices. Through the integration of these qualitative findings with the phase one quantitative data, the research offers a comprehensive insight into visitor behaviour, mixing numerical trends with rich, context-specific narratives (Braun & Clarke, 2013; Bryman & Bell, 2015).

Thematic analysis facilitated the categorisation of qualitative data into structured themes, enabling the researcher to systematically explore how personality traits, and motivations influence visitor activities at the destination. This structured framework allowed the identification of key themes and their practical implications for Cumbria’s tourism industry, emphasising how these insights could inform sustainable and tailored tourism strategies. To guide this process, a five-phase analytical framework, adapted from Bingham & Witkowski (2022) and Bingham (2023), was employed, integrating both deductive and inductive reasoning for comprehensive theme development (see figure 19).

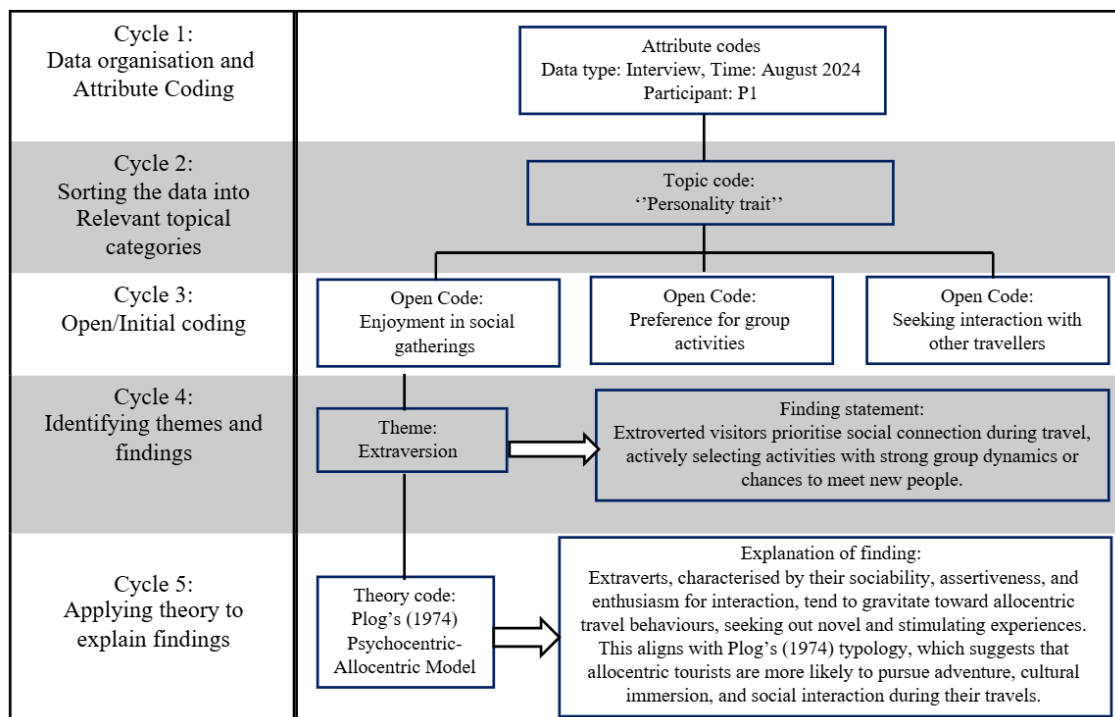


Fig. 19: The five-phase process (Adapted from Bingham, 2023; Bingham & Witkowski, 2022)

For example, in Phase 1: Organising the Data, transcripts were compiled and systematically labelled, ensuring efficient navigation through the data. Phase 2: sorting data into relevant topical categories focused on organising responses specifically under the topic code of personality trait, which included open codes such as enjoyment in social gatherings, preference for group activities, and seeking interaction with other travellers (Cycle 2). In Phase 4: identifying patterns, themes, and findings synthesised these codes into the overarching theme of social engagement, revealing how extraversion influences travellers' preferences for shared experiences. Finally, in Phase 5: Applying theory to explain findings, Plog's (1974) psychocentric-allocentric model was integrated to

interpret the results, illustrating how these personality traits correlate with travel behaviours. Throughout this analytical process, memoing, a qualitative technique for recording reflections, observations, and emerging insights, was utilised to capture interpretations and connections within the data, enriching the overall analysis of the interview findings (Bingham, 2023). Ultimately, integrating the results from both the quantitative and qualitative phases strengthens the study, providing a more comprehensive understanding of the research objectives. This approach provides deeper insights that go beyond the scope of individual methods, aligning with best practices in tourism research to deliver actionable recommendations for sustainable destination strategies (Tashakkori, Johnson & Teddlie, 2020).

3.6 Ethical considerations

Ethical considerations were applied to each stage of this research systematically to ensure the study remains at high professional and ethical levels. Ethical issues are a fundamental aspect of research, particularly in research involving the collection of data from individuals through surveys, interviews, or focus groups (Creswell, 2014). These often centre on ethical obligation to participants, requiring thorough planning to be able to meet with concern over their well-being, privacy, and representation (O'Gorman & Macintosh, 2014). The validity of this study was based on a reflexive and engaged approach in addressing these issues. Further, Bryman and Bell (2015), identified the four key areas of research ethical guidelines: (1) protecting participants from harm, (2) informed consent, (3) protection of privacy, and (4) the avoidance of deception. These guidelines were used to evaluate and address potential ethical concerns throughout the research process.

Risk of harm to participants

Research which causes harm to the well-being of participants is ethically unacceptable, as acknowledged by Saunders, Lewis and Thornhill (2016). Harm includes emotional distress, mental or physical illness, and disruption in interpersonal relationships (Bryman & Bell, 2015). Risk could arise through embarrassment, anxiety, discomfort, pain, and opposition by other people (Saunders, Lewis & Thornhill, 2016). To ensure the moral integrity of this research, a set of precautionary measures were included along its three phases to safeguard the participants from potential harmful effects.

In the first phase, questionnaires were made available electronically so that participants could complete them in their own time and at their own comfort and familiarity. By maintaining participants off-site and completing the surveys at their own pace, this approach prevented potential discomfort or mental exhaustion. Participants were also provided with clear guidance and a choice to withdraw at any time without any consequences, making participation stress-free and solely voluntary.

The second phase comprised focus group discussions that were conducted in a controlled, indoor setting on the campus of the University of Cumbria. This site was selected to provide a secure and impartial setting and reduce any hazard to participants' physical well-being or comfort. In addition, regulations were enforced to encourage mutual respect in discussions, and trained facilitation for the sessions confirmed that a reassuring and inclusive context was maintained. These measures minimised the risk of face-to-face confrontation or emotional strain, enabling honest and constructive dialogue.

The third stage employed one-to-one interviews through Microsoft Teams, a secure web-based platform approved by the university. This allowed participants to contribute from their own settings, enhancing their safety and comfort with fewer stresses or logistical inconvenience. The secure features of Microsoft Teams ensured confidentiality for the sessions, which were safely stored and password protected on OneDrive. In addition, the private, individual interviews created a secure setting where participants felt comfortable to talk without fear of judgment.

Throughout all the phases, the participants were informed about their rights, including the right to withdraw at any point, and were assured anonymity, in surveys, and confidentiality of their contribution, in focus groups and interviews. These steps were part of ensuring ethical practice and the development of a respectful research environment. By proactively addressing potential harms, this study ensured its commitment in minimising harm and promoting participants' well-being during the research process.

Informed consent

Ensuring that participants fully understand their involvement in a study is another important ethical principle. Informed consent involves offering participants all the information necessary so that they can make an informed and voluntary decision about whether to be involved (Saunders, Lewis & Thornhill, 2016). Notably, consent to take part in data collection may not always mean consent for all possible uses of the data.

Bryman and Bell (2015) noted that in order to maintain transparency, researchers are required to specify the study purpose, data handling, and participants' rights.

To guarantee privacy and confidentiality, this study assumed strict anonymity measures. The participants were not assigned their real names but rather coded by labels (e.g., P1, P2, P3) at the transcription and analysis of the data. The participation was voluntary, and the participants were notified in advance of the study purpose, benefits, and risks involved.

During Phase 1 (visitor surveys), an informed consent was offered at the start of the questionnaire, stating the research objectives and outlining the topic that was to be examined. The participants were also assured a guarantee of withdrawal at any time before completing the questionnaire, with full anonymity guaranteed.

In Phase 2 (focus groups) and Phase 3 (semi-structured interviews), participants were given a comprehensive briefing before attending each session, namely the research purpose, possible benefits, risks, and their rights. Consent was obtained before participation, and they were advised they could withdraw at any time with no consequences.

By focusing on informed consent, this research ensured transparency and respected participants' autonomy, developing an ethical and trustworthy research environment. In every phase, strict ethical guidelines were followed to protect participants' rights and well-being.

Privacy and confidentiality

Privacy and confidentiality are fundamental ethical requirements in research, upholding respect for individuals and their autonomy while avoiding harm (Saunders, Lewis, & Thornhill, 2016). The principles are directly linked to informed consent, as participants willingly waive some privacy rights by agreeing to participate but retain the right to decline answering intrusive or personal questions (Bryman & Bell, 2015). Researchers are therefore obligated to design studies that minimise invasions of privacy and protect sensitive information.

In Phase 1, questionnaires were distributed electronically as anonymous links, enabling participants to respond without being interacted with directly or identified. For

further privacy protection, sensitive questions, such as religion, sexual orientation, racial origin, and income, were omitted, following best practice in the avoidance of potential embarrassment (Frankfort-Nachmias & Nachmias, 1996). This ensured participant anonymity and confidentiality and reduced the risks in case of accidental loss of data.

Phase 2, focus group interviews were conducted on the university campus in a secure and controlled environment. The respondents were made aware of the confidentiality requirement and asked to keep each other confidential throughout and even after the discussions. They were also advised that they had the right to refuse to respond to any question without any consequences.

For Phase 3, semi-structured interviews were conducted through Microsoft Teams, the university approved secure online platform. This platform allowed secure communication, and all recordings and related data were stored on the university's password protected OneDrive storage. Although qualitative data may not always be fully anonymised, the research was conducted following GDPR guidelines, keeping personal, pseudonymised data (DuBois et al., 2018; Lyons & Coyle, 2021). The identities of the participants were substituted with coded labels (e.g., P1, P2).

Secure data storage and management were prioritised during the research to maintain confidentiality. Password-protected systems and encryption guaranteed sensitive information was only available to authorised investigators. With these safeguards, the study strictly followed ethics standards, being mindful of respect for participant anonymity and upholding trust in each stage of the research.

Avoiding deception

Deception in research entails instances where the true aim or character of the research is hidden, potentially invading participants' right to privacy, and dignity (Bryman & Bell, 2015). This involves secretly collecting information without disclosing it to participants or keeping the reasons for membership in online groups for research purposes unknown (Saunders, Lewis & Thornhill, 2016).

No deception was used at any point in the data collection. Participants were informed that they were participating in a research study, with clear information provided about the purpose, goals, and processes of the study before they became involved.

Transparency was always ensured to enable participants to make conscious choices about their participation. This respect for ethical integrity honoured participants' rights and ensured trust, as the study committed to maintaining high ethical standards.

3.7 Chapter summary

This chapter delineated the methodology adopted for conducting this research and provided a comprehensive overview of the research design, supported by underpinning principles. This research aims to advance tourist segmentation by integrating personality traits, offering a more comprehensive understanding of visitor behaviour and supporting sustainable management practices. As such, an abductive strategy was adopted, based on a pragmatic paradigm, employing deductive and inductive reasoning for the understanding of the research topic. The phased research design integrated quantitative and qualitative methods. Phase 1 utilised a survey for quantitative data, whereas phases 2 and 3 utilised qualitative methods by way of focus group discussions among industry practitioners and semi-structured interviews with visitors, respectively. The mixed-methods strategy facilitated an in-depth understanding of the visitors' behaviours in Cumbria.

The chapter highlighted the need to integrate various sources of information, joining industry perspectives and visitor insights to ensure the results are theoretically and practically valid. Ethical concerns were carefully addressed in the research, with particular focus on informed consent, privacy, confidentiality, and being open to the participants, reflecting a commitment to high ethical standards. Through addressing both methodological and ethical concerns, this chapter provides a basis for the following findings and discussion chapters.

Chapter 4: Findings

Introduction

This chapter presents a detailed analysis of the collected data, segmented into three categories corresponding to each phase of research. The research aim is to advance tourist segmentation by integrating personality traits, providing a deeper understanding of visitor behaviour and supporting sustainable management practices. By integrating quantitative and qualitative results, the study presents a comprehensive investigation from the perspectives of both industry practitioners and visitors, ensuring that the findings are both academically and practically valid. Phases 2 and 3 were informed by the findings of phase 1, ensuring a structured progression in the research design. This approach provides an in-depth understanding of tourist behaviour within the context of Cumbria, supporting sustainable destination management.

The first section investigates tourist typologies in Cumbria. Through a deductive, quantitative, and explanatory research design, the study employs a random probability sampling to measure personality traits, travel motivations, preferred activities, and socio-demographic factors. The primary objective is to advance tourist segmentation models by integrating personality traits. This phase establishes foundational insights into how individual differences influence behaviours at the destination.

The second section explores industry perspectives on visitor behaviour, particularly the influence of psychological factors on visitor activities and segmentation practices. Using an inductive and qualitative approach, focus groups with purposive sampling contextualised the findings from phase 1 within industry expertise. The discussions explored how the identified visitor clusters could inform sustainable practices, bridging theoretical insights with practical applications.

Building on the quantitative findings from phase 1, the third section explores how psychological factors influence visitor behaviour. Using an inductive, qualitative approach with visitor semi-structured interviews and purposive sampling, it aimed to refine the identified tourist typologies while uncovering additional factors not captured in the quantitative analysis. This further investigation allows for a more comprehensive understanding of visitor behaviour and the implications for segmentation and sustainable tourism strategies.

The table 12 below provides an overview of the pragmatic mixed-methods approach employed in this study, outlining the three phases of the research, their respective objectives, and the method selection that guides each stage. Together, these three phases address specific, but interconnected objectives in a way that integrate different perspectives and approaches to achieve an overall understanding of the research subject.

Table 12: Research overview: phases, objectives, and methodological approach

Pragmatism							
This research aims to advance tourist segmentation by integrating personality traits, offering a more comprehensive understanding of visitor behaviour and supporting sustainable management practices.							
Mixed Methods							
Phase 1			Phase 2		Phase 3		
Develop tourist typologies by integrating personality traits into segmentation models, providing a framework for understanding visitor behaviours.			Examine tourism industry perspectives on visitor segmentation and sustainable practices, bridging theoretical research with practical application.		Conduct an in-depth analysis of the tourist typologies identified, exploring how psychological factors influence activity choices, and reveal external factors that influence visitor behaviour.		
Objective 1	Objective 2	Objective 3	Objective 1	Objective 2	Objective 1	Objective 2	Objective 3
Measure visitors' personality traits, travel motivations, preferred activities, and socio-demographic factors	Determine predictive relationships between personality traits, travel motivations, and activities	Develop data-driven tourist typologies	Explore industry perspectives on the role of personality traits and travel motivations in shaping visitor activities	Explore industry perspectives on the use and value of visitor clusters for tailoring tourism strategies and enhancing visitor experiences	Explore visitors' personality traits and motivations and their impact on preferred activities	Enhance the understanding of the visitor clusters by adding qualitative insights	Uncover additional factors influencing visitor activities not captured in phase 1
							
Survey			Focus groups		Semi-structured interviews		
Random sampling			Purposive/ Judgemental sampling		Purposive/ Judgemental sampling		
Probability sampling			Expert sampling		Non-probability sampling		
Deductive			Inductive		Inductive		
Quantitative			Qualitative		Qualitative		
Explanatory			Exploratory		Exploratory		

4.1 Phase 1: Quantitative Data Analysis

Introduction

Phase 1 of this research focused on a quantitative investigation, leading to the development of tourist typologies in Cumbria. Through a deductive and explanatory research design, this phase measured visitors' personality traits, motivations, preferred activities, and socio-demographic variables to identify patterns across diverse visitor profiles. The use of random probability sampling ensured a representative dataset, enabling the identification of predictive relationships among these factors. The analysis further revealed five distinct visitor clusters, offering insights into the segmentation of tourists based on psychological and socio-demographic factors. These findings not only highlight patterns of engagement with specific tourism activities but also offer practical implications for tailoring destination management strategies. The empirical results from this phase established the foundation for the qualitative investigation in the subsequent phases, enriching the study's investigation on visitor behaviour in Cumbria.

4.1.1 Integrating psychographic insights into sustainable strategies

A pilot study was conducted to evaluate the feasibility of the research design, refine data collection instruments, and address potential issues prior to the full-scale study. According to Veal (2018), this aims to ensure the clarity, reliability, and validity of the measurement tools, enhancing the methodological robustness of the visitor survey. A qualitative approach involving feedback from 10 academics and peers was used to ensure the survey was clear and easy to read. Then, the study focused on refining the final instrument, addressing concerns about its length and completion time (approx. 10 minutes).

This initial study was key in identifying how personality traits and motivations influence visitor activities, a crucial step before developing tourist typologies. This approach ensures that subsequent large-scale data collection and segmentation efforts are both theoretically and empirically valid. Considering the growing emphasis on psychological segmentation in tourism (McKercher et al., 2023; Agarwal & Singh, 2021), it was essential to understand the impact of personality and motivations on visitor behaviour within Cumbria.

Statistical analyses were conducted using SPSS version 24.0, and Factor Analysis was employed to assess the item structure and adherence to theoretical constructs. Items with low factor loadings (below .4), cross-loadings, or poor internal consistency were removed to enhance reliability (Hair et al., 2014). The final instrument included only the most relevant items, enhancing survey efficiency, data quality, research robustness, and improving completion rates and response accuracy in the larger study (Veal, 2018). The results are discussed below.

Profile of respondents (initial study)

The 330 valid questionnaires were added to the SPSS24, with females comprising the majority at 59.1%. The prevalent age groups of the respondents are in Group 2: 30-39yrs, representing 22.7%, and the highest percentage of travellers are British citizens (80.9%). Details of the sample's demographic are presented in table 13 below.

Table 13: Profile of the respondents (initial study)

		Frequency	Percent			Frequency	Percent
Gender	Male	135	40.9	Work status	Employed	226	68.5
	Female	195	59.1		Self-employed	26	7.9
	Total	330	100.0		Student	26	7.9
Age	18-29	74	22.4		Retired	42	12.7
	30-39	75	22.7		Unemployed	6	1.8
	40-49	65	19.7		I prefer not to say	4	1.2
	50-59	57	17.3		Total	330	100.0
	60+	59	17.9	Education	High School	31	9.4
	Total	330	100.0		College	77	23.3
Nationality	IN India	5	1.5		Undergraduate Degree	104	31.5
	GB United Kingdom	267	80.9		Master's Degree	56	17.0
	US United States	6	1.8		Postgraduate and above	47	14.2
	Others	52	15.8		I prefer not to say	15	4.5
	Total	330	100.0		Total	330	100.0

Normality

After data collection, plotting a frequency distribution or histogram helps visualise how often each score occurs (Field, 2018). Ideally, data follows a normal, bell-shaped distribution, where values are symmetrically centred (Field, 2018). Many statistical methods assume normal distribution of dependent variables (Pallant, 2016). Deviations occur through skewness (asymmetry) and kurtosis (pointiness) (Field, 2018). George and Mallery (2018) confirm that the values for asymmetry and kurtosis between -3 and +3 are considered acceptable to prove normal univariate distribution. Hair et al. (2014) argued that data is regarded as normal if skewness is between -2 to +2 and kurtosis is between -7 to +7, while Schmider et al. (2010) recommended values in between -2/+2 for skewness, and -9/+9 for kurtosis. Field (2018), on the other hand, suggested to look at the shape of the distribution visually, and in larger samples, ‘*do not even worry about normality at all*’ (Field, 2018, p. 249).

In this study, the analysis confirmed that the variables were normally distributed, with only mild deviations in skewness and kurtosis (see Appendix 6). As confirmed in the literature, with reasonably large samples, skewness will not make a substantive difference in the analysis (Tabachnick & Fidell, 2013). While kurtosis can result in an underestimate of the variance, this risk is reduced with large samples (200+ cases) (Tabachnick & Fidell, 2013). However, analyses were also performed with optimised variables to assess their effects, and no statistically significant differences were found. Given the large sample size of 330 participants, and the fact that non-parametric tests showed no significantly different results, it was concluded that the data can be assumed as normally distributed and suitable for parametric analysis.

Factor Analysis (FA)

The next step towards investigating the relationships between variables involved a factor analysis. Pallant (2020) explains that Factor Analysis (FA) is a statistical technique used to uncover the underlying structure within a dataset by identifying the optimal number of factors that explain shared variance among variables. This approach reduces large sets of variables or scale items into more concise, meaningful dimensions by summarising patterns of correlation and grouping related items (Pallant, 2020). Several techniques can be employed to extract latent factors, including Principal Component Analysis (PCA), Principal Factors, and Maximum Likelihood Factoring (Pallant, 2016). PCA, the default method in SPSS and the most utilised, reduces the

dataset's dimensionality by transforming variables into components, while identifying the contribution of each variable to these components (Field, 2018).

While factor analysis (FA) is a general term for techniques that identify patterns in data, Exploratory Factor Analysis (EFA) represents the exploratory technique within factor analysis, used when the factor structure is not known and needs to be revealed. Confirmatory Factor Analysis (CFA), however, is used to test a predefined factor structure or hypothesis (Tabachnick & Fidell, 2013). In line with the prior research (e.g., Alves et al., 2023; Lee & Kim, 2023; Alves et al., 2022; Romão et al., 2015), in the current study factor analysis was applied to distinct sections: personality traits, travel motivations, and visitor activities.

The reliability of the validated personality scale (Soto & John, 2017) was established using Confirmatory Factor Analysis (CFA). Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was .770 (Kaiser, 1974), greater than the recommended .6, and Bartlett's Test of Sphericity was statistically significant ($p < .001$) (Bartlett, 1954), showing that the data were appropriate for factor analysis (Pallant, 2016) (see Appendix 7). Varimax rotation was identified as the most suitable technique as the personality scale was previously validated in existing literature (Soto & John, 2017). The table below presents the reliability analysis results for each construct, with Cronbach's alpha values exceeding the recommended threshold of 0.7, demonstrating strong internal consistency (Pallant, 2016).

Table 14: Scale reliability: personality traits (initial study)

Factor	Measuring item	Factor loading	Cumulative interpretation variance (%)	Cronbach's α
Negative Emotionality	I am someone who is emotionally stable, not easily upset.	.843	12.192	0.863
	I am someone who worries a lot.	.805		
	I am someone who is relaxed, handles stress well.	.747		
	I am someone who tends to feel depressed, blue.	.721		
	I am someone who is temperamental, gets emotional easily.	.709		
	I am someone who feels secure, comfortable with self.	.675		
Conscientiousness	I am someone who tends to be disorganised.	.768	11.173	0.801

	I am someone who keeps things neat and tidy.	.738		
	I am someone who is persistent, works until the task is finished.	.720		
	I am someone who can be somewhat careless.	.669		
	I am someone who has difficulty getting started on tasks.	.639		
	I am someone who is reliable, can always be counted on.	.594		
Agreeableness	I am someone who can be cold and uncaring.	.731	9.826	0.753
	I am someone who tends to find fault with others.	.662		
	I am someone who assumes the best about people.	.658		
	I am someone who is compassionate, has a soft heart.	.649		
	I am someone who is sometimes rude to others.	.637		
	I am someone who is respectful, treats others with respect.	.607		
Extraversion	I am someone who is dominant, acts as a leader.	.724	9.158	0.737
	I am someone who is outgoing, sociable.	.720		
	I am someone who tends to be quiet.	.708		
	I am someone who is full of energy.	.641		
	I am someone who prefers to have others take charge.	.581		
	I am someone who is less active than other people.	.395		
Open-mindedness	I am someone who has little interest in abstract ideas.	.682	8.869	0.720
	I am someone who has little creativity.	.670		
	I am someone who is original, comes up with new ideas.	.662		
	I am someone who is fascinated by art, music, or literature.	.660		
	I am someone who is complex, a deep thinker.	.612		
	I am someone who has few artistic interests.	.564		

Note: Confirmatory Factor Analysis extraction method: Principal Component; Rotation method: Varimax

Principal Axis Factoring (PAF) was chosen for the Exploratory Factor Analysis (EFA) in this study to identify the underlying structure of the measured variables and reduce dimensionality. Unlike Principal Component Analysis (PCA), which is primarily a data reduction technique that accounts for total variance, PAF focuses on extracting common variance, making it particularly suitable for uncovering latent constructs (Conway & Huffcutt, 2003). Latent constructs are abstract, unobservable concepts, like travel motivation factors such as escape, nostalgia, and self-development, which cannot be directly measured but are inferred through multiple observed variables. Each construct was measured using multiple items, and the goal was to confirm whether they could be represented as distinct single constructs by identifying their underlying factor structures.

Varimax rotation was applied, which simplifies factor interpretation by maximising the variance of factor loadings, thereby producing clearer and more stable factor structures (Reimann et al., 2002). Varimax is an orthogonal rotation method, it assumes that factors are uncorrelated. Given the theoretical foundations of this study, factor independence was assumed, making Varimax an appropriate choice. However, if substantial correlations had been detected between factors, an oblique rotation method (e.g., Direct Oblimin) would have been considered, as it allows for factor intercorrelations (Brown, 2009).

Exploratory Factor Analysis (EFA) identified key dimensions of travel motivations and visitor activities. KMO values at 0.805 for travel motivations and 0.809 for visitor activities, with Bartlett's test significant at .000 (Bartlett, 1954), indicating data suitability for EFA (Pallant, 2016). 3 items were not loading ('Physically rest and relax'; 'Have romantic relationships', and 'Do things with my partner/family/friends'), hence they were removed from the initial scale (see Appendix 8).

The process of determining the number of factors to keep is referred to as extraction (Field, 2018). Following the Kaiser's (1974) criterion only factors with eigenvalues greater than 1 have been retained, as they satisfy the latent root criterion. Factors with eigenvalues less than 1 are considered insignificant and are excluded from further analysis. To complement this, the scree test, as proposed by Cattell (1966) was employed as an additional tool to identify the optimal number of factors to retain. As described by Cattell (1966), the scree test involves plotting eigenvalues for each factor and identifying the point where the curve transitions from a steep descent to a horizontal

trajectory (Pallant, 2016). This ‘elbow’ in the plot indicates the factors to retain, as they account for the most variance in the dataset (Field, 2018). Typically, a few factors with high eigenvalues are followed by many with lower values, creating the characteristic shape. Field (2018) claimed that for samples exceeding 200 participants, the scree plot is considered a reliable method for selecting factors.

EFA revealed the presence of six factors (Self-development, Relationship and recognition, Escape, Nostalgia, Autonomy, and Novelty and stimulation), with eigenvalues exceeding 1, explaining 25.43%, 10.29%, 9.68%, 7.27%, 5.53% and 5.01% of the variance respectively, accounting for 63.24% of the variance in travel motivations (see Appendix 8). Internal consistency between the items in the factors was measured using Cronbach’s alpha coefficient. According to Baloglu and McCleary (1999), this is the most generally used reliability measure to estimate the degree to which the items on a measure are representative of the construct being measured. The table below shows the reliability test results for each construct, with all Cronbach's alpha values exceeding the recommended 0.7, confirming internal consistency.

Table 15: Scale reliability: travel motivation (initial study)

Factor	Item	Factor loading	Cronbach’s α
	I travel to Cumbria		
Self-development	to gain a sense of accomplishment.	.724	.836
	to understand more about myself.	.659	
	to get outside of my comfort zone.	.655	
	to develop my skills and abilities.	.583	
Relationship and recognition	to share skills with others/ showing what I can do.	.693	.724
	to meet new people who enjoy the same things as I do.	.663	
	to experience a new culture and meet new people.	.595	
	to connect with friends or relatives living in other locations.	.487	
	as it is a destination that would impress others.	.457	
Escape	to get a better appreciation of nature.	.840	.701
	to admire and be close to nature.	.779	
	to escape from the daily routine.	.441	
	to be away from the crowds of people.	.438	
Nostalgia	to think about good times I have had in the past.	.958	.936
	to reflect on past memories.	.839	
Autonomy	to be independent.	.795	.867
	to do things my own way.	.778	
Novelty and	to seek fun and enjoyment.	.720	.743

stimulation	to explore the unknown/ do something new.	.558	
	to experience thrills or excitement.	.547	

Note: Exploratory Factor Analysis: Extraction method: Principal Axis Factoring, Rotation method: Varimax

For the visitor activities section, EFA revealed the presence of seven components (cultural activities, adventure, entertainment, wellness, lake cruises, recreation, and thematic activities) with eigenvalues exceeding 1, explaining 26.50%, 14.37%, 7.84%, 5.67%, 5.33%, 5.00% and 4.55% respectively, explaining 69.27% of the variance in visitor activities (see Appendix 9). 2 items ('Observe natural habitats (birds/animal/wildlife)' and 'Taste local products') were not loading, hence they were removed (see Appendix 9). Oblique rotation was also performed, providing similar results. The table below shows the reliability test results for each construct, with all Cronbach's alpha values exceeding the recommended 0.7, confirming internal consistency.

Table 16: Scale reliability: visitor activities (initial study)

Factor	Item	Factor loading	Cronbach's α
	While in Cumbria, I choose to...		
Local culture	visit archaeological sites/ruins.	.782	.867
	visit monuments (e.g., castles, churches, historic houses) parks, and gardens.	.780	
	visit museums.	.747	
	visit exhibitions/ art galleries.	.617	
Adventure	do adventure activities on water (e.g., sailing, canoeing, diving, jet skiing).	.732	.742
	do adventure activities in the air (e.g., parachute jump, gliding).	.648	
	do adventure activities on the land (rock climbing/ abseiling/ off road).	.611	
	practice wild swimming/ forest bathing.	.542	
	participate in sporting competitions (e.g., trail running, cycling competition).	.414	
Entertainment	attend festivals/concerts.	.709	.768
	attend cultural activities/ artistic performances.	.703	
	attend other special events (e.g., wedding, birthday party).	.446	
Wellness	go to a SPA/ beauty centre.	.865	.915
	undergo health and wellness treatments.	.849	
Lake cruises	take boat trips to explore the destination.	.898	.801
	take boat trips for the historical value of the route.	.593	

Recreation	practice hiking / mountaineering/ long walks in nature.	.892	.704
	exercise (e.g., walking, running, cycling).	.590	
Thematic activities	participate in food and beverage masterclasses.	.681	.721
	engage in thematic sports (e.g., horse riding, archery).	.541	

Note: Exploratory Factor Analysis: Extraction method: Principal Axis Factoring, Rotation method: Varimax

Multiple linear regression analysis

After the formulation of valid and reliable constructs, a multiple linear regression was used to assess the ability of personality traits and travel motivations to predict activities taken by visitors. Preliminary investigations were conducted to ensure no violation of the assumptions of normality, multicollinearity, linearity, and homoscedasticity (Pallant, 2020). The tolerance values for each independent variable were above 0.4, indicating an acceptable level of collinearity, as tolerance values below 0.1 are typically considered problematic. Similarly, all variance inflation factor (VIF) values were below 2.0, under the commonly accepted threshold of 10, suggesting that multicollinearity was not a concern in the analysis (Pallant, 2020). The table below presents the linear regression coefficients and collinearity statistics, including the variables that demonstrated statistical significance.

Table 17: Linear regression coefficients and collinearity statistics

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	Dependent variable: Culture							
	Extraversion	−0.240	0.078	−0.156	−3.054	0.002	0.675	1.481
	Conscientiousness	0.136	0.065	0.096	2.105	0.036	0.839	1.192
	Open-mindedness	0.259	0.064	0.181	4.016	0.000	0.865	1.156
2	Dependent variable: Adventure							
	Extraversion	0.271	0.072	0.190	3.773	0.000	0.686	1.458
	Agreeableness	−0.139	0.072	−0.088	−1.936	0.054	0.836	1.196
	Self-development	0.175	0.058	0.180	3.039	0.003	0.497	2.013
	Novelty and stimulation	0.200	0.065	0.166	3.086	0.002	0.605	1.653
3	Dependent variable: Recreation							
	Extraversion	0.151	0.069	0.133	2.176	0.030	0.666	1.502

	Self-Development	0.180	0.054	0.234	3.313	0.001	0.499	2.002
	Relationship	-0.214	0.060	-0.235	-3.570	0.000	0.572	1.749
4	Dependent variable: Entertainment							
	Open-mindedness	0.153	0.061	0.112	2.500	0.013	0.839	1.192
	Relationship and recognition	0.201	0.065	0.170	3.111	0.002	0.566	1.766
	Nostalgia	0.077	0.036	0.096	2.118	0.035	0.817	1.225
5	Dependent variable: Wellness							
	Extraversion	0.213	0.101	0.122	2.112	0.035	0.665	1.503
	Dependent variable: Lake cruise							
	Agreeableness	0.175	0.092	0.094	1.901	0.058	0.836	1.196
	Escape	0.194	0.102	0.103	1.909	0.057	0.700	1.429
	Autonomy	-0.128	0.056	-0.123	-2.273	0.024	0.702	1.425
6	Dependent variable: Recreation							
	Extraversion	0.160	0.068	0.144	2.365	0.019	0.666	1.502
	Self-development	0.186	0.053	0.245	3.494	0.001	0.499	2.002
	Relationship and recognition	-0.178	0.059	-0.198	-2.999	0.003	0.572	1.749
7	Dependent variable: Thematic activities							
	Relationship and recognition	0.146	0.065	0.132	2.257	0.025	0.558	1.791

The results from the multiple linear regression, along with the coefficients for each activity category undertaken by visitors in Cumbria, are further illustrated in figure 20 below. The model includes standardised beta coefficients, which indicate the relative contribution of each independent variable to the dependent variable (Pallant, 2020). The corresponding models, including the R square values, are provided in Appendix 10. R square (R^2) represents the proportion of variance in the dependent variable that can be explained by the independent variables in the model. In other words, it indicates how well the model fits the data with higher R^2 values suggesting a stronger explanatory power (Pallant, 2020).

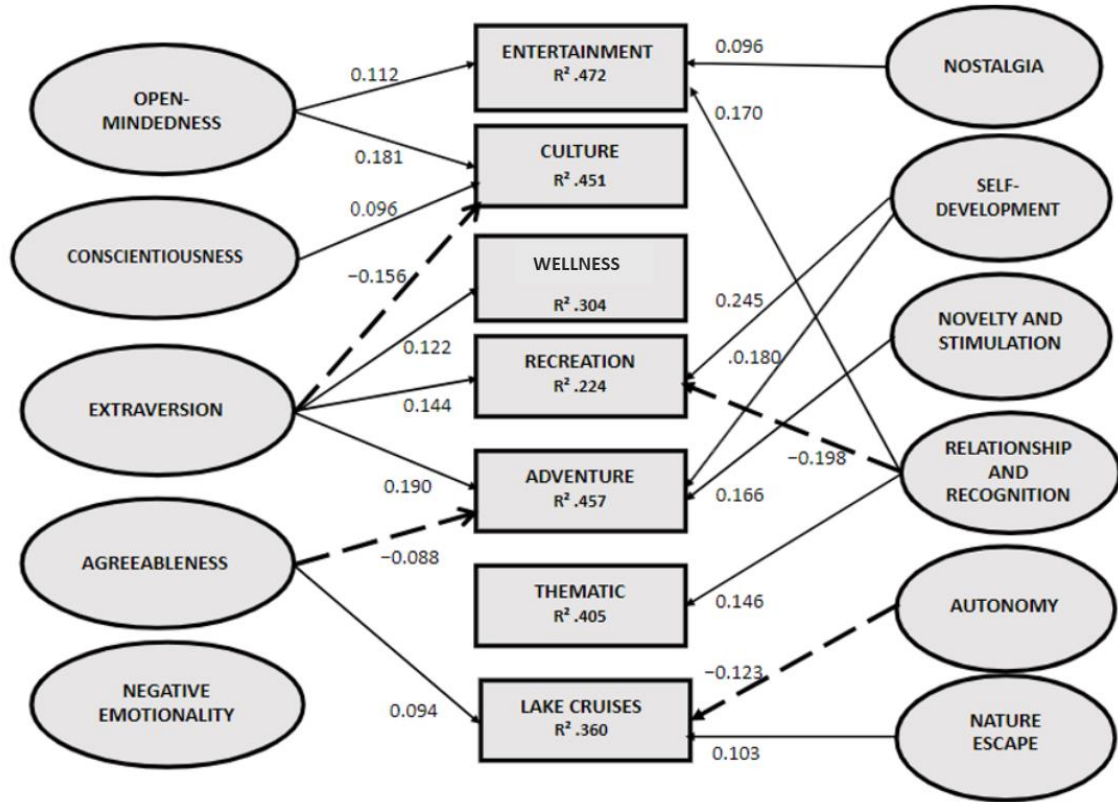


Fig. 20: Analytical results. Note. All the coefficients have p values < 0.05

Open-mindedness indicates positive correlation with culture ($\beta=.181, p=.000$) and entertainment ($\beta=.112, p=.000$). Visitors with higher levels of open-mindedness have a greater inclination towards engaging in cultural activities and entertainment. Conscientiousness revealed positive relationship with cultural activities ($\beta=.096, p=.000$). Extraversion revealed positive relation with adventure ($\beta=.190, p=.000$), recreation ($\beta=.144, p=.000$), and wellness ($\beta=.122, p=.000$), but also a negative relationship with culture ($\beta=-.156, p=.000$). This means that as the level of extraversion increases, the interest towards cultural activities decreases. Agreeableness revealed positive relationship with lake cruises ($\beta=.094, p=.000$), and negative relationship with adventure activities ($\beta=-.088, p=.000$). The personality trait of negative emotionality did not reveal significance against any of the found activities. This finding supports Kovačić et al.'s (2022) study, who also revealed that emotional stability did not influence activity preference. This lack of correlation may be the result of having a low mean rating for Negative Emotionality from respondents in Cumbria, indicating that, perhaps, those with higher ratings of negative emotionality did not participate in the survey.

Furthermore, data revealed positive relationship between nostalgia and entertainment ($\beta=.096, p=.000$). Self-development positively affects recreation ($\beta=.245, p=.000$) and adventure ($\beta=.180, p=.000$). Novelty and stimulation revealed positive correlation with adventure ($\beta=.166, p=.000$), while relationship and recognition revealed positive relationship with entertainment ($\beta=.170, p=.000$) and thematic activities ($\beta=.146, p=.000$), but negative correlation with recreation ($\beta=-.198, p=.000$). Autonomy only revealed negative relationship with lake cruises ($\beta=-.123, p=.000$). Finally, nature escape revealed a positive relationship with lake cruises ($\beta=.103, p=.000$).

Socio-demographic factors influencing tourist behaviour

Traditionally viewed as secondary to motivations and traits, socio-demographic factors have been challenged with regards to their effectiveness in determining tourist activity patterns at the destination (Kovačić et al., 2022). Previous studies (Alves et al., 2022; Kovačić et al., 2022) showed that personality and motivations are predictive of tourist behaviour, and this was confirmed by the current study. However, it further investigates the impact of socio-demographic factors such as gender, age, education, and nationality on activities, offering a better understanding of visitor behaviour in Cumbria.

Gender

To examine gender differences in visitor activity preferences, Box's Test of Equality of Covariance Matrices was performed and found to be statistically significant (Box's $M = 48.915$, $F(28, 290,174.07) = 1.706$, $p = .011$; see table 18), indicating a violation of the assumption of equal variance-covariance matrices.

Table 18: Box's Test of Equality of Covariance Matrices (Gender)

Box's Test of Equality of Covariance Matrices^a	
Box's M	48.915
F	1.706
df1	28
df2	290174.068
Sig.	.011
Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.	
a. Design: Intercept + Gender	

Additionally, tests of normality (see table 19) showed that several activity variables did not follow a normal distribution.

Table 19: Test of Normality (Gender)

Tests of Normality							
	Gender	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Culture	Male	.094	135	.005	.968	135	.003
	Female	.104	195	<.001	.971	195	<.001
Outdoors Adventure	Male	.073	135	.078	.977	135	.022
	Female	.075	195	.010	.969	195	<.001
Events	Male	.105	135	<.001	.941	135	<.001
	Female	.122	195	<.001	.945	195	<.001
Wellness	Male	.225	135	<.001	.827	135	<.001
	Female	.221	195	<.001	.829	195	<.001
Lake Cruise	Male	.160	135	<.001	.942	135	<.001
	Female	.132	195	<.001	.949	195	<.001
Recreation	Male	.238	135	<.001	.763	135	<.001
	Female	.256	195	<.001	.770	195	<.001
Thematic	Male	.164	135	<.001	.886	135	<.001
	Female	.171	195	<.001	.891	195	<.001
a. Lilliefors Significance Correction							

Because both the homogeneity of variance-covariance and normality assumptions were violated, the use of MANOVA was not appropriate. Instead, the Independent-Samples Mann-Whitney U Test was employed, as recommended in the literature (Field, 2018; Tabachnick & Fidell, 2019; Pallant, 2020). The Mann-Whitney U Test is particularly suitable for ordinal or non-normally distributed data and does not require the assumption of homogeneity of variance, making it a robust alternative in these circumstances.

The results (see Appendix 11) indicated that for most activity types, including culture ($p = .377$), outdoors/adventure ($p = .177$), events ($p = .500$), wellness ($p = .480$), recreation ($p = .817$), and thematic activities ($p = .581$), the null hypothesis was retained, showing no significant difference in the distribution of these activities across genders. However, a significant difference was observed for lake cruises ($p = .004$), with the null hypothesis rejected. This suggests that gender significantly influences participation in lake cruises, with more women than men choosing this activity in Cumbria. The effect

size for this difference was small ($r < .3$), and the sample sizes for each gender group were sufficient to support the reliability of the test. These findings reveal that, while gender does not generally influence most visitor activity preferences, it does play a role in lake cruise participation.

Age

To assess differences in visitor activity preferences across age groups, Box's Test of Equality of Covariance Matrices was conducted and found to be statistically significant (Box's $M = 184.593$, $F(112, 180,723.03) = 1.571$, $p < .001$; see table 20), indicating a violation of the assumption of homogeneity.

Table 20: Box's Test of Equality of Covariance Matrices (Age)

Box's Test of Equality of Covariance Matrices ^a	
Box's M	184.593
F	1.571
df1	112
df2	180723.031
Sig.	<.001
Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.	
a. Design: Intercept + Age	

Normality tests further confirmed that the data did not meet the requirements for parametric analysis (see table 21). Given these violations, the Kruskal-Wallis's test was chosen as a non-parametric alternative, as it does not require assumptions of normality or equal variances and is recommended when group distributions are non-normal or heteroscedastic (Field, 2018; Pallant, 2020).

Table 21: Test of Normality (Age)

Tests of Normality							
	Age	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Culture	18-29	.088	74	.200*	.963	74	.028
	30-39	.086	75	.200*	.953	75	.007
	40-49	.088	65	.200*	.974	65	.184
	50-59	.171	57	<.001	.941	57	.008
	60+	.132	59	.012	.950	59	.017
Outdoors Adventure	18-29	.101	74	.062	.982	74	.396
	30-39	.118	75	.011	.968	75	.055

	40-49	.099	65	.186	.976	65	.230
	50-59	.114	57	.065	.958	57	.046
	60+	.204	59	<.001	.880	59	<.001
Events	18-29	.136	74	.002	.940	74	.002
	30-39	.148	75	<.001	.945	75	.003
	40-49	.110	65	.048	.931	65	.001
	50-59	.163	57	<.001	.940	57	.007
	60+	.157	59	<.001	.915	59	<.001
Wellness	18-29	.202	74	<.001	.872	74	<.001
	30-39	.199	75	<.001	.843	75	<.001
	40-49	.223	65	<.001	.855	65	<.001
	50-59	.271	57	<.001	.793	57	<.001
	60+	.322	59	<.001	.721	59	<.001
Lake Cruise	18-29	.146	74	<.001	.943	74	.002
	30-39	.112	75	.020	.957	75	.013
	40-49	.173	65	<.001	.947	65	.008
	50-59	.171	57	<.001	.926	57	.002
	60+	.167	59	<.001	.912	59	<.001
Recreation	18-29	.274	74	<.001	.812	74	<.001
	30-39	.269	75	<.001	.751	75	<.001
	40-49	.274	65	<.001	.789	65	<.001
	50-59	.227	57	<.001	.790	57	<.001
	60+	.230	59	<.001	.781	59	<.001
Thematic	18-29	.213	74	<.001	.901	74	<.001
	30-39	.191	75	<.001	.891	75	<.001
	40-49	.150	65	<.001	.909	65	<.001
	50-59	.192	57	<.001	.886	57	<.001
	60+	.250	59	<.001	.843	59	<.001
*. This is a lower bound of the true significance.							
a. Lilliefors Significance Correction							

According to the Kruskal-Wallis's test results (see Appendix 12), significant differences by age group were found for cultural activities ($p = .012$), adventure activities ($p < .001$), and wellness activities ($p = .005$), leading to rejection of the null hypothesis in these categories. No significant differences were found for events ($p = .698$), lake cruises ($p = .646$), recreation ($p = .373$), or thematic activities ($p = .079$), with the null hypothesis retained. Effect sizes for significant findings were small to moderate, and group sizes were generally adequate, though some age categories were smaller, which may limit power. These results indicate that age is a significant factor influencing

preferences for culture, adventure, and wellness activities but has minimal effect on other types of visitor activities.

Level of education

To determine whether visitor activity preferences differed across education levels, Box's Test of Equality of Covariance Matrices was again statistically significant (Box's $M = 185.922$, $F(140, 21,662.76) = 1.212$, $p = .045$; see table 22), indicating a violation of the homogeneity assumption.

Table 22: Box's Test of Equality of Covariance Matrices (Level of education)

Box's Test of Equality of Covariance Matrices ^a	
Box's M	185.922
F	1.212
df1	140
df2	21662.758
Sig.	.045
Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.	
a. Design: Intercept + Education	

Shapiro-Wilk tests for normality (see table 23) also revealed significant deviations from normality for most activity components across education groups. Due to these violations, the Kruskal-Wallis's test was selected, as it does not require normality and is robust to differences in group variances and sizes (Field, 2018; Pallant, 2020).

Table 23: Test of Normality (Level of education)

Tests of Normality							
	Highest level of education completed	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Culture	High School	.177	31	.015	.931	31	.048
	College	.088	77	.200*	.982	77	.359
	Undergraduate Degree	.090	104	.037	.970	104	.020
	Master's Degree	.111	56	.082	.964	56	.098
	Postgraduate and above	.155	47	.006	.931	47	.008
	I prefer not to say	.214	15	.062	.928	15	.252
Outdoors Adventure	High School	.147	31	.087	.907	31	.011
	College	.095	77	.081	.954	77	.008
	Undergraduate Degree	.100	104	.012	.961	104	.004
	Master's Degree	.130	56	.020	.957	56	.046

	Postgraduate and above	.098	47	.200*	.974	47	.374
	I prefer not to say	.148	15	.200*	.921	15	.199
Events	High School	.124	31	.200*	.952	31	.173
	College	.143	77	<.001	.918	77	<.001
	Undergraduate Degree	.124	104	<.001	.938	104	<.001
	Master's Degree	.138	56	.009	.939	56	.007
	Postgraduate and above	.126	47	.059	.943	47	.024
	I prefer not to say	.170	15	.200*	.934	15	.316
Wellness	High School	.286	31	<.001	.808	31	<.001
	College	.249	77	<.001	.793	77	<.001
	Undergraduate Degree	.252	104	<.001	.801	104	<.001
	Master's Degree	.210	56	<.001	.858	56	<.001
	Postgraduate and above	.207	47	<.001	.874	47	<.001
	I prefer not to say	.245	15	.016	.798	15	.003
Lake Cruise	High School	.189	31	.006	.929	31	.042
	College	.127	77	.004	.958	77	.012
	Undergraduate Degree	.118	104	.001	.939	104	<.001
	Master's Degree	.132	56	.016	.944	56	.012
	Postgraduate and above	.156	47	.006	.942	47	.022
	I prefer not to say	.257	15	.009	.842	15	.013
Recreation	High School	.271	31	<.001	.710	31	<.001
	College	.244	77	<.001	.791	77	<.001
	Undergraduate Degree	.267	104	<.001	.767	104	<.001
	Master's Degree	.313	56	<.001	.763	56	<.001
	Postgraduate and above	.192	47	<.001	.846	47	<.001
	I prefer not to say	.213	15	.065	.855	15	.020
Thematic	High School	.169	31	.024	.892	31	.005
	College	.217	77	<.001	.873	77	<.001
	Undergraduate Degree	.204	104	<.001	.882	104	<.001
	Master's Degree	.231	56	<.001	.867	56	<.001
	Postgraduate and above	.175	47	.001	.892	47	<.001
	I prefer not to say	.235	15	.025	.860	15	.025
*. This is a lower bound of the true significance.							
a. Lilliefors Significance Correction							

The results of the Kruskal-Wallis test (see Appendix 13) showed no significant differences in visitor activity preferences across education levels for any of the activities examined: culture ($p = .093$), adventure ($p = .426$), events ($p = .569$), wellness ($p = .630$), lake cruises ($p = .426$), recreation ($p = .160$), and thematic activities ($p = .556$). The null hypothesis was retained in all cases. Effect sizes were negligible ($\eta^2 < .01$), and while some education groups had smaller sample sizes, the non-parametric approach mitigated

concerns about the impact of these discrepancies. These findings suggest that education level does not significantly influence visitor activity preferences in Cumbria.

Nationality

To assess differences in visitor activity preferences by nationality, Box's Test of Equality of Covariance Matrices was not statistically significant (Box's $M = 48.606$, $F(28, 651.63) = 1.127$, $p = .298$; see table 24), indicating that the assumption of homogeneity was met.

Table 24: Box's Test of Equality of Covariance Matrices (Nationality)

Box's Test of Equality of Covariance Matrices ^a	
Box's M	48.606
F	1.127
df1	28
df2	651.632
Sig.	.298
Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.	
a. Design: Intercept + Nationality	

However, Shapiro-Wilk tests (see table 25) showed significant deviations from normality for most activity components, particularly in the largest group (United Kingdom), and the presence of several small nationality groups further limited the reliability of parametric analyses. Although MANOVA could have been used based on homogeneity, the violation of normality and the unequal group sizes justified the use of the Kruskal-Wallis's test, which is more robust under these conditions (Field, 2018; Tabachnick & Fidell, 2019; Pallant, 2020).

Table 25: Test of Normality (Nationality)

Tests of Normality							
	Nationality	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Culture	AU	.196	3	.	.996	3	.878
	CN	.260	2	.			
	CY	.260	2	.			
	DE	.385	3	.	.750	3	<.001
	HU	.260	2	.			
	IN	.153	5	.200*	.994	5	.993
	NL	.231	5	.200*	.881	5	.314
	PL	.240	5	.200*	.836	5	.155
	RO	.178	9	.200*	.921	9	.403
	SE	.292	3	.	.923	3	.463
	CH	.260	2	.			

Adventure	GB	.098	267	<.001	.972	267	<.001
	US	.209	6	.200*	.907	6	.415
	AU	.187	3	.	.998	3	.915
	CN	.260	2	.			
	CY	.260	2	.			
	DE	.253	3	.	.964	3	.637
	HU	.260	2	.			
	IN	.315	5	.117	.865	5	.245
	NL	.331	5	.076	.817	5	.111
	PL	.359	5	.034	.820	5	.117
	RO	.273	9	.053	.908	9	.303
	SE	.219	3	.	.987	3	.780
	CH	.260	2	.			
	GB	.070	267	.003	.968	267	<.001
Events	US	.242	6	.200*	.883	6	.284
	AU	.219	3	.	.987	3	.780
	CN	.260	2	.			
	CY	.260	2	.			
	DE	.253	3	.	.964	3	.637
	HU	.260	2	.			
	IN	.318	5	.109	.701	5	.010
	NL	.159	5	.200*	.990	5	.980
	PL	.233	5	.200*	.884	5	.329
	RO	.260	9	.080	.923	9	.417
	SE	.385	3	.	.750	3	<.001
	CH	.	2	.			
	GB	.116	267	<.001	.941	267	<.001
	US	.254	6	.200*	.866	6	.212
Wellness	AU	.204	3	.	.993	3	.843
	CN	.260	2	.			
	CY	.260	2	.			
	DE	.385	3	.	.750	3	<.001
	HU	.260	2	.			
	IN	.311	5	.129	.871	5	.269
	NL	.360	5	.033	.767	5	.042
	PL	.349	5	.046	.771	5	.046
	RO	.196	9	.200*	.961	9	.807
	SE	.385	3	.	.750	3	<.001
	CH	.260	2	.			
	GB	.240	267	<.001	.810	267	<.001
	US	.302	6	.094	.775	6	.035
Lake Cruise	AU	.385	3	.	.750	3	<.001
	CN	.260	2	.			
	CY	.260	2	.			
	DE	.385	3	.	.750	3	<.001
	HU	.260	2	.			
	IN	.212	5	.200*	.895	5	.384
	NL	.394	5	.011	.710	5	.012
	PL	.246	5	.200*	.956	5	.777
	RO	.200	9	.200*	.960	9	.799
	SE	.175	3	.	1.000	3	1.000
	CH	.260	2	.			
	GB	.143	267	<.001	.948	267	<.001
	US	.190	6	.200*	.934	6	.614
Recreation	AU	.292	3	.	.923	3	.463
	CN	.260	2	.			
	CY	.260	2	.			
	DE	.	3	.	.	3	.

	HU	.	2	.			
	IN	.349	5	.046	.771	5	.046
	NL	.254	5	.200*	.914	5	.492
	PL	.367	5	.026	.684	5	.006
	RO	.229	9	.191	.854	9	.082
	SE	.175	3	.	1.000	3	1.000
	CH	.	2	.			
	GB	.253	267	<.001	.743	267	<.001
	US	.180	6	.200*	.920	6	.505
Thematic	AU	.385	3	.	.750	3	<.001
	CN	.260	2	.			
	CY	.260	2	.			
	DE	.175	3	.	1.000	3	1.000
	HU	.260	2	.			
	IN	.304	5	.149	.817	5	.111
	NL	.213	5	.200*	.963	5	.826
	PL	.372	5	.022	.828	5	.135
	RO	.324	9	.007	.878	9	.149
	SE	.385	3	.	.750	3	<.001
	CH	.260	2	.			
	GB	.181	267	<.001	.889	267	<.001
	US	.407	6	.002	.640	6	.001
*. This is a lower bound of the true significance.							

The Kruskal-Wallis's test results (see Appendix 14) revealed no significant differences in activity preferences across nationality groups for culture ($p = .395$), adventure ($p = .358$), events ($p = .274$), wellness ($p = .119$), lake cruises ($p = .133$), recreation ($p = .502$), or thematic activities ($p = .242$), with the null hypothesis retained throughout. Effect sizes were negligible ($\eta^2 < .01$), and the small sample sizes in some nationality groups may have reduced the power to detect differences. Overall, these results suggest that nationality does not significantly impact visitor activity preferences

In summary, the analysis of socio-demographic factors highlighted differing levels of influence on visitor activity preferences in Cumbria. Gender significantly influenced participation only in lake cruises, while other activities showed no gender-based variations. Although limited direct evidence compares male and female preferences for lake cruises, Rosa et al. (2020) and Meng and Uysal, (2008) suggested that women have a stronger affinity for nature and tranquillity, which may explain this study's finding. Age emerged as a more significant factor, shaping preferences for cultural, adventure, and wellness. In line with past research, younger individuals prefer physically demanding and adventurous pursuits (Pomfret & Varley, 2019), whereas older visitors are drawn to cultural and wellness related experiences (Richards, 2018). In contrast, education and nationality had no significant impact on activity choices, suggesting their limited role in shaping preferences. To address these differences and gain deeper insights, the survey

captured information from a larger sample, enabling trends across different groups of visitors to reveal themselves. The findings of this initial study emphasise the importance of psychological factors, along with socio-demographics, to fully comprehend and cater to diverse preferences among Cumbrian visitors.

4.1.2 Developing tourist typologies

Following the completion of the initial study, the next phase collected extensive data from the target sample of Cumbria visitors. For wider reach, the survey link was posted on online and offline channels. Data collection was conducted over an entire year period, between September 2022 and September 2023, to capture variations in visitor behaviour across seasons. The questionnaire was targeted at 18 and above visitors, both in peak and off-peak seasons, employing random sampling to ensure representation. The aim was to develop tourist typologies integrating personality traits, motivations and socio-demographic factors, providing a comprehensive understanding of visitor behaviour. Once the data was imported into SPSS 24 software, no outliers and missing values were observed, and a final sample of 1,217 usable questionnaires was achieved.

Profile of respondents (main survey)

The sample for the study consisted of 1,217 valid questionnaires, with females comprising the majority at 62%. The prevalent age groups of the respondents are in Group 5:60+yrs, representing 25.2%, and the minority of responses in Group 1: 18-29yrs, accounting 17.3% of the total respondents. The highest percentage of travellers were British citizens (82.9%), 61% are employed, and 30.6% completed an undergraduate degree. They travelled to Cumbria with a partner (42.4%), for leisure (90.4%) (see table 26).

Table 26: Profile of the respondents (visitor survey)

Profile of the respondents							
		Frequency	Percent			Frequency	Percent
Gender	Male	457	37.6	Work status	Employed	742	61.0
	Female	754	62.0		Self-employed	106	8.7
	Prefer not to say	6	0.5		Student	82	6.7
	Total	1217	100.0		Retired	251	20.6
Age	18-29	211	17.3		Unemployed	18	1.5
	30-39	216	17.7		I prefer not to say	18	1.5

	40-49	194	15.9		Total	1217	100.0
	50-59	283	23.3		Employed	742	61.0
	60+	307	25.2		Education High School	119	9.8
	Prefer not to say	6	.5		College	266	21.9
	Total	1217	100.0		Undergraduate Degree	372	30.6
Nationality	AU Australia	14	1.2%	Travel partner	Master's Degree	216	17.7
	CA Canada	13	1.1%		Total	1217	100.0
	CN China	11	0.9%		Alone	201	16.5
	IN India	14	1.2%		With a partner	516	42.4
	GB United Kingdom	1009	82.9%		With family	326	26.8
	US United States	44	3.6%		With friends	155	12.7
	Others	440	9.1%		With a traveling group	11	.9
	Total	1217	100%		Prefer not to say	8	.7
Past visits	None	96	7.9	Trip purpose	Total	1217	100.0
	One time	218	17.9		Leisure	1100	90.4
	Two to four times	381	31.3		Business	8	.7
	Five times or more	512	42.1		Leisure and Business	65	5.3
	Prefer not to say	10	.8		Other	43	3.5
	Total	1217	100.0		Prefer not to say	1	.1
					Total		100%

Normality

The distribution of the scores was assessed using skewness and kurtosis, and histograms (Field, 2018) (see Appendix 15). All variables are within the accepted range of distribution, with skewness and kurtosis values close to 0 (Pallant, 2016).

Factor Analysis (FA)

The validity of the personality traits measured by Confirmatory Factor Analysis, with KMO value at .817 exceeds the recommended .6 and Bartlett's Sphericity is Sig. at .000 (Bartlett, 1954) indicating that the current data was suitable for factor analysis (Field, 2018) (see Appendix 16/ table 27).

Table 27: Scale reliability: personality traits (visitor survey)

Factor	Measuring item	Factor loading	Cumulative interpretation variance (%)	Cronbach's α

Negative Emotionality	I am someone who is emotionally stable, not easily upset.	-.824	17.471	0.871
	I am someone who worries a lot.	.795		
	I am someone who is relaxed, handles stress well.	-.780		
	I am someone who is temperamental, gets emotional easily.	.747		
	I am someone who tends to feel depressed, blue.	.703		
Conscientiousness	I am someone who tends to be disorganised.	.789	10.147	0.797
	I am someone who keeps things neat and tidy.	-.742		
	I am someone who is persistent, works until the task is finished.	-.700		
	I am someone who can be somewhat careless.	.663		
	I am someone who has difficulty getting started on tasks.	.632		
Agreeableness	I am someone who can be cold and uncaring.	-.714	10.061	0.764
	I am someone who is sometimes rude to others.	-.705		
	I am someone who assumes the best about people.	.666		
	I am someone who tends to find fault with others.	-.657		
	I am someone who is compassionate, has a soft heart.	.653		
Extraversion	I am someone who is outgoing, sociable.	.755	8.054	0.748
	I am someone who tends to be quiet.	-.727		
	I am someone who is full of energy.	.683		
	I am someone who is dominant, acts as a leader.	.672		
	I am someone who is less active than other people.	-.492		
Open-mindedness	I am someone who has little interest in abstract ideas.	-.723	5.903	0.745
	I am someone who is fascinated by art, music, or literature.	.715		
	I am someone who has little creativity.	-.662		
	I am someone who has few artistic interests.	-.641		
	I am someone who is original, comes up with new ideas.	.612		

Note: Confirmatory Factor Analysis extraction method: Principal Component; Rotation method: Varimax

In the initial study, Exploratory Factor Analysis (EFA) was performed to identify the initial factor structure of the measurement instrument, and based on these findings, the instrument was refined. However, when the same instrument was applied to the larger sample in the visitor survey, the factor structure did not hold as expected. This discrepancy

could be explained by the different characteristics of the larger sample, necessitating the determination of the validity of the structure with a diversified dataset (Hair et al., 2019, Field, 2018). To adjust for this, additional EFA in the main study was performed to refine the factor structure so that the instrument is reliable and valid for the broad population. This additional EFA ensured that the measurement model was properly aligned with the larger sample, contributing to the overall quality of the research process.

Exploratory Factor Analysis (EFA) using Principal Axis Factoring identified key dimensions of travel motivations and visitor activities. KMO values at 0.817 for motivations, and 0.810 respectively, for visitor activities, with Bartlett's test significant at .000, indicating data suitability for EFA (Field, 2018) (see Appendix 17; Appendix 18). 5 items (travelling to understand more about myself, to be away from the crowds of people, doing adventure activities in the air (e.g., parachute jump, gliding), attending other special events (e.g., wedding, birthday party), exercising (e.g., walking, running, cycling), were not loading hence they were removed (Hair et al., 2014).

Scale reliability was confirmed with Cronbach's alpha values above 0.70, denoting good internal consistency (Field, 2018). The final analysis retained 18 items for travel motivation, revealing five factors accounting for 67.8% variance (see table 28), and 17 items for visitor activities, revealing five factors explaining 65.49% variance (see table 29).

Table 28: Scale reliability: travel motivation (visitor survey)

Factor	Measuring item	Factor loading	Cumulative interpretation variance (%)	Cronbach's α
Nature escape	I travel to Cumbria to admire and be close to nature.	.922	23.695	0.767
	I travel to Cumbria to get a better appreciation of nature.	.778		
	I travel to Cumbria to escape from the daily routine.	.436		
Self-development	I travel to Cumbria to develop my skills and abilities.	.653	13.234	0.765
	I travel to Cumbria to get outside of my comfort zone.	.649		
	I travel to Cumbria to gain a sense of accomplishment.	.602		
	I travel to Cumbria to experience a new culture and meet new people.	.438		
Relationship and recognition	I travel to Cumbria to share skills with others/ showing what I can do.	.655	6.737	0.700

	I travel to Cumbria to connect with friends or relatives living in other locations.	.621		
	I travel to Cumbria to meet new people who enjoy the same things as I do.	.602		
	I travel to Cumbria as it is a destination that would impress others.	.442		
Autonomy	I travel to Cumbria to do things my own way.	.792	4.761	0.877
	I travel to Cumbria to be independent.	.782		
Nostalgia	I travel to Cumbria to think about good times I have had in the past.	.854	3.228	0.871
	I travel to Cumbria to reflect on past memories.	.832		
Novelty and stimulation	I travel to Cumbria to experience thrills or excitement.	.669	2.930	0.702
	I travel to Cumbria to explore the unknown/ do something new.	.592		
	I travel to Cumbria to seek fun and enjoyment.	.574		

Note: Exploratory Factor Analysis: Extraction method: Principal Axis Factoring, Rotation method: Varimax

Table 29: Scale reliability: visitor activities (visitor survey)

	Measuring item	Factor loading	Cumulative interpretation variance (%)	Cronbach's α
Local culture	While in Cumbria, I choose to visit monuments (e.g., castles, churches, historic houses) parks, and gardens.	.835	20.823	0.799
	While in Cumbria, I choose to visit museums.	.821		
	While in Cumbria, I choose to visit exhibitions/ art galleries.	.671		
	While in Cumbria, I choose to visit archaeological sites/ ruins.	.536		
	While in Cumbria, I choose to take boat trips to explore the destination.	.503		
Thematic activities	While in Cumbria, I choose to engage in thematic sports (e.g., horse riding, archery).	.786	15.968	0.786
	While in Cumbria, I choose to participate in food and beverage masterclasses.	.689		
	While in Cumbria, I choose to participate in sporting competitions (e.g., trail running, cycling competition).	.643		
Recreation and Adventure	While in Cumbria, I choose to practice wild swimming/ forest bathing.	.725	9.057	0.700
	While in Cumbria, I choose to practice hiking / mountaineering/ long walks in nature.	.669		

	While in Cumbria, I choose to do adventure activities on water (e.g., sailing, canoeing, diving, jet skiing).	.594		
	While in Cumbria, I choose to do adventure activities on the land (rock climbing/ abseiling/ off road).	.487		
Entertainment	While in Cumbria, I choose to attend cultural activities/ artistic performances.	.916	5.040	0.723
	While in Cumbria, I choose to attend festivals/concerts.	.538		
	While in Cumbria, I choose to take boat trips for the historical value of the route.	.520		
Wellness	While in Cumbria, I choose to go to a SPA/ beauty centre.	.838	4.049	0.862
	While in Cumbria, I choose to undergo health and wellness treatments.	.804		

Note: Exploratory Factor Analysis: Extraction method: Principal Axis Factoring, Rotation method: Varimax

Hierarchical and k-means cluster analysis

To obtain profiles with similar personality traits, travel motivations, and visitor activities, a two-step analysis using hierarchical and k-means techniques was employed, following established procedures in tourism studies (e.g., Cha et al., 2024; Ghosh & Mukherjee, 2023; Vargas et al., 2021; Øgaard et al., 2019). This hybrid approach, recommended by Hair et al. (2014), utilised Euclidean distance for measuring similarity and employed the Ward method to ensure maximum homogeneity within each cluster. The initial analysis, guided by the agglomeration coefficient and dendrogram, suggested a five-cluster structure (see figure 21).

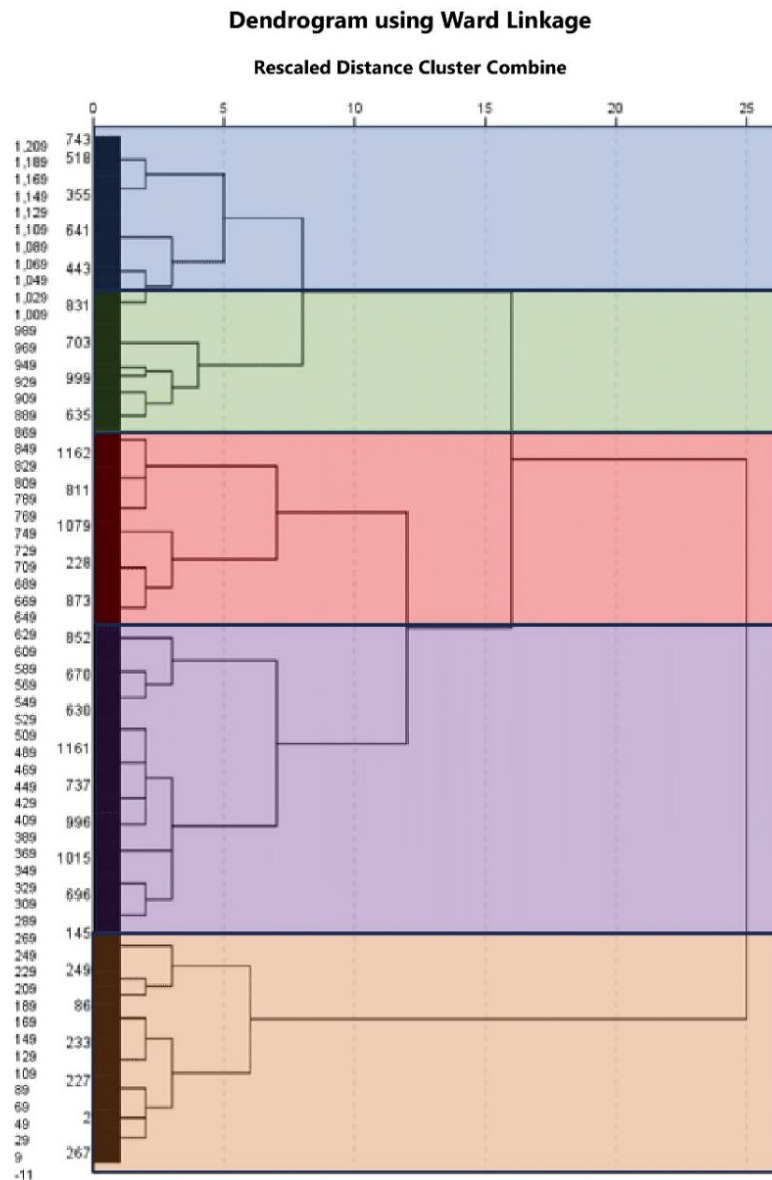


Fig. 21: Dendrogram with clusters (results from hierarchical clustering)

Furthermore, in the conducted ANOVA analysis, all variables showed statistically significant differences among the clusters ($p < 0.05$) (see table 30, figure 21).

Table 30: Mean score of segments

Final Cluster Centres							
	Cluster					F test	ANOVA Sig.
	1	2	3	4	5		
Open-mindedness	18.89	24.42	22.01	20.94	20.11	71.904	.000
Conscientiousness	20.85	19.91	24.56	22.55	24.06	68.390	.000
Extraversion	15.50	20.26	22.56	20.06	20.63	132.822	.000
Agreeableness	23.65	22.47	25.80	23.72	23.71	29.008	.000

Negative Emotionality	21.00	18.85	13.56	16.34	12.84	191.012	.000
Nature Escape	13.16	13.43	13.01	7.72	12.80	389.144	.000
Self-development	10.83	13.41	15.56	13.47	11.45	96.165	.000
Relationship and Recognition	8.52	9.68	12.78	12.81	8.97	148.781	.000
Autonomy	6.32	7.22	8.12	9.02	6.45	104.958	.000
Nostalgia	6.56	6.38	7.63	6.32	5.84	25.388	.000
Novelty and Stimulation	10.06	11.44	12.51	11.25	10.87	46.610	.000
Local Culture	16.01	17.51	18.00	10.63	13.44	175.364	.000
Thematic Activities	4.96	5.77	7.76	8.78	5.03	134.451	.000
Recreation and Adventure	10.15	12.47	13.41	8.75	11.12	87.939	.000
Entertainment	6.82	8.10	9.97	11.51	6.08	247.890	.000
Wellness	3.61	3.84	5.16	3.67	3.41	35.950	.000

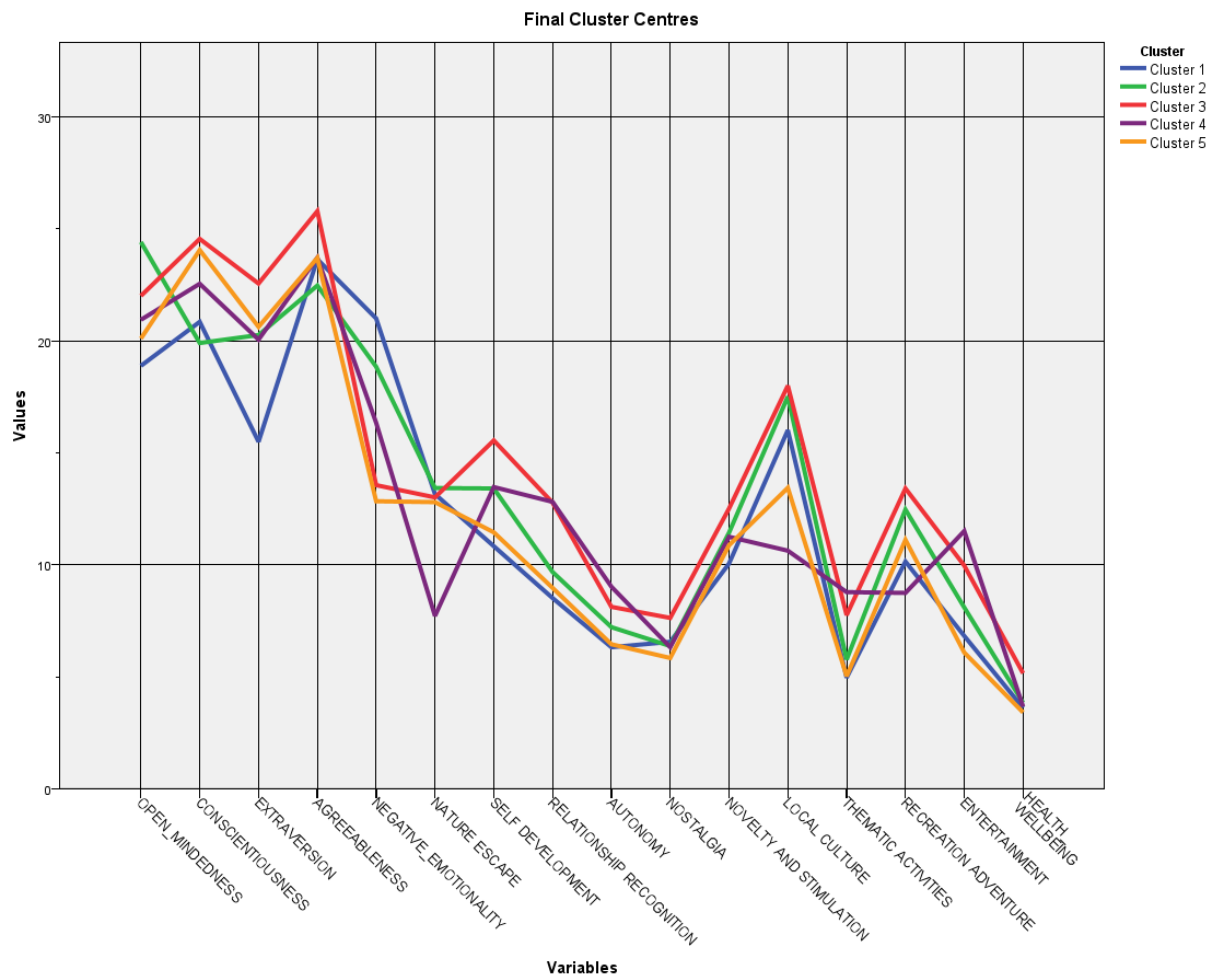


Fig. 22: Cluster Centres

Discriminant analysis – bootstrapping

Following the recommendations of prior research (e.g., Cha et al., 2024; Chen et al., 2014; Kim & Ritchie, 2012), a discriminant analysis was conducted to distinguish and validate the five visitor clusters. Bootstrapping is a way to test the reliability of data analysis by repeatedly taking random samples from the dataset and analysing each sample (Efron & Tibshirani, 1994). As shown in the analysis results (see table 31) the four discriminant functions were statistically significant as determined by the chi-square test ($p < 0.001$), confirming the discriminant functions' effectiveness in distinguishing among the groups.

Table 31: Tests of the significance of the five clusters

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation	Wilks' Lambda	Chi-square	df	Sig.
1	2.695 ^a	52.4	52.4	.854	.050	3611.076	64	.000
2	1.384 ^a	26.9	79.3	.762	.185	2035.537	45	.000
3	.801 ^a	15.6	94.9	.667	.441	988.264	28	.000
4	.260 ^a	5.1	100.0	.454	.794	278.706	13	.000
a. First 4 canonical discriminant functions were used in the analysis.								

Moreover, the classification results showed that 93.3% of original cases and 92.0% of cross-validated cases were correctly classified, demonstrating the model's robustness. Each cluster showed high accuracy in classification, with percentages of correctly classified cases ranging from 86.3% to 98.0% in the original grouping and slightly lower but comparable in cross-validation.

Table 32: Classification results

Classification Results ^{a,c}								
		Cluster Number of Case	Predicted Group Membership					Total
			1	2	3	4	5	
Original	Count	1	187	6	1	7	4	205
		2	2	197	4	6	7	216
		3	1	3	211	15	11	241

		4	0	1	4	248	0	253
		5	3	2	0	4	293	302
	%	1	91.2	2.9	.5	3.4	2.0	100.0
		2	.9	91.2	1.9	2.8	3.2	100.0
		3	.4	1.2	87.6	6.2	4.6	100.0
		4	.0	.4	1.6	98.0	.0	100.0
		5	1.0	.7	.0	1.3	97.0	100.0
		Cross-validated ^b	Count	1	185	7	1	7
2	4			190	5	7	10	216
3	1			3	208	16	13	241
4	0			1	4	246	2	253
5	3			4	0	4	291	302
%	1		90.2	3.4	.5	3.4	2.4	100.0
	2		1.9	88.0	2.3	3.2	4.6	100.0
	3		.4	1.2	86.3	6.6	5.4	100.0
	4		.0	.4	1.6	97.2	.8	100.0
	5		1.0	1.3	.0	1.3	96.4	100.0

a. 93.3% of original grouped cases correctly classified.

b. Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case.

c. 92.0% of cross-validated grouped cases correctly classified.

From the results of discriminant analysis presented, a five-cluster classification revealed both original and cross-validated accuracy levels. Specifically, in Cluster 1, 187 of 205 participants were classified correctly, and at original classification level, 91.2% accuracy was present. In cross-validated results, 185 of 205 participants were correctly classified and retained a strong level of accuracy of 90.2%. Cluster 2 was also accurate in classification since 197 of the 216 subjects were correctly classified at 91.2% accuracy. Cross-validated classification was slightly lower at 88.0%, with 190 of 216 subjects classified. For Cluster 3, 211 of the 241 subjects were correctly categorised in the initial run, with 87.6% accuracy. Cross-validation accuracy dropped only to 86.3%, with 208 of the 241 subjects being correctly categorised. Cluster 4 had the best initial classification accuracy at 98.0%, with 248 of 253 subjects correctly classified. Cross-validated accuracy remained high at 97.2%, with 246 of 253 correctly classified. Cluster 5 also exhibited high classification accuracy, with 293 of 302 subjects classified correctly (97.0%) Cross-validation showed a slight decrease to 96.4%, with 291 out of 302 subjects correctly assigned. Overall, 93.3% of the original cases were correctly classified, and the cross-validation analysis correctly classified 92.0% of cases. These results indicate a strong

reliability and validity of the discriminant functions used to classify the clusters, enhancing confidence in the cluster structure and the discriminant analysis model.

Chi-square tests

Further, chi-square tests, as noted by Knapp (2018), were employed to analyse demographic differences in the identified clusters. The combination of crosstab analysis and K-means clustering, as described by Ceylan, Çizel and Karakaş (2021), was used to create tourist typologies and interpret patterns. These tests revealed no significant differences between segments in terms of travel partner ($\chi^2 = 27.2$; $p = 0.13$). Afterwards, new typologies were named based on their key characteristics and dominant traits relevant to this study (see Appendix 19).

Cluster characteristics

Five distinct clusters of tourists visiting Cumbria were found in this study: Reserved Explorers, Culturally Curious, Diligent Adventurers, Social Explorers, and Balanced Explorers. The following section summarises the unique profiles of each segment.

Cluster 1 - Reserved Explorers

The Reserved Explorers cluster is characterised by the lowest scores in open-mindedness (18.89) and extraversion (15.50), suggesting a preference for familiar, comfortable, and solitary travel experiences. They also have the highest level of negative emotionality (21.00) among all clusters. They are motivated by nature escape (13.16) and self-development (10.83), and they are highly interested in local culture (16.01).

Demographically, this segment is female dominated (80.5%) the majority being in the 50-59 (23.9%) and 60+ (29.8%) groups. They primarily originate from the United Kingdom (82.9%), and the educational background ranges from high school (12.2%) through postgraduate levels (11.7%).

Cluster 2 – Culturally Curious

Named for their high scores in open-mindedness (24.42) and low negative emotionality (18.85), the Culturally Curious cluster reflects a strong drive for new experiences. With moderate conscientiousness (19.91) and extraversion (20.26), these tourists balance planning with spontaneous social interactions. Their travel motivations

include self-development (13.41), novelty and stimulation (11.44), and a high interest in local culture (17.51) and recreational adventure (12.47).

This is a heterogeneous group, predominantly younger, with high percentages in the 18-29 (21.3%) and 30-39 (20.8%) age ranges. The majority are employed (58.3%), and most visitors are from the United Kingdom (77.8%). Their education is made up of a high proportion of those with undergraduate (32.9%) and postgraduate (21.8%) qualifications.

Cluster 3 – Diligent Adventurers

This cluster is characterised by the highest conscientiousness (24.56) and agreeableness (25.80), and low negative emotionality (13.56), indicating a preference for organised and pleasant social interactions. They are driven by self-development (15.56), relationship recognition (12.78), and nature escape (13.01), as well as high local culture interest (18.00). They also have the strongest preference for wellness (5.16) across all clusters.

Mainly composed of women (59.8%), this group has a balanced age segment, particularly in the 50-59 (24.9%) and 60+ (24.9%) groups. They are mostly from the United Kingdom (79.3%), with many having an undergraduate degree (28.2%) and highest loyalty to the destination (56.0%) amongst clusters.

Cluster 4 – Social Explorers

Social Explorers score high in open-mindedness (20.94), conscientiousness (22.55), extraversion (20.06), and agreeableness (23.72), with lower negative emotionality (16.34). Their motivations are based on relationships and recognition (12.81) and autonomy (9.02), with a preference for entertainment (11.51) and thematic activities (8.78).

Demographically, the cluster is slightly female skewed (61.7%), with significant representation in 18-29 (20.9%) and 30-39 (21.3%) age ranges. The majority is in employment (64.4%) or self-employed (19.8%) and are based in the United Kingdom (80.2%). Educational qualifications vary, with the majority holding bachelor's (29.6%) and master's degrees (18.2%).

Cluster 5 – Balanced Explorers

Balanced Explorers rank high on open-mindedness (20.11), conscientiousness (24.06), and agreeableness (23.71), with extraversion (20.63) and the lowest negative emotionality (12.84) amongst all groups. Their motivations include nature escape (12.80), self-development (11.45), and high interest in local culture (13.44) and recreational adventure (11.12), combining relaxation with physical exercise.

This group tends to be older with strong percentages aged 50-59 (28.1%) and 60+ (29.1%) and slightly higher percentages of females (56.6%). The great majority are United Kingdom in nationality (86.4%), highly educated with high percentages of undergraduate (32.5%) and postgraduate (16.2%) graduates.

4.1.3 Summary

This section developed tourist typologies based on a combination of psychological and socio-demographic factors, helping to build a more detailed understanding of visitors to Cumbria. The survey used a deductive, quantitative research approach and applied random probability sampling to collect data on visitors' personality traits, travel motivations, activity preferences, and socio-demographic factors. In doing so, the study addressed objective 1 by capturing a comprehensive set of visitor characteristics. Objective 2 was met by explaining how personality traits and travel motivations predict activity choices, and the cluster analysis achieved objective 3 by identifying distinct visitor groups with shared profiles.

An initial study was conducted to assess the research design. This phase confirmed the validity, reliability, and consistency of the measures, improving the methodological rigor and refining the analytical model for more accurate visitor typology. The initial results revealed the importance of psychological factors to better understand and target various segments of visitors in Cumbria. Establishing such relationships at this stage was critical prior to proceeding with a full-scale study aiming to develop tourist typologies. Further, the cluster analysis identified five distinct segments of tourists, each with unique profiles: Reserved Explorers, Culturally Curious, Diligent Adventurers, Social Explorers, and Balanced Explorers. These results were discussed with industry practitioners in phase 2, to explore current segmentation practices and how the identified visitor clusters could inform sustainable destination management practices, bridging theoretical insights with practical applications.

4.2 Phase 2: Qualitative Data Analysis

Introduction

The second phase of this research gathered industry insights on visitor segmentation and sustainable practices through qualitative focus group discussions with tourism practitioners. It explored the influence of psychological factors on visitor behaviour and the identified tourist typologies from a practical perspective. By combining theoretical findings with industry insights, this phase contextualised empirical results and offered actionable recommendations for tourism management strategies, supporting Cumbria Tourism's goal of establishing the county as the UK's leading sustainable rural destination by 2040 (Cumbria Tourism, 2024).

A key outcome of the focus group discussions involved the industry's perspective on how personality traits and motivations intersect with visitor activities, enhancing understanding of identified visitor clusters through the industry's perspective. This integration could enable DMOs and stakeholder to refine segmentation strategies, improve visitor distribution, and drive innovation in regional tourism development. Six key themes emerged: segmentation strategies, attitudes towards personality-based approaches, visitor profiles, diversifying distribution, adoption barriers, and collaborative innovation in tourism, providing a framework for incorporating psychological insights into industry practices, contributing to more effective sustainable destination management.

Profile of participants

The quantitative results from phase 1 were explored through two focus group discussions with tourism practitioners from Cumbria, representing small and medium-sized enterprises (SMEs). The first discussion focused on the initial study's findings, examining personality traits and motivations as predictors of visitor behaviour, allowing professionals to reflect on their practical implications for destination management. The second session discussed the visitor clusters, examined the relevance of the personality-based segmentation approach within the local context, and explored implications for improving visitor engagement and destination management.

Table 33 below provides an overview of the participants, highlighting their roles and sectors. They were selected using purposive sampling to ensure representation of

senior-level professionals with extensive expertise in the visitor economy. Participants were involved from various sectors, including accommodations (hotels, self-catering units), activity providers (swim clubs, forest coordinators), visitor attractions (museums, gardens, cruises), and the local DMO. Their perspectives cumulatively provided insights into the application of the quantitative findings from phase one in real-world situations. The diversity in roles and companies ensured that the sessions were able to capture a broad set of operational, strategic, and marketing challenges facing the regional tourism industry.

Table 33: Focus group participants' profile

Code	Role	Industry sector
Focus group I		
P1	Consultant	Tourism and hospitality businesses
P2	Marketing Manager	Accommodation – boutique hotel
P3	Sales and Marketing Director	Accommodation - luxury hotel & self-catering
P4	Sales Marketing Manager	Accommodation - hotel
P5	Consultant	Tourism and hospitality businesses
P6	Revenue Manager	Accommodation and outdoor visitor attraction- campsite, cottages, and gardens
P7	Swim Club Manager	Activity provider
P8	Cruise Company Manager	Tour operator
P9	Museum Manager and Curator	Indoor visitor attraction
Focus group II		
P10	Active Forest Coordinator	Activity provider
P11	Sales and Marketing Coordinator DMO	Sales and Marketing Coordinator DMO
P12	Restaurant General Manager	Hospitality
P13	Front Desk Manager	Accommodation - hotel
P14	Swim Club Manager	Activity provider
P15	Sales and Marketing Director	Accommodation - luxury hotel & self-catering

P16	Sales and Marketing Manager	Accommodation and outdoor visitor attraction- campsite, cottages, and gardens
P17	Consultant	Tourism and hospitality businesses

Note: The sample group was determined by the purposeful sampling method, where individuals were chosen based on their expertise in the tourism and hospitality industry. The inclusion criteria required participants to hold senior-level management positions in the industry

The focus group discussions were thematically analysed using NVivo 12 (Saunders, Lewis & Thornhill, 2019; Bryman, 2016; Braun & Clarke, 2006). The data was analysed following the principle of saturation where each category is extensively covered until such a point that there are no further meaningful results to be derived. A fundamental aspect of this process was the concept of 'consensus construction', as proposed by Waring (2012), where the dialogue was used to facilitate reaching a commonality or consensus among participants on key issues. This method ensured that the analysis reflects collective viewpoints rather than isolated opinions, providing a richer interpretation of the data. By incorporating consensus construction, the study was able to contextualise the quantitative findings within the practical realities of Cumbria's tourism industry, offering a deeper and more collaborative understanding of visitor behaviour and industry challenges.

Thematic coding was supported through NVivo, where a structured node framework was developed to capture emerging topics. Key themes included: segmentation strategies, barriers to adopting personality-based approaches, visitor profiles and personas, visitor distribution strategies, adoption barriers, and collaborative innovation (see Appendix 20). A wheel chart was created in NVivo to graphically depict the distribution and emphasis of coded content across these themes (see Appendix 21). Based on the quantity of references coded during the two focus group sessions, this diagram illustrates the relative coverage of each theme. Key concerns and priorities among tourism stakeholders were reflected in the following prominent themes: market segmentation strategies, visitor profiles and personas, and perceived barriers to adopting psychological segmentation.

The wheel chart also shows how many different stakeholders were interested in technological issues that were continuously connected to segmentation and sustainability objectives, like the function of destination mobile applications and the requirement for

real-time visitor data. In addition to providing industry-relevant insights into how psychological segmentation might be operationalised in practice, these thematic patterns assisted in placing the quantitative findings in context.

The themes emerging from the focus group discussions are presented in more detail in the following section and are supported by direct quotes, illustrating shared concerns and strategic perspectives on the application of data-driven visitor segmentation in Cumbria's tourism sector. The findings below integrate discussions from both focus groups.

4.2.1 Segmentation strategies

The findings identified that the industry practitioners in Cumbria segment their markets based on visitor behaviour upon visit, in contrast to visitor attributes prior to arrival: *'what they do when they are with us, not who they are when coming'* (P6). For instance, hotel managers segment their markets on factors such as visit type (holiday, business, or spa) and accommodation type booked (e.g., family or pet-friendly). Similarly, tourist attractions segment visitors by ticket type bought (e.g., general, or event-type tickets). These strategies align with traditional segmentation models, such as those proposed by Kotler and Keller (2016), that rely mainly on behavioural, demographic, and geographic data.

While operationally effective, these models have significant limitations. As McKercher et al. (2022) noted, behavioural segmentation informs about what customers are doing but does not inform about why they are doing it. Similarly, Dolnicar (2022) also criticised the demographic and behavioural segmentation as being limited, with such approaches overlooking the complex psychological drivers behind consumer behaviour and therefore limiting their predictive accuracy.

McKercher et al. (2022) further added that effective segmentation needs to balance simplicity and depth so that marketing efforts address tourists' fundamental motivations. While the focus group discussions revealed that practitioners in Cumbria's currently may be missing an opportunity to develop a deeper understanding of visitors' needs by focusing solely on apparent behaviour, this could be addressed by adopting a psychographic segmentation based on psychological factors such as personality and motivational factors (McCrae & Costa, 1999; John et al., 2008). Practitioners could more

effectively anticipate tourist preferences and develop more effective strategies, as they unanimously highlighted the potential for psychographic segmentation to enhance marketing effectiveness and visitor satisfaction.

4.2.2 Attitudes towards a personality-based approach

Industry practitioners expressed strong support for personality-based marketing, recognising its potential to create promotional content aligned with customers' individual personalities. One participant noted, *"This can only be positive and make the person feel that when they arrive, it will be safe, comfortable, and enjoyable"* (P2). This approach was seen as particularly valuable in resource-constrained settings, where focused strategies could produce higher returns: *"Given our limited resources, anything that can be straightforward, simplified, and compact for us to implement is better"* (P9). By targeting the right visitors, personality segmentation allows businesses to avoid investing time on individuals that are not going to engage with their offer, thereby increasing the effectiveness of their marketing. This is in line with previous research by Dolnicar, Grün and Leisch (2018), who noted the benefit of employing psychographic segmentation to build more focused and cost-effective marketing campaigns.

While enthusiastic about the personality-based strategies, practitioners were sceptical about the practicability of implementing the model. Cost, time, and the malleability of personality traits and drives were among the issues raised. One participant observed, *"Personality traits might change... Life events change personality"* (P6), highlighting the fluidity of individual characteristics. Another respondent noted shifting motivations, highlighting how a change in the life circumstance can alter the dynamic of a visit: *"They might visit for one reason when they had family, and then it changes, it changes the dynamics of that visit. I think it would be evolving"* (P7).

Seasonal factors, family dynamics, and the influence of dominant personalities within travel groups were identified as additional complexities affecting visitor behaviour, resonating with insights from Reeve (2024), Piuchan (2018) and Hudson (2008) on the dynamic nature of tourist motivations. However, the literature revealed that there is a consensus that core aspects of personality remain relatively stable throughout the lifespan (Roberts & Yoon, 2022), a notion supported by longitudinal studies (Bleidorn et al., 2022). On that note, the practitioners recognised the added benefit of incorporating

personality traits to gain more detailed insights into their customers, helping to refine segmentation and better understand visitor preferences.

Furthermore, the practitioners unanimously agreed on the importance of delivering the right message to potential visitors. One participant explained, *“But I’m not going to change what I offer because this is who I am, I’m in the Lake District. So yeah, this is my offering. I attract 1, 2 or 3, so I send the right message through the website, through an app, to address the characteristics of each of the variables”* (P1). This highlights the importance of effective communication ensuring that tourism offerings resonate with the targeted visitor segments, aligning with strategic goals for sustainability and economic impact (Dolnicar, 2022; Pan & Shang, 2023). Another participant emphasised the emotional and well-being connections tied to activities: *“This also has opportunities on how these activities make somebody feel... You know how well-being makes people feel, and you know that could be linked back to those personality traits”* (P6). This perspective resonates with findings by Filep and Laing (2019), who highlighted the importance of emotional well-being in shaping tourist satisfaction.

4.2.3 Visitor profiles and personas

Industry professionals confirmed that the behavioural patterns identified in the quantitative data aligned closely with their practical experiences. Specific traveller profiles, such as the Diligent Adventurers and Social Explorers, were highlighted as examples of visitor types whose preferences mirrored the data findings. Comments like, *“Your ‘Social Explorers’ maps well to our ‘Off-the-Beaten Trackers’ segment – people happy to independently explore without much assistance”* (P10), demonstrate the resonance between data-driven segments and actual market segments targeted by tourism practitioners. These insights highlight the practical applicability of quantitative segmentation in aligning with existing operational frameworks (Dolnicar, 2020; McKercher et al., 2022).

In contrast, some practitioners noted a disconnect between industry defined personas and how visitors perceive themselves. One participant observed, *“So I think whilst it’s hugely, massively beneficial for the industry, I really don’t believe customers see themselves in terms of personas”* (P16). This highlights a potential challenge, while segmentation aids in targeting and tailoring experiences, visitors may not consciously identify with assigned labels, potentially influencing how they engage with marketing

messages. Another practitioner restated this concern, “*Customers don’t think in terms of personas*” (P17), indicating that rigid, persona-based marketing strategies might not resonate on a personal level. This suggests a need for a more refined approach to bridge industry segmentation and visitor self-perception.

While destinations like Scotland and Canada use personas such as adventure seekers and cultural explorers to segment the market and design tailored experiences, their effectiveness in accurately reflecting tourist behaviour remains uncertain (VisitScotland, 2024; Destination Canada, 2024). However, as focus groups revealed, tourism marketers might avoid overly rigid classifications in promotional efforts. Instead, Cumbria Tourism should consider adopting for more flexible, narrative strategies that highlight core motivations and experiences. This may resonate more effectively with visitors, by creating emotional connections and appealing to their interests, as highlighted in past research (Yan & Halpenny, 2019; Choo, Joo & Woosnam, 2020).

4.2.4 Diversifying visitor distribution

Management of tourist flow emerged as key priority in Cumbria's industry, with most practitioners affirming that measures must be taken to control high season and to alleviate the issues that it creates. As they acknowledged, honey spots such as Ambleside and Windermere are facing pressure from environmental deterioration, infrastructure, and a reduced quality of life for residents. Effective visitor management is therefore critical to providing sustainable tourism, and the literature strongly advocates for interventions that redistribute tourists both temporally and spatially (Seraphin et al., 2020), a key focus for Cumbria Tourism.

One potential solution could be the development of a mobile app designed to guide visitors toward lesser-known attractions. Such an approach could provide engaging alternatives to traditional hotspots, encouraging exploration beyond the usual tourist hubs. Research supports the role of digital tools in shaping visitor behaviour, with mobile applications shown to promote sustainable tourism by highlighting under-visited destinations and delivering personalised narratives that enrich the tourist experience (Beritelli & Reinhold, 2021). By redistributing visitor traffic, these tools can reduce overcrowding and preserve key tourism assets, a strategy also highlighted by Butler and Dodds (2019). Tourism practitioners widely endorsed this idea, noting its potential to protect Cumbria’s iconic sites and foster a more balanced tourism economy. One

participant commented, *‘It’s getting people out of all the honeypot areas to discover something new’* (P7). Directing visitors to less popular areas not just to take pressure off overcrowded sites, but also to diversify the tourism experience by uncovering more of what the destination has to offer. This is a priority for Cumbria Tourism is addressing overtourism, and technology could enhance these strategies.

However, there were concerns among some of the participants that app algorithms may reinforce existing visitor trends. Nonetheless, the industry practitioners highlighted the importance of targeting specific visitor typologies, such as the Culturally Curious, who are eager to experiment new and enriching experiences. To attract such visitors, app algorithms could recommend less visited attractions and authentic cultural experiences. This personalised approach could potentially reduce the risks of overtourism, protect key areas, and promote less popular areas, spreading economic benefits more evenly across the region, leading to a more sustainable form of tourism.

4.2.5 Adoption barriers and data challenges for personalised travel apps

The practitioners recognised the importance of visitor data for enhancing the tourism offer and addressing key issues such as overcrowding and underutilised attractions. Every participant in the focus group collectively agreed with the potential for a customised trip-planning and recommendation app. Participant 17 highlighted its ability to showcase ‘hidden gems’ and redistribute visitor traffic away from high-traffic areas, aligning with sustainable tourism goals. By matching visitor preferences with lesser-known attractions, such an app could enhance visitor satisfaction while promoting sustainability (Butler & Dodds, 2019; Seraphin, Sheeran & Pilato, 2018).

However, challenges to implementing a digital tool were apparent. Participant 10 raised concerns about maintaining updated and comprehensive data, particularly for smaller businesses with limited technological capacity: *‘I think it’s a good idea. I would just question how easy it is to get all the accessible information up to date and how businesses feed into that’* (P10). This concern reflects a broader issue of operational capacity and uneven technological integration across businesses, a challenge confirmed in the literature (Barros et al., 2022). Small companies often lack the resources to maintain digital platforms updated, which may limit the app from providing real-time, up-to-date suggestions.

In this context, the role of the DMO becomes essential because they could facilitate integration of digital tools, coordinate stakeholder activity, and unite businesses to enhance service delivery and facilitate sustainable tourism (Gretzel, 2022; Sotiriadis, 2021). Even more so, since 97% of Cumbria's DMO support comes in the form of commercial input by member companies (Cumbria Tourism, 2024), the value of the DMO is further enhanced. Not only does this approach towards tourist development ensure that businesses get to experience benefits directly from the actions of the DMO, but it could also justify the cost of their membership. The ability of the DMO to deliver valuable services, including marketing, data analysis, and sustainable tourism planning, provides a return on investment for these companies. This makes the DMO a selling point for member companies, as they could easily see how their contributions help to create a thriving, sustainable tourism sector.

Despite challenges, the app's potential to personalise and streamline visitor experiences was a compelling case for its development. By offering customised filters such as activity type and budget, the app could simplify trip planning while addressing individual preferences. However, there were certain participants who questioned its necessity since they believed that tools like Google, TripAdvisor, and Lonely Planet already provide the same. As Participant 16 remarked, *“So while the data is hugely valuable to us as an industry, I think it really is a solution to a problem that visitors don't have”* (P16). This critique highlights the need for the app to offer distinct advantages beyond those of existing tools, particularly by utilising data insights to benefit both visitors and the industry and support sustainable practices. This represents another opportunity for the DMO to not only address emerging needs but also reinforce existing ones, creating a more compelling and differentiated offering.

4.2.6 Collaborative innovation in regional tourism

The data from visitor clusters was highlighted as an asset for driving innovation and addressing gaps in existing offerings that may not meet certain visitor profiles. One participant proposed integrating the app with destination management systems to guide visitors toward more personalised experiences: *“I think the app could work with destination management companies... building on the data to enhance accommodation and activity listings based on personas”* (P15). This sentiment confirms findings in

tourism literature that advocate using data to inform collaborative destination strategies and improve visitor satisfaction (Barros et al., 2022).

Participants recognised the opportunity for collaboration between the private and public sectors in integrating technology to create seamless visitor experiences. Innovative ideas discussed included synchronised digital platforms, real-time sharing of availability, and bundled payments across attractions and activities. Such integrated systems have been shown to enhance destination competitiveness and foster a more cohesive tourism experience (Huang et al., 2022). However, participants acknowledged the challenges associated with implementing these strategies and emphasised starting with joint content development and shared exclusive offers. As one participant noted, the main benefit would come from enabling visitors to “*move seamlessly across organisations and across boundaries*” (P16), particularly in transportation, without realising they have switched providers. This vision aligns with research advocating for integrated regional tourism strategies that prioritise visitor convenience and collaboration among stakeholders (Butler & Dodds, 2019; Seraphin et al., 2020). By adopting these collaborative approaches and employing technological tools, Cumbria's tourism sector could not only enhance visitor experiences but also foster sustainable growth and resilience.

4.2.7 Summary

This section explored industry insights into understanding visitor behaviour, segmentation, and sustainable practices within Cumbria's tourism industry, supporting Cumbria Tourism's goal of establishing the county as the UK's leading sustainable rural destination by 2040 (Cumbria Tourism, 2024). Using an inductive, qualitative approach, insights were gathered through focus groups with tourism professionals in Cumbria, selected through purposive sampling. The aim was to contextualise the findings from phase 1 with practical perspectives, ensuring their relevance to real-world tourism management. Objective 1 was fulfilled through an exploration of the perceptions of industry practitioners regarding the effect of personality traits and travel motivation on visitor behaviours, while objective 2 was fulfilled through an investigation of how tourist segments can be used in the development of tourism strategies as well as enhancing tourist experiences. The industry representatives recognised the value of personality-based segmentation in informing marketing, product planning, and destination management.

Consistently, this bridged the gap between theoretical studies and practice, emphasising that segmentation strategies need to be grounded on industry practice.

Current segmentation practices primarily focus on observable visitor behaviour during their stay, rather than pre-visit characteristics, highlighting a reliance on traditional methods. While these may be operationally effective, they are also limited in their ability to address psychological drivers. Tourism practitioners expressed enthusiasm for psychographic segmentation to tailor strategies more effectively, enhance visitor satisfaction, and sustainable practices. However, challenges such as costs and resource limitations were perceived as barriers to implementation. This creates an opportunity for DMO to be innovative in providing solutions, such as partnering with local businesses and using technology for more effective marketing, and higher impact strategies. Through enhanced use of resources and stakeholder coordination, the local DMO could overcome these challenges and create more accessible and sustainable initiatives that balance industry resources, while meeting visitor expectations.

Digital opportunities, such as a mobile application, were identified as promising tools for improving visitor management. The stakeholders recognised the app's potential to redirect visitors from overcrowded areas to less visited attractions, supporting sustainable tourism. Concerns for data accuracy, integration, and differentiation from other platforms such as TripAdvisor and Google were expressed. To overcome these obstacles, the participants emphasised that only by incorporating certain features like personality-based recommendations and real-time adaptability would drive visitor interaction and industry effectiveness, presenting an opportunity for the DMO to support innovative solutions.

Collaboration was a dominant theme, and public-private sector cooperation had strong support. Ideas included the development of integrated systems for seamless visitor experiences, such as coordinated digital platforms, real-time shared availability, and bundle payments for attractions and activities. Visitor cluster data was seen as a valuable resource for aligning tourism offerings with psychological drivers. While large-scale initiatives may pose logistic difficulties, steps such as joint content development and campaigns were suggested as the initial practices towards fostering cooperation and resilience among Cumbria's tourism industry. By incorporating innovative segmentation methods, adopting digital solutions, and reinforcing regional collaboration, Cumbria's

tourism industry could optimise the visitor experience while supporting the destination's long-term sustainability.

4.3 Phase 3: Qualitative Data Analysis

Introduction

The third phase builds on phase 1 quantitative analysis and explores psychological factors influencing visitor behaviour in Cumbria. With an inductive, qualitative research approach, semi-structured interviews explored personality traits and motivational factors driving behaviour, uncovering contextual influences not captured by the quantitative analysis, which enrich and complement the survey findings. Moreover, building on phase 2 findings where industry practitioners debated the value of a destination app, visitor interviews explored whether such an app would address an unmet need. With a deeper understanding of visitor behaviour, this phase reveals valuable insights for local DMO and businesses to adapt strategies to visitor profiles, thereby supporting sustainable development within Cumbria.

Profile of participants

The study sample was 25 participants (17 females, 8 males) aged between 21 and 54 years, from various demographics, work statuses, and educational backgrounds (see table 34). Their nationalities varied, including the United Kingdom, Romania, Tunisia, India, Japan, Indonesia, Greece, Canada, Iran, Sri Lanka, Syria, Hong Kong, and Bulgaria, which reflects the diversity of Cumbria's visitors. The majority of participants were employed, while students and retirees were a minority. Most of the participants were highly educated with an undergraduate, master's, or postgraduate level of education. The interview participants were categorised into the five phase 1 groups as outlined by their characteristics: Balanced Explorers, Social Explorers, Culturally Curious, Diligent Adventurers, and Reserved Explorers. The most common group were the Balanced Explorers, followed by Diligent Adventurers and Social Explorers, and then Culturally Curious and Reserved Explorer in smaller numbers.

Table 34: Interview participants' profile

Interviewee Code	Gender	Age	Nationality	Work status	Highest level of education completed	Cluster
P1	Female	31	Romania	Employed	Undergraduate Degree	Balanced Explorer

P2	Male	34	United Kingdom	Employed	Master's Degree	Balanced Explorer
P3	Male	32	United Kingdom	Employed	Undergraduate Degree	Culturally Curious
P4	Male	37	United Kingdom	Employed	Undergraduate Degree	Diligent Adventurer
P5	Female	27	Tunisia	Student	Postgraduate Degree	Reserved Explorer
P6	Male	34	Romania	Employed	Undergraduate Degree	Diligent Adventurer
P7	Female	33	Romania	Employed	Undergraduate Degree	Balanced Explorer
P8	Male	28	India	Employed	Master's Degree	Social Explorer
P9	Female	21	Japan	Student	High School	Diligent Adventurer
P10	Male	30	United Kingdom	Employed	Undergraduate Degree	Culturally Curious
P11	Female	45	Romania	Employed	Undergraduate Degree	Social Explorer
P12	Female	34	Indonesia	Employed	Master's Degree	Diligent Adventurer
P13	Female	32	Greece	Employed	Master's Degree	Balanced Explorer
P14	Female	51	Canada	Retired	Postgraduate Degree	Social Explorer
P15	Male	32	Iran	Employed	Master's Degree	Diligent Adventurer
P16	Female	47	Sri Lanka	Employed	Master's Degree	Balanced Explorer
P17	Female	54	United Kingdom	Employed	Undergraduate Degree	Balanced Explorer
P18	Female	31	Syria	Employed	Master's Degree	Reserved Explorer
P19	Female	29	United Kingdom	Student	Postgraduate Degree	Culturally Curious
P20	Male	32	Romania	Employed	High School	Social Explorer
P21	Female	30	United Kingdom	Employed	Master's Degree	Reserved Explorer
P22	Female	42	United Kingdom	Employed	Master's Degree	Diligent Adventurer
P23	Female	37	Hong Kong	Employed	Master's Degree	Culturally Curious
P24	Female	31	United Kingdom	Employed	Master's Degree	Social Explorer
P25	Female	34	Bulgaria	Employed	Undergraduate Degree	Balanced Explorer

Prior to the interviews, the participants were asked to select from pre-designed activity packages (see Appendix 5), choosing the one that best fitted their interests. While many respondents selected the same packages, their experiences of these activities were relatively different, shaped by their individual personalities. For example, hiking, a popular activity and particularly so in Cumbria as home of the Lake District National Park, was perceived differently amongst participants. To some, it was a social experience,

as it provided opportunities to meet others who shared their interests. For others, it was a therapeutic and solitary activity that provided a sense of calmness and self-reflection. For others, hiking was seen as a physical challenge. These findings align with Gretzel et al.'s (2004) study, who segmented individuals based on activity-related preferences and found that while travel personality groups were different in relation to the psychographic variables, travel behaviour among individuals within these segments was not significantly different. This suggests that while personality offers insights into traveller preferences, it does not always predict specific behaviours.

The alignment between pre-selection and subsequent interview discussions allowed for the identification of initial preferences that might otherwise be influenced by situational factors during the visit. For example, Participant 7 initially selected a package tailored for cultural activities, however, when visiting the destination, they adapted their choices due to their companion's preferences. Showing high agreeableness, they prioritised outdoor activities such as hiking and nature walks: *"I went with a friend, and she's not a massive fan. She doesn't like going to museums, castles, or churches—she just likes nature. So, I just went with her. But if I was by myself, I would have definitely had a more balanced mix of activities. But when you go with someone else, you kind of think, OK, let's just go with the flow."* This illustrates how social dynamics and personality traits, in this case high agreeableness, influence decision-making and behaviour, and ultimately the visitor's experience and overall satisfaction.

Initial recruitments targeted diverse groups to achieve a broad cross-section of ideas. The first eight interviews established primary variations, with a further 10 to develop a deeper understanding. In the final set of seven interviews, no new themes emerged and observed patterns were consistent, confirming data stability. Therefore, the qualitative data were able to effectively complement and enrich the understanding of the quantitative findings of phase 1.

The coding process was conducted using NVivo 12, enabling systematic organisation of qualitative data. Initial codes were developed inductively and later grouped into higher-order themes using a thematic analysis approach. The coding structure was organised into thematic categories reflecting key concepts such as personality traits, motivations, and technology use. For example, personality traits were coded across five Big Five dimensions, while visitor typologies were grouped under five

emergent clusters developed during the analysis. The NVivo coding summary (see Appendix 22) provides an overview of the coding hierarchy, the number of sources coded under each node, and the number of references per theme. This structure allowed for both within-cluster and cross-cluster comparisons of behavioural and motivational themes.

NVivo Tree Map visualisations were used to further explore the thematic profiles of each visitor typology. These visualisations showed the number of coded references across themes for each cluster (see Appendix 23). Different behavioural patterns and experiential priorities were emphasised by these images. Reserved Explorers, for instance, frequently mentioned alone time and serene locations, whereas Social Explorers prioritised social gatherings, group activities, and shared experiences. Diligent Adventurers suggested an achievement-oriented travel style by placing a strong emphasis on planning, outdoor challenge, and self-improvement. Meanwhile, participants who were culturally curious were drawn to museums and historical education. Lastly, Balanced Explorers showed a wide-ranging, uniformly distributed interest in adventure and cultural activities.

These visualisations enhanced the interpretive insights produced by qualitative coding and assisted in confirming the cluster typologies' thematic integrity. The following section will present a rich description of the visitor clusters, integrating quantitative and qualitative findings.

4.3.1 Reserved Explorers

Personality traits of the Reserved Explorers

Open-mindedness: The Reserved Explorers display low open-mindedness, as highlighted by their strong preference for routine and familiarity. They tend to favour familiar activities, avoiding the uncertainty associated with novel experiences. For instance, P5 explained, *“I don’t mind being familiar with a certain space. I’ll love it. I’ll visit it over and over again because it becomes a comfort.”* Similarly, P21 stated, *“I tend to just stick with what I know. What I’m good at, what I know works.”* These preferences highlight their risk-averse and conservative nature, opting for familiar experiences rather than exploring the unknown.

Conscientiousness: Participants in this cluster score high in conscientiousness and therefore they are inclined towards structured and organised activities. Their systematic

planning process of the journey reflects their preference for structure and predictability. Their methodical approach to organising trips reflects their need for control and predictability. P5 demonstrated this tendency by sharing, *"I like to plan my life [...] I would move to India in 40 years to retire."* Similarly, P21 illustrated this trait when describing their travel planning, saying, *"I do like planning. You know where we're going to park? How long we'll hike, where we'll have lunch."* These detailed plans reflect a strong need for preparation and a systematic approach to life experiences, including travel.

Extraversion: The Reserved Explorers display low extraversion, reflected in their preference for solitary activities and avoidance of high-energy, social settings. They find fulfilment in solitude and personal reflection, often seeking out quiet, nature-based environments. As P18 expressed, *"I prefer solitary experiences... It's very, very fulfilling to, you know, just wander on your own."* P21 reiterated this sentiment, stating, *"It's just hills for miles and miles and miles. I feel so, so safe here. I love this vast open landscape. There's probably no one around for miles."* This preference for solitude and introspection highlights their introverted nature and aversion to lively social environments.

Agreeableness: Although Reserved Explorers are not always seeking social interaction, they have a remarkably high level of respect and interest in the local communities and culture. The fact that they are interested in taking part in culturally enriching experiences, including local history and customs, indicates a level of appreciation and empathy for others. For instance, P5 shared, *"Local anything that is, you know, local in terms of food, in terms of like local shops... Like the things that someone from the Lake District would do."* Their interest in local culture and history demonstrates high agreeableness, rooted in a respectful appreciation about the destinations they visit.

Negative Emotionality: The Reserved Explorers display high levels of negative emotionality, characterised by caution, and a need for safety in travel. This trait influences their preference for predictability and familiar environments. P5 revealed the emotional impact of a negative travel experience, stating, *"It took me 8 months to have the courage to go back to that place... I felt like I was more ready."* Their cautious approach extends to their planning, with P5 noting, *"I like to know where I'm going. What are the possibilities?... I like to familiarise myself with the surroundings or the place that I'm*

going to.” These statements illustrate their emotional vulnerability and the self-protective measure they follow to ensure a sense of security when traveling.

Travel motivations among the Reserved Explorers

Reserved Explorers are primarily motivated by a desire for nature escape, self-enrichment, and cultural immersion. Their choice of independent and outdoor activities reflects a desire for therapeutic relaxation and contemplation rather than thrill or high-energy experiences. For instance, P18 described the calming effect of the outdoors, stating, *“It gives me time to be with nature,”* while P5 highlighted the restorative power of slow, reflective activities: *“I like that sort of slow, not tiring...you get to experience the softness and the sweetness of it.”* This is also evident in their high interest in self-development and the therapeutic benefits of nature activities. One participant described, *“I’m not necessarily hungry for that thrill. I’m not, like on a constant like I have to move...it’s not my nature”* (P5). Similarly, another participant mentioned, *“I really like going on walks on my own bike rides on my own, spending all this time alone”* (P21), highlighting the therapeutic benefits of solitary activities. Beyond nature, their interest in local culture drives them to seek authentic and culturally enriching experiences, highlighting how they perceive travel as a means for personal growth, emotional restoration, and engagement with their environment.

In summary, the qualitative findings of interviews with Reserved Explorers add depth to the quantitative survey data, enriching the understanding of this cluster's behaviours and preferences. When quantitative data revealed their low open-mindedness and extraversion scores, the interviews explained how these manifest, such as their enjoyment of solo nature retreats and structured, familiar activities. Participants described enjoying solitary walks, visits to cultural sites, and slow-paced, restorative activities, often in natural settings. Similarly, their scores on negative emotionality were contextualised by interview data that highlighted their need for safety, predictability, and emotional preparedness. These qualitative insights further revealed that their motivations for nature-based escape, self-development, and cultural engagement are not simply matters of interest, but deeply rooted in personal values and emotional needs, bringing important implications for targeted communication strategies. In this context, marketing messages that highlight peaceful, nature-focused retreats are likely to resonate with this group. Strategically targeting this segment may not only enhance market alignment but it

could result in more sustainable tourism outcomes by attracting visitors whose behaviours are less invasive. Rather than increasing visitor numbers, this approach supports a shift towards a value-based tourism that prioritises long-term destination sustainability.

4.3.2 Culturally Curious

Personality traits of the Culturally Curious

Open-mindedness: The Culturally Curious cluster display high open-mindedness, reflected in their desire for diverse and authentic travel activities that combine adventure, culture, and personal growth. They are interested in new opportunities, whether it involves trying local cuisine, engaging in cultural activities, or immersing themselves in history. Participant 10 exemplifies this with, *“I like the wild swimming, and you know I like water, obviously. I like the aspect of it, and then I also like the boat trips, and I like archaeology.”* Similarly, P3 highlighted their passion for cultural learning, stating, *“The first thing I will check is what kind of history they have. So that's the first thing for me; after that, the rest is gonna come.”* These statements highlight their enthusiasm for discovering and engaging with authentic and enriching experiences.

Conscientiousness: The Culturally Curious are moderately conscientious, adopting a flexible approach towards travel. While they like to have an overall structure in place, they like spontaneity and making plans along the way. As Participant 10 commented, *“I like to have a rough plan in place, especially for things like guided tours or workshops, but I also leave room to explore spontaneously.”* This adaptability is shared by P3, who explained, *“I don't plan anything like on day one, day 2-3 we're gonna do all this, this, this. So, we just check everything and then go around, check the area.,”* and P19 who stated: *“I'm generally not so fixed on certain things. I'm quite open to try lots of different activities”*. Their spontaneity and adaptability make them open to a wide range of experiences while maintaining a sense of purpose in their travels.

Extraversion: This cluster is moderately extraverted, balancing social interaction with time spent alone. They enjoy being around people, particularly local groups, but in small, intimate groups as opposed to large ones. Participant 10 noted, *“When you're in such a big group, everyone's a bit loud and noisy and everywhere, and you can't really respect nature as much.”* Similarly, P19 expressed a preference for smaller groups, stating, *“Big groups put me off for some reason.”* However, they do enjoy meeting new people and participating in shared experiences, as highlighted by P23: *“I'm going to go out and do*

fun stuff with local people.” This balanced extraversion allows them to maintain meaningful interactions while preserving opportunities for reflection.

Agreeableness: Culturally Curious are highly agreeable, and this is reflected in their enjoyment of authentic interaction with local communities and cultures. They try to learn about the traditions and histories of the destination, with P10 illustrating this, saying, *“I want to try foods and stuff that they had 'cause it's all local produce”*. They show a genuine interest in understanding the perspectives of others and making a positive contribution to the places they visit, again highlighting their empathetic and collaborative nature.

Negative emotionality: This cluster is emotionality stable, indicating resilience in the face of unexpected situations. They have a positive attitude even if things do not go as planned, as participant 10 stated: *“Try and enjoy as much as you can, even if stuff goes wrong.”*

Travel motivations among the Culturally Curious

The Culturally Curious are highly motivated to discover, learn, and grow as individuals. For them, travel is about experiencing new environments and uncovering the culture of a destination. As P10 articulated, *“I like trying new things, especially like food and stuff, food and culture,”* and P19 showed their appreciation for novelty by saying, *“I love trying new things. I sometimes struggle to commit to one thing because I get so excited by newness.”* This cluster enjoys adventure and cultural immersion, viewing travel as a means of personal growth, with P10 expressing this: *“I want to feel like I accomplished something as well”*. Similarly, P23 stated, *“Going to exhibitions and archaeological sites as well, because learning the history, the local history, is also my personal interest.”* Their motivations reflect a combination of appreciation for nature, cultural learning, and a desire for authentic connections.

In summary, the qualitative results from interviews with the Culturally Curious provide a richer understanding of their behaviours and preferences, complementing the quantitative survey. While the quantitative data highlights their high open-mindedness and low negative emotionality, the interviews revealed strong motivation for novelty-seeking and cultural immersion. This group has a high preference for authentic and diverse experience, such as local culture, local food, and history. Their desire for flexibility reveals their moderate conscientiousness scores, showing a balance between planned structure and spontaneous discovery. The interviews further uncovered how this

cluster's modest extraversion is manifested in their inclination toward smaller groups and intimate social interactions as opposed to large impersonal groups. These findings point to a visitor segment that is not only intellectually and emotionally engaged, but also more likely to value and respect local culture and traditions. Strategically attracting such visitors could support more sustainable tourism development by shifting the focus from volume to value, encouraging deeper, place-sensitive engagement that enhances cultural sustainability, and contributes to longer-term destination resilience.

4.3.3 Diligent Adventurers

Personality traits of the Diligent Adventurers

Open-mindedness: The Diligent Adventurers show moderate open mindednesses, suggesting that they are willing to attempt new activities but within their own comfort zones. They enjoy discovering new cultural and historical elements, such as museums, landmarks, and local traditions. For example, P6 noted their interest in *“learning about the local area,”* while P12 shared, *“whenever I go travelling, I always find myself actually reading the information board in the panel.”* However, their openness is moderated by caution, as P22 explained: *“Not against trying new things. Probably depending on what they are can be a little bit apprehensive. So, you know, if a friend said let's go and do skydiving... I'd be a bit like, do I really want to do that?”* This measured openness ensures they balance intellectual curiosity with personal comfort.

Conscientiousness: A defining trait of the Diligent Adventurers, conscientiousness is evident in their meticulous approach to travel planning. They emphasise organisation and preparation, which fosters confidence and reduces stress during their journeys. They also provided instances of thorough planning, as P4 stated, *“We've had an itinerary that we've stuck to for each day,”* and P12 stated, *“I'm very detailed planning.”* They are also responsible and meticulous regarding matters of responsibility and safety, as P22 described, *“If I'm going hiking, I'm the one that'll turn up with, like, the emergency shelter and the first aid kits.”* This statement indicates their forward-looking and detail-oriented manner of preparing in advance should something arise.

Extraversion: Diligent Adventurers are very extraverted, and they appreciate substantial social interaction as well as being alone. They enjoy group activities that involve knowledge exchange and shared experiences, such as P15's reflection: *“I love to give my knowledge to others and get others' knowledge.”* However, they prefer small groups over

large social gatherings. P12 shared, *“Food tastes better when you share it with people,”* highlighting their sociable side, while P22 added, *“If it’s a good bunch of people, I’m happy to be amongst them, but then I still do need to come home.”* This balance allows them to enjoy social engagement without compromising their need for personal time.

Agreeableness: The cluster’s high agreeableness is illustrated in their cooperative and empathetic attitudes. They value shared learning and contribute positively to group experiences. For example, P9 expressed their enthusiasm for volunteering: *“I really like to participate in volunteer work. This point is also important for me.”* This aligns with their broader travel motivations of fostering mutual cultural exchange and building connections with others. P15 noted, *“When we go in a group like in a museum...if I know something I share with them, and I’m interested if they know something they can share with me.”* This cooperative and socially conscious mindset reflects their desire to create enriching experiences for themselves and others. Similarly, P22 highlighted a sense of responsibility toward other travellers, stating, *“It’s not just for yourself. It could be the person you’re walking with, or you might come across somebody who needs assistance.,”* demonstrating a genuine care also for the well-being of others.

Negative emotionality: The Diligent Adventurers demonstrate low negative emotionality, highlighting resilience and emotional stability. They approach travel challenges with preparedness and optimism. P22 reflected this mindset by stating, *“I don’t think I’ll worry, but I’ll be prepared,”* while P4 mentioned: *“Prepare for the worst, right?”* This stability enables them to maintain a positive and calm attitude even during uncertain circumstances, which enhances their overall travel experiences. Their cautious planning not only reduces stress but also enhances their overall travel experiences by providing a sense of control.

Travel motivations among the Diligent Adventurers

The Diligent Adventurers are driven by a combination of wellness, cultural experience, and social activity. Wellness and health are at the core of their traveling experiences, and tourists focus on activities that are tailored to physical and mental rejuvenation. P22 described, *“I think there’s a big side for me that’s like the mental well-being and being outdoors, feeling like it’s a bit of a reset, it’s away from the hustle and bustle of life,”* while P4 associated Cumbria with relaxation and spa treatments, noting, *“This is why I associate Cumbria for me in my mind, with the place of relaxation where I can go and*

just be one with nature and just enjoy that while I'm also maybe having a spa treatment and so on and so forth". This health focus is complemented by their love of cultural and historical exploration. P15 highlighted this by stating, *"The most interesting place that I've visited in Cumbria...was the Beatrix Potter Gallery."* Diligent Adventurers also seek opportunities for shared learning and mutual exchange. P15 explained, *"I love to give my knowledge to others and get others' knowledge...this way it is more interesting for me."* Their desire for meaningful experiences reflects their experiential approach to travel, combining adventure, relaxation, cultural discovery, and social connection to create fulfilling experiences.

In summary, the qualitative findings from the interviews with the Diligent Adventurers complement the quantitative data, offering a better understanding of the behaviours of this group. While the survey indicated their conscientiousness and agreeableness scores, the interviews revealed how these traits manifest in their meticulous planning, preparedness, and cooperative social behaviour. The respondents emphasised the importance of precise itineraries and risk planning in advance, indicative of their responsible way of making their experience enjoyable and seamless. The interviews also provide valuable background to their self-development, health, and cultural-enrichment motivations. Aside from the quantitative findings indicating that their escapes and wellness activities appeal to nature, the interviews revealed the greater significance of mental and physical rejuvenation, particularly through hiking, spa, and wellness activities. Their interest in cultural activities including visiting museums reflects their desire for enriching experiences. Considering this group's preference for clear organisation and planned schedules, highlighting well-organised itineraries that offer a mix of relaxation, culture, and personal growth will appeal to their need for structure. Additionally, showcasing seasonal wellness retreats during off-peak times could help to distribute visitors more evenly across the year, promoting sustainable travel patterns.

4.3.4 Social Explorers

Personality traits of the Social Explorers

Open-mindedness: Social Explorers show a relatively high open-mindedness, being driven by curiosity and a desire for new activities. They are interested in visiting archaeological sites, festivals, and activities that will provide new learning opportunities. P14 explained this interest, saying visits are *"unique learning opportunities,"* and P11

would be interested in festivals that are *"crazy or really like mediaeval."* This openness is also reflected in their excitement about pushing limits and trying new experiences, as noted by P20: *"I will try to push the limits for sure."*

Conscientiousness: Social Explorers balance structure with spontaneity, displaying a flexible yet thoughtful approach to travel. While some participants emphasise the benefits of planning, such as P11's observation that *"planning beforehand works better than not planning, because sometimes you tend to maybe overspend something,"* others highlight the importance of adaptability. P24 reflected, *"having a car makes that a bit easier because you can sort of play it by ear,"* while P14 noted, *"I just go with the flow."* This mix of structure and spontaneity allows them to enjoy their travelling experience, balancing both structured activity and unplanned exploration.

Extraversion: Extraversion is a defining trait of this cluster, as they thrive on social interactions and in group dynamics. P14 explicitly identified as an extrovert, stating, *"I'm very much an extrovert,"* and shared, *"I just talk to everybody that I meet."* Social Explorers value shared experiences, viewing them as opportunities for and socialising and enjoyment, as P8 noted, *"it tends to be the company that makes the experience better."* They also appreciate the collective reactions of others to new experiences, as highlighted by P11: *"It's really interesting to see also how the others react on what you are seeing for the first time."* These travellers prioritise connection and group activities as integral aspects of their journeys.

Agreeableness: This group shows high agreeableness through their cooperative and collaborative approach to travel. They enjoy learning with others, as P14 highlighted: *"I think with a group, because then you can learn a lot more."* Similarly, P24 expressed the value of *"going for walks with people"* for deep conversations. Their preference for shared meals and experiences, as noted by P20: *"food tastes better with friends"*, highlights their communal orientation. Their emphasis on shared enjoyment and collaboration reflects a desire to foster positive and supportive relationships during their travels.

Negative emotionality: Social Explorers generally show emotional stability and a positive outlook, although occasional concerns about safety or risks are present. P11's statement, *"I'm enjoying now. I'm here now. I have to live the moment,"* reflecting a focus on enjoying the present. However, practical concerns were revealed, as P14 explained when

discussing activities abroad: *“If I got hurt, you know [...] I didn’t want to break something so I couldn’t partake in other things I wanted to do.”* These concerns illustrate a balanced approach to emotional well-being, where excitement and enjoyment are prioritised alongside practical awareness.

Travel motivations among the Social Explorers

The travel motivations of Social Explorers are shaped by a mix of novelty-seeking, fun, shared experiences, and independence. They have a clear inclination towards new and exciting activities, as P20 articulated: *“I will try to push the limits for sure.”* Fun and enjoyment are central themes, with P14 sharing, *“I wanted to make sure that I was having fun,”* and P8 emphasising that the company they keep enhances experiences: *“It tends to be the company that makes the experience better.”* They also value independence in their travel, as P14 described their activities as *“self-propelled,”* while P24 highlighted their preference for *“being somewhat independent.”* Nostalgia also plays a role in shaping their motivations, with P8 reflecting on the emotional resonance of places: *“it reminded me of my childhood place because it's got like those old British houses and the hills”*. This mix of novelty, social connection, independence, and nostalgic experiences makes travel deeply fulfilling for Social Explorers.

In summary, qualitative results from Social Explorers interviewed further confirm quantitative survey findings and provide insight into this segment more deeply. Whereas the survey revealed that they are open-minded, conscientious, extraverted, and agreeable, interviews illustrate the way in which these traits translate into travel tendencies and practices. Their extraversion manifests as strong social interaction and experience shared emphasis, and the interviewees emphasise the enjoyment of learning and activity in a group. Their openness expresses as appreciation for new and culturally rich activities, such as participation in festivals and visiting archaeological sites. While their conscientiousness allows a thoughtful approach to planning, their flexibility allows spontaneity to discover, which provides a balance of structure and flexibility. Their agreeableness is revealed through their cooperative nature, as they appreciate group settings. Furthermore, their low negative emotionality supports a positive and resilient outlook, with participants focusing on fun and enjoyment. Suggested marketing should emphasise group experiences, interactive activities, and socially engaging events, such as festivals, local fairs, and food experiences, to cater to their desire for connection and

novelty. Through exclusive seasonal activities, this group could be encouraged to travel during less busy times of the year, easing pressure on peak periods and supporting a more sustainable distribution of visitors.

4.3.5 Balanced Explorers

Personality traits of the Balanced Explorers

Open-mindedness: Balanced Explorers show high open-mindedness, as evidenced by their desire to try new activities and experience various aspects of the destination. They view travel as an opportunity to broaden their perspectives, whether through cultural immersion, recreational activities, or exposure to nature. P1 explained, *“I’d say that I am more inclined to try new things... part of the experience is trying new things,”* while P2 added, *“the more things that you can experience in life, the better.”* Their enthusiasm for diverse experiences reflects a curious and adaptive mindset, making them open to both cultural and nature exploration.

Conscientiousness: This cluster balances conscientiousness with flexibility, reflecting their organised yet adaptable approach to travel. Participants prefer to have a general plan while remaining open to changes. P1 explained, *“I have an idea of what I want to do and the places I want to see, but it’s not set in stone,”* and P25 emphasised, *“that’s the whole point of planning... so you’re not worried about anything at all.”* This balance allows them to enjoy their experiences without feeling restricted, ensuring a fulfilling and stress-free journey.

Extraversion: Balanced Explorers display moderate extraversion, valuing positive social interactions while enjoying smaller group settings. They derive pleasure from shared experiences, as P13 noted, *“every time I’ve been to the Lake Districts... it’s always been with more people. I haven’t been alone.”* However, they also prefer smaller groups or one-on-one interactions for deeper connections, as P25 shared: *“I do prefer to be with a smaller group of people, or even one or two people.”*

Agreeableness: High agreeableness is a defining trait of Balanced Explorers, expressed in their social and cooperative nature. They enjoy group dynamics and interacting with people from diverse backgrounds. P17 highlighted, *“I like the interaction group things because you meet people from all different backgrounds, and everybody’s got their own*

story.” This cooperative nature, combined with their preference for shared experiences and learning, provides a welcoming and peaceful approach to travel.

Negative emotionality: Balanced Explorers are low in negative emotionality, with a strong and adaptive reaction to adversity. They are relaxed in their attitude, as P2 noted, *“if it goes wrong then you just mitigate it. Don’t you do your best with what you got?”* Their emotional stability allows them to focus on the enjoyment and learning aspects of their journey, ensuring that minor setbacks do not impact their overall experience.

Travel motivations among the Balanced Explorers

Balanced Explorers are motivated by a mix of nature escape, self-development, cultural immersion, and recreational adventure. Their appreciation for natural settings is reflected in their desire for relaxation and disconnection. P17 shared, *“I disconnect from anything to do with work... I’d just like to be at one with where I am and the surroundings.”* P2 endorsed this sentiment, *“I need a bit of peace and quiet and a change of scenery I think actually”*. This desire for nature escape is a defining characteristic of their travel behaviour, and they show a deep appreciation of the natural environment, as P25 expressed: *“particular areas where nature has been preserved and is pristinely clean and is a reflection of the natural beauty of a country’s is of a specific interest to me”*. This desire for nature is complemented by their enthusiasm for cultural engagement, with P2 noting, *“It’s kinda got the cultural side of it as well as like a bit of relaxation.”* They also value opportunities for personal growth and learning, as P7 explained, *“when I visit a place, I like to kind of feel like, oh, I’ve learned something.”* Recreational and adventurous activities further enrich their travel experiences, with participants expressing a willingness to try new physical challenges. P17 said, *“I’m pretty happy to give most things a try if I think it’s within my capabilities,”* reflecting their openness to new and stimulating activities. This diverse range of motivations enables Balanced Explorers to enjoy a well-rounded and fulfilling travel experience, combining relaxation, cultural engagement, and personal growth.

In summary, the qualitative findings offer a deeper understanding of the Balanced Explorers, by adding depth to the quantitative survey data. While the quantitative data captured their high scores on openness, conscientiousness, and agreeableness, the interviews reveal how those traits manifest when they travel. Balanced Explorers enjoy a mix of planning and flexibility, therefore making their trips planned as well as

spontaneous. Their high agreeableness and social nature are evidenced by their enjoyment of cooperative activities and interactions, most particularly in small groups. Their nature escape need corresponds to their relaxing experience tendency, while their openness to being immersed in culture and personal growth is evidenced through their interest in history, local culture, and learning experiences. Additionally, their interest in leisure and adventurous activities complements their active engagement with their environments, effectively balancing between relaxation and physical activity. Suggested marketing for this group should offer itineraries that support sustainable strategies at the destination, mixing opportunities for relaxation, cultural exploration, and recreational challenges.

4.3.6 External factors influencing tourist behaviour

In addition to psychological factors, the interviews revealed several external factors having a significant effect on tourist behaviour in Cumbria. These factors include challenges associated with traveling to a different country, financial considerations, and dependence on available modes of transportation, all influencing tourists' behaviour at the destination.

The experience of exploring a foreign country was the key influencer on tourist behaviour, affecting decision-making and activity preferences. Safety and caution received even greater importance for many participants in a foreign country. P14 (Canada) evaluated their concerns about participating in specific activities while abroad: *"If I got hurt, you know [...] I didn't want to break something so I couldn't partake in other things I wanted to do."* These same feelings of unfamiliarity also led visitors to rely more on guided tours or structured itineraries for assurance. For others, however, being in a foreign country enhanced the sense of novelty and excitement, pushing their involvement in cultural and historical activities as a means of connecting with the local heritage.

Budget limitations emerged as another key factor affecting the activity participation of visitors. Budgets among some visitors limited their enjoyment of luxury activities such as spa sessions, despite their being extremely important to them, as expressed by one participant from Indonesia, who said, *"I did not go for the spa because of the cost."* Similarly, careful financial planning was a key strategy for others to avoid overspending. For instance, P11 shared, *"Planning beforehand works better than not planning, because sometimes you tend to maybe overspend something."* On the contrary, other participants expressed a preference for more luxurious and tailored experiences. P4

highlighted the appeal of activities designed with a luxury focus, stating, *“I would probably lean towards the luxury side of it. It'd be good to offer a different holiday line for people that were looking for that kind of holiday.”* These contrasting perspectives highlight the importance of an additional layer of filtering for segmentation to align tourism offerings with specific segments.

Transportation and accessibility also emerged as a significant factor in shaping tourist behaviour. For visitors relying on public transportation, such as P24, travelling required more detailed planning: *“Having to rely on buses or trains forces me to plan more because I can't just go anywhere at any time,”* they explained. In contrast, for respondents who had the facility of private automobiles, transport could accommodate greater ease and freedom of movement. P4 emphasised this advantage: *“Having a car makes that a bit easier because you can sort of play it by ear.”* These contrasting experiences highlight the importance of transportation infrastructure in facilitating tourists' mobility within the destination, not only for convenience, but a key component in promoting responsible tourism and supporting the long-term sustainability of the destination.

Understanding these external factors is essential to DMOs and local stakeholders in planning to target specific visitor segments. These results highlight the need to consider not only socio-demographic and psychological, but also extrinsic determinants in tourist behaviour. By addressing these influences, destinations could better comprehend and respond to sustainable development, and create a visitor economy that serves long-term social, environmental, and economic goals.

4.3.7 Use of technology

Building on the industry practitioner focus groups' findings, namely criticism that a destination app was a replication of what already was out there, as one business representative highlighted: *“So although the data is incredibly valuable to us as an industry, I think it genuinely is a fix for a problem that visitors aren't having”* (P16), visitor interviews explored this aspect in more detail. Specifically, questions were designed to understand visitors' use of technology when planning the trip and navigating around the destination, to understand how much tourists rely on existing tools, and to understand whether the proposed app's functionalities would address an unmet need. By capturing visitor perspectives, the research aimed to assess the accuracy of the industry perception

One participant explained, *“Pricing has to be upfront as well or clear pricing plans, especially if I had kids”* (P2). Others highlighted the need for affordability features such as deals and discounts to make experiences more appealing. For instance, one user stated, *“The deals and stuff could be enticing for people because it looks more affordable now”* (P10). This emphasis on clear and budget-friendly options highlights the financial considerations that often shape travel decisions.

The integration of local expertise was another recurring theme, with users valuing recommendations from residents. As one participant noted, *“The local knowledge is most trusted 'cause they're the people who know it”* (P2). Similarly, partnerships with local businesses were perceived to enhance the app's appeal. A participant suggested, *“If the local restaurants have a partnership with the app... you can have 15% off at this restaurant”* (P10), demonstrating how such collaborations could provide mutual benefits.

Efficiency in planning and navigation was frequently mentioned, with users expressing the need for an app that simplify logistical challenges and optimise itineraries. Efficient route planning was seen as essential, as one participant shared, *“It would save me all the walking... instead of going from A to C to D, do it in a chronological way”* (P1). Comprehensive details provided in a single platform were also valued, with another participant stating, *“You can preplan everything to the app and then you get all the details. So, you only have to refer to one site”* (P16). Moreover, digital and interactive features played a significant role in participant expectations. Participants desired tools such as interactive maps, real-time updates, and offline accessibility. One interviewee noted, *“A good quality map... how to get there by car but also has a bit of an OS feature for hiking mountains”* (P4). Offline functionality was also appreciated, with another participant noting, *“Walks maps that can be used online and offline”* (P18).

While these features highlight the importance of effective digital integration to improve usability, some participants expressed scepticism due to past experiences with poorly designed apps. One interviewee explained: *“I'm prejudiced against those local apps... the main issue I've seen with them is really bad user experience”* (P25). This reinforces the necessity for a well-designed, user-friendly interface to ensure trust and engagement. Another participant pointed out, *“It depends how well it's made 'cause if it's subpar, I'm just gonna use Google”* (P10), emphasising the need for high-quality development, a key point accentuated by industry professionals during the focus group

discussions. Finally, specific features such as offers, offline maps, and event calendars were consistently mentioned. Features such as event calendars were seen as particularly useful, as one participant stated, *‘‘If there were a calendar of events and people could input their event directly into the calendar... that would be good’’* (P14). Additionally, the inclusion of discounts and packages was seen as an effective way to make the app more appealing and practical.

4.3.8 Summary

The final section explored the factors influencing visitor behaviour at the destination in greater depth, employing semi-structured interviews to enhance the understanding of visitor clusters. This phase built upon the quantitative findings by adopting an inductive, qualitative approach to identify context-dependent influences on visitor behaviour. Through purposive sampling, the study captured insights into the psychological dimensions of visitor experiences that were not fully addressed in the quantitative phase.

This stage addressed the objectives of phase 3 by exploring how personality traits and motivations influence preferred activities, adding qualitative depth to the existing visitor clusters, and uncovering additional factors that shape visitor behaviour. The interviews revealed further layers of complexity, illustrating how personality and motivations are shaped by situational and contextual influences. For instance, while the quantitative data identified general behavioural patterns, the qualitative findings highlighted external factors such as visiting a foreign country, transportation limitations, financial considerations, and specific social contexts that influence activity choices. More importantly, the depth of insight revealed through the visitor interviews enables destination managers to design more targeted and meaningful experiences aligned with distinct visitor needs and values, supporting more effective and sustainable tourism strategies.

In addition, the interviews revealed that all respondents use technology to organise their trips, expressing a strong interest in a user-friendly app that integrates local knowledge, personalisation, and functional support. Technology emerged as an important influence on visitor behaviour, with digital tools increasingly taking the place of traditional sources of information that once helped guide travel decisions. This suggests that businesses and DMOs might be missing out on valuable data if they don't capitalise

on it. While there are challenges, such as user scepticism, the potential benefits of a comprehensive destination app are clear. Addressing these issues could improve user satisfaction, increase adoption, and help businesses and destinations align with long-term sustainable practices.

4.4 Chapter Summary

The chapter concludes by emphasising the pragmatic mixed-method approach used in the study, integrating deductive, quantitative analysis (phase 1) with inductive, qualitative insights (phases 2 and 3). This approach provided a more comprehensive understanding of tourist behaviour in Cumbria, ensuring methodological rigor while also offering industry-relevant insights and capturing the factors driving tourist behaviour.

The first phase of the research focused on investigating the interplay between personality traits and travel motivations with visitor activities in Cumbria, leading to the development of tourist typologies. Using random probability sampling, the study collected data on socio-demographic factors, personality traits, motivations, and preferred activities. Factor Analysis was employed to validate the measurement scales and identify key dimensions of travel motivations and activities. While several factors were confirmed, certain items did not load as expected (below .4), resulting in their removal from further analysis. The analysis revealed six motivational factors and seven distinct activity categories, providing foundational insights into the underlying psychological drivers of visitor behaviour. More importantly, five tourist clusters were identified, each reflecting distinct profiles and preferences.

The second phase of the research aimed to place the quantitative results in context through industry expert perspectives. This phase employed an inductive qualitative approach, using expert opinion through focus groups to contextualise the identified clusters in operational settings. Industry insights were valuable, affirming the practical significance of the findings and highlighting the importance of psychographic segmentation for tourism strategies. Their perspectives helped to refine the understanding of visitor behaviour in real-world tourism contexts, enriching the theoretical findings with practical insights.

During the third phase, the research explored the visitor clusters further through the qualitative analysis of visitor semi-structured interviews. The third phase aimed to

gain further insights into the role of psychological factors in visitor experiences, expanding on the findings of the quantitative data in phase 1. The interviews revealed further layers of nuance, revealing the dynamic and context-bound factors that had not been completely covered in the quantitative analysis. This qualitative exploration added depth to the understanding of how tourists' behaviour is influenced by personality traits and external situational factors, further informing tourism strategies. The findings also revealed a strong demand for a destination-specific app that integrates personalisation, local knowledge, and logistical ease to enhance interaction at the destination.

Table 35 below summarises the key results from each phase, highlighting the distinct contributions of each research stage to the overall understanding of visitor behaviour at the destination.

Table 35: Research overview: phases, objectives, methodological approach and results

Pragmatism							
This research aims to advance tourist segmentation by integrating personality traits, offering a more comprehensive understanding of visitor behaviour and supporting sustainable management practices.							
Mixed Methods							
Phase 1			Phase 2		Phase 3		
Develop tourist typologies by integrating personality traits into segmentation models, providing a framework for understanding visitor behaviours.			Examine tourism industry perspectives on visitor segmentation and sustainable practices, bridging theoretical research with practical application.		Conduct an in-depth analysis of the tourist typologies identified, exploring how psychological factors influence activity choices, and reveal external factors that influence visitor behaviour.		
Objective 1	Objective 2	Objective 3	Objective 1	Objective 2	Objective 1	Objective 2	Objective 3
Measure visitors' personality traits, travel motivations, preferred activities, and socio-demographic factors	Determine predictive relationships between personality traits, travel motivations, and activities	Develop data-driven tourist typologies	Explore industry perspectives on the role of personality traits and travel motivations in shaping visitor activities	Explore industry perspectives on the use and value of visitor clusters for tailoring tourism strategies and enhancing visitor experiences	Explore visitors' personality traits and motivations and their impact on preferred activities	Enhance the understanding of the visitor clusters by adding qualitative insights	Uncover additional factors influencing visitor activities not captured in phase 1
↓	↓	↓	↓	↓	↓	↓	↓
Open-mindedness Conscientiousness Extraversion Agreeableness	Key traits influencing activities include Open-mindedness (cultural activities, entertainment),	Clear patterns identified five clusters: Reserved	Industry professionals highlighted the potential of	Industry professionals valued visitor clusters for aligning tourism offerings with	Identified distinct personality traits and motivations	Offered deeper interpretive insights by revealing how	Additional factor influencing tourist behaviour include travel

Negative Emotionality Nature escape Self-development Relationship /Recognition Autonomy Nostalgia Novelty and Stimulation Culture Thematic activities Recreation Adventure Entertainment Wellness Lake cruises Gender Age Nationality Work status Education Past visits Travel Trip purpose	Conscientiousness (cultural activities), Extraversion (adventure, recreation, wellness interest, cultural decline), and Agreeableness (lake cruises, adventure avoidance). Significant motivations include Nature escape (lake cruises), Self- Development (recreation, adventure), Novelty & Stimulation (adventure), and Nostalgia (entertainment) Relationship/ recognition (entertainment, thematic activities) were also significant. Autonomy negatively predicts lake cruises, while relationship building negatively predicts recreational activities	Explorers, Culturally Curious, Diligent Adventurers, Social Explorers, and Balanced Explorers. Clusters reflect variations in personality traits, motivation, activities and socio- demographic factors.	personality traits and travel motivations to enhance segmentation, marketing strategies, and visitor satisfaction, moving beyond traditional methods. Practical barriers, such as costs and resource limitations, were noted, with digital tools like apps proposed as effective solutions for integrating personality-based activity recommendations.	psychological drivers, improving targeted marketing campaigns, and addressing experience gaps. Practitioners suggested strategies for sustainability, aiming to divert visitors from overpopulated areas by targeting specific clusters for off-the- beaten-path attractions, with technology seen as a key tool to personalise information and guide visitor flows more effectively. Collaboration and adaptability were emphasised, ensuring visitor clusters remain dynamic and responsive to visitor trends and preferences.	shaping activity preferences. Reinforced the centrality of psychological profiling (Big Five traits) in predicting and segmenting tourist behaviour.	similar behaviours are driven by distinct psychological factors across clusters, highlighting limitations of relying solely on quantitative data (e.g., hiking as solitude, social connection, or physical challenge). Provided rich examples from qualitative interviews that complement statistical trends from phase 1.	companions, financial considerations, dependence on available modes of transportation, and challenges associated with traveling in a different country. The findings also revealed a strong demand for a destination- specific app that integrates personalisation, and local knowledge.

Chapter 5 Discussion

Introduction

This study contributes to current discourse on the key role of visitor behaviour knowledge in enhancing the performance of Destination Management Organisations (DMOs) in supporting sustainable and resilient local visitor economies, as indicated by Morrison, Cheah, and Kumar (2024). Scholars such as Volchek et al. (2020) and Gertner and Freire (2019) emphasised that a thorough understanding of tourist behaviour is important because it forms the foundation upon which visitor satisfaction, and long-term destination success are developed. Milano, Novelli and Cheer (2020) further noted that DMOs, in their role of strategic enablers coordinating stakeholders and managing tourism sustainably, could adopt strategic interventions such as zoning, demarketing, and targeting specific segments, ensuring the sustainable development of the destination. As such, the trajectory of the destination could be influenced, rather than predetermined, despite earlier concepts suggesting inevitable stagnation and decline due to mass tourism (Plog, 2001).

This research aimed to advance tourist segmentation by integrating personality traits, providing a deeper understanding of visitor behaviour and supporting sustainable management practices. This chapter critically analyses the main findings of the research based on the results achieved in the three phases of the research. The discussion combines the quantitative and qualitative findings from the perspectives of visitors and tourism professionals alike. Phase 1 findings informed the direction of phases 2 and 3, offering a consistent and iterative research process. This synthesis provides an informed analysis of tourist market segmentation in Cumbria and its relevance to sustainable destination management, offering a model for other destinations to enhance their sustainability planning. The chapter concludes by discussing how the empirical findings enrich the theoretical and practical foundations of tourism management, particularly regarding segmentation practices and sustainability strategies.

5.1 Psychological factors as predictors of visitor activity

In the initial stage of the study, it was important to understand the factors influencing visitor behaviour by identifying psychological determinants, such as

personality traits and travel motivations. These factors revealed the psychological factors that drive tourists to choose specific activities at a destination, providing deeper insights compared to traditional segmentation methods generally based on socio-demographic variables (McKercher et al., 2022). By focusing on these psychographic influences, the study added a more detailed layer to the understanding of visitor behaviour, addressing the growing emphasis on psychological segmentation in tourism (Agarwal & Singh, 2021). This approach not only contributed to existing literature but also showed how psychological traits could predict activity choices, supporting earlier studies (e.g., Alves et al., 2022; Rafiq et al., 2023; Kesenheimer & Greitemeyer, 2021). These findings are explored further in the following sections, revealing how they could form the foundation for developing more targeted and sustainable destination management strategies.

5.1.1 Entertainment

Engagement in entertainment activities is significantly influenced by the personality trait open-mindedness, as well as travel motivations of nostalgia and relationship building, in line with existing literature (Alves et al., 2022; Degnet et al., 2022; Almeida & Garrod, 2021; Yan & Halpenny, 2019). Open-minded individuals, characterised by a preference for novelty, intellectual stimulation, and diversity (Costa & McCrae, 1992), are more likely to participate in activities such as art and cultural festivals, supporting the results found by Alves et al. (2022) and Yan and Halpenny (2019). In the same context, relationship-building motivations drive individuals towards experiencing activities such as religious festivals and farmers' markets, highlighting the role of interpersonal relationships in shaping preferences (Yan & Halpenny, 2019). Nostalgia is also effective in motivating visitors, with studies confirming its ability to attract new visitors and encourage revisitation (Cho, Joo, & Woosnam, 2020; Kim, Kim, & Petrick, 2019).

To enhance the appeal of entertainment activities, Hwuang et al. (2019) emphasised that marketers need to emphasise the aesthetic and creative dimensions, which play a significant role in visitor satisfaction, as acknowledged by Almeida and Garrod (2021). They add that the aesthetic quality and attractiveness of events are likely to surpass the demographic or motivational traits in creating pleasant visitor experiences (Almeida & Garrod, 2021). By implementing these principles, destinations could develop entertainment activities that form stronger emotional connections and encourage repeat visitation, supporting long-term destination success.

5.1.2 Culture

Cultural activities, such as visits to museums, archaeological sites, and galleries, is positively predicted by open-mindedness (Kaufman, 2013) and conscientiousness (Kovačić et al., 2022) personality dimensions but is negatively influenced by extraversion (Kovačić et al., 2022). Individuals who are open-minded appreciate beauty, they require intellectual stimulation, and they are predisposed to cultural activities (Kaufman, 2013). This aligns with the findings of Kovačić et al. (2022), who list knowledge-seeking and the desire for direct experience as key drivers for individuals high on openness. In Cumbria, cultural tourism experiences are attractive to the intellectual and aesthetic sensibilities of high open-mindedness individuals, contrary to the results of Alves et al. (2022), which suggested that these activities are more frequently chosen by agreeable individuals. Furthermore, Matzler et al. (2011) explained that conscientious travellers interact with local history, culture, and heritage to a great extent, valuing structure, facts, and detail.

Therefore, Yoo and Gretzel (2011) suggested rational, function-based marketing approaches for this segment as they prefer tourism products and services that emphasise practical and information-rich content. Conversely, extravert types have a greater desire for excitement, spontaneity, and social engagement, thus a lesser desire for cultural activities in Cumbria. This negative correlation is also accounted for by Kovačić et al. (2022), who found that extraverts seek socially engaging and exciting activities rather than cultural activities.

5.1.3 Wellness

Highly extraverted individuals will likely be actively engaged in wellness activities in Cumbria, a trend supported by previous research that indicates a high correlation between this personality type and health awareness (Alves et al., 2022). Specifically, Alves et al. (2022) found that individuals with high scores for extraversion focus more on how others perceive them, which could explain their interest in spa services and health related activities. In addition, Damijanić (2020) recognised reward-seeking as among the strongest motivators of health tourists, meaning that these visitors will likely be responsive to incentive schemes for participation in health-related experiences. These findings indicate that marketers could effectively target extraverts with promotions of

experiences that are self-image affirming and reward-giving, addressing their internal health and wellness drives.

5.1.4 Recreation

Recreational activities are influenced by the personality trait of extraversion (Faullant, Matzler & Mooradian, 2011) and the motivation for self-development (Li, Ryan & Bin, 2020). Extroverts, characterised by their high energy levels (Oehler & Wedlich, 2018), often engage in activities such as mountaineering, hiking, long walks, and running in Cumbria. Faullant et al. (2011) argued that highly extroverted individuals derive greater enjoyment from intense experiences, linking extraversion with active leisure pursuits. Similarly, Happ et al. (2021) identified sport-related motivations (competition, exhibitionism, sociability, and pushing personal limits) as key drivers for long-distance hikers.

Interestingly, the current study results differ from Blackwell et al. (2017), who found that extraverts adopt friendly behaviours to foster social connections. Instead, it reveals a negative correlation between relationship travel motivation and recreational activity engagement. While extraverts value social settings, their focus on self-development and personal challenges may lower their interest in building relationships during these activities. Supporting Li, Ryan, and Bin's (2020) findings, hikers appear primarily driven by health, challenge, and achievement, reflecting a self-centred aspect of motivation. Tomik et al. (2017) further reinforce this by highlighting the intrinsic gratification that hikers derive from their pursuits, supporting the results of this study. Therefore, marketers in the recreational sector should emphasise the personal growth and fulfilment these activities provide, highlighting how participation contributes to enhanced well-being and achievement.

5.1.5 Adventure

Adventure activities such as sailing, gliding, and climbing attract individuals with high levels of extraversion, a finding supported by previous research (Oehler & Wedlich, 2018; Li et al., 2015; Huang, Gursoy & Xu, 2014). In contrast, those with high agreeableness levels tend to avoid these activities, aligning with findings from Akhrani and Najib (2020). This aversion, as explained by Joseph and Zhang, (2021), is likely due to higher risk sensitivity and concerns about potential consequences.

The visitor survey further revealed that self-development, novelty and stimulation are key travel motivations that positively influence participation in adventure activities, in line with Skavronskaya, Moyle and Scott's (2020) findings. Tourists are often motivated by challenge, adventure, and self-actualisation while engaging in outdoor activities (Tomik, Ardenska & Cholewa, 2017; Mishra et al., 2021). Extraverts are particularly drawn to adventure sport, stimulated by novelty-seeking and self-enhancement, a finding supported by Alves et al. (2022) and Vargas et al. (2021), who also found that individuals who enjoy adventurous activities score highly on extraversion.

To effectively engage this segment, marketers must highlight the excitement and self-gratification derived from adventure activities. They can also effectively engage and encourage involvement from this segment by highlighting individualised experiences specially designed to match their novelty-seeking and challenge-driven orientation.

5.1.6 Thematic activities

Thematic activities like horse riding, archery, and masterclasses did not show a direct link to specific personality traits. This is likely because these experiences are diverse and appeal to individuals with a wide range of characteristics. For instance, Alves et al. (2022) found that agreeable individuals are more likely to visit theme and animal parks, enjoying activities involving social interaction and collaboration. Similarly, gastronomic experiences are likely to appeal to those high in agreeableness and extraversion, since Alves et al. (2022) found that food activities correlate with cheerful, social dispositions.

This study highlights the influence of relationship-building and recognition as travel motivations that drive participation in thematic activities, suggesting that social motivations play a key role. Visitors often seek opportunities to connect with others and create meaningful experiences. Using these insights, marketers should design offerings that foster social interaction and community engagement, tailoring activities to align with the relational and recognition-oriented desires of their target audience.

5.1.7 Lake cruises

Lastly, lake cruises were found to appeal to individuals with high agreeableness (Alves et al., 2022; Kovačić et al., 2022), driven by a desire to escape the ordinary (Hsu & Li, 2017) and observe nature's beauty (Di Fabio & Kenny, 2018). These travellers are drawn towards serene, social settings where they can unwind and rejuvenate, in line with

motivations for communal experience and nature appreciation (Cavusoglu & Avcikurt, 2021; Alves et al., 2022). Nevertheless, autonomy-focused visitors are not attracted to lake cruises as the requirement for organisation is contrary to their preference for independent actions (Vada et al., 2023). As such, marketing implications could be effective by focusing on communal aspects for agreeable tourists and concurrently offering flexibility and tailor-made alternatives to attract autonomy-focused visitors.

These insights into the psychological drivers of visitor activity formed the basis for the next stage of the research. As highlighted in the literature, psychographic factors like personality and travel motivations offer more predictive strength and understanding of visitor behaviour compared to basic socio-demographic information (e.g., Alves et al.'s, 2022; Kovačić et al., 2022).). Using these psychological variables, the study challenges traditional destination management practices that have been prone to over-reliance on demographic information. By understanding that psychographic data provides deeper insights into visitor preferences, this research highlights the importance of integrating these factors into destination management strategies. These strategies must be responsive, addressing specific visitor profiles while promoting sustainability and effective use of resources. This approach could enable DMOs to move away from a one-size-fits-all approach and instead customise experiences, services, and communications to better fit unique visitor segments, enhancing visitor experiences and sustainable practices.

Acknowledging the explanatory and predictive value of psychographic factors, the study progressed to developing tourist typologies. This was achieved by cross-tabulating psychographic profiles with socio-demographic characteristics, as some socio-demographics, particularly age and gender highlighted differing levels of influence on visitor activity preferences in Cumbria. This multidimensional framework allowed for the creation of more meaningful and interpretable visitor segments, offering a more complete description of tourist heterogeneity. These tourist typologies were subsequently supplemented with qualitative data from visitor interviews, adding contextual depth to understanding visitor behaviours. By embracing both the psychological and socio-demographic factors, the identified typologies offer value for destination managers aiming to increase visitor engagement and inform long-term sustainability strategies.

5.2 Tourist segmentation: a personality-based approach

The literature confirmed that data-driven segmentation approaches help identify patterns in tourist behaviour (e.g., Carvache-Franco et al., 2023; Lee & Kim, 2023; Rishi & Chatterjee, 2023; Tessema et al., 2022). The early literature highlighted the importance of psychological drivers, particularly tourist motivations, with early researchers identifying tourist typologies that distinguish between diverse groups (e.g., Cohen, 1978; Smith, 1977). Moreover, previous research showed that personality traits influence behaviour (e.g., Alves et al., 2022; Rafiq et al., 2023; Kesenheimer & Greitemeyer, 2021), with earlier studies by Gretzel et al. (2004), and Park et al. (2010) highlighting the importance of qualitative understanding of tourist behaviours. Building on these ideas, this study employed a mixed methodology to gain a deeper understanding of visitor segmentation by combining quantitative data with qualitative insights, while responding to calls to move beyond static demographic categories (Agrwal & Singh, 2021).

Quantitative data helped identify patterns in what visitors do, while the qualitative interviews revealed the reasons behind their behaviour. Including both visitor and industry practitioner perspectives added further value, with clusters reflecting real world practices within the current setting in Cumbria, offering actionable insights for destination managers. For example, the Reserved Explorers were found to be a group that seeks security, comfort, and familiarity, and which tend to choose tranquil, low risk nature-based and culturally enriching activities. By combining qualitative findings with quantitative findings, the findings provide a comprehensive understanding of this segment, enabling more focused marketing communications that address their preferences. Equally important, demarketing initiatives could also be utilised to discourage this segment from traveling to overcrowded or ecologically sensitive areas, supporting the overall goal of sustainable destination management (Bertocchi et al., 2020).

Further, the Culturally Curious cluster is emotionally stable with a specific focus on self-improvement, novelty, and cultural engagement. These tourists visit the destination as a means of personal growth and experiential learning, engaging with the destination through alternative activities, participatory workshops, and deep immersion in nature and local culture. The qualitative data enhanced conceptualisation of their travel motivations, which revealed the importance of authenticity, flexibility, and cultural

contact to target this segment. On the other hand, demarketing efforts could redirect this segment away from mass tourism sites to less known alternatives that preserve authenticity and reduce pressure on popular areas.

Another cluster, Diligent Adventurers is defined by their preference for structured, purposeful travel that combines wellness, cultural enrichment, and social interaction. These findings emphasise the importance of promoting experiences that allow for personal development and deep interaction, reflecting their aspirational travel goals. The mixed-methods approach provided a deeper understanding of their expectations, enabling the development of more tailored strategies. In this case, demarketing may be employed to steer this segment away from very commercial or disorganised itineraries and toward more socially responsible tourist experiences.

The other identified group, the Social Explorers reveal motivations of independence and social interaction. Their travel experiences are enriched by elements of nostalgia, excitement, and collective participation. Marketing initiatives should therefore encourage group activities such as festivals, cultural events, and guided tours. The inclusion of qualitative findings within the segmentation process provided a more detailed understanding of this cluster to develop more focused and personalised engagement approaches. At the same time, demarketing could discourage travel to overly organised or impersonal types of tourism, directing Social Explorers to activities that align with their enjoyment of spontaneity and authentic social connection.

Lastly, the Balanced Explorers express a broad spectrum of interests, seeking variety and balance among cultural experience, nature, relaxation, and personal development. These tourists are open to marketing strategies that offer flexible, heterogeneous itineraries combining structure and freedom. Qualitative results revealed their aversion to rigid, mass commercialised tourist products, with demarketing suggested as a way of discouraging them from these in favour of experiences that reflected their values of flexibility and heterogeneity. Insight into the preferences of this multifaceted group is key to the creation of targeted experiences that provide for their diverse needs while supporting sustainability goals.

The identified clusters in this study align closely with Cohen's (1972) typology and its later extensions (e.g., Fan et al., 2017; Kusumawardhana et al., 2023), providing a deeper understanding of tourist behaviour by incorporating personality traits into these

established frameworks. Reserved Explorers share characteristics with Cohen's (1972) mass tourists, as well as Fan et al.'s (2017) Dependents, who favour minimal host interaction. Culturally Curious tourists align with Cohen's (1972) explorers and drifters, engaging in immersive cultural experiences, similar to Fan et al.'s (2017) Explorers. Diligent Adventurers exhibit traits of Cohen's (1972) individual mass tourists and Fan et al.'s (2017) Belonging Seekers, as they seek structured but enriching travel. Social Explorers, motivated by entertainment and interaction, reflect Cohen's (1972) explorers and Fan et al.'s (2017) Conservatives. Balanced Explorers combine aspects of institutionalised and non-institutionalised tourists, while embracing Kusumawardhana et al.'s (2023) emphasis on experiential and tailored tourism. This represents the desire of these tourists to balance the comfort of familiarity provided by guided, organised experiences with the freedom to engage in unique, personalised experiences that express their own interests and provide significant, memorable experiences.

Furthermore, drawing on Plog's (1974, 2001) allocentric-psychocentric model, the study's findings illustrate how tourists differ in their novelty-familiarity orientation based on the Big Five personality traits (Goldberg, 1990). The five visitor clusters derived in this study (Reserved Explorers, Culturally Curious, Diligent Adventurers, Social Explorers, and Balanced Explorers) correspond to Plog's (2001) psychographic types, with distinct activity preference patterns and further illustrating the relevance of his typology in contemporary tourism research. Although Plog's (2001) psychocentric-allocentric continuum was initially developed to explain destination selection, this framework proves to be equally insightful in understanding activity engagement at the destination level. These findings suggest that traveller behaviours and motivations are more varied than just destination choice, highlighting the diverse ways tourists interact with and experience the same location.

Reserved Explorers correspond closely to Plog's (1974) psychocentric travellers, who favour routine, comfort, and predictability. Culturally Curious tourists exhibit allocentric tendencies, displaying openness to novelty and immersive experiences. Diligent Adventurers fall within Plog's (1974) mid-centric category, balancing structure with meaningful engagement. Social Explorers demonstrate predominantly allocentric characteristics, actively seeking new social interactions and entertainment opportunities, while Balanced Explorers fit within the mid-centric classification, as they prefer customisable itineraries that incorporate both relaxation and cultural immersion.

Although this present study found congruence with earlier tourist typologies like Plog (2001) and Cohen's (1972), it does recognise the flaws that exist in these early models. Though these typologies had been helpful to explain tourist activity early on, they were reliant on broad, static categories that were not theoretically robust or predictive, as criticised by Cruz-Milán (2018). In comparison, the inclusion of the relatively stable Big Five personality dimensions (Bleidorn et al., 2022) provides a more psychologically grounded and empirically validated framework within which to account for tourist behaviour variation. The Big Five personality dimensions surpass some of the limitations of earlier typologies in that they provide greater predictive power in a wide variety of contexts of behaviour, including tourism (Crompton & Petrick, 2024; Alves et al., 2022).

The qualitative interviews with tourists in this study added depth to the quantitative data to further understand the tourist clusters. From these interviews, it was revealed how visitor personality traits and the conditions or situations they were faced with during their visit influenced their behaviour, aligning with theories like the Cybernetic Big Five Theory (CB5T) (DeYoung, 2015) and the Whole Trait Theory (Fleeson & Jayawickreme, 2015). These theories explained that personality traits are not fixed, but situation and context dependent. Similarly, Urry's (1990) 'tourist gaze' concept emphasised that not just physically but tourists consume places symbolically as well, disentangling the 'sacred', out-of-the-ordinary or culturally unique parts from the 'profane', ordinary, everyday activities. This supports the argument that tourist behaviour is shaped by not just intrinsic factors but external situations, social processes, and the way in which individuals interpret their surroundings.

Together, these theories explain the dynamic and socially constructed nature of tourist experiences, and the value of qualitative understanding in being able to capture this complexity. The visitor interviews reinforced this view, demonstrating how experiences were influenced by personality traits but also by situational factors including dependence on available modes of transportation, financial constraints, or travel companions. For example, one interviewee initially selected a cultural package but changed at the destination, opting for outdoor activities to accommodate a friend's preference. This shift, influenced by their high agreeableness, illustrates how personality and social context, in this case, impacted travel decisions. As such, this research highlights the dynamism of tourist behaviour, emphasising the value of qualitative data

in describing the richness of the interaction between personality, context, and the socially constructed nature of tourism experiences.

While contextual variables are indisputably important, their measurement is problematic due to their subjective nature. Personality traits, and particularly the Big Five, however, offer a stable, empirically grounded, and quantifiable framework for the measurement of individual differences (Goldberg, 1990). Notably, other theoretical approaches mentioned earlier such as CB5T (DeYoung, 2015) and the Whole Trait Theory (Fleeson & Jayawickreme, 2015) which emphasise the interaction between traits and contexts, but do not offer independent measurement instruments. Instead, these theories embrace the Big Five model as the underlying structure within which personality is understood. Consequently, the Big Five remains the only consistently measurable and widely applied framework of empirical personality research that enables the integration of psychological constructs into tourism studies in a methodologically consistent manner (Soto & John, 2017; McCrae & Costa, 2004).

This research therefore highlights the importance of combining measurable trait-based approaches with contextual qualitative insights to enhance the understanding of the multifaceted nature of tourist behaviour. Previous research has shown that personality traits influence behaviour (e.g., Alves et al., 2022; Rafiq et al., 2023; Kesenheimer & Greitemeyer, 2021) and travel motives, such as relaxation, adventure, or culture, explain the underlying reason of travel selection. The Big Five framework of personality traits provide an understanding of how such motivations are translated into real behaviours (Goldberg, 1990). In this way, motivations help explain the *why* behind travel choices, while personality traits reveal the *how*, showing how these motivations shape actions and influence tourism behaviours.

These findings align with Gretzel et al.'s (2004) study, who segmented individuals based on activity-related preferences. This study found that while travel personality segments were distinct in relation to the psychographic variables, travel behaviour among individuals within these segments was not significantly different. This suggests that while personality offers insights into traveller preferences, it does not always predict specific behaviours.

For example, Reserved Explorers are drawn to quiet and routine activities, viewing hiking as a getaway into nature. Conversely, Culturally Curious are open to new and stimulating activities, viewing hiking as a means of self-discovery and excitement. Balanced Explorers, however, enjoy hiking because it is well-rounded, appreciating its mix of physical activity, social engagement, and room for reflection. Such distinct cluster profiles reveal how personality influences the way visitors interpret and respond to activities even when their original choices are similar (Gretzel et al., 2004), highlighting the imperatives of segmentation approaches considering both psychological traits and external conditions. Understanding these psychological factors enables more targeted tourism management, with the ability to create experiences that more closely resonate with specific segments, enhance visitor satisfaction, and support long-term, sustainable destination management.

Lastly, as highlighted by Alves et al.'s (2022) and Kovačić et al.'s (2022), personality traits proved to be better predictors of activity preferences compared to socio-demographic variables, emphasising the benefits of personality segmentation over traditional demographic approaches, generally employed by practitioners. By distinguishing these segments, the research provides practical implications for the tourism sector, supporting more efficient marketing, optimal resource allocation, innovative product development, and personalised services (Cha et al., 2024). Furthermore, it reflects a broader shift from reliance on socio-demographic data to a greater emphasis on psychographic factors, providing a comprehensive understanding of tourist behaviour (Li & Kovacs, 2024). By integrating psychological factors and socio-demographics, this study presents a multidimensional tourist analysis, advancing the traditional segmentation methods, and supporting sustainable destination management strategies.

5.3 Enhancing sustainable destination management strategies

Translating these segmentation insights into practice requires a rethinking of tourism management at the destination level. Traditionally, Destination Management Organisations (DMOs) have focused on increasing visitor numbers as a measure of success (Milano, Novelli & Cheer, 2020). However, there is growing shift towards more value-driven, strategic thinking that prioritises having the right types of visitors, rather than simply more visitors (McKercher et al., 2022). Advanced segmentation, in this context, becomes a central tool in aligning tourism development with sustainability goals.

The literature confirmed that by targeting appropriate visitor segments allows destinations to align tourism supply with the preferences, and behaviours of specific tourist segments (McKercher et al., 2022; Kennedy et al., 2022). This improves the overall quality of the visitor experience along with supporting sustainable development by ensuring tourism supply meets the demand. Additionally, by attracting suitable visitor segments, DMOs could optimise the distribution of tourism activity, alleviate pressure from overcrowded destinations, and promote a more balanced and resilient tourism system, as highlighted by Seraphin et al. (2020). In this context, segmentation is not only a marketing tool, but a strategic planning approach that contributes to the overall goals of sustainable destination management.

The industry practitioners in this research highlighted broader knowledge of sustainability as they acknowledge that it encompasses not only the environment but also social wellbeing in the community and economic impact of tourism on the area. This approach is more comprehensive in its vision for sustainability, in that the focus is not so much on reducing the number of tourists but managing them in such a way that the economic returns are maximised without compromising residents' quality of life or the environment. Perhaps one of the most significant messages of success, however, is the ability to reduce congestion while boosting visitor spend, a balance that could be achieved through a well-positioned data-based strategy. As McKercher et al. (2022) and Mihali (2020) stated, by encouraging off-season tourism and encouraging exploration of less-visited areas, destinations could more evenly spread the tourism dividends more evenly across regions and seasons.

The reality of implementing such strategies, however, comes with challenges. Businesses revealed that they do not have the resources to maintain digital platforms up to date, and this could limit them from making real-time, up-to-date suggestions, as confirmed in the focus group discussions. It is these contexts that the role of DMOs becomes vital as it can manage the coordination of digital platforms, unify stakeholder action, and enhance service quality to promote sustainable tourism (Sotiriadis, 2021; Gretzel, 2022). Further, Gretzel (2020) conceptualised DMOs as 'intelligent agents' that transform from traditional marketing organisations to knowledge-driven bodies using data and digital technology to support decision-making and innovation. This perspective highlights the way technology and data, when strategically utilised, not only enhance the

effectiveness of DMOs but also help them achieve sustainability goals, improved destination management and tourism outcomes.

While many destinations have introduced policy responses to deal with overtourism, these are questioned regarding their effectiveness and longer-term sustainability. Approaches such as accommodation caps in Barcelona or tourist dispersal in and Amsterdam tend to deflect rather than abolish tourism pressures, raising questions of equity, control, and social effects (Barrios, 2020; Sæþórsdóttir et al., 2020; Pasma, 2022). Such challenges could, perhaps, be addressed more effectively through responsive, data-centric approaches to managing destinations.

This thesis proposes such an approach which involves constant monitoring and examination of digital footprints, such as geolocation data, activity preferences, time spent at various attractions, and user feedback, which can reveal patterns in visitor behaviour that are not apparent through traditional survey methods (Dong et al., 2023; Dolnicar & Leisch, 2017). For example, tracking the frequency and duration of visits to specific sites could help validate and refine existing clusters, ensuring they remain relevant as visitor preferences evolve over time. Moreover, technological tools have the potential to identify behavioural patterns, refining the segmentation approach, and therefore enabling more responsive and personalised strategies.

Sending the right message to the right audience remains crucial for effective destination management. As observed by industry practitioners in the focus groups, it is not about repositioning the central tourism product but more on how it is marketed to attract the right visitors, maximise visitor satisfaction, and support sustainability (Butler & Dodds, 2019; Seraphin, Sheeran & Pilato, 2018). The literature acknowledged the potential of personalising marketing messages according to personality segments to maximise promotional effect, with an example of successful campaigns targeting Plog's (2001) psychocentric travellers with messages highlighting comfort and familiarity, whereas allocentric travellers were attracted to novelty and adventure (Kim et al., 2019). This indicates the value of personality-based approaches in achieving more focused and effective destination marketing.

Moreover, studies revealed a positive correlation between mobile phone use and the Big Five personality traits, which means that the behaviours patterns of users could be inferred from online activities (Beierle et al., 2020; Stachl et al., 2017). Social media

usage based on mobile phones also taps into these personality traits, providing information regarding user behaviours (Marengo & Montag, 2020; Montag et al., 2021). These findings support the inclusion of online behaviour data in personality-driven tourist segmentation, for enhanced understanding of tourist preferences and improved management strategies.

5.4 Technology integration and smart governance in sustainable tourism

Building on the role of targeted segmentation, the integration of advanced technologies is transforming tourism management from reactive to proactive practice. Real-time data analytics platforms now enable DMOs to monitor visitor behaviour dynamically, respond swiftly to emerging trends, and personalise experiences based on actual preferences (Xiang et al., 2021; Buhalis & Amaranggana, 2015). This allows for adaptive marketing and management strategies that align with both visitor expectations and sustainability goals (Boes, Buhalis & Inversini, 2016). For example, if Culturally Curious visitors gravitate toward hidden heritage sites, destination apps can suggest similar experiences, helping to disperse crowds while enriching the visitor journey (Gursoy et al., 2024).

Another layer is added by the application of machine learning and predictive analytics, which find patterns like connections between different types of accommodations and activity preferences that help with more accurate segmentation and intervention (Núñez, 2024). Demarketing initiatives are also aided by real-time insights, which enable DMOs to direct tourists to less-travelled locations and away from crowded areas (Hall et al., 2021). Smart systems like GPS-enabled apps and IoT infrastructure manage flows while maintaining site integrity, signalling a shift from volume-driven tourism to value-driven, quality-focused experience management (Seraphin, Sheeran & Pilato, 2018; Li et al., 2017).

This not only promotes a more equitable distribution of visitors but also synchronises economic objectives with carrying capacity constraints (Butler & Dodds, 2022). By predicting the long-term effects of current trends, data-driven tools could be strategically implemented to improve environmental resilience and visitor satisfaction (Wang et al., 2024). In the end, technology gives DMOs the ability to play a more strategic, governance-focused role by managing digital platforms, guiding sustainable

behaviour, and making sure that tourism development stays flexible and fair (Abdelmalak, 2024). However, as Boes, Buhalis, and Inversini (2016) remind us, the human element remains essential. The difficulty is in leveraging technology to build authentic, meaningful relationships between tourists, destinations, and host communities in addition to streamlining operations.

5.4. Chapter summary

This chapter connects the research findings with existing literature, proposing an advanced segmentation model for DMOs that includes personality traits to support sustainable destination management. The study indicates that by integrating the Big Five (Costa & McCrae, 1992; Goldberg, 1990) personality traits with behaviour data derived from digital platforms, DMOs could create more personalised and effective visitor flow management (Beierle et al., 2020; Stachl et al., 2017; Marengo & Montag, 2020). This approach could allow for better insight into the behaviours of the visitors and consequently more targeted offerings and resource allocation.

The findings support earlier tourism typologies like Plog's (1974) psychocentric-allocentric continuum and Cohen's (1972; 1974; 1979) tourist typologies. The clusters discovered in this study provide a deep understanding of tourist behaviour, where personality traits transcend traditional segmentation models. Additionally, this study highlights the potential of personality traits as effective dimensions for visitor segmentation, especially considering the transformative role of digital footprints. Derived from mobile phone usage and social media interactions, digital footprints present a dynamic, scalable alternative to traditional methods like surveys and interviews, which are static and time consuming (Dong et al., 2023; Dolnicar, 2022).

Unlike conventional approaches, digital footprints allow for continuous, year-round data collection, capturing variations in tourist behaviour across seasons and contexts. This adaptability enables visitor clusters to evolve organically, reflecting changing preferences and providing richer insights into tourism dynamics (Dolnicar & Leisch, 2017). The research suggests that digital footprints would be able to enhance real-time segmentation strategies, possibly overcoming the inadequacies of self-reported data (Montag et al., 2021). By integrating psychological insights with advanced digital technology, DMOs could create strategies that are not only more sustainable but

responsive and engaging. Real-time information could allow DMOs to satisfy visitor demands and address challenges like overcrowding, and ease pressure on resources.

To stakeholders and Destination Management Organisations alike, data-driven integration delivers dynamic segmentation models that adapt to emerging visitor behaviour. This may facilitate sustainable tourist development and assist tourism destinations like Cumbria in better managing challenges within an increasingly competitive tourism environment. Lastly, this research proposes a forward-thinking model for destination management, one that embraces change, psychographic insights, and technology to enhance visitor experiences, while ensuring the destination's long-term sustainability.

Chapter 6: Conclusion

Introduction

This thesis investigated how Destination Management Organisations (DMOs) could strategically manage tourism to preserve destination distinctiveness while supporting long-term sustainability goals. It critically examined the assumption found in some traditional models that destination decline is an inevitable outcome of tourism growth (Plog, 2001). Instead, drawing on a range of destination development theories (e.g., Butler, 2024, 1980; Bellato et al., 2023; Sharpley & Telfer, 2015; Harrison, 2014; Hall, 2011), this thesis asserts that destinations possess strategic flexibility rather than being bound to a linear trajectory of growth and inevitable decline. Targeted segmentation and adaptive management could help destinations refocus their tourism offerings to draw in higher-value tourists, ease the burden of resource-intensive segments, and promote a socially inclusive, environmentally responsible, and economically resilient tourism model.

This chapter provides a conclusive evaluation of the findings drawn from the three phases. The study employed a mixed methods research design, grounded in a pragmatist paradigm. The aim was to advance tourist segmentation by incorporating personality traits to enhance sustainable management strategies. While Morrison (2023) noted that traditional tourism segmentation relies mainly on socio-demographic factors, tourist typologies have been used in research for many years to examine behavioural patterns and motivations (e.g., Cohen, 1978; Smith, 1977; Plog, 2001).

More recently, attention has been directed to psychological dimensions, as noted by Li and Kovacs (2024), with personality traits being recognised as significant predictors of behaviour (Li & Kovacs, 2024; Costa & McCrae, 1992). The Five Factor Model (Goldberg, 1990), composed of openness, conscientiousness, extraversion, agreeableness, and neuroticism (OCEAN) traits, is the only recognised personality measurement model (Costa & McCrae, 1992; John et al., 2008). Moreover, the personality traits have been proven to be strong predictors of activity preference and engagement styles (e.g., Kovacic et al., 2022; Alves et al., 2020). As such, by examining predictive relationships and identifying visitor clusters based on psychological and socio-demographic factors, the current research integrated visitor insights with industry

perspectives, offering a comprehensive understanding of visitor behaviour. The research followed an exploratory sequential design, where the quantitative data collection and analysis guided the two subsequent qualitative phases. Each phase addressed specific objectives of the study, and these are further discussed.

In Phase 1, quantitative methods were employed to examine data-driven tourist typologies in Cumbria. Using surveys and random probability sampling, this phase measured visitors' personality traits, travel motivations, preferred activities, and socio-demographic factors. The statistical analysis identified predictive relationships between these psychological variables and activity preferences. Recognising the explanatory and predictive value of psychographic factors, the study further developed tourist typologies, revealing five visitor profiles, named by their dominant characteristics: Reserved Explorers, Culturally Curious, Diligent Adventurers, Social Explorers, and Balanced Explorers.

Further, Phase 2 adopted a qualitative approach to explore industry perspectives on visitor behaviour and segmentation practices. Using an inductive design, focus groups with purposive sampling gathered insights from tourism stakeholders, including managers and local DMO to contextualise the quantitative findings from phase 1. These discussions emphasised the operational relevance of personality-based segmentation and visitor clusters, bridging the theoretical knowledge with operational practices.

Finally, building on the quantitative results from phase 1, phase 3 employed a qualitative approach to gain further insight into visitor clusters. Through semi-structured interviews and purposive sampling, the phase explored how psychological factors influence visitor behaviour at the destination. By focusing on tourists' subjective experiences, it explored the identified tourist typologies while revealing additional factors that influence visitor behaviour, complementing the quantitative findings.

This mixed-methods design, combining qualitative and quantitative approaches, provided a rich and extensive analysis of tourist behaviours. By integrating industry practitioners' and tourists' perspectives, the findings are not only theoretically valid but also relevant to tourism management strategies, bridging the gap between theory and practice. The chapter concludes with the managerial and theoretical implications of the

findings, an acknowledgment of the study's limitations, and proposing directions for future research.

6.1 Phase 1: Identifying tourist typologies based on psychological and socio-demographic factors

By employing a quantitative approach (visitor surveys), the first phase of this study addressed the following objectives of the research:

- Measure visitors' personality traits, travel motivations, preferred activities, and socio-demographic factors
- Determine predictive relationships between personality traits, travel motivations, and activities
- Develop data-driven tourist typologies

The initial phase of this research aimed to identify tourist clusters based on psychological and socio-demographic factors. Employing a quantitative research design, the study collected comprehensive data through visitor surveys, obtaining visitor socio-demographic data, measuring the Big Five personality traits (Soto & John, 2019; Costa & McCrae, 1992; Goldberg, 1990), travel motivations, and activity preferences. This method aimed to explain the relationship between psychological and socio-demographic factors that shape visitors' activities at the destination.

In line with past research (Alves et al., 2023; Kovačić et al., 2022), the findings highlighted the significant role of personality traits as predictive indicators of activity choices, offering a comprehensive understanding of visitor behaviour compared to traditional demographic segmentation. Key traits influencing activities include Open-mindedness (associated with cultural activities and entertainment), Conscientiousness (linked to cultural activities), Extraversion (predicting engagement in adventure, recreation, wellness, with an avoidance of cultural activities), and Agreeableness (positively associated with lake cruises but linked to avoidance of adventure).

Moreover, travel motivations emerged as significant predictors of activity preferences. Notable motivations include Nature escape (driving interest in lake cruises), Self-Development (associated with recreation and adventure), Novelty and Stimulation (linked to adventure), and Nostalgia (correlating with entertainment preferences). Additionally, motivations such as Relationship and Recognition were significant positive

predictors for entertainment and thematic activities. Negative predictive relationships were also identified, with Autonomy decreasing the likelihood of choosing lake cruises and Relationship-building negatively predicting participation in recreational activities.

The analysis also revealed varying influences of socio-demographic factors on visitor activity preferences in Cumbria. Gender only affected participation in lake cruises, possibly linked to women's stronger affinity for nature and tranquillity (Rosa et al., 2020; Meng & Uysal, 2008). Age played a more significant role, with younger visitors favouring adventure activities and older tourists preferring cultural and wellness experiences, supporting earlier studies (Pomfret & Varley, 2019; Richards, 2018). In contrast, education and nationality showed no significant impact on activity choices. These initial results were key in identifying how psychological and socio-demographic factors influence visitor activities, a crucial step before developing data-driven visitor typologies.

Recognising that psychographic factors offer significant explanatory and predictive value, the study progressed to developing tourist typologies. The cluster analysis revealed five distinct visitor types in Cumbria (Reserved Explorers, Culturally Curious, Diligent Adventurers, Social Explorers, and Balanced Explorers), each with unique sets of personality traits, motivations, activity preferences, and socio-demographic variables. These results align with and expand on foundational tourism theories, such as Plog's (1974) psychocentric-allocentric scale and Cohen's (1972; 1974; 1979) tourist typologies. Despite facing critique, these typologies remain foundational for further research and model development, with their apparent simplicity reflecting the data and analytical limitations of their times that hindered a more comprehensive understanding of tourist behaviour (Cruz-Milán, 2024).

In summary, the findings from this phase advanced the understanding of the interplay between personality traits, travel motivations, and visitor activities, reinforcing the value of psychological segmentation in contemporary tourism research. By highlighting the predictive power of personality traits and motivations, this study offers a strategic framework for destinations like Cumbria to anticipate and respond to changing visitor preferences, encouraging more adaptive tourism models.

6.2 Phase 2: Industry perspectives on visitor segmentation and sustainable practices

By employing a qualitative approach (focus group discussions with industry practitioners), the second phase of this study addressed the following objectives of the research:

- Explore industry perspectives on the role of personality traits and travel motivations in shaping visitor activities
- Explore industry perspectives on the use and value of visitor clusters for tailoring tourism strategies and enhancing visitor experiences

The second phase of this research explored industry perspectives on visitor behaviour and segmentation strategies that could inform the development of tourism strategy and visitor experience. Using an inductive qualitative approach, focus group discussions with Cumbrian tourism stakeholders offered a practical lens which contextualised theoretical findings from phase 1. This phase linked academic knowledge with real-world situations, offering practical recommendations for sustainable tourism, and presenting an opportunity for the local DMO to support innovative solutions.

The key findings revealed that current segmentation practices within Cumbria's tourism industry are predominantly founded upon observable visitor behaviour, such as activity participation and booking types. While operationally useful, these methods overlook the underlying psychological determinants of behaviour. Stakeholders in the industry recognised the potential for psychographic segmentation to enhance the precision of marketing, visitor satisfaction, and alignment with sustainability goals. However, they also stated implementation barriers, such as resource limitations and financial concerns. This creates an opportunity for the local DMO to be innovative in offering solutions aligned with higher impact strategies.

Moreover, the participants highlighted the potential to revolutionise visitor management and experiences through digital tools. The proposed use of a mobile app, incorporating personality-based recommendations and real-time responsiveness, was highlighted as a possible solution to challenges such as overcrowding and the even dispersal of visitor flows. By proactively pushing lesser-known locations and tailoring

experience based on individual interests, such solutions could address sustainability goals while enhancing visitor experience.

Further, collaboration was a dominant theme, with a call for alignment of efforts between private and public sectors to achieve common sustainable goals. Industry stakeholders endorsed the development of integrated systems, such as synchronised digital platforms and bundled payment models, to facilitate seamless visitor experiences. The application of visitor cluster data to align tourism offerings with psychological drivers was viewed as a significant opportunity to develop destination management practices. While large-scale initiatives face logistical and resource constraints, smaller-scale cooperation such as joint content creation, seasonal promotions, and shared resources, were proposed as achievable starting points for building trust, creating resilience, and increasing regional development. This could allow DMOs to innovate by partnering with local businesses and using technology for effective marketing and management. Better resource use and stakeholder coordination could help create accessible, sustainable initiatives that balance industry needs with visitor expectations.

In summary, the study highlighted the importance of psychographic segmentation for marketing and management strategies, innovative digital solutions, and regional collaboration for enhancing visitor experience and promoting sustainable tourism in Cumbria. By targeting psychological motivations and adopting advanced segmentation approaches, the tourism industry could move beyond traditional approaches, ensuring competitiveness while protecting its cultural and natural resources. These results provide a blueprint for operational improvement and illustrate the value of aligning academic research and industry practice to support adaptive tourism strategies.

6.3 Phase 3: Exploring tourist typologies and external influences on visitor behaviour

By employing a qualitative approach (visitor interviews), the third phase of this study addressed the following objectives of the research:

- Explore visitors' personality traits and motivations and their impact on preferred activities
- Investigate and expand upon the quantitative data by adding qualitative depth
- Uncover additional factors influencing visitor activities not captured in phase 1

The third phase of this study provided insights into the visitor clusters, while also revealing other factors that influence behaviour. Refining the quantitative results from phase 1, this phase employed an inductive, qualitative method using semi-structured interviews with visitors, providing rich, context-specific insights into the factors that influence visitor behaviour. Importantly, this depth of insight enabled destination managers to design more targeted and meaningful experiences aligned with distinct visitor needs and preferences, supporting more effective and sustainable tourism strategies.

The key findings from the interview results revealed the complexity of how personality and motives are expressed within specific situations. While quantitative results presented overall behavioural patterns, the qualitative phase added insights into situational conditions underlying tourism decisions. Therefore, as an example, visitors emphasised companions' influence while traveling, financial considerations and dependence on available modes of transportation. These findings highlight the dynamic, context-dependent nature of tourist behaviour, which is typically not reflected in quantitative analysis, but offers valuable information for more efficient and tailored tourism strategies.

Furthermore, all interviewees confirmed using digital tools to plan their trips, and it was revealed a demand for a destination-based app that integrates personalisation, local insight, and logistical convenience. Participants mentioned aspects such as personalised itineraries, offers, offline access, and interactive maps with embedded local knowledge, a sentiment reiterated by the results of focus groups among industry players. These aspects would not only enhance the tourist experience but also provide rich opportunities for collecting and analysing digital footprints, including geolocation, activity interests, and user ratings. This data would be used to further refine the visitor clusters from phase one and enable real-time alignment of tourism strategies, allowing destinations to support sustainable tourism practices.

In summary, the findings from this phase provided a deeper understanding of the psychological and contextual factors behind tourist behaviour, reinforcing the importance of integrating qualitative insights with digital tools for dynamic and adaptive tourism management. This could allow destinations like Cumbria to optimise visitors'

experiences, create better-informed segmentation, and encourage sustainable tourism practices.

6.4 Summary

This section summarises the results from the mixed-methods study aimed to advance tourist segmentation by integrating personality traits, enhancing sustainable destination management practices. The first phase of the study quantitatively explained the interplay between psychological factors and socio-demographic factors. After revealing the explanatory and predictive power of personality traits and motivations influencing visitor activities, five visitor clusters were identified: Reserved Explorers, Culturally Curious, Diligent Adventurers, Social Explorers, and Balanced Explorers. The second phase gathered industry expertise, highlighting the potential of psychographic targeting and digital tools in personalising offering and strategy planning. Phase 3 added qualitative depth to discover additional factors such as transportation, financial concerns, challenges related to visiting a foreign country, and the influence of travel companions on visitor behaviour. Across phases, the analysis highlighted that destination managers must balance psychological insight with situational and demographic data when creating tailored, and sustainable tourist experiences. By adopting a personality-based visitor segmentation, destinations could enhance visitor engagement, marketing and management strategies. Additionally, the use of technology would ensure that targeting and clustering is more precise, allowing destination managers to gain better knowledge of tourists' preferences and behaviours and create customised experiences aligned with sustainability goals.

6.5 Research contributions

The findings of the research offer important theoretical and practical contributions for Destination Management Organisations (DMOs) and other industries, contributing to segmentation practices, improving visitor experiences, and supporting sustainable development through a deeper understanding of visitor behaviour. By applying a three-stage process, the research advanced tourist segmentation models through the integration of personality traits to support sustainable destination management. In phase 1, it provided a quantitative foundation, where it identified five tourist segments (Reserved Explorers, Culturally Curious, Diligent Adventurers, Social Explorers, and Balanced Explorers). Phase 2 situated these results into context with industry expertise, offering

valuable insights into tailoring strategies to visitor profiles. Finally, phase 3 qualitatively examined the nuances of visitor behaviour and uncovered additional factors and contextual factors influencing strategies. Collectively, these phases offered a comprehensive model for understanding visitor behaviour, enabling strategic adaptability and sustainability in destination management strategies.

6.5.1 Theoretical contributions

This study advances tourist segmentation theory by incorporating personality traits into traditional models, addressing the limitations of broad psychographic typologies (Cruz-Milán, 2024). While Plog's (1974, 2002) model classifies tourists into allocentric, mid-centric, and psychocentric types and Cohen's (1972, 1979) typologies distinguish between explorer and institutionalised tourists, these frameworks often overlook individual psychological differences. By integrating the Big Five personality traits (Goldberg, 1990), this research introduces a more accurate and enduring predictor of visitor preferences. Unlike conventional models that often assume homogeneity within segments, personality-driven segmentation recognises the stability of intrinsic traits, offering a more robust foundation for predicting engagement styles and activity choices (Bleidorn et al., 2022; Roberts & Yoon, 2022). This contribution not only strengthens segmentation theory but also provides DMOs with deeper, evidence-based insights to create more effective and personalised tourism strategies.

The findings of this study also provide contributions to the literature highlighting personality traits as predictors of visitor behaviour, supporting previous research (e.g., Alves et al., 2022; Kovačić et al., 2022). Unlike static demographic factors, personality traits provide deeper insights into visitor preferences, and decision-making processes, making them more reliable predictors for formulating targeted marketing strategies and sustainable tourism initiatives. Moreover, this study makes a significant theoretical contribution by addressing one of the key limitations in existing research, the focus on quantitative methods to investigate personality traits as predictors of visitor behaviour. Most research in this area is based on self-reporting questionnaires and statistical models (e.g., Alves et al., 2022; Çelik & Dedeoğlu, 2022; Yurcu et al., 2022). Although they are effective in identifying general patterns, they do not capture the richness and complexity of how personality traits influence behaviour. By integrating semi-structured interviews, with the measurement instrument of the Five-Factor Model, Big Five Inventory-2 (Soto

and John, 2017), this research builds upon the quantitative studies to provide a contextualised understanding, while addressing the limitations of self-report questionnaires, including bias and construct validity. Drawing on Larkin, Watts and Clifton's (2006) emphasis on participant voice, the qualitative component of this study allows for deeper understanding of how personality traits shape tourism behaviour in specific contexts. This integrated approach not only reinforces the reliability of the findings but also challenges the dominance of purely statistical approaches in personality-based tourism research, providing a broader and theoretically informed perspective.

6.5.2 Managerial contributions

This study offers significant managerial recommendations to Destination Marketing Organisations (DMOs), highlighting the need for them to adapt to the rapidly evolving digital world of the tourism industry. Traditionally, DMOs have been central to the destination's management and marketing, using data to inform strategic decisions, as noted by Wagenseil et al. (2022). However, with the rise of AI-driven personalisation and large-scale data analysis, visitor segmentation and marketing dynamics are transformed, with increasing competition from digital platforms. Although DMOs will still be relevant for destination stewardship, stakeholder coordination, and sustainable tourism, they will need to reinvent themselves to remain effective in this new environment. To remain relevant, Sigala et al. (2024) highlighted the need for DMOs to reposition themselves by balancing their roles with technological advancements and changing visitor expectations (Sigala et al., 2024). This research proposes a forward-thinking approach for DMOs to adapt to increasing demands for personalised services while addressing sustainability, visitor management, and resource issues (Foris et al., 2020). To be at the forefront of digital age tourism, DMOs could refine their segmentation strategy by introducing psychological factors, such as long-term consistent personality, into their frameworks (Bleidorn et al., 2022; Roberts & Yoon, 2022).

Additionally, this research highlights the critical role of technology in enabling DMOs to manage visitor flows in real time, aligning marketing strategies with current trends, seasonal demands, and environmental concerns (Barros et al., 2022). It addresses the limitations of traditional survey-based segmentation, highlighting how digital platforms, mobile apps, and social media could provide continuous, real-time data on tourist preferences and emerging trends. By using digital footprints, such as interactions

on mobile and social media, DMOs could capture scalable, year-round data that reflects seasonal and contextual behavioural changes (Dong et al., 2023; Dolnicar, 2022). Moreover, AI and machine learning improve segmentation by predicting demand fluctuations and optimising resource allocation, enabling more personalised visitor experiences. These data-driven approaches overcome the constraints of self-reported data, supporting sustainable tourism development, allowing destinations to adapt to evolving market conditions (Dolnicar & Leisch, 2017; Montag et al., 2021).

Moreover, as a novel and innovative shift, segmentation based on personality traits goes beyond the traditional socio-demographic factors, offering a more stable and reliable foundation for understanding visitor behaviours. By identifying distinct psychological profiles, DMOs could tailor their promotional strategies more effectively to the intrinsic desires of different tourists' segments. This personalised approach would not only allow DMOs to anticipate and respond to shifting tourist demands but also ensure that their offerings remain aligned with changing visitor expectations over time. More importantly, segmentation based on psychological factors not only supports marketing of certain activities to specific visitor segments, but it also allows for demarketing initiatives. These strategies could help to manage visitor volumes and mitigate the negative impacts of overtourism. For instance, one of the identified visitor clusters, Reserved Explorers, who value calmness and solitude, could be encouraged to visit less frequented, off-season areas, thereby reducing the pressure at popular destinations and distributing tourism demand more evenly throughout the year. Conversely, Social Explorers who enjoy social events could be targeted for festivals and local fairs to concentrate visitation at appropriate times. This dual approach of targeted marketing and demarketing may not only reduce environmental degradation but also optimise resource management, enhancing the overall visitor experience (Beritelli & Reinhold, 2021).

However, while psychological segmentation and technological advancements provide avenues for managing visitor flows and sustainable tourism, their success is based on a multi-stakeholder approach. Policymakers, local communities, and private enterprises must collaborate to ensure that solutions to tourism management are socially, environmentally, and economically sustainable (Butler & Dodds, 2019). Otherwise, visitor flow management would then turn into yet another reactive response rather than an active tool to support sustainable tourism. As such, stakeholder collaboration within the tourism ecosystem remains a central managerial implication of this research. DMOs,

in their roles, are particularly crucial for enabling cooperation among local entrepreneurs, attractions, service providers, and governmental agencies toward creating an integrated and sustainable tourism product (UNWTO, 2019). By working together, stakeholders can create more integrated tourism experiences that contribute to the long-term sustainability of the destination (Gretzel et al., 2004).

This study also presents relevant managerial implications for closely related fields, most particularly hospitality and events management, which are deeply interconnected with tourism as part of the broader visitor economy. Psychological segmentation and clustering approaches could facilitate the creation of personalised guest experiences in hospitality, allowing service providers to better align offerings with different types of visitor profiles. Similarly, in events management, knowledge of the psychological traits of target audiences could inform marketing, enhancing visitor satisfaction and operational efficiency. This highlights the potential of data-informed, personality-based approaches to improving experience design and resource planning in industries beyond destination management. By making decisions based on behavioural insights, tourism and related organisations could better meet guests' changing expectations and sustainability demands.

6.6 Study limitations

The research has some limitations that should be considered while interpreting the findings. Firstly, its focus on the Cumbria area limits results' generalisability to other destinations (e.g., coastal or urban settings). Secondly, the research is limited to recreational tourism. This focus is supported by previous research conducted by Cumbria Tourism (2022), where recreation, relaxation, nature, and heritage experience were consistently mentioned as primary reasons for visiting the area. Although data were collected throughout the year, the survey was specifically designed to capture leisure-oriented activities. As such, the results should only be interpreted within leisure travel context. While this narrow scope may reduce generalisability to other travel markets (e.g., education tourism, medical tourism), it allows for more focused and more detailed exploration of the psychological determinants of Cumbrian leisure tourism.

Furthermore, although the survey sample of 1,217 responses is within statistical conventions for adequate representation (Taherdoost, 2016), the sample was slightly biased, with an overrepresentation of older age groups, particularly 60+ years (25.2%),

and consisted mainly of British nationals (82.9%), limiting the applicability of the findings, especially when considering cultural differences that were revealed in the visitor interviews as influential in shaping tourist interests.

The use of the short version of the Big Five Inventory-2 (Soto and John, 2017) to measure personality traits is another limitation. While the BFI-2 balances brevity and psychometric quality, with Cronbach's alpha supporting internal consistency, this version may have limited the depth of personality measurement. This model does not necessarily capture the whole richness of personality because it focuses on general traits and potentially overlooks small individual differences that affect travel behaviour.

Finally, the qualitative element to the study represented by interviews with visitors and industry expert focus group discussions also have inherent limitations. Personal bias and the small sample sizes in these methods may fail to represent general opinions and experiences of all parties in the tourism industry. Due to the subjective nature of qualitative data, interpretations may vary, possibly impacting consistency of the results. Future research could improve reliability and validity through larger and more varied samples to reflect more broadly visitor behaviour and preference.

6.7 Future research

Future research could extend the geographical scope of this study to test the applicability and transferability of the conceptual framework in a wider range of destination types, including urban and coastal settings. While the current study focused exclusively on leisure tourism, reflecting Cumbria's dominant travel profile as identified by local tourism authorities (Cumbria Tourism, 2022), future research could explore alternative travel motivations, such as nightlife, clubbing, or theme parks, which could be more relevant in other destinations. In addition, the inclusion of more socio-economically and culturally diverse samples, or segments such as accessibility and inclusion-focused markets, would further enrich the understanding of psychological segmentation and its impact on destinations.

Future studies could also examine how facet-level analysis of personality traits influence tourist behaviour. Moreover, employing observational methods to monitor tourists in natural settings may provide an integrated view of how personality affects visitor behaviours. Alternatively, addressing potential biases in personality questionnaires

(Pedregon et al., 2012), other studies could explore gamified methods, which use mini games to implicitly assess personality traits (Alves et al., 2024). This approach reduces social desirability bias, enhances participant engagement, and eliminates the need for intrusive questionnaires, offering a more efficient and user-friendly data collection process (Finnerty et al., 2016).

Future studies could examine how tourist personality types and destination personas align, or misalign, and how these dynamics affect long-term loyalty, satisfaction, and destination choice. This line of research could provide a more integrated approach to comprehending visitor experiences by bridging the gap between supply-side branding strategies and demand-side behavioural segmentation. Expanding on this, a comparative framework could be created to evaluate the ways in which various tourist typologies engage with the personalities of the destination, adding to the body of research on experience design and branding.

Future research could also expand the analysis through cross-cultural comparisons to investigate the stability and adaptability of personality-based segmentation models in various national or cultural contexts. Such research would contribute to theory refinement and enhance the applicability of segmentation frameworks in global tourism. For instance, the findings related to wellness tourism, especially the narrow item loading on spa-related activities, suggest that the definition and interpretation of wellness may vary across settings. Future research could explore how the cultural context shapes wellness perceptions and how this affects tourism product development and segmentation strategies.

Longitudinal studies could also examine the long-term impacts of personality-based marketing and demarketing strategies, particularly their effects on visitor loyalty, destination image, and sustainability. This would provide insights into the enduring effectiveness of these strategies in balancing tourist demand with resource conservation.

Finally, future research should transition from theoretical to practical data collection by incorporating digital footprints. Ethically capturing data such as browsing and search history, social media activity, geolocation, bookings, and transactions could enable more accurate profiling of tourist behaviours and the refinement of visitor clusters. This study provides a conceptual foundation for advancing data-driven approaches, with future phases focusing on practical implementation. Integrating digital footprints will

offer deeper insights into tourist motivations and enhance the validity and real-world applicability of tourism research and practice.

6.8 Chapter summary

This chapter provided a conclusive evaluation of the findings drawn from the three phases. The second section of this chapter presented the managerial and theoretical implications of the results. The aim of this research was to advance tourist segmentation by integrating personality traits, providing a deeper understanding of visitor behaviour. In doing so, it produces significant implications for DMOs to formulate more adaptive and sustainable tourism strategies, aligning visitor experiences and long-term destination sustainability.

Through quantitative and qualitative analyses, the study integrated insights from visitor data and industry perspectives, offering both theoretical contributions and practical relevance for tourism management. Phase 1 employed surveys to develop data-driven tourist typologies by integrating personality traits into segmentation models, highlighting the predictive power of psychological factors in segmentation models. Phase 2 examined industry perspectives on visitor segmentation and sustainable practices, evaluating insights from tourism professionals to bridge theoretical research with practical applications. Focus groups discussions with industry practitioners highlighted a gap between current behaviour-based segmentation and the potential of psychographic approaches, and it presented opportunities for the DMO to support innovative solutions. Phase 3 complemented the quantitative findings from phase 1 through visitor interviews, providing an in-depth analysis of visitor clusters derived from quantitative data analysis, exploring how psychological factors interact to shape activity choices, and identifying additional factors that influence visitor behaviour.

The findings confirmed personality traits as key drivers of visitor behaviour. Additionally, the interviews revealed other influencing factors, such as travel companion, transportation, challenges associated with visiting a foreign country, and financial considerations, emphasising the dynamic nature of tourism behaviour. Moreover, visitors expressed interest in a destination-specific app offering personalised itineraries, offline functionality, and local expertise. This contrasted with some views of industry practitioners in the focus groups, who argued that a destination specific app might not offer significant value to visitors. Despite such challenges, the visitor insights offered the

prospect of real-time data in optimising visitor profiles, adapting strategies, and promoting a more balanced distribution of resources. The findings emphasise the necessity of an integration of qualitative findings with digital methods to create an adaptive tourism management. For destinations such as Cumbria, this approach could enhance visitor engagement, segmentation techniques, and support long-term measures for sustainability.

Lastly, this thesis advocates for a destination management model that considers the environmental, social, and economic sustainability. With advanced technological tools, DMOs could overcome static policies, embrace data-driven decision-making, and respond to real-time challenges, enhancing visitor experiences and creating long-term destination resilience (Ogbeide & Mildemberger, 2025; MacEachern et al., 2024). By identifying and targeting high-value tourist segments, DMOs could preserve the '*golden travel goose*' (Plog, 2001, p.24) of tourism, ensuring that the destination succeeds without compromising its long-term sustainability.

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Appendices

Appendix 1: Questionnaire layout

Cumbria Visitor Survey

Personality, travel motivations and activity preferences

Participant Information Sheet and Consent

Please read the following statements fully and carefully. By proceeding to take the questionnaire, you are giving your consent.

About the study

Cumbria Tourism's mission is to create a world class visitor experience through effective marketing, proactive sustainable tourism development and relevant industry services.

The current market segmentation in tourism focuses mostly on socio-demographic variables such as age, gender, income, family status, education and nationality. When viewed through this traditional demographic data, visitors within the same category may look identical, but it would be a mistake to assume two individuals share the same preferences purely based on their similar socio-demographic characteristics.

Therefore, the aim of this PhD research is to develop a digital platform which will enable the use of sector-based algorithms to allow Cumbria Tourism to more accurately study, profile and predict customer behaviour. The goal is to identify how to replace broad person-based demographics (gender/age/generation x etc) by using the concept of personality trait. Personality insights offer opportunities to better connect with visitors, understand their wants and needs, allowing the creation of a better match for products, services and experiences at the destination.

There are no direct benefits to you as a participant, other than contribution to the body of knowledge regarding the visitor behaviour. The results from the study will be utilised to enhance the visitor experience in Cumbria.

1. I understand that the research aims to collect data on tourist personality traits, travel motivations and activity preferences in Cumbria. The procedure involves filling this online survey.
2. I volunteer to take part in this research questionnaire. I will not be paid for my involvement. I am free to withdraw from the project at any time, without reason.
3. I understand that all data provided will be treated in strict confidence, and no identifying information such as name, email address or IP address will be collected. The survey will not contain any information that will personally identify the participants.
4. I understand that there are no foreseeable risks associated with the participation in this research.
5. I confirm that I am at least 18 years of age.

6. I understand the explanation of the research project. By proceeding to take this questionnaire, I agree to take part in this research project and to the above statements. Any statements I have concern with I will discuss with the researcher or the supervisor prior to commencing.

Contact details: Delia Moisa (Researcher, PhD)

Email address: (x)

Alternatively, you can also contact Dr Demos Parapanos (Supervisor)

Email address: (x)

Address: University of Cumbria, Rydal Road, Ambleside, LA22 9BB

Visitor Profile

Please select the option that best suits your profile.

1. Gender

Female Male Other

2. Age

18-29 30- 39 40-49 50-59 60+ I prefer not to say

3. Nationality

Selection from the list

4. Work status

Employed Self-employed Student Retired Unemployed Other I prefer not to say

5. Highest level of education completed

High School College Undergraduate Degree Master's Degree Postgraduate and above

I prefer not to say

6. Number of visits to Cumbria in the past two years

None One time Two to four times Five times or more I prefer not to say

7. Travel partner

Alone With a partner With family With friends With a traveling group

I prefer not to say

8. Purpose of the trip

Leisure Business Leisure and Business Other I prefer not to say

Personality traits

Please indicate your level of agreement or disagreement with the following statements.

Strongly disagree/ Disagree /Neutral/ Agree/ Strongly agree

- I am someone who tends to be quiet.
- I am someone who is outgoing and sociable.
- I am someone who is dominant and often acts as a leader.
- I am someone who prefers to have others take charge.
- I am someone who is full of energy.
- I am someone who is less active than other people.
- I am someone who is compassionate and has a soft heart.
- I am someone who can be cold and uncaring at times.
- I am someone who is sometimes rude to others.
- I am someone who is respectful and treats others with respect.
- I am someone who assumes the best about people.
- I am someone who tends to find fault with others.
- I am someone who tends to be disorganised.
- I am someone who keeps things neat and tidy.
- I am someone who has difficulty getting started on tasks.
- I am someone who is persistent and works until the task is finished.
- I am someone who is reliable and can always be counted on.
- I am someone who can be somewhat careless.
- I am someone who worries a lot.
- I am someone who is relaxed and handles stress well.
- I am someone who tends to feel depressed or blue.
- I am someone who feels secure and comfortable with myself.
- I am someone who is emotionally stable and not easily upset.
- I am someone who is temperamental and gets emotional easily.
- I am someone who is fascinated by art, music, and literature.
- I am someone who has few artistic interests.
- I am someone who has little interest in abstract ideas.
- I am someone who is complex and a deep thinker.
- I am someone who is original and comes up with new ideas.

I am someone who has little creativity.

Travel motivation

Please indicate your level of agreement or disagreement with the following statements.

Strongly disagree/ Disagree /Neutral/ Agree/ Strongly agree

I travel to Cumbria to explore the unknown and do something new.

I travel to Cumbria to experience thrills and excitement.

I travel to Cumbria to seek fun and enjoyment.

I travel to Cumbria to physically rest and relax.

I travel to Cumbria to escape from the daily routine.

I travel to Cumbria to be away from the crowds of people.

I travel to Cumbria to do things with my partner, family, or friends.

I travel to Cumbria to meet new people who enjoy the same things as I do.

I travel to Cumbria to connect with friends or relatives living in other locations.

I travel to Cumbria to share skills with others and show what I can do.

I travel to Cumbria to visit a destination that would impress others.

I travel to Cumbria to admire and be close to nature.

I travel to Cumbria to get a better appreciation of nature.

I travel to Cumbria to be independent.

I travel to Cumbria to do things my own way.

I travel to Cumbria to develop my skills and abilities.

I travel to Cumbria to experience new cultures and meet new people.

I travel to Cumbria to gain a sense of accomplishment.

I travel to Cumbria to understand more about myself.

I travel to Cumbria to get outside of my comfort zone.

I travel to Cumbria to have romantic relationships.

I travel to Cumbria to think about the good times I have had in the past.

I travel to Cumbria to reflect on past memories.

Activity Preferences

Please indicate your level of agreement or disagreement with the following statements.

Strongly disagree/ Disagree /Neutral/ Agree/ Strongly agree

While in Cumbria, I choose to do adventure activities on water, such as sailing, canoeing, diving, and jet skiing.

While in Cumbria, I choose to do adventure activities in the air, like parachute jumps and gliding.

While in Cumbria, I choose to do adventure activities on land, including rock climbing, abseiling, and off-roading.

While in Cumbria, I choose to practice hiking, mountaineering, and long walks in nature.

While in Cumbria, I choose to observe natural habitats, including birds, animals, and wildlife.

While in Cumbria, I choose to practice wild swimming and forest bathing.

While in Cumbria, I choose to attend a festival or concert.

While in Cumbria, I choose to attend cultural activities and artistic performances.

While in Cumbria, I choose to attend other special events, such as weddings and birthday parties.

While in Cumbria, I choose to visit archaeological sites and ruins.

While in Cumbria, I choose to visit monuments, including castles, churches, historic houses, parks, and gardens.

While in Cumbria, I choose to visit museums.

While in Cumbria, I choose to visit exhibitions and art galleries.

While in Cumbria, I choose to participate in sporting competitions, such as trail running and cycling competitions.

While in Cumbria, I choose to exercise through walking, running, or cycling.

While in Cumbria, I choose to engage in thematic sports, like horse riding and archery.

While in Cumbria, I choose to participate in a food and beverage masterclass.

While in Cumbria, I choose to taste local products.

While in Cumbria, I choose to take boat trips to explore the destination.

While in Cumbria, I choose to take boat trips for the historical value of the route.

While in Cumbria, I choose to go to a spa or beauty centre.

While in Cumbria, I choose to undergo health and wellness treatments.

Thank you very much for participating in this survey!

Participant Debrief Form

Title of study: Cumbria Visitor Survey - Personality, travel motivations and activity preferences

Thank you for taking the time to take part in this research project.

The research project aimed to investigate the relationship between personality traits and tourist behaviours in Cumbria. Personality insights offer opportunities to better connect with visitors, understand their wants and needs, allowing the creation of a better match for products, services, and experiences at the destination.

If you would like any further information about this research project, then please feel free to get in touch with Delia Moisa (Researcher, PhD); email address (x), or Dr Demos Parapanos (Supervisor); email address (x). Access to results can also be requested to the contact details provided.

Please note that the data is anonymised, your responses cannot be withdrawn after completing the survey, as the researcher is not able to identify them.

Any statements I have concern with I will discuss with the researcher or the supervisor.

Contact details: Delia Moisa (Researcher, PhD)

Email address: (x)

Alternatively, you can also contact Dr Demos Parapanos (Supervisor)

Email address: (x)

Address: University of Cumbria, Rydal Road, Ambleside, LA22 9BB

However, if you are not satisfied or wish to make a more formal complaint you should contact Dr Colette Conroy, Chair of Research Ethics (email: research.office@cumbria.ac.uk).

If any of the issues in this study were distressing and you feel you need additional support, please contact one of the organisations below for help:

Samaritans telephone number: 116 123

HopelineUK on 0800 068 41 41

Thank you again for your participation!

Appendix 2: Questionnaire items and sources

Construct	Item	Source
Personality traits	I am someone who	
Extraversion	Tends to be quiet.	Soto, C. J. and John, O. P. (2017)
	Is outgoing, sociable.	
	Is dominant, acts as a leader.	
	Prefers to have others take charge.	
	Is full of energy.	
	Is less active than other people.	
Agreeableness	Is compassionate, has a soft heart.	Soto, C. J. and John, O. P. (2017)
	Can be cold and uncaring.	
	Is sometimes rude to others	
	Is respectful, treats others with respect.	
	Assumes the best about people	
	Tends to find fault with others	
Conscientiousness	Tends to be disorganised.	Soto, C. J. and John, O. P. (2017)
	Keeps things neat and tidy.	
	Has difficulty getting started on tasks.	
	Is persistent, works until the task is finished.	
	Is reliable, can always be counted on.	
	Can be somewhat careless.	
Open-mindedness	Is fascinated by art, music, or literature.	Soto, C. J. and John, O. P. (2017)
	Has few artistic interests.	
	Has little interest in abstract ideas	
	Is complex, a deep thinker.	
	Is original, comes up with new ideas.	
	Has little creativity.	
Negative emotionality	Worries a lot.	Soto, C. J. and John, O. P. (2017)
	Is relaxed, handles stress well.	
	Tends to feel depressed, blue.	
	Feels secure, comfortable with self.	
	Is emotionally stable, not easily upset.	
	Is temperamental, gets emotional easily.	
Travel motivations	I travel to Cumbria to...	
Novelty and stimulation	Explore the unknown/Do something new	Sung, Y.K., Chang, K.C. and Sung, Y. F. (2016); Maghrifani, D., Liu, F. and Sneddon, J. (2022); Pearce, P. and Lee, U. (2005); Wong et al., (2013)
	Experience thrills or excitement	
	Seek fun and enjoyment	
Escape	Physically rest and relax	Jeong, Y.; Zielinski, S.; Chang, J.-S.; Kim, S.-i. (2018); Maghrifani, D., Liu, F. and Sneddon, J. (2022); Pearce, P. and Lee, U. (2005); Wong et al., (2013);
	Escape from the daily routine	
	Be away from the crowds of people	

		Capar, G., Pala, T. and Toksöz, D. (2022);
Relationship	Do things with my partner/family/friends	Jeong, Y.; Zielinski, S.; Chang, J.-S.; Kim, S.-i. (2018); Hsu, C.H.C., Cai, L., A., and Li, M. (2010); Maghrifani, D., Liu, F. and Sneddon, J. (2022); Pearce, P. and Lee, U. (2005); Sung, Y.K., Chang, K.C. and Sung, Y. F. (2016)
	Meet new people who enjoy the same things as I do	
	Connect with friends or relatives living in other locations	
	Have romantic relationships	
Recognition	Share skills with others/showing what I can do	Pearce, P. and Lee, U. (2005); Sung, Y.K., Chang, K.C. and Sung, Y. F. (2016)
	Visit a destination that would impress others	
Nature	Admire and be close to nature	Jeong, Y.; Zielinski, S.; Chang, J.-S.; Kim, S.-I. (2018); Oktadiana, H., Pearce, P. L., Pusiran, A. K. and Agarwal, M. (2017); Pearce, P. and Lee, U. (2005)
	Get a better appreciation of nature	
Autonomy	Be independent	Oktadiana, H., Pearce, P. L., Pusiran, A. K. and Agarwal, M. (2017); Pearce, P. and Lee, U. (2005)
	Do things my own way	
Self-development	Develop my skills and abilities	Capar, G., Pala, T., Toksöz, D. (2022); Oktadiana, H., Pearce, P. L., Pusiran, A. K. and Agarwal, M. (2017); Pearce, P. and Lee, U. (2005)
	Experience a new culture and meet new people	
	Gain a sense of accomplishment	
Self-actualisation	Understand more about myself	Capar, G., Pala, T., Toksöz, D. (2022); Oktadiana, H., Pearce, P. L., Pusiran, A. K. and Agarwal, M. (2017); Pearce, P. and Lee, U. (2005) [51, 54, 56]
	Get outside of my comfort zone	
Nostalgia	Think about good times I have had in the past	Oktadiana, H., Pearce, P. L., Pusiran, A. K. and Agarwal, M. (2017); Pearce, P. and Lee, U. (2005)
	Reflect on past memories	
Visitor activities	While in Cumbria, I...	
Adventure	Do adventure activities on water (e.g., sailing, canoeing, diving, jet skiing)	Alves, P., Martins, H., Saraiva, P., Carneiro, J., Novais, P & Marreiros, G. (2023) Alves, P., Saraiva, P., Carneiro, J., Campos, P., Martins, H., Novais, P., Marreiros, G. (2022)
	Do adventure activities in the air (e.g., parachute jump, gliding)	
	Do adventure activities on the land (rock climbing/abseiling/off road)	
Recreation	Practice hiking/mountaineering/long walks in nature	Alves, P., Martins, H., Saraiva, P., Carneiro, J., Novais, P & Marreiros, G. (2023); Alves, P., Saraiva, P., Carneiro, J., Campos, P., Martins, H., Novais, P., Marreiros, G. (2022)
	Observe natural habitats (birds/animal/wildlife)	
	Practice wild swimming/forest bathing	
Entertainment	Attend a festival/concert	Alves, P., Martins, H., Saraiva, P., Carneiro, J., Novais, P & Marreiros, G. (2023); Alves, P., Saraiva, P., Carneiro, J., Campos, P., Martins, H., Novais, P., Marreiros, G. (2022)
	Attend cultural activities/artistic performance	
	Attend other special events (e.g., wedding, birthday party)	
	Visit archaeological sites/ruins	

History and heritage	Visit monuments (e.g., castles, churches, historic houses), parks and gardens	Alves, P., Martins, H., Saraiva, P., Carneiro, J., Novais, P & Marreiros, G. (2023); Alves, P., Saraiva, P., Carneiro, J., Campos, P., Martins, H., Novais, P., Marreiros, G. (2022)
Museums and art	Visit museums	Alves, P., Saraiva, P., Carneiro, J., Campos, P., Martins, H., Novais, P., Marreiros, G. (2020); Kovačić, S., Jovanović T., Vujičić, M., Morrison, A. and Kennell, J. (2022)
	Visit exhibitions/art galleries	
Sports	Participate in sporting competitions (e.g., trail running, cycling competition)	Alves, P., Martins, H., Saraiva, P., Carneiro, J., Novais, P & Marreiros, G. (2023); Alves, P., Saraiva, P., Carneiro, J., Campos, P., Martins, H., Novais, P., Marreiros, G. (2022); Kovačić, S., Jovanović T., Vujičić, M., Morrison, A. and Kennell, J. (2022)
	Exercise (e.g., walking, running, cycling)	
	Engage in thematic sports (e.g., horse riding, archery)	
Gastronomy	Participate in a food and beverage masterclass	Alves, P., Martins, H., Saraiva, P., Carneiro, J., Novais, P & Marreiros, G. (2023); Alves, P., Saraiva, P., Carneiro, J., Campos, P., Martins, H., Novais, P., Marreiros, G. (2022); Kovačić, S., Jovanović T., Vujičić, M., Morrison, A. and Kennell, J. (2022)
	Taste local products	
Lake cruises	Take boat trips to explore the destination	Alves, P., Martins, H., Saraiva, P., Carneiro, J., Novais, P & Marreiros, G. (2023); Alves, P., Saraiva, P., Carneiro, J., Campos, P., Martins, H., Novais, P., Marreiros, G. (2022)
	Take boat trips for the historical value of the route	
Wellness	Go to a SPA/beauty centre	Alves, P., Martins, H., Saraiva, P., Carneiro, J., Novais, P & Marreiros, G. (2023); Alves, P., Saraiva, P., Carneiro, J., Campos, P., Martins, H., Novais, P., Marreiros, G. (2022)
	Undergo health and wellness treatments	

Appendix 3: Focus group scripts

First focus group

Time 14:00-14:05	Welcome and Introductions Introduction and explanation of the format of the session, and how participants' views will be used.	
14:05-14:15	Explaining rules and housekeeping Housekeeping issues (toilets, fire exits) Please speak one at a time, to ensure that everyone has an opportunity to share their views Respect the opinions of others - everyone's views are valid although you might not agree with them There are no right or wrong answers – the goal is to know what you think The session is audio recorded but everything will be kept confidential – no names will be put against comments, after transcription If anyone has any specific questions that do not relate to the discussion, there will be an opportunity at the end of the meeting Asking participants to introduce themselves and share something interesting (and brief) about themselves, as an ice breaker, giving participants the opportunity to speak so that they feel more confident when participating in the focus group	
14:15-15:10	Focus group questions Has market segmentation been addressed at your current organisation? What type of segmentation is driving the marketing activities at your current organisation? Have you come across the term personality-based market segmentation before? What are your thoughts on market segmentation based on personality? Do you think it would add value to your organisation? Why? Why not? What are the perceived advantages when using this type of segmentation? Do you perceive any disadvantages when segmenting customers based on their personalities? If yes, how could we mitigate them? Are there any barriers towards adopting a personality-based segmentation approach? Do you think your organisation would adopt this kind of segmentation? Why? Why not? How do you think personality-based marketing segmentation could be implemented within the organisation? Is there anything else you would like to add on the topic of personality-based market segmentation?	
	Focus group question	Supporting literature
	Has market segmentation been addressed at your current organisation?	Dolnicar (2022); Morrison, Cheah & Kumar (2024)

	What type of segmentation is driving the marketing activities at your current organisation?	Dolnicar (2022); Morrison, Cheah & Kumar (2024)
	Have you come across the term personality-based market segmentation before?	Alves et al. (2023); Dolnicar (2022); Morrison, Cheah & Kumar (2024)
	What are your thoughts on market segmentation based on personality?	Dolnicar (2022); Morrison, Cheah & Kumar (2024)
	Do you think it would add value to your organisation? Why? Why not?	Li, Meng & Uysal (2021); Reinhold, Beritelli & Laesser (2023)
	What are the perceived advantages when using this type of segmentation?	Dolnicar & Grün (2008)
	Do you perceive any disadvantages when segmenting customers based on their personalities? If yes, how could we mitigate them?	Zhang et al. (2022); Hwang et al. (2019)
	Are there any barriers towards adopting a personality-based segmentation approach?	Sigala (2024); Foris et al. (2020); Brassell (2022)
	Do you think your organisation would adopt this kind of segmentation? Why? Why not?	Buhalis & Amaranggana (2015); Huang et al. (2022)
	How do you think personality-based market segmentation could be implemented within the organisation?	Reinhold, Beritelli & Laesser (2023); Dong et al. (2023); Montag et al. (2021); Neuhofer, Buhalis & Ladkin (2015)
	Is there anything else you would like to add on the topic of personality-based market segmentation?	Veal (2017); Braun & Clarke (2006); Patton (2005)
15:10-15:20	Welcoming questions from the group	
15:20-15:25	Summing up Summarising main points, asking whether there are any concerns, explaining again how their views will be used and the next steps of the research, how they can access their data.	
15:25-15:30	Giving thanks and closing	

Second focus group

Time 13:00-13:05	Welcome and Introductions Introduction and explanation of the format of the session, and how participants' views will be used	
13:05-13:15	Explaining rules and housekeeping Housekeeping issues (toilets, fire exits) Please speak one at a time, to ensure that everyone has an opportunity to share their views Respect the opinions of others - everyone's views are valid although you might not agree with them There are no right or wrong answers – the goal is to know what you think The session is recorded but everything will be kept confidential – no names will be put against comments, after transcription If anyone has any specific questions that do not relate to the discussion, there will be an opportunity at the end of the meeting Asking participants to introduce themselves and share something interesting (and brief) about themselves, as an ice breaker, giving participants the opportunity to speak so that they feel more confident when participating in the focus group	
13:15-14:10	Focus group question	Supporting literature
	Were the identified visitor clusters surprising? Why?	Dolnicar (2022); Pearce (2013); Li, Meng & Uysal (2021)
	Do the clusters align with your expectations? Why?	Dolnicar (2022)
	How do you think knowledge of these clusters could be useful for your business operations or marketing strategies moving forward?	Morrison, Cheah & Kumar (2024); Reinhold, Beritelli & Laesser (2023); Dolnicar & Grün (2008)
	How might businesses like yours work together to enhance experiences for certain visitor clusters identified in the research?	Buhalis & Amaranggana (2015); Foris et al. (2020); Hall (2011)
	What are your initial thoughts on a destination mobile app that provides personalised trip planning and recommendations based on visitor profiles?	Beierle et al. (2020); Montag et al. (2021); Giglio et al. (2019)
	What role do you think it could play in your marketing efforts? How might you use app data to adapt products, services, or experiences?	Leung, Buhalis & Viglia (2024); Huang et al. (2022); Sigala et al. (2024)

	What are your perspectives on how to collect this data in a non-invasive way?	Hinds & Joinson (2019); Reinhold, Beritelli & Laesser (2023); Brassell (2022)
	What potential issues do you foresee?	Zhang et al. (2022); Suanpang & Pothipassa (2024)
	How might they be mitigated?	Sigala et al. (2024); Dong et al. (2023); Guerrero & Dias (2024)
	Is there anything else you would like to add on the topic of personality-derived visitor clusters?	Patton (2005); Braun & Clarke (2006); Veal (2017)
14:10-14:20	Welcoming questions from the group	
14:20-14:25	Summing up Summarising main points, asking whether there are any concerns, explaining again how their views will be used and the next steps of the research, how they can access their data.	
14:25-14:30	Giving thanks and closing	

Appendix 4: Semi-structured interview

Question	Probes	Follow up	Dimension/ Supporting literature
Why did you choose this package?	Can you elaborate on the factors that influenced your decision?	Were there specific elements of the package that stood out to you during the decision-making process?	Preferred activities Dolnicar (2022); Crompton (1979)
What other options did you consider before selecting this package?	How did your decision-making process evolve as you evaluated different package options?	Were there specific features or aspects of other packages that you found appealing but ultimately decided against?	
Are there specific activities that particularly stand out to you as must-do?	Could you elaborate on why these activities are significant to you?	How do these activities enhance your overall experience in Cumbria?	
What motivates you to visit Cumbria?	Can you share the primary motivations that led to your decision to visit Cumbria?	What specific factors (personal, recommendations, external) drove these motivations?	Travel motivation Iso-Ahola (1982); Dann (1977); Pearce & Lee (2005)
Reflecting on your chosen package, are there specific goals you hope to achieve through these activities?	Are there personal objectives or specific experiences you aim to fulfil?	Are there elements of personal development you seek during your trips?	
Do you enjoy forming social connections while travelling?	Do you generally prefer socialising in group activities, or do you value more solitary experiences?	How do these preferences influence your activity choices in Cumbria?	Extroversion Trull et al.'s (1998, 2001)
Can you provide specific examples of activities that you have enjoyed or participated in during your trip that align with your need for socializing/ solitary experiences?	Could you give some specific examples of activities you engaged in during your trip that catered to your desire for socializing/ solitary experiences?	How did the social or solitary aspects enhance your overall enjoyment of the trip?	

Do you tend to be more inclined towards trying new things and exploring, or do you prefer familiar and traditional experiences?	Can you share your inclination toward novelty versus familiarity in your preferred experiences?	How did these activities contribute to your sense of enjoyment or fulfilment during the trip?	Open-Mindedness Trull et al.'s (1998, 2001)
Can you provide specific examples of activities that you have enjoyed or participated in during your trip that align with your need to explore new things/ provided a familiar experience?	Can you share specific instances or activities from your trip that align with your desire to explore new things/ provide a sense of familiarity?	How did these specific activities contribute to either fulfilling your need for exploration/offering a sense of familiarity during your trip?	
How organised and detail-oriented would you say you are when planning and engaging in activities, during your travel in Cumbria?	Can you describe how comfortable you are with spontaneity and adaptability in your plans when in Cumbria?	How challenging is it to deviate from well-organised plans during your travel experience in Cumbria?	Conscientiousness Trull et al.'s (1998, 2001)
Can you provide specific examples of activities that you have enjoyed or participated in during your trip that align with your well-organised plans/ spontaneity in Cumbria?	Can you share specific examples of activities from your trip in Cumbria that reflect your inclination towards well-organised plans or spontaneous experiences?	How did these activities align with your preference for either well-organised plans or spontaneous moments during your trip in Cumbria?	
Would you say that you are more likely to opt for activities that involve cooperation and shared experiences, or do you value more independence and personal enjoyment?	Could you provide insights into your preference for cooperative versus independent activities during your travels?	What are the instances where you find it challenging to compromise or find common ground with others during your travel in Cumbria?	Agreeableness Trull et al.'s (1998, 2001)
Can you provide specific examples of activities that you have enjoyed or participated in during your trip that involved cooperation/ independence and personal enjoyment?	Can you share specific examples of activities from your trip that involved cooperation with others/ showcased your independence and personal enjoyment?	How did these specific activities reflect your inclination towards cooperative experiences/ preference for independent and personally enjoyable	

		moments during the trip?	
Do you worry a lot about the future or things that might go wrong? What kinds of things do you worry about?	Can you elaborate on the nature of your concerns and how they may influence your travel decisions, especially in unpredictable situations?	How do you manage or cope with unexpected events while traveling in Cumbria, such as changes in weather impacting your planned activities?	Negative Emotionality Trull et al.'s (1998, 2001)
Can you provide specific examples of activities that you have enjoyed or participated in during your trip that caused some concerns?	Can you share specific instances or activities from your trip that caused some concerns or raised issues for you?	In reflecting on these activities, could you elaborate on the specific concerns they triggered and how they impacted your overall experience during the trip?	
In planning your visit to Cumbria, did you use any travel technology?	Could you provide insights into the role of travel technology in your trip planning process?	Were there specific tools or platforms that proved particularly useful in planning your visit to Cumbria?	Use of technology Beierle et al. (2020); Sigala et al. (2024); Huang et al. (2022)
In planning your future visit to Cumbria, would you consider using a destination app?	What factors would influence your decision to use a destination app for future visits to Cumbria?	Are there specific features or functionalities that you believe a destination app should have to enhance your planning experience?	
Is there anything else you would like to add or any specific aspect of your travel preferences that we haven't discussed?	Is there any aspect of your travel experiences that holds significant importance to you but hasn't been covered in our discussion?	Can you elaborate on the specific aspect you mentioned, and how does it contribute to shaping your overall travel preferences or experiences?	Unexplored facets Veal (2017); Braun & Clarke (2006); Patton (2005)

Appendix 5: Activity packages

Package 1	Package 2	Package 3	Package 4	Package 5
Engage in thematic sports (e.g., horse riding, archery). Participate in sporting competitions (e.g., trail running, cycling competition). Participate in food and beverage masterclasses. Do adventure activities in the air (e.g., parachute jump, gliding). Attend cultural activities/ artistic performances. Attend festivals/concerts. Take boat trips for the historical value of the route. Attend other special events (e.g., wedding, birthday party). Go to a SPA/ beauty centre. Undergo health and wellness treatments.	Visit museums. Visit monuments (e.g., castles, churches, historic houses) parks, and gardens. Visit exhibitions/ art galleries. Visit archaeological sites/ ruins. Take boat trips to explore the destination.	Go to a SPA/ beauty centre. Undergo health and wellness treatments. Practice wild swimming/ forest bathing. Do adventure activities on water (e.g., sailing, canoeing, diving, jet skiing). Practice hiking / mountaineering/ long walks in nature. Do adventure activities on the land (rock climbing/ abseiling/ off road). Visit museums. Visit monuments (e.g., castles, churches, historic houses) parks, and gardens. Visit exhibitions/ art galleries. Visit archaeological sites/ ruins. Take boat trips to explore the destination. Attend cultural activities/ artistic performances. Attend festivals/concerts. Take boat trips for the historical value of the route. Attend other special events (e.g., wedding, birthday party). Engage in thematic sports (e.g., horse riding, archery). Participate in sporting competitions (e.g., trail running, cycling competition). Participate in food and beverage masterclasses. Do adventure activities in the air (e.g., parachute jump, gliding).	Practice wild swimming/ forest bathing. Do adventure activities on water (e.g., sailing, canoeing, diving, jet skiing). Practice hiking / mountaineering/ long walks in nature. Do adventure activities on the land (rock climbing/ abseiling/ off road).	Engage in thematic sports (e.g., horse riding, archery). Participate in sporting competitions (e.g., trail running, cycling competition). Participate in food and beverage masterclasses. Do adventure activities in the air (e.g., parachute jump, gliding). Attend cultural activities/ artistic performances. Attend festivals/concerts. Take boat trips for the historical value of the route. Attend other special events (e.g., wedding, birthday party).

Appendix 6: Initial study: Descriptive Statistics

Descriptive Statistics									
	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
E1_R I am someone who tends to be quiet.	330	1.00	5.00	2.8697	1.10731	.125	.134	-.926	.268
E2 I am someone who is outgoing, sociable.	330	1	5	3.42	.933	-.283	.134	-.401	.268
E3 I am someone who is dominant, acts as a leader.	330	1	5	3.20	1.005	-.277	.134	-.576	.268
E4_R I am someone who prefers to have others take charge.	330	1.00	5.00	3.2545	.93986	-.174	.134	-.529	.268
E5 I am someone who is full of energy.	330	1	5	3.75	.846	-.440	.134	-.006	.268
E6_R I am someone who is less active than other people.	330	1.00	5.00	3.9848	.93061	-.880	.134	.367	.268
A1 I am someone who is compassionate, has a soft heart.	330	1	5	4.12	.745	-.994	.134	1.999	.268
A2_R I am someone who can be cold and uncaring	330	1.00	5.00	4.1030	.97147	-1.028	.134	.397	.268
A3_R I am someone who is sometimes rude to others.	330	2.00	5.00	4.0818	.97817	-.792	.134	-.432	.268
A4 I am someone who is respectful, treats others with respect.	330	1	5	4.47	.589	-1.048	.134	3.023	.268
A5 I am someone who assumes the best about people.	330	1	5	3.67	.910	-.303	.134	-.453	.268
A6_R I am someone who tends to find fault with others.	330	1.00	5.00	3.5667	.89414	-.266	.134	-.445	.268
C1_R I am someone who tends to be disorganised.	330	1.00	5.00	3.7879	1.10971	-.768	.134	-.221	.268
C2 I am someone who keeps things neat and tidy.	330	1	5	3.60	1.068	-.398	.134	-.663	.268
C3_R I am someone who has difficulty	330	1.00	5.00	3.3879	1.10312	-.376	.134	-.817	.268

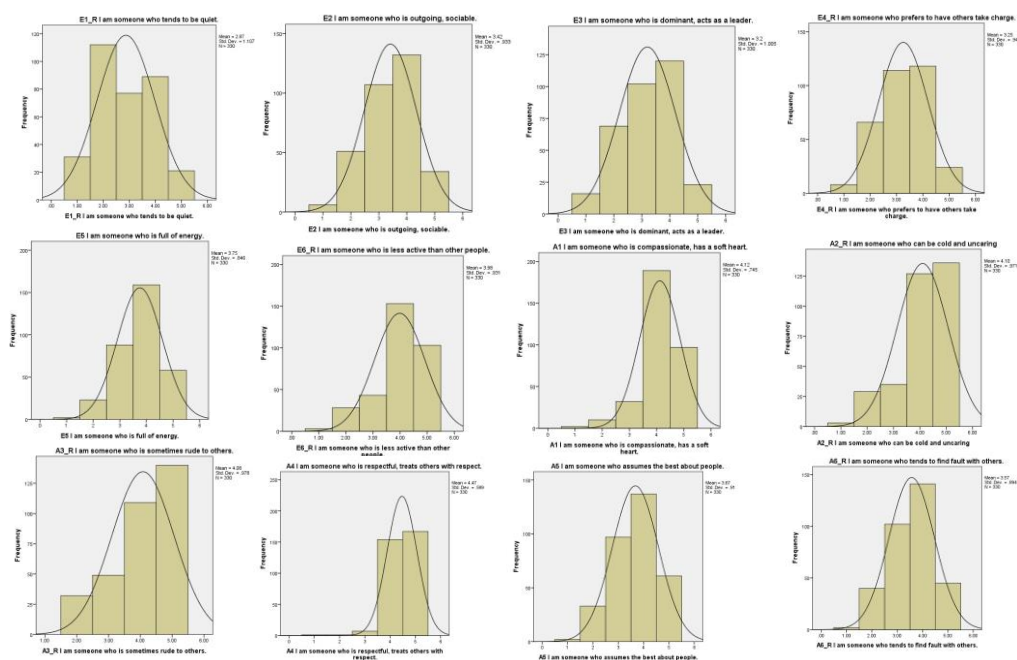
getting started on tasks.									
C4 I am someone who is persistent, works until the task is finished.	330	1	5	3.89	.874	-.672	.134	.197	.268
C5 I am someone who is reliable, can always be counted on.	330	2	5	4.33	.645	-.849	.134	1.436	.268
C6_R I am someone who can be somewhat careless.	330	1.00	5.00	3.7667	.95655	-.755	.134	.012	.268
N1 I am someone who worries a lot.	330	1	5	3.37	1.149	-.220	.134	-.908	.268
N2_R I am someone who is relaxed, handles stress well.	330	1.00	5.00	2.8030	.99878	.311	.134	-.576	.268
N3 I am someone who tends to feel depressed, blue.	330	1	5	2.54	1.157	.344	.134	-.829	.268
N4_R I am someone who feels secure, comfortable with self.	330	1.00	5.00	2.2667	.98705	.704	.134	.082	.268
N5_R I am someone who is emotionally stable, not easily upset.	330	1.00	5.00	2.5394	.98312	.527	.134	-.384	.268
N6 I am someone who is temperamental, gets emotional easily.	330	1	5	2.58	.999	.280	.134	-.801	.268
O1 I am someone who is fascinated by art, music, or literature.	330	1	5	3.68	1.094	-.576	.134	-.504	.268
O2_R I am someone who has few artistic interests.	330	1.00	5.00	3.3697	1.23635	-.295	.134	-1.020	.268
O3_R I am someone who has little interest in abstract ideas.	330	1.00	5.00	3.3636	1.04948	-.199	.134	-.624	.268
O4 I am someone who is complex, a deep thinker.	330	1	5	3.63	.969	-.484	.134	-.265	.268
O5 I am someone who is original, comes up with new ideas.	330	1	5	3.55	.892	-.431	.134	-.179	.268
O6_R I am someone who has little creativity.	330	1.00	5.00	3.6273	1.06499	-.594	.134	-.420	.268
NS1 I travel to Cumbria to explore the	330	1	5	4.00	.894	-.944	.134	.617	.268

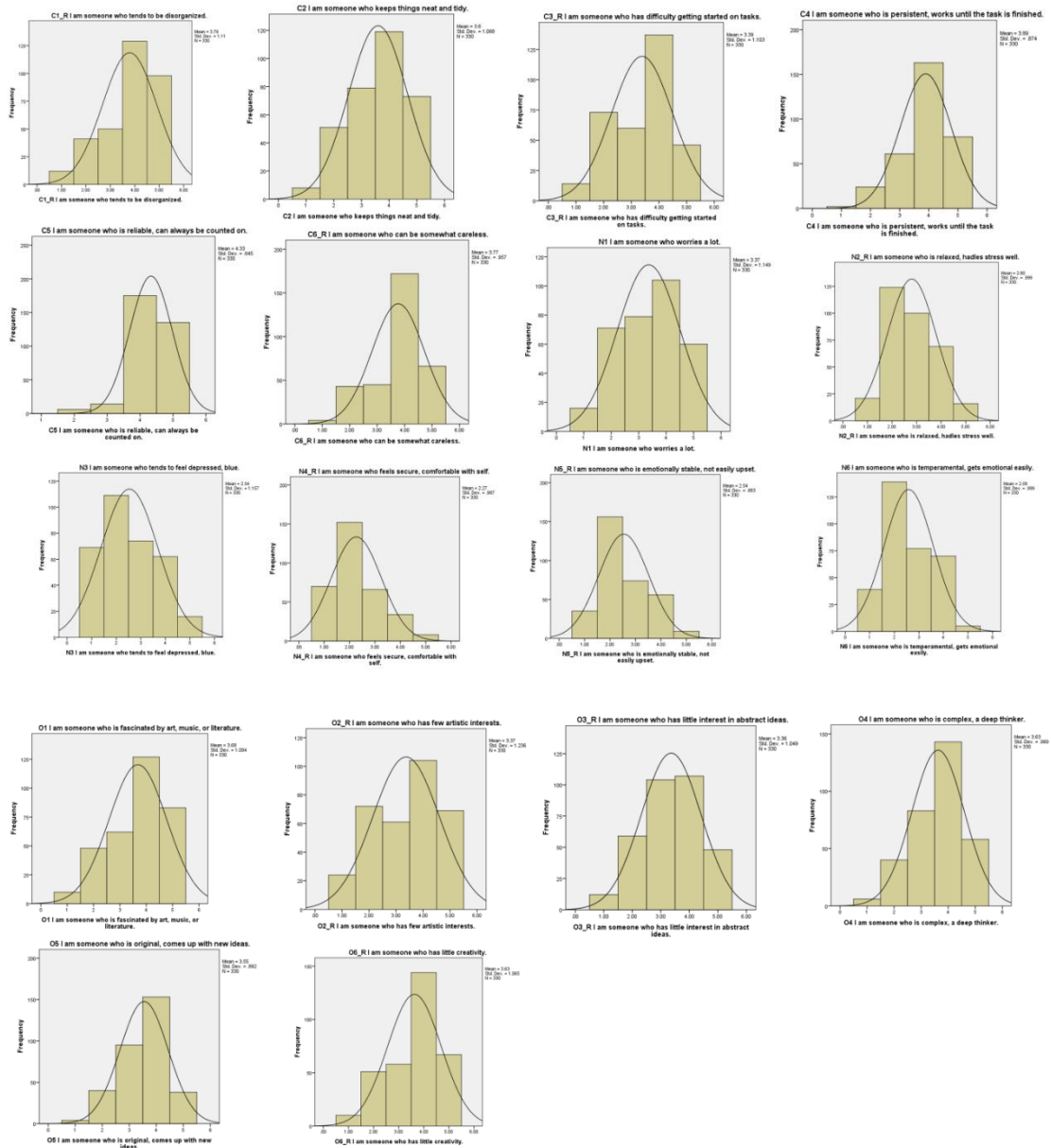
unknown/ do something new.									
NS2 I travel to Cumbria to experience thrills or excitement.	330	1	5	3.47	1.061	-.250	.134	-.785	.268
NS3 I travel to Cumbria to seek fun and enjoyment.	330	1	5	4.11	.785	-1.034	.134	1.867	.268
ESC1 I travel to Cumbria to physically rest and relax.	330	1	5	3.62	1.127	-.574	.134	-.577	.268
ESC2 I travel to Cumbria to escape from the daily routine.	330	1	5	4.28	.754	-1.166	.134	1.858	.268
ESC3 I travel to Cumbria to be away from the crowds of people.	330	1	5	3.78	1.031	-.562	.134	-.472	.268
REL1 I travel to Cumbria to do things with my partner/family/friends.	330	1	5	4.09	1.089	-1.396	.134	1.371	.268
REL2 I travel to Cumbria to meet new people who enjoy the same things as I do.	330	1	5	2.73	1.071	.322	.134	-.514	.268
REL3 I travel to Cumbria to connect with friends or relatives living in other locations.	330	1	5	2.58	1.223	.447	.134	-.889	.268
REC1 I travel to Cumbria to share skills with others/ showing what I can do.	330	1	5	2.33	1.067	.585	.134	-.380	.268
REC2 I travel to Cumbria as it is a destination that would impress others.	330	1	5	2.31	1.246	.681	.134	-.666	.268
NA1 I travel to Cumbria to admire and be close to nature.	330	2	5	4.63	.548	-1.255	.134	1.245	.268
NA2 I travel to Cumbria to get a better appreciation of nature.	330	2	5	4.44	.717	-1.268	.134	1.534	.268
AU1 I travel to Cumbria to be independent.	330	1	5	3.46	1.092	-.196	.134	-.699	.268

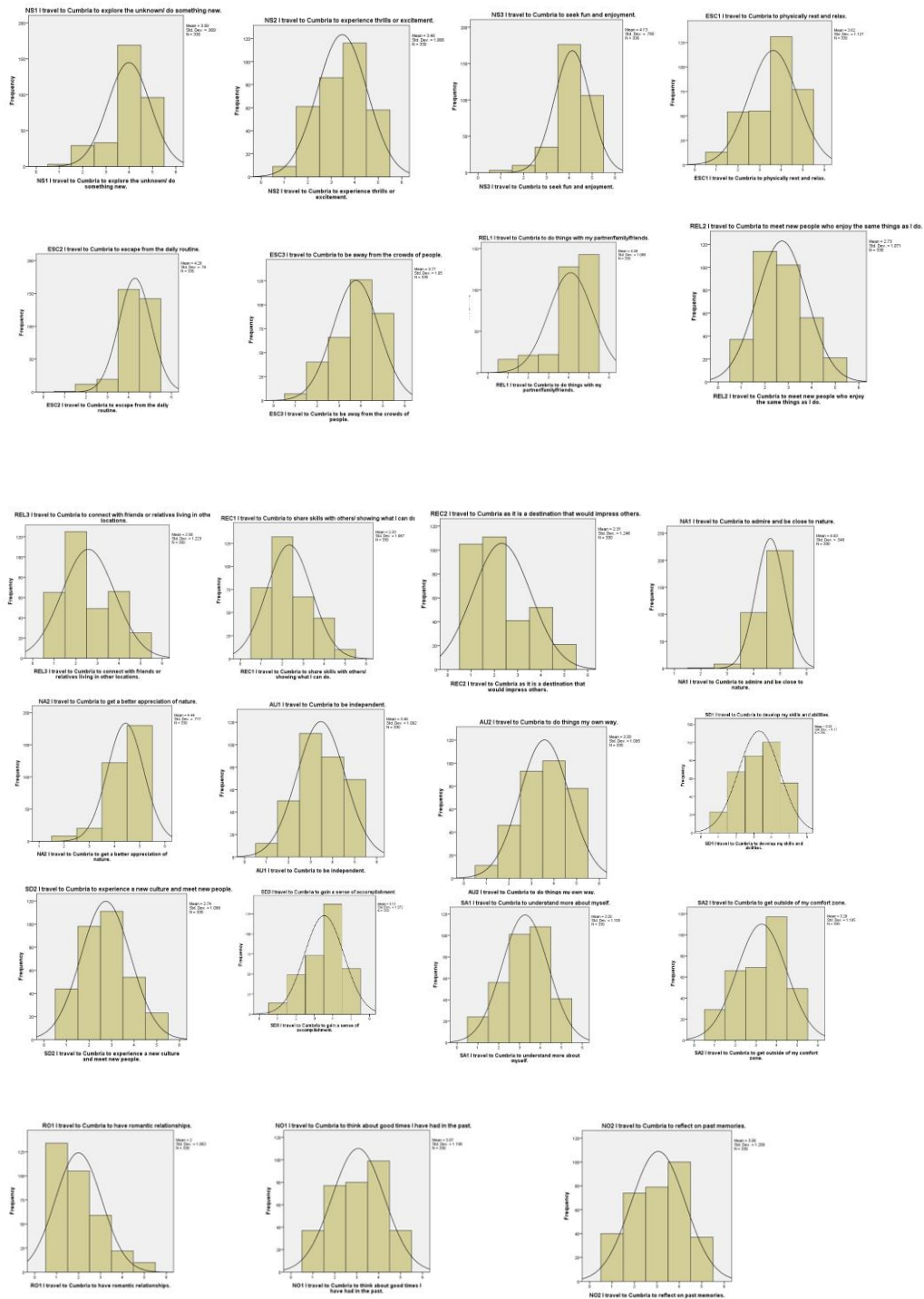
AU2 I travel to Cumbria to do things my own way.	330	1	5	3.58	1.095	-.355	.134	-.656	.268
SD1 I travel to Cumbria to develop my skills and abilities.	330	1	5	3.29	1.170	-.223	.134	-.855	.268
SD2 I travel to Cumbria to experience a new culture and meet new people.	330	1	5	2.74	1.099	.241	.134	-.549	.268
SD3 I travel to Cumbria to gain a sense of accomplishment.	330	1	5	3.53	1.072	-.533	.134	-.409	.268
SA1 I travel to Cumbria to understand more about myself.	330	1	5	3.26	1.105	-.299	.134	-.584	.268
SA2 I travel to Cumbria to get outside of my comfort zone.	330	1	5	3.28	1.195	-.331	.134	-.875	.268
REL4 I travel to Cumbria to have romantic relationships.	330	1	5	2.00	1.062	.956	.134	.282	.268
NO1 I travel to Cumbria to think about good times I have had in the past.	330	1	5	3.07	1.196	-.129	.134	-.959	.268
NO2 I travel to Cumbria to reflect on past memories.	330	1	5	3.06	1.209	-.148	.134	-.975	.268
ADV1 While in Cumbria, I choose to do adventure activities on water (e.g., sailing, canoeing, diving, jet skiing).	330	1	5	2.75	1.391	.185	.134	-1.317	.268
ADV2 While in Cumbria, I choose to do adventure activities in the air (e.g., parachute jump, gliding).	330	1	5	1.72	.899	1.582	.134	2.917	.268
ADV3 While in Cumbria, I choose to do adventure activities on the land (rock climbing/ abseiling/ off road).	330	1	5	2.74	1.389	.223	.134	-1.250	.268
RCN2 While in Cumbria, I choose to observe natural	330	1	5	4.00	.947	-1.139	.134	1.281	.268

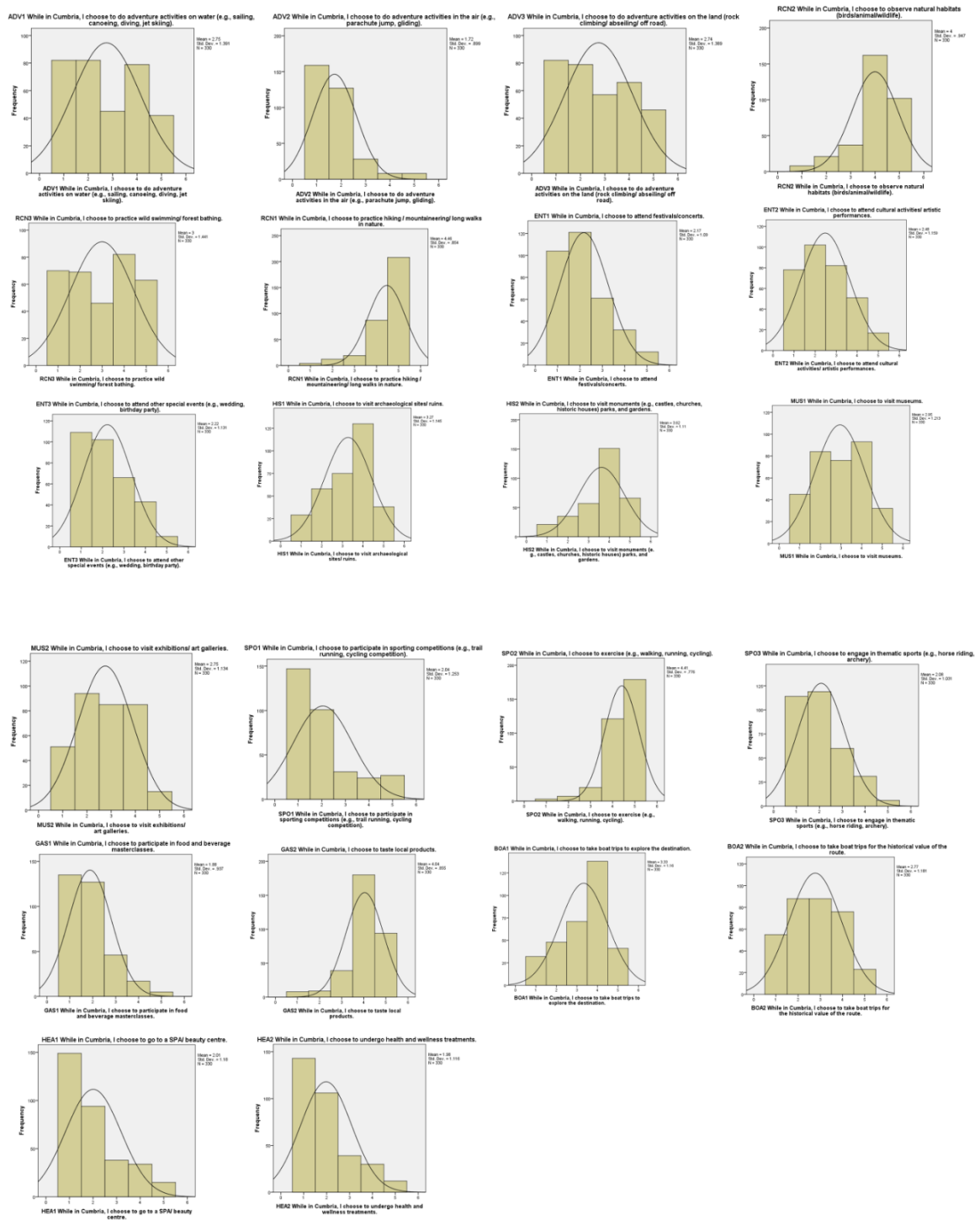
habitats (birds/animal/wildlife).									
RCN3 While in Cumbria, I choose to practice wild swimming/ forest bathing.	330	1	5	3.00	1.441	-.038	.134	-1.391	.268
ENT1 While in Cumbria, I choose to attend festivals/concerts.	330	1	5	2.17	1.090	.785	.134	-.074	.268
ENT2 While in Cumbria, I choose to attend cultural activities/ artistic performances.	330	1	5	2.48	1.159	.401	.134	-.721	.268
ENT3 While in Cumbria, I choose to attend other special events (e.g., wedding, birthday party).	330	1	5	2.22	1.131	.609	.134	-.580	.268
HIS1 While in Cumbria, I choose to visit archaeological sites/ ruins.	330	1	5	3.27	1.145	-.439	.134	-.686	.268
HIS2 While in Cumbria, I choose to visit monuments (e.g., castles, churches, historic houses) parks, and gardens.	330	1	5	3.62	1.110	-.813	.134	.005	.268
MUS1 While in Cumbria, I choose to visit museums.	330	1	5	2.95	1.213	-.034	.134	-1.030	.268
MUS2 While in Cumbria, I choose to visit exhibitions/ art galleries.	330	1	5	2.75	1.134	.041	.134	-.969	.268
SPO1 While in Cumbria, I choose to participate in sporting competitions (e.g., trail running, cycling competition).	330	1	5	2.04	1.253	1.157	.134	.272	.268
SPO2 While in Cumbria, I choose to exercise (e.g., walking, running, cycling).	330	1	5	4.41	.776	-1.611	.134	3.368	.268
RCN1 While in Cumbria, I choose to practice hiking / mountaineering/ long walks in nature.	330	1	5	4.46	.854	-1.873	.134	3.520	.268

SPO3 While in Cumbria, I choose to engage in thematic sports (e.g., horse riding, archery).	330	1	5	2.08	1.031	.761	.134	-.136	.268
GAS1 While in Cumbria, I choose to participate in food and beverage masterclasses.	330	1	5	1.88	.937	1.068	.134	.867	.268
GAS2 While in Cumbria, I choose to taste local products.	330	1	5	4.04	.855	-1.279	.134	2.557	.268
BOA1 While in Cumbria, I choose to take boat trips to explore the destination.	330	1	5	3.33	1.160	-.557	.134	-.569	.268
BOA2 While in Cumbria, I choose to take boat trips for the historical value of the route.	330	1	5	2.77	1.181	.098	.134	-.934	.268
HEA1 While in Cumbria, I choose to go to a SPA/ beauty centre.	330	1	5	2.01	1.180	1.038	.134	.059	.268
HEA2 While in Cumbria, I choose to undergo health and wellness treatments.	330	1	5	1.98	1.116	1.077	.134	.324	.268
Valid N (listwise)	330								







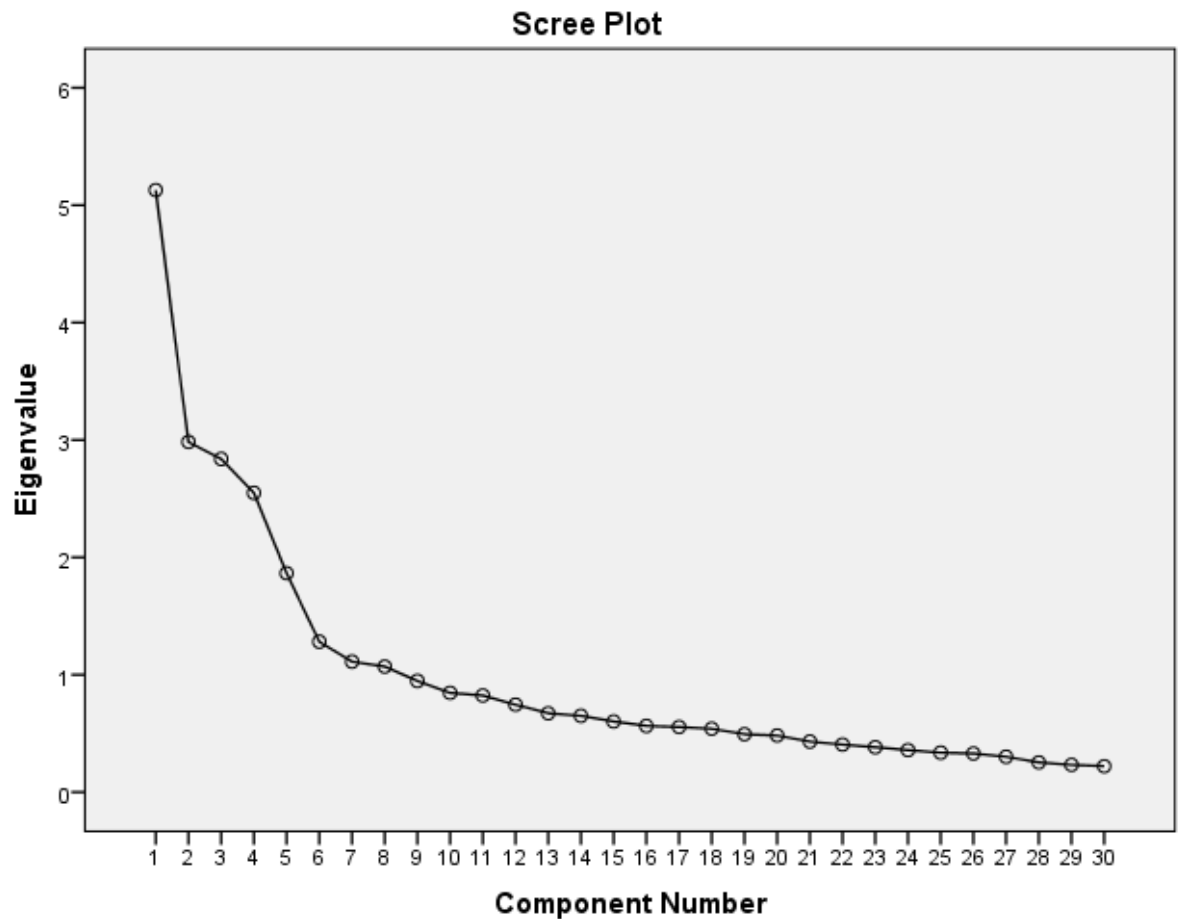


Appendix 7: Initial study: Personality traits

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.770
Bartlett's Test of Sphericity	Approx. Chi-Square	3493.711
	df	435
	Sig.	.000

Total Variance Explained						
Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.129	17.096	17.096	3.658	12.192	12.192
2	2.983	9.944	27.040	3.352	11.173	23.365
3	2.838	9.462	36.502	2.948	9.826	33.191
4	2.550	8.499	45.001	2.747	9.158	42.349
5	1.865	6.217	51.218	2.661	8.869	51.218
6	1.281	4.272	55.489			
7	1.112	3.705	59.195			
8	1.070	3.567	62.761			
9	.947	3.158	65.920			
10	.846	2.819	68.739			
11	.823	2.745	71.483			
12	.745	2.484	73.967			
13	.672	2.241	76.208			
14	.650	2.168	78.376			
15	.601	2.005	80.381			
16	.564	1.881	82.261			
17	.555	1.850	84.111			
18	.540	1.799	85.911			
19	.494	1.646	87.557			
20	.482	1.608	89.165			
21	.431	1.436	90.601			
22	.405	1.350	91.951			
23	.383	1.276	93.227			
24	.358	1.194	94.421			
25	.336	1.121	95.542			
26	.329	1.097	96.640			
27	.301	1.005	97.644			

28	.253	.845	98.489			
29	.232	.774	99.263			
30	.221	.737	100.000			
Extraction Method: Principal Component Analysis.						



Rotated Component Matrix ^a					
	Component				
	1	2	3	4	5
E1_R I am someone who tends to be quiet.				.708	
E2 I am someone who is outgoing, sociable.				.720	
E3 I am someone who is dominant, acts as a leader.				.724	
E4_R I am someone who prefers to have others take charge.				.581	

E5 I am someone who is full of energy.				.641	
E6_R I am someone who is less active than other people.				.395	
A1 I am someone who is compassionate, has a soft heart.			.649		
A2_R I am someone who can be cold and uncaring			.731		
A3_R I am someone who is sometimes rude to others.			.637		
A4 I am someone who is respectful, treats others with respect.			.607		
A5 I am someone who assumes the best about people.			.658		
A6_R I am someone who tends to find fault with others.			.662		
C1_R I am someone who tends to be disorganised.		.768			
C2 I am someone who keeps things neat and tidy.		.738			
C3_R I am someone who has difficulty getting started on tasks.		.639			
C4 I am someone who is persistent, works until the task is finished.		.720			
C5 I am someone who is reliable, can always be counted on.		.594			
C6_R I am someone who can be somewhat careless.		.669			
N1 I am someone who worries a lot.	.805				
N2_R I am someone who is relaxed, handles stress well.	.747				
N3 I am someone who tends to feel depressed, blue.	.721				
N4_R I am someone who feels secure, comfortable with self.	.675				

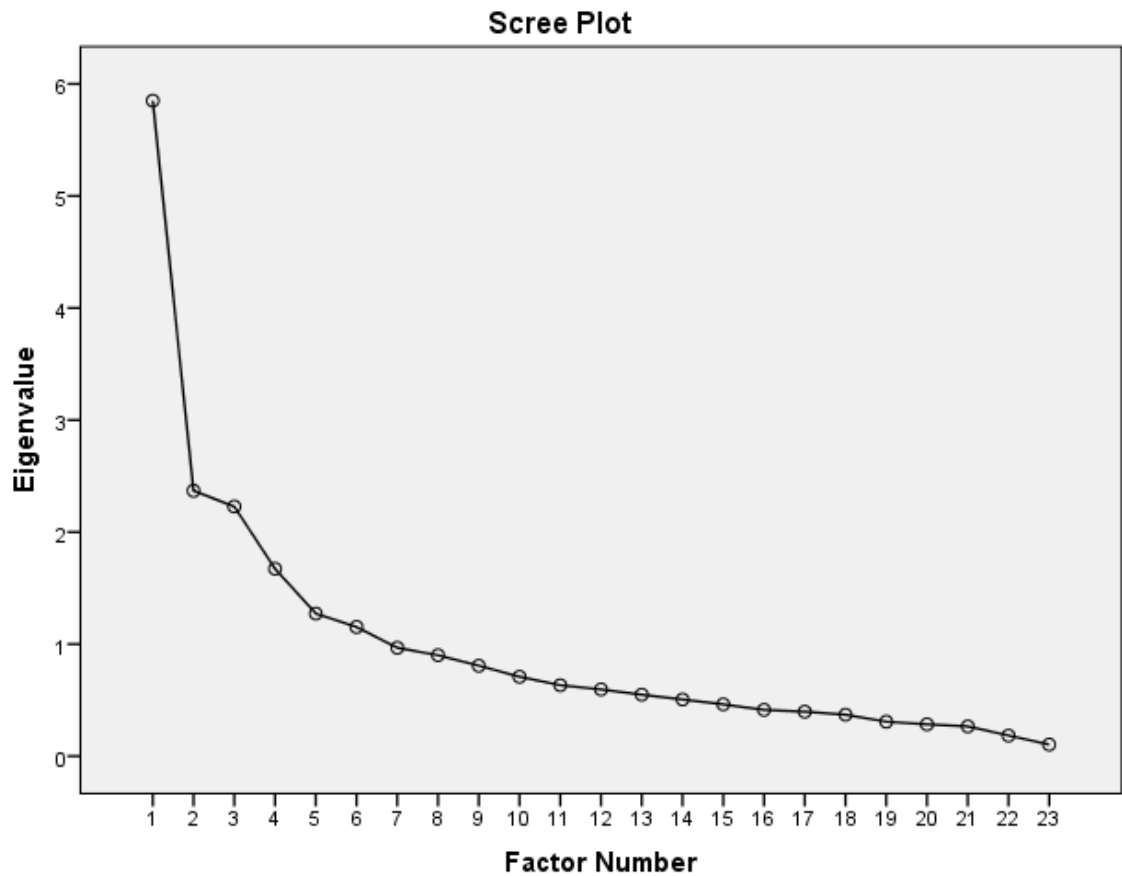
N5_R I am someone who is emotionally stable, not easily upset.	.843				
N6 I am someone who is temperamental, gets emotional easily.	.709				
O1 I am someone who is fascinated by art, music, or literature.					.660
O2_R I am someone who has few artistic interests.					.564
O3_R I am someone who has little interest in abstract ideas.					.682
O4 I am someone who is complex, a deep thinker.					.612
O5 I am someone who is original, comes up with new ideas.					.662
O6_R I am someone who has little creativity.					.670
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.					
a. Rotation converged in 5 iterations.					

Appendix 8: Initial study: Factor analysis: Travel motivations

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.805
Bartlett's Test of Sphericity	Approx. Chi-Square	3180.562
	df	253
	Sig.	.000

Total Variance Explained									
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.851	25.438	25.438	5.444	23.669	23.669	2.484	10.801	10.801
2	2.369	10.299	35.738	1.931	8.396	32.065	2.311	10.048	20.849
3	2.228	9.687	45.425	1.861	8.089	40.154	2.139	9.299	30.148
4	1.672	7.271	52.696	1.204	5.234	45.388	1.793	7.798	37.946
5	1.272	5.532	58.229	.868	3.773	49.162	1.776	7.721	45.667
6	1.153	5.013	63.241	.747	3.246	52.408	1.551	6.741	52.408
7	.967	4.206	67.448						
8	.901	3.916	71.364						
9	.808	3.511	74.875						
10	.708	3.080	77.955						
11	.633	2.754	80.709						
12	.596	2.589	83.298						
13	.549	2.386	85.683						
14	.506	2.198	87.882						
15	.462	2.011	89.893						
16	.413	1.797	91.690						
17	.397	1.726	93.416						
18	.370	1.608	95.024						
19	.307	1.337	96.361						

20	.284	1.233	97.593						
21	.266	1.156	98.749						
22	.184	.801	99.550						
23	.103	.450	100.000						
Extraction Method: Principal Axis Factoring.									



Rotated Factor Matrix ^a						
	Factor					
	1	2	3	4	5	6
SD3 I travel to Cumbria to gain a sense of accomplishment.	.724					
SA1 I travel to Cumbria to understand more about myself.	.659					
SA2 I travel to Cumbria to get outside of my comfort zone.	.655					
SD1 I travel to Cumbria to develop my skills and abilities.	.583					

ESC1 I travel to Cumbria to physically rest and relax.						
REC1 I travel to Cumbria to share skills with others/ showing what I can do.		.693				
REL2 I travel to Cumbria to meet new people who enjoy the same things as I do.		.663				
SD2 I travel to Cumbria to experience a new culture and meet new people.		.595				
REL3 I travel to Cumbria to connect with friends or relatives living in other locations.		.487				
REC2 I travel to Cumbria as it is a destination that would impress others.		.457				
REL4 I travel to Cumbria to have romantic relationships.						
NA2 I travel to Cumbria to get a better appreciation of nature.			.840			
NA1 I travel to Cumbria to admire and be close to nature.			.779			
ESC2 I travel to Cumbria to escape from the daily routine.			.441			
ESC3 I travel to Cumbria to be away from the crowds of people.			.438			
NO1 I travel to Cumbria to think about good times I have had in the past.				.958		
NO2 I travel to Cumbria to reflect on past memories.				.839		
AU1 I travel to Cumbria to be independent.					.795	
AU2 I travel to Cumbria to do things my own way.					.778	

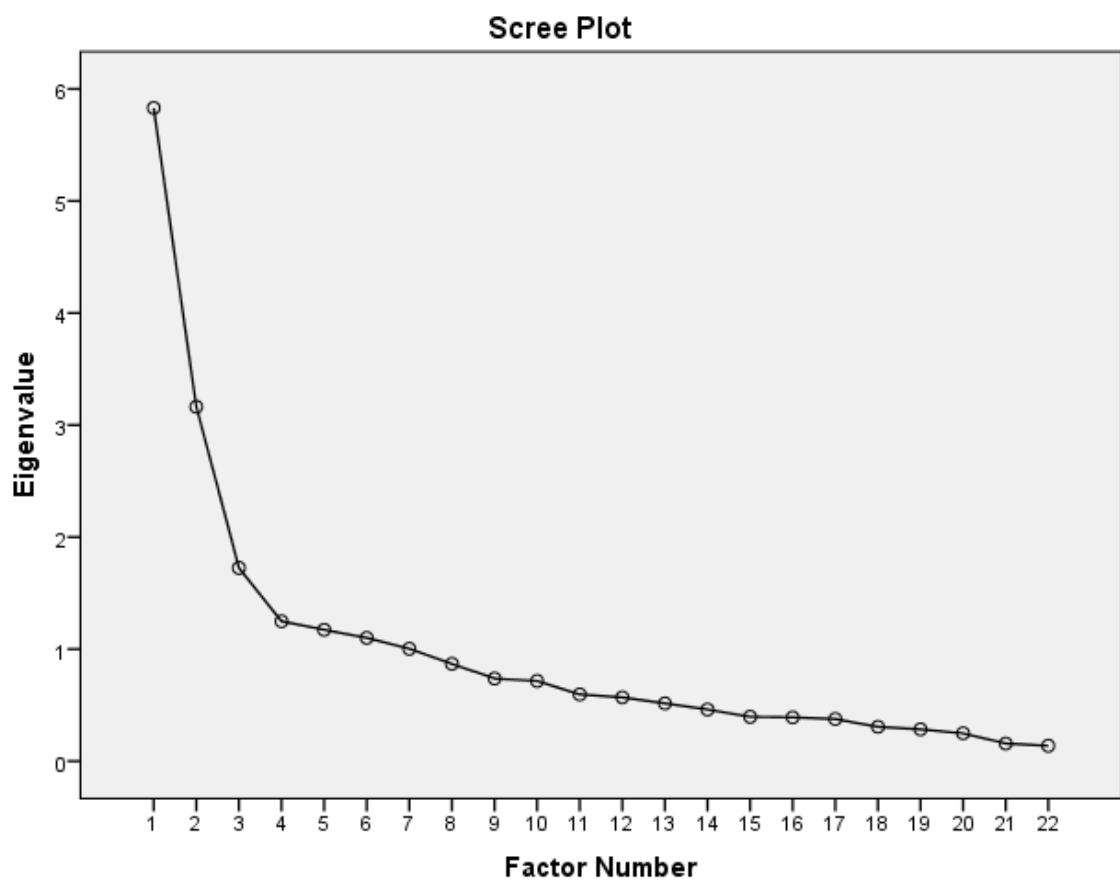
REL1 I travel to Cumbria to do things with my partner/family/friends.						
NS3 I travel to Cumbria to seek fun and enjoyment.						.720
NS1 I travel to Cumbria to explore the unknown/ do something new.						.558
NS2 I travel to Cumbria to experience thrills or excitement.						.547
Extraction Method: Principal Axis Factoring. Rotation Method: Varimax with Kaiser Normalization.						
a. Rotation converged in 8 iterations.						

Appendix 9: Initial study: Factor analysis: Visitor activities

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.809
Bartlett's Test of Sphericity	Approx. Chi-Square	3167.371
	df	231
	Sig.	.000

Total Variance Explained									
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.830	26.501	26.501	5.473	24.879	24.879	2.750	12.501	12.501
2	3.163	14.376	40.877	2.727	12.397	37.276	2.263	10.285	22.786
3	1.725	7.841	48.718	1.375	6.251	43.526	1.827	8.306	31.092
4	1.248	5.672	54.390	.925	4.203	47.729	1.751	7.961	39.053
5	1.173	5.330	59.720	.843	3.834	51.563	1.502	6.826	45.879
6	1.100	5.001	64.721	.721	3.277	54.840	1.358	6.172	52.052
7	1.003	4.557	69.278	.561	2.548	57.388	1.174	5.336	57.388
8	.868	3.947	73.225						
9	.737	3.352	76.577						
10	.716	3.253	79.829						
11	.595	2.706	82.535						
12	.570	2.589	85.124						
13	.516	2.344	87.468						
14	.461	2.095	89.563						
15	.396	1.799	91.362						

16	.390	1.775	93.136						
17	.376	1.709	94.845						
18	.306	1.393	96.238						
19	.284	1.291	97.530						
20	.249	1.130	98.659						
21	.157	.715	99.374						
22	.138	.626	100.000						
Extraction Method: Principal Axis Factoring.									



Rotated Factor Matrix ^a							
	Factor						
	1	2	3	4	5	6	7
HIS1 While in Cumbria, I choose to visit archaeological sites/ ruins.	.782						
HIS2 While in Cumbria, I choose to visit monuments (e.g., castles, churches, historic houses) parks, and gardens.	.780						

MUS1 While in Cumbria, I choose to visit museums.	.747						
MUS2 While in Cumbria, I choose to visit exhibitions/ art galleries.	.617						
GAS2 While in Cumbria, I choose to taste local products.							
RCN2 While in Cumbria, I choose to observe natural habitats (birds/animal/wildlife).							
ADV1 While in Cumbria, I choose to do adventure activities on water (e.g., sailing, canoeing, diving, jet skiing).		.732					
ADV2 While in Cumbria, I choose to do adventure activities in the air (e.g., parachute jump, gliding).		.648					
ADV3 While in Cumbria, I choose to do adventure activities on the land (rock climbing/ abseiling/ off road).		.611					
RCN3 While in Cumbria, I choose to practice wild swimming/ forest bathing.		.542					
SPO1 While in Cumbria, I choose to participate in sporting competitions (e.g., trail running, cycling competition).		.414					
ENT1 While in Cumbria, I choose to attend festivals/concerts.			.709				
ENT2 While in Cumbria, I choose to attend cultural activities/ artistic performances.			.703				
ENT3 While in Cumbria, I choose to attend other special events (e.g., wedding, birthday party).			.446				
HEA1 While in Cumbria, I choose to go to a SPA/ beauty centre.				.865			
HEA2 While in Cumbria, I choose to undergo health and wellness treatments.				.849			

BOA1 While in Cumbria, I choose to take boat trips to explore the destination.					.898		
BOA2 While in Cumbria, I choose to take boat trips for the historical value of the route.					.593		
RCN1 While in Cumbria, I choose to practice hiking / mountaineering/ long walks in nature.						.892	
SPO2 While in Cumbria, I choose to exercise (e.g., walking, running, cycling).						.590	
GAS1 While in Cumbria, I choose to participate in food and beverage masterclasses.							.681
SPO3 While in Cumbria, I choose to engage in thematic sports (e.g., horse riding, archery).							.541
Extraction Method: Principal Axis Factoring.							
Rotation Method: Varimax with Kaiser Normalization.							
a. Rotation converged in 7 iterations.							

Appendix 10: Initial study: Linear regression analysis

Model Summary^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.636 ^a	.405	.372	.69045
a. Predictors: (Constant), CULTURE, NATURE_ESCAPE, NEGATIVE_EMOTIONALITY, ADVENTURE, AGREEABLENESS, CONSCIENTIOUSNESS, NOSTALGIA, RECREATION, OPEN_MINDEDNESS, WELLNESS, AUTONOMY, NOVELTY_AND_STIMULATION, LAKE_CRUISE, EXTRAVERSION, RELATIONSHIP_AND_RECOGNITION, ENTERTAINMENT, SELF_DEVELOPMENT				
b. Dependent Variable: THEMATIC_ACTIVITIES				

Model Summary^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.671 ^a	.451	.421	.74067
a. Predictors: (Constant), THEMATIC, RECREATION, AGREEABLENESS, OPEN_MINDEDNESS, NEGATIVE_EMOTIONALITY, NOSTALGIA, NOVELTY_AND_STIMULATION, CONSCIENTIOUSNESS, AUTONOMY, WELLNESS, EXTRAVERSION, NATURE_ESCAPE, LAKE_CRUISE, ENTERTAINMENT, RELATIONSHIP_AND_RECOGNITION, ADVENTURE, SELF_DEVELOPMENT				
b. Dependent Variable: CULTURE				

Model Summary^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.676 ^a	.457	.428	.68431
a. Predictors: (Constant), CULTURE, NATURE_ESCAPE, NEGATIVE_EMOTIONALITY, AGREEABLENESS, WELLNESS, RECREATION, CONSCIENTIOUSNESS, NOSTALGIA, OPEN_MINDEDNESS, NOVELTY_AND_STIMULATION, AUTONOMY, THEMATIC, EXTRAVERSION, LAKE_CRUISE, RELATIONSHIP_AND_RECOGNITION, ENTERTAINMENT, SELF_DEVELOPMENT				
b. Dependent Variable: ADVENTURE				

Model Summary^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.473 ^a	.224	.182	.64833
a. Predictors: (Constant), ADVENTURE, NEGATIVE_EMOTIONALITY, CULTURE, NATURE_ESCAPE, AGREEABLENESS, CONSCIENTIOUSNESS, NOSTALGIA, OPEN_MINDEDNESS, WELLNESS, AUTONOMY, NOVELTY_AND_STIMULATION, LAKE_CRUISE, EXTRAVERSION, RELATIONSHIP_AND_RECOGNITION, THEMATIC, ENTERTAINMENT, SELF_DEVELOPMENT				
b. Dependent Variable: RECREATION				

Model Summary^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.687 ^a	.472	.443	.69528
a. Predictors: (Constant), RECREATION, OPEN_MINDEDNESS, NEGATIVE_EMOTIONALITY, NOSTALGIA, WELLNESS, AGREEABLENESS, NOVELTY_AND_STIMULATION, CONSCIENTIOUSNESS, AUTONOMY, CULTURE, THEMATIC, NATURE_ESCAPE, EXTRAVERSION, LAKE_CRUISE, RELATIONSHIP_AND_RECOGNITION, ADVENTURE, SELF_DEVELOPMENT				
b. Dependent Variable: ENTERTAINMENT				

Model Summary^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.600 ^a	.360	.325	.87778
a. Predictors: (Constant), ENTERTAINMENT, NEGATIVE_EMOTIONALITY, AUTONOMY, AGREEABLENESS, RECREATION, OPEN_MINDEDNESS, CONSCIENTIOUSNESS, NOVELTY_AND_STIMULATION, NOSTALGIA, WELLNESS, EXTRAVERSION, NATURE_ESCAPE, THEMATIC, CULTURE, RELATIONSHIP_AND_RECOGNITION, ADVENTURE, SELF_DEVELOPMENT				
b. Dependent Variable: LAKE_CRUISE				

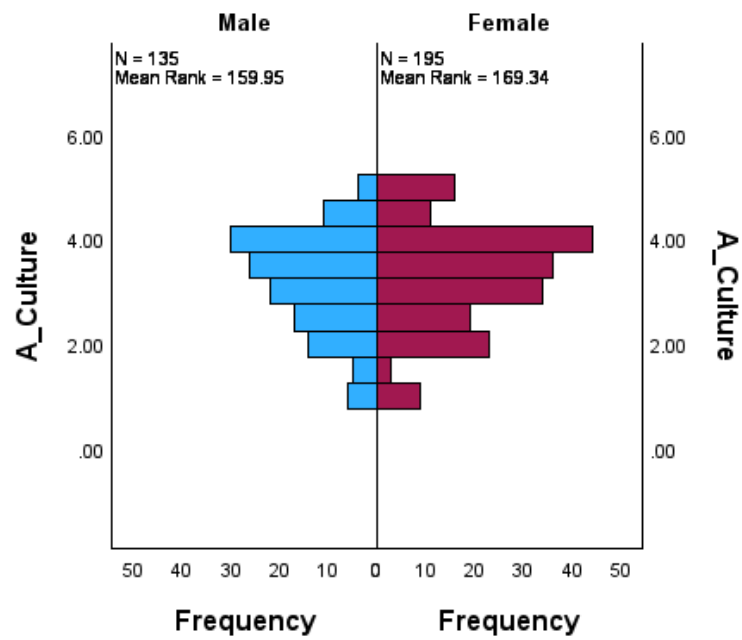
Model Summary^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.551 ^a	.304	.266	.94486
a. Predictors: (Constant), LAKE_CRUISE, SELF_DEVELOPMENT, NEGATIVE_EMOTIONALITY, OPEN_MINDEDNESS, AGREEABLENESS, NOSTALGIA, CONSCIENTIOUSNESS, RECREATION, THEMATIC, EXTRAVERSION, NATURE_ESCAPE, AUTONOMY, ENTERTAINMENT, NOVELTY_AND_STIMULATION, ADVENTURE, CULTURE, RELATIONSHIP AND RECOGNITION				
b. Dependent Variable: WELLNESS				

Appendix 11: Independent-Samples Mann-Whitney U Test Variable (IV): Gender

Hypothesis Test Summary				
	Null Hypothesis	Test	Sig. ^{a,b}	Decision
1	The distribution of A_Culture is the same across categories of Gender.	Independent-Samples Mann-Whitney U Test	.377	Retain the null hypothesis.
2	The distribution of A_Outdoors_Adventure is the same across categories of Gender.	Independent-Samples Mann-Whitney U Test	.177	Retain the null hypothesis.
3	The distribution of A_Events is the same across categories of Gender.	Independent-Samples Mann-Whitney U Test	.500	Retain the null hypothesis.
4	The distribution of A_Wellness is the same across categories of Gender.	Independent-Samples Mann-Whitney U Test	.480	Retain the null hypothesis.
5	The distribution of A_Lake_Cruise is the same across categories of Gender.	Independent-Samples Mann-Whitney U Test	.004	Reject the null hypothesis.
6	The distribution of A_Recreation is the same across categories of Gender.	Independent-Samples Mann-Whitney U Test	.817	Retain the null hypothesis.
7	The distribution of A_Thematic is the same across categories of Gender.	Independent-Samples Mann-Whitney U Test	.581	Retain the null hypothesis.
a. The significance level is .050.				
b. Asymptotic significance is displayed.				

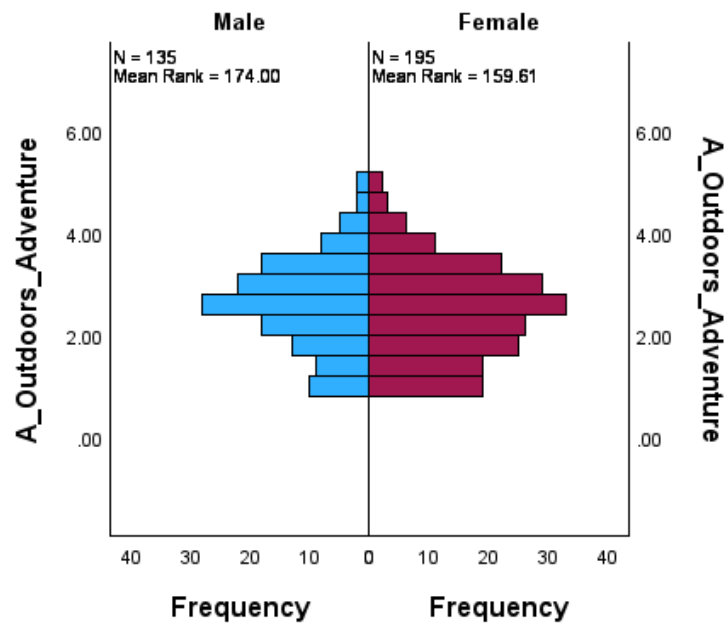
Independent-Samples Mann-Whitney U Test

Gender

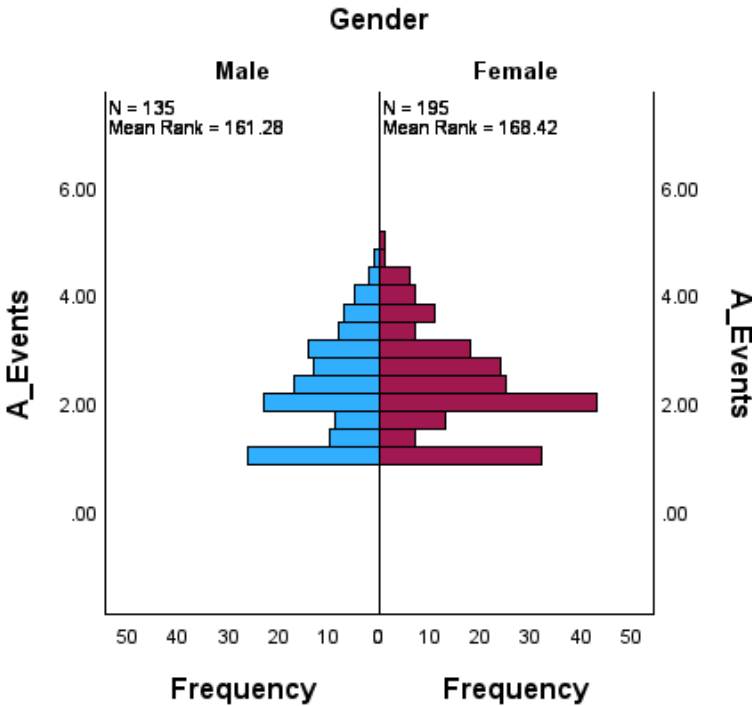


Independent-Samples Mann-Whitney U Test

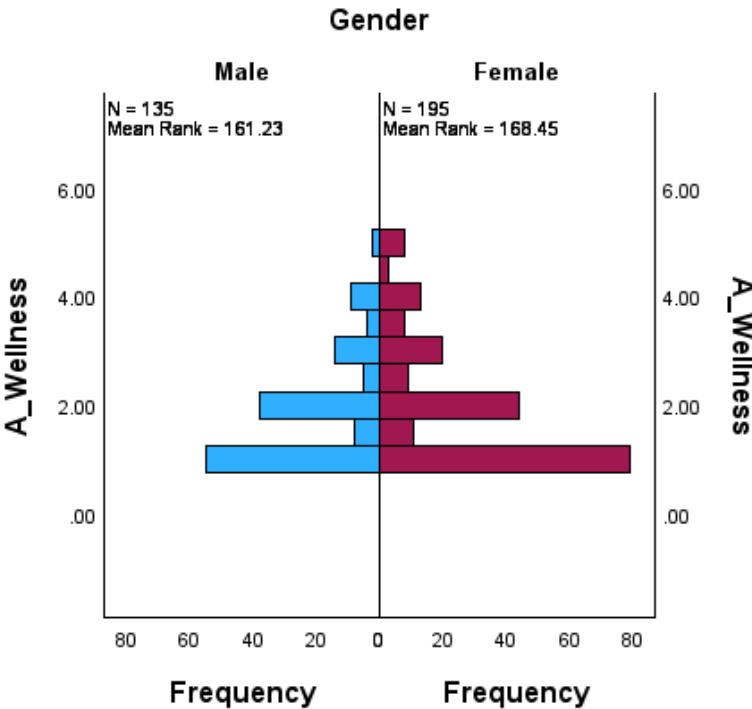
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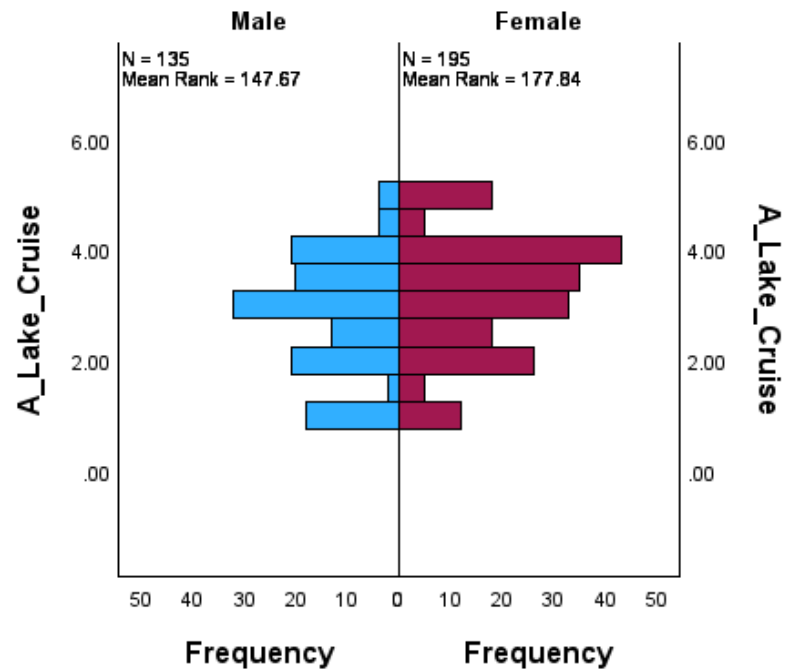


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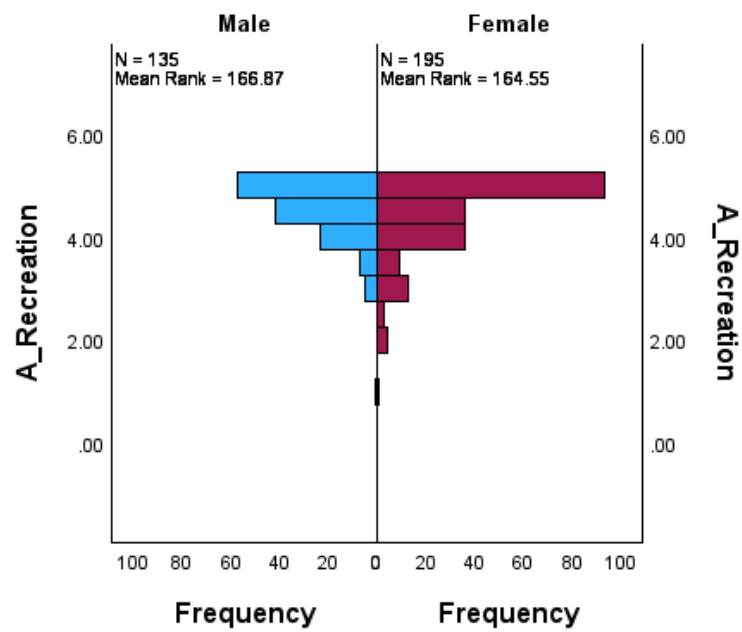
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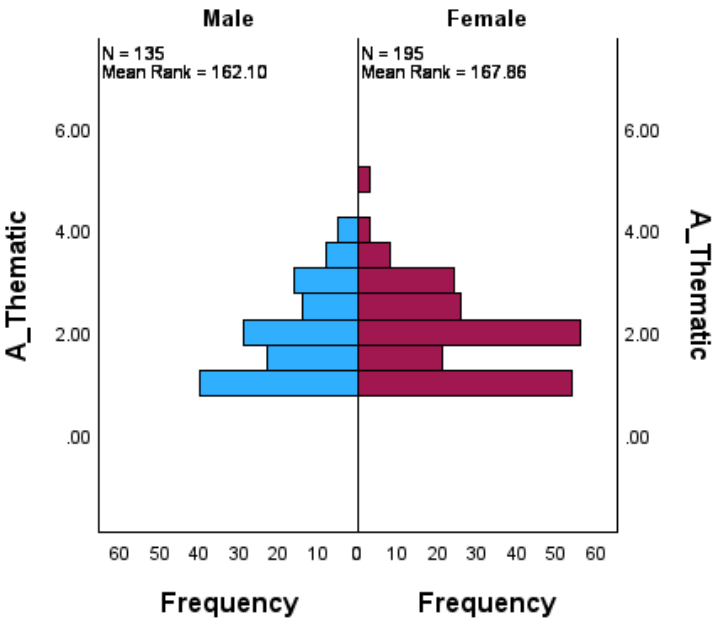
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Gender



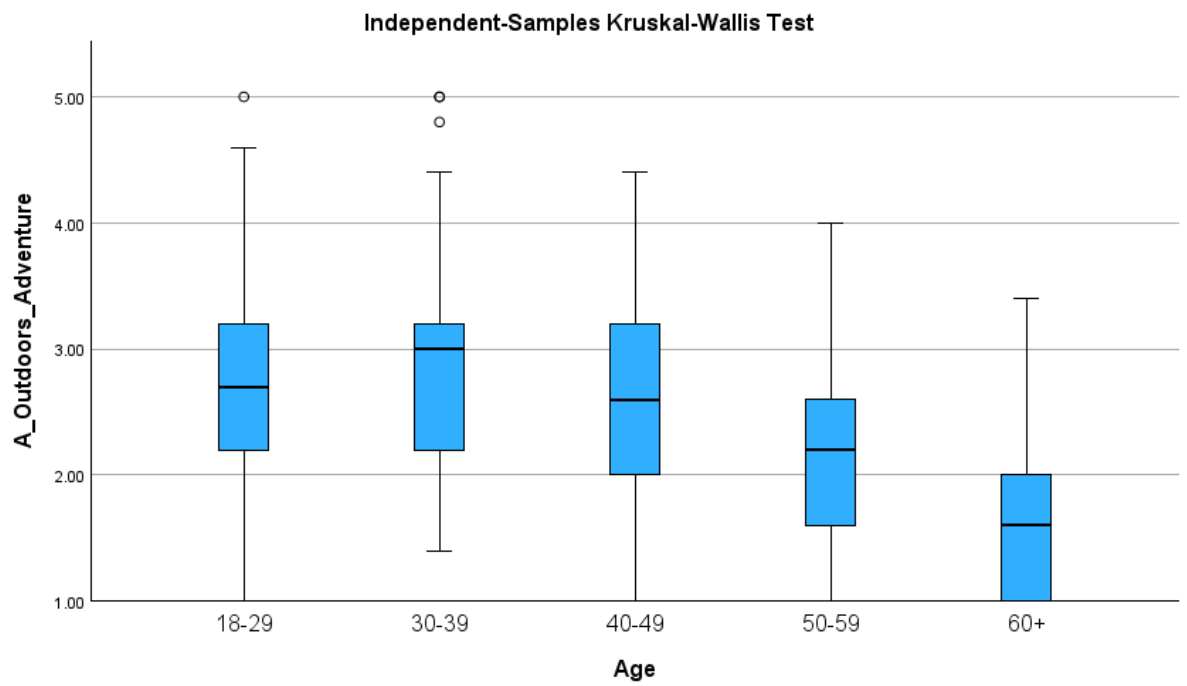
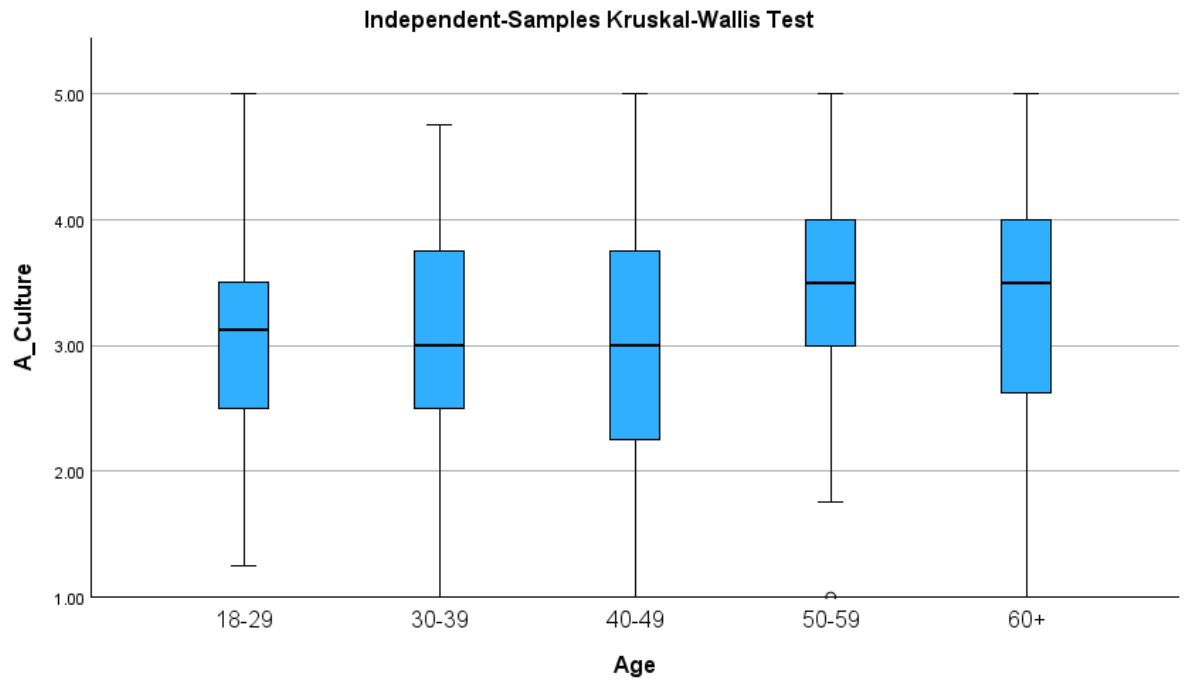
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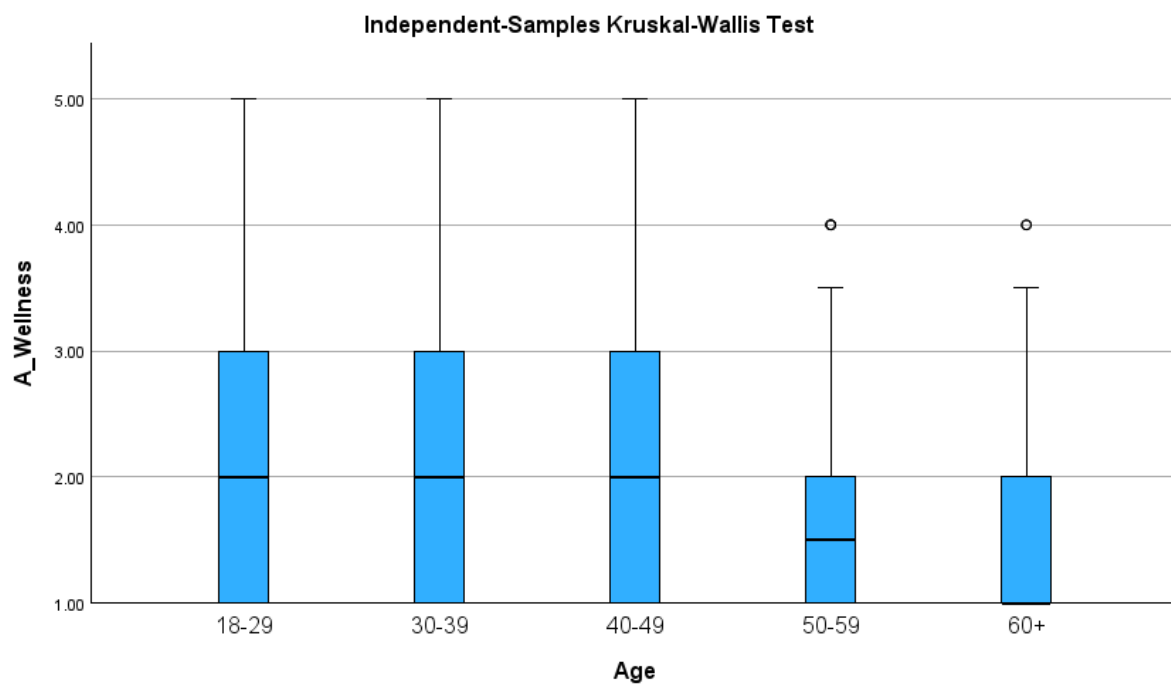
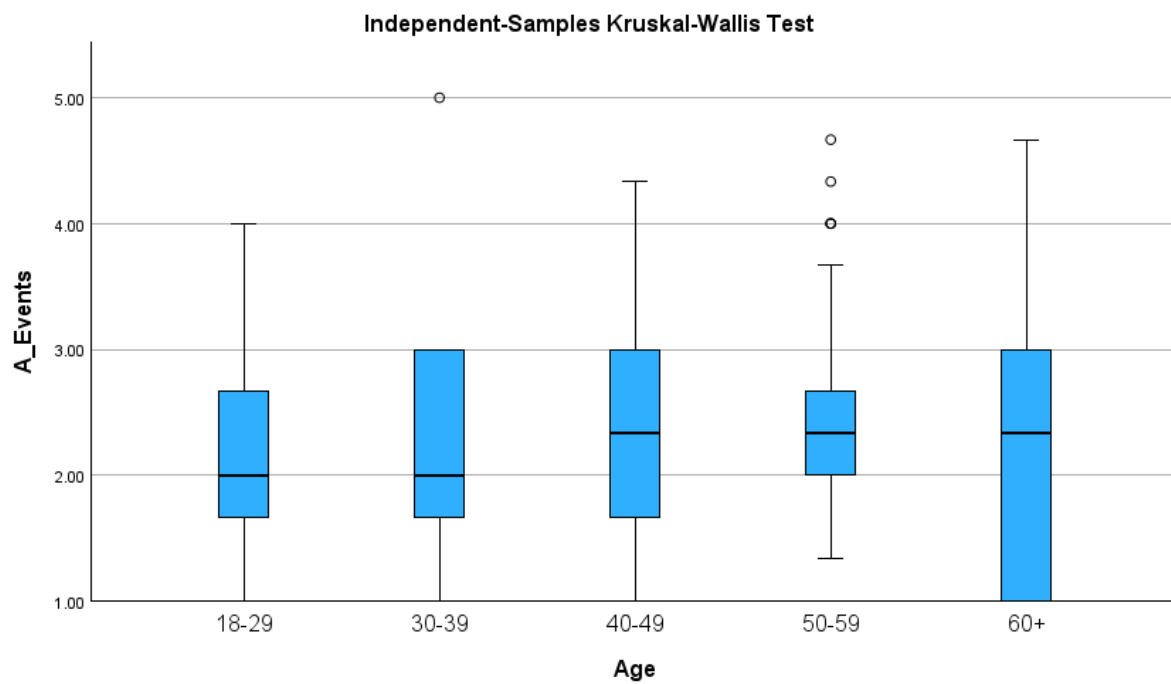
Gender

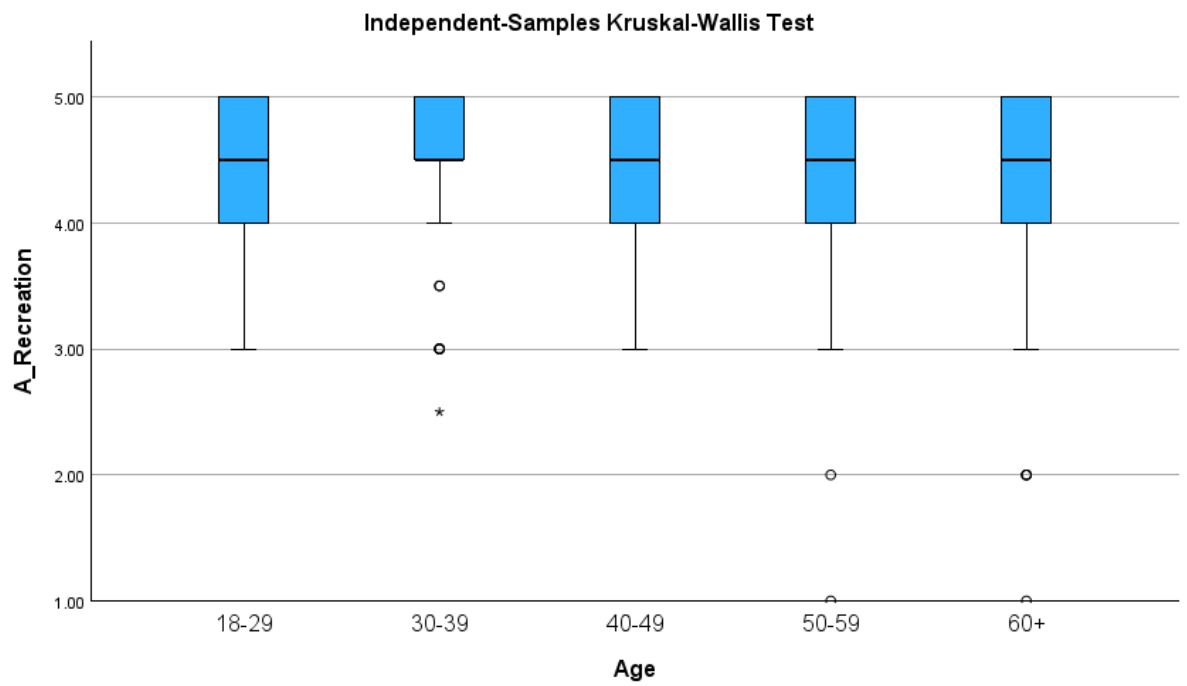
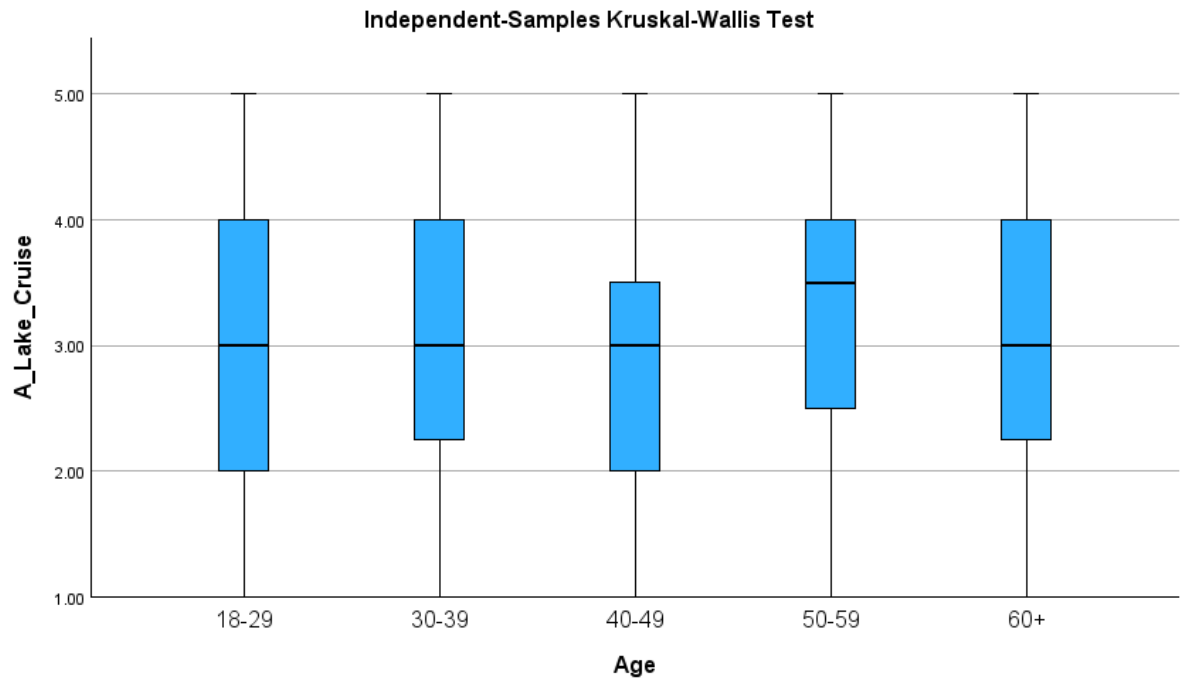


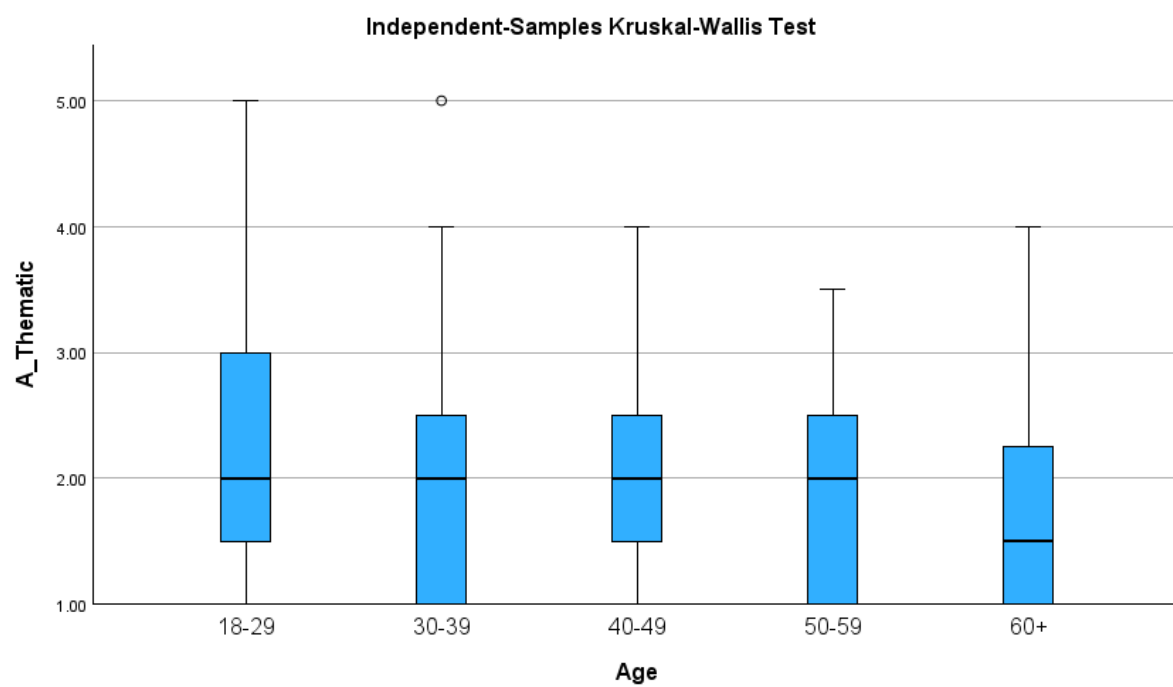
Appendix 12: Kruskal-Wallis Test Independent Variable (IV): Age

Hypothesis Test Summary				
	Null Hypothesis	Test	Sig. ^{a,b}	Decision
1	The distribution of A_Culture is the same across categories of Age.	Independent-Samples Kruskal-Wallis Test	.012	Reject the null hypothesis.
2	The distribution of A_Outdoors_Adventure is the same across categories of Age.	Independent-Samples Kruskal-Wallis Test	<.001	Reject the null hypothesis.
3	The distribution of A_Events is the same across categories of Age.	Independent-Samples Kruskal-Wallis Test	.698	Retain the null hypothesis.
4	The distribution of A_Wellness is the same across categories of Age.	Independent-Samples Kruskal-Wallis Test	.005	Reject the null hypothesis.
5	The distribution of A_Lake_Cruise is the same across categories of Age.	Independent-Samples Kruskal-Wallis Test	.646	Retain the null hypothesis.
6	The distribution of A_Recreation is the same across categories of Age.	Independent-Samples Kruskal-Wallis Test	.373	Retain the null hypothesis.
7	The distribution of A_Thematic is the same across categories of Age.	Independent-Samples Kruskal-Wallis Test	.079	Retain the null hypothesis.
a. The significance level is .050.				
b. Asymptotic significance is displayed.				



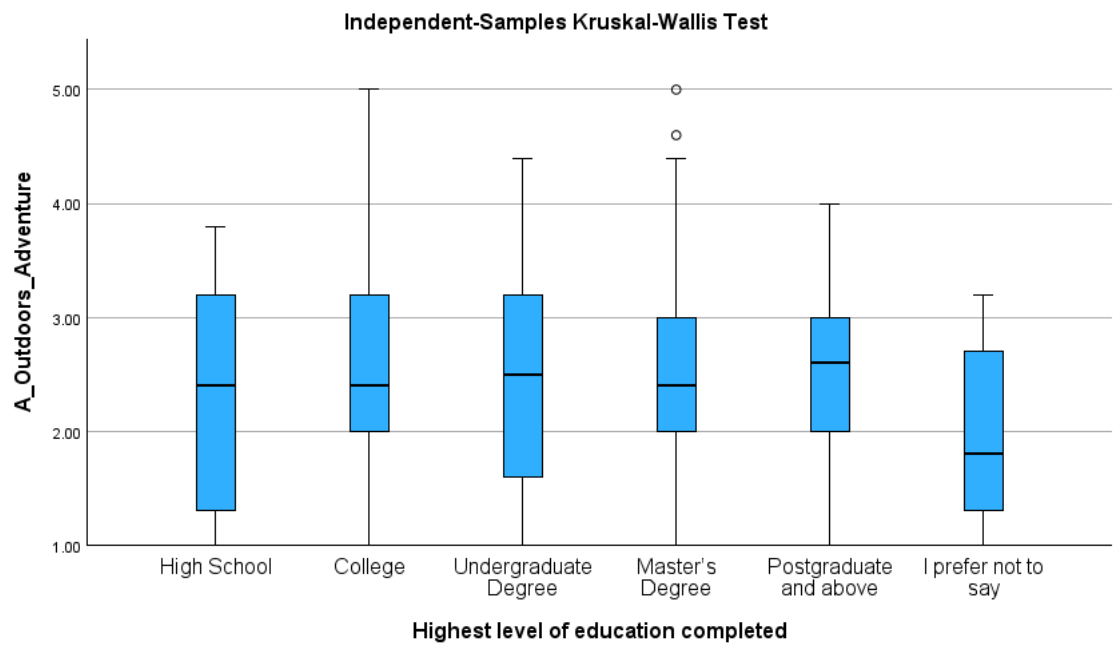
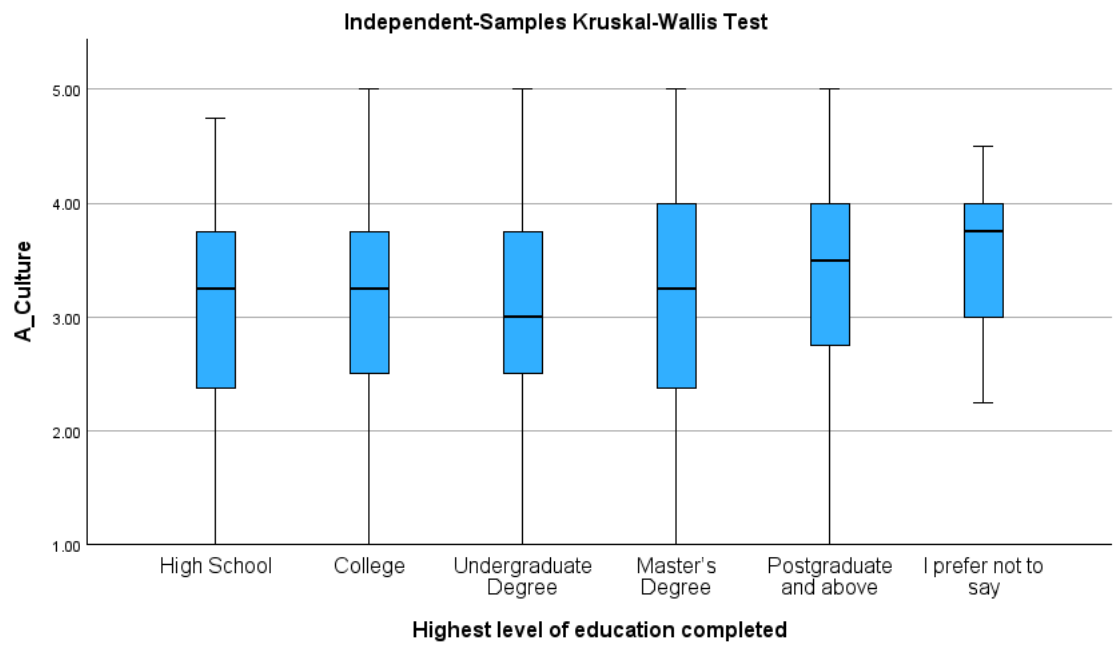


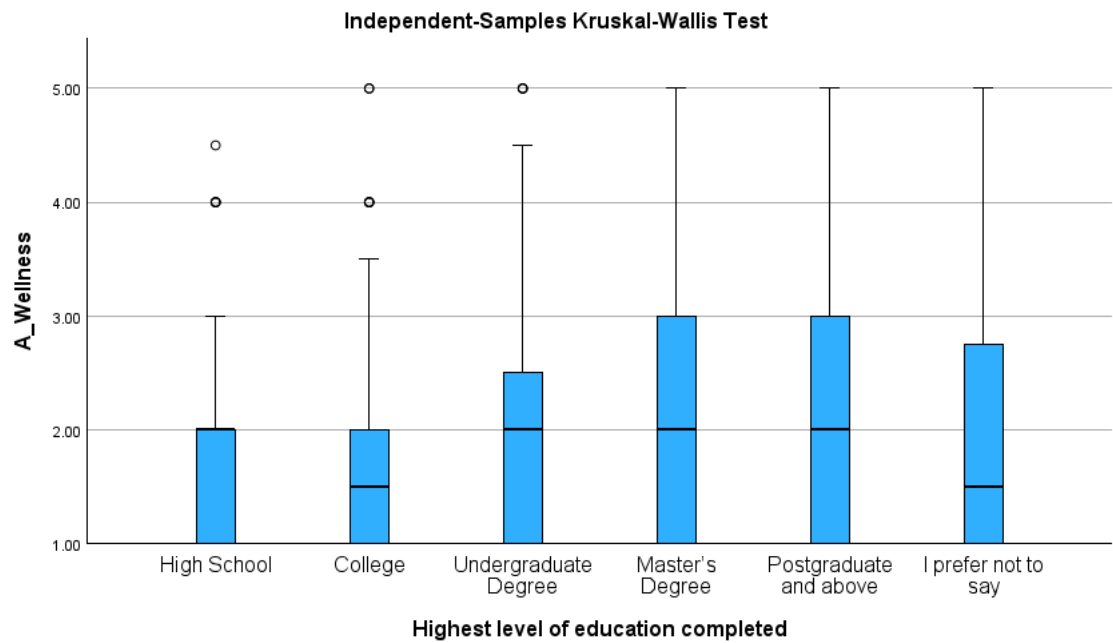
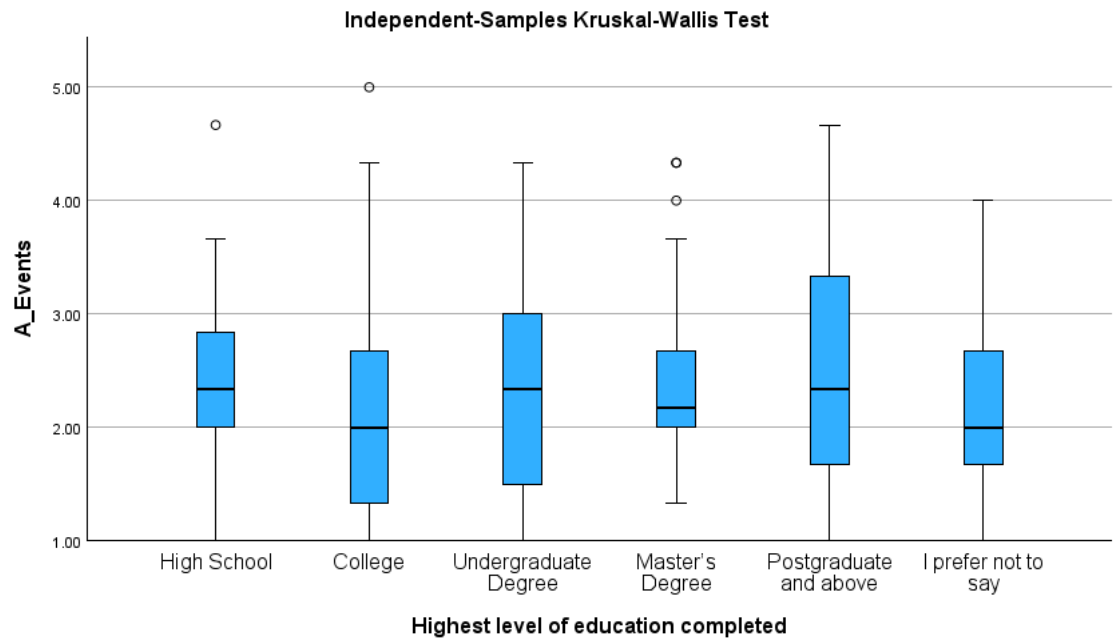


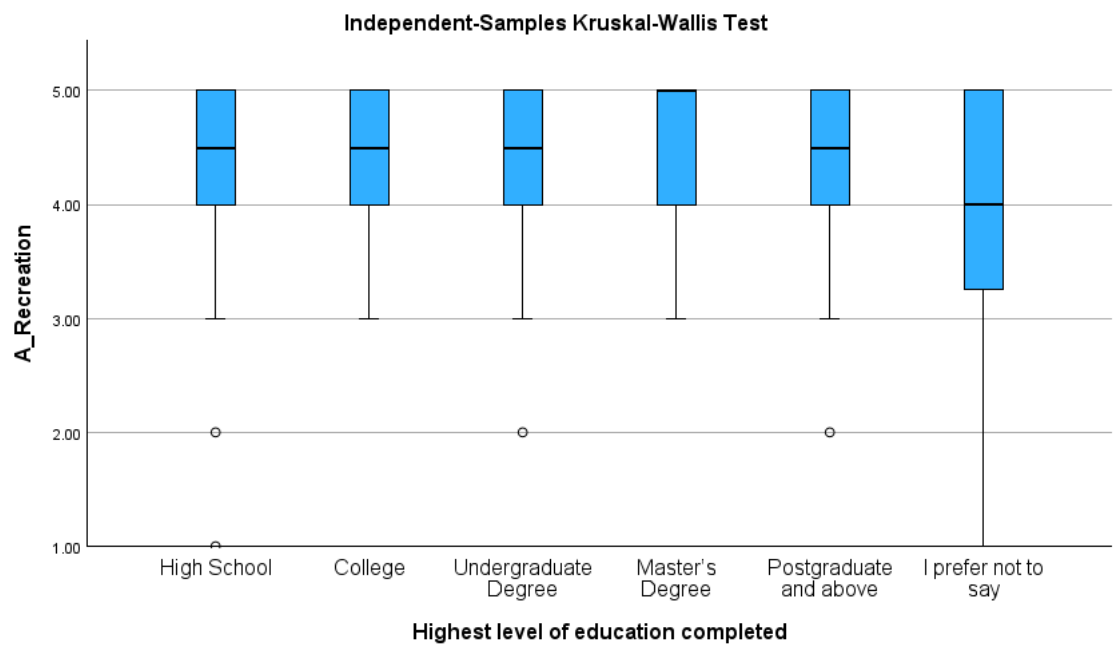
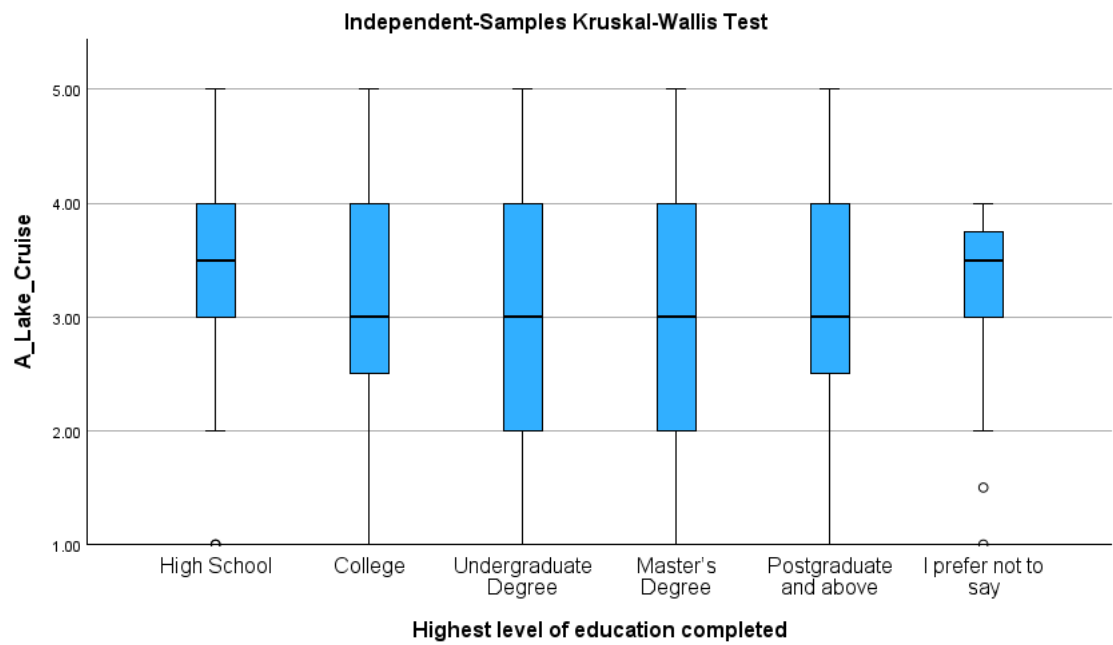


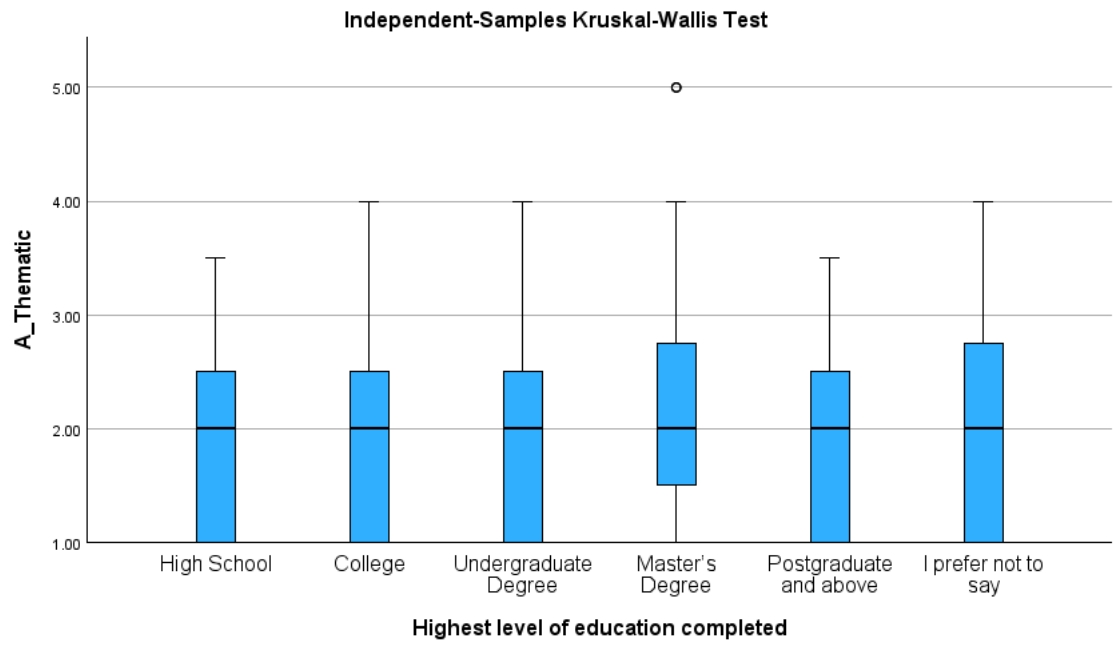
Appendix 13: Kruskal-Wallis Test Independent Variable (IV): Level of education

Hypothesis Test Summary				
	Null Hypothesis	Test	Sig. ^{a,b}	Decision
1	The distribution of A_Culture is the same across categories of Highest level of education completed.	Independent-Samples Kruskal-Wallis Test	.093	Retain the null hypothesis.
2	The distribution of A_Outdoors_Adventure is the same across categories of Highest level of education completed.	Independent-Samples Kruskal-Wallis Test	.426	Retain the null hypothesis.
3	The distribution of A_Events is the same across categories of Highest level of education completed.	Independent-Samples Kruskal-Wallis Test	.569	Retain the null hypothesis.
4	The distribution of A_Wellness is the same across categories of Highest level of education completed.	Independent-Samples Kruskal-Wallis Test	.630	Retain the null hypothesis.
5	The distribution of A_Lake_Cruise is the same across categories of Highest level of education completed.	Independent-Samples Kruskal-Wallis Test	.426	Retain the null hypothesis.
6	The distribution of A_Recreation is the same across categories of Highest level of education completed.	Independent-Samples Kruskal-Wallis Test	.160	Retain the null hypothesis.
7	The distribution of A_Thematic is the same across categories of Highest level of education completed.	Independent-Samples Kruskal-Wallis Test	.556	Retain the null hypothesis.
a. The significance level is .050.				
b. Asymptotic significance is displayed.				



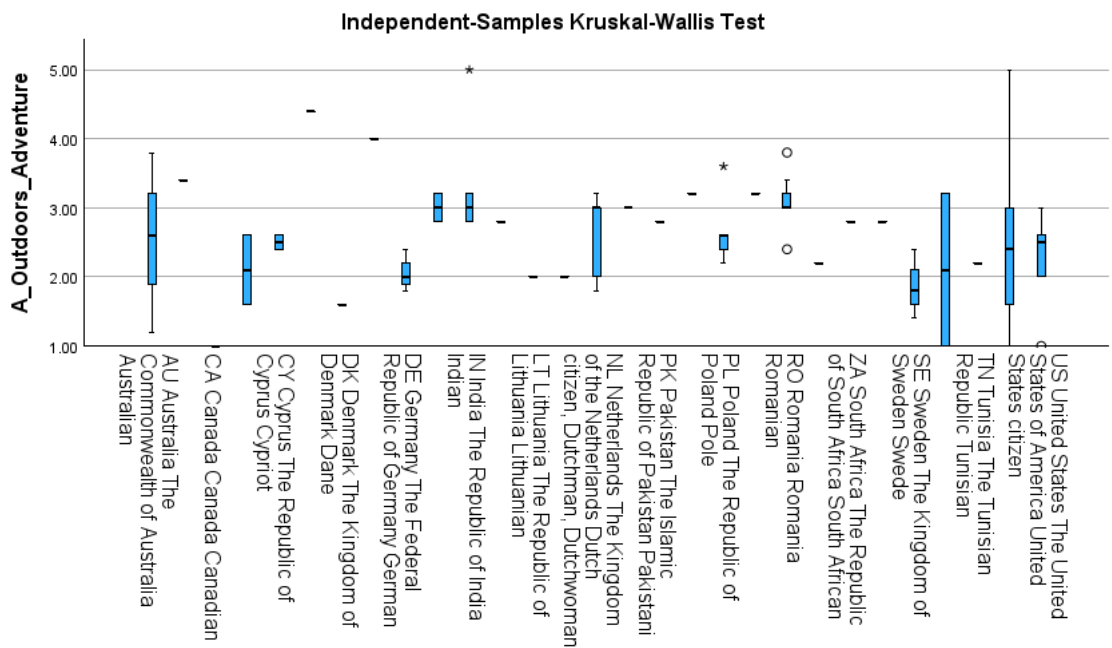
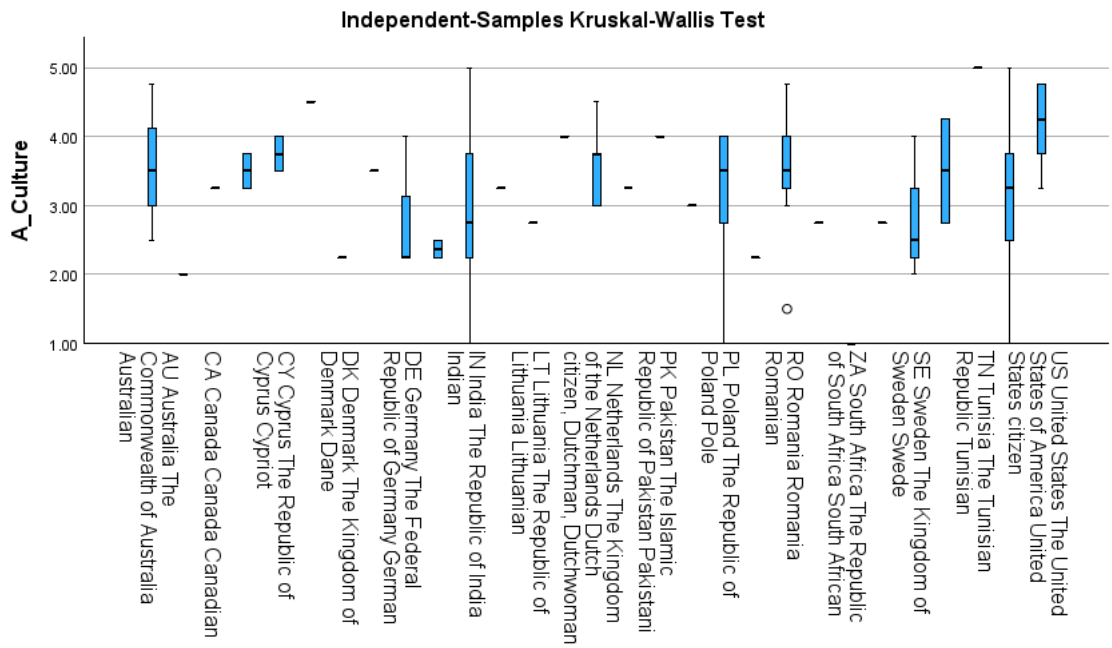


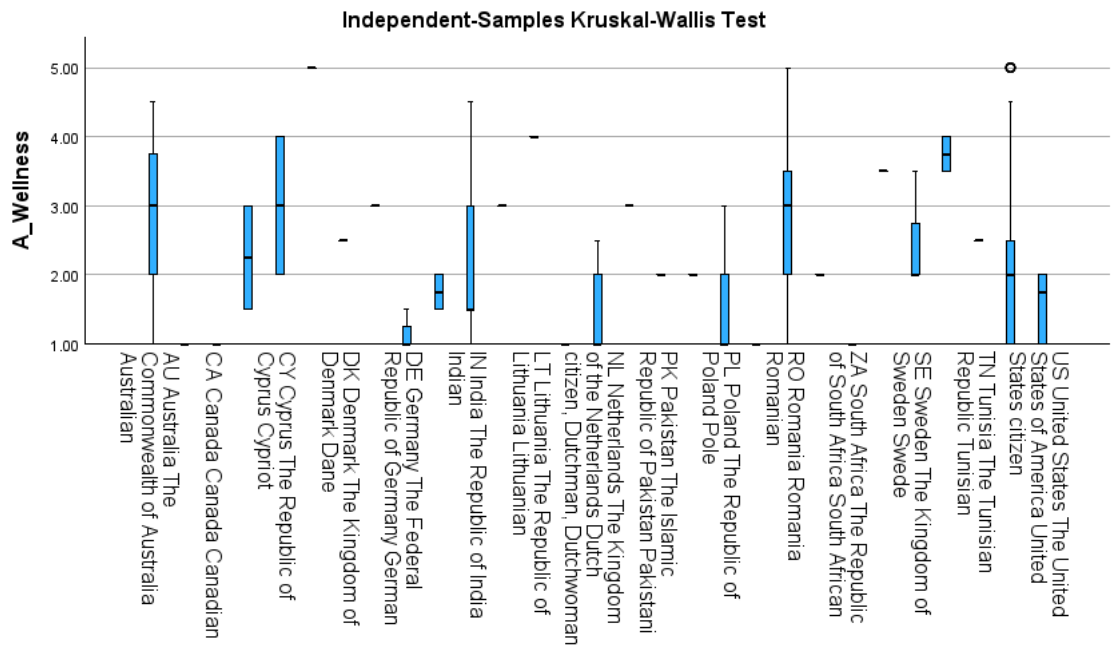
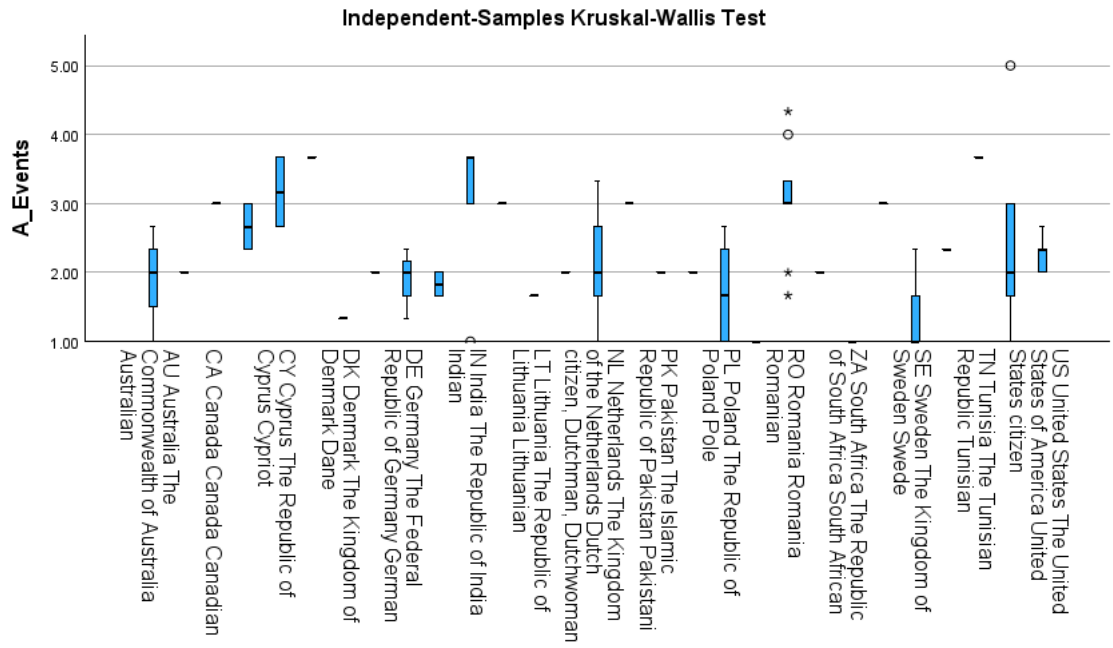


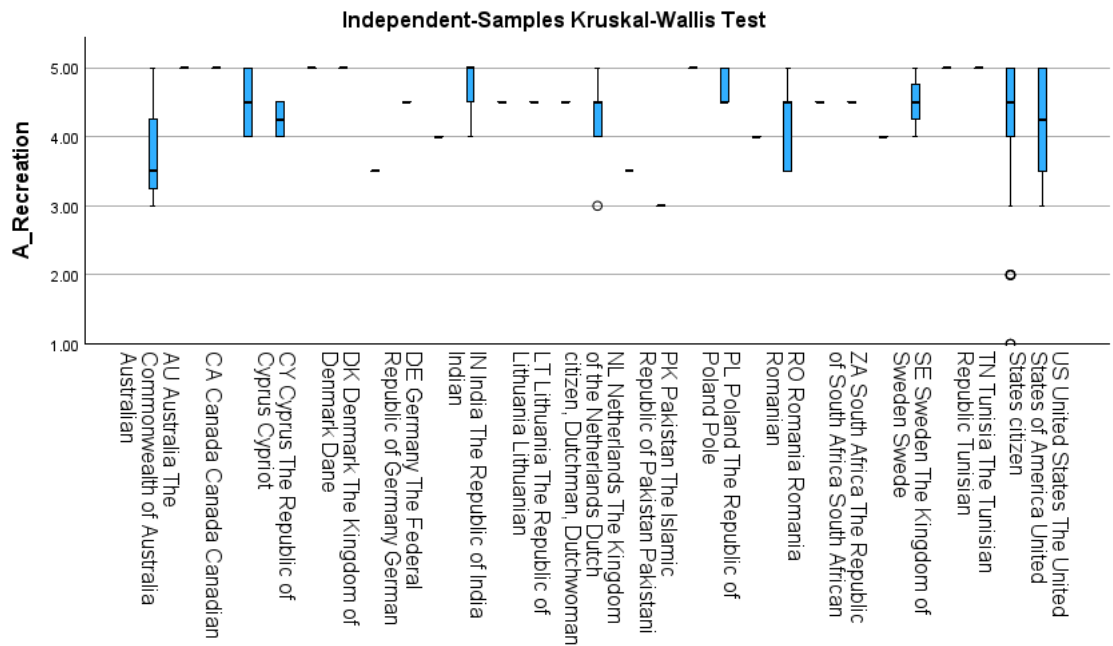
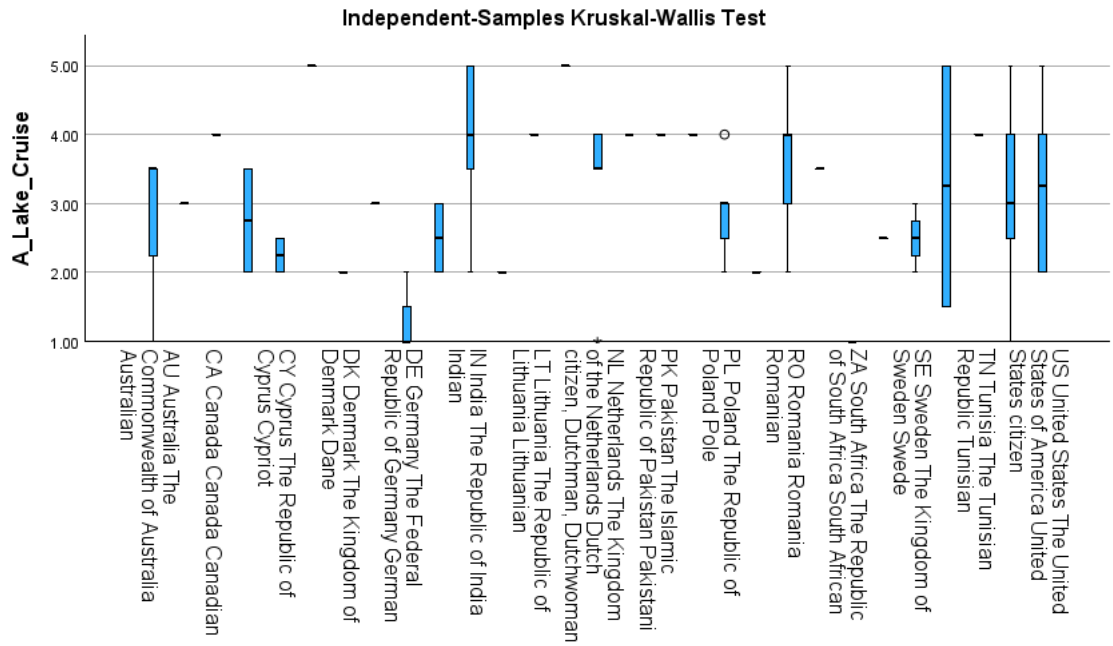


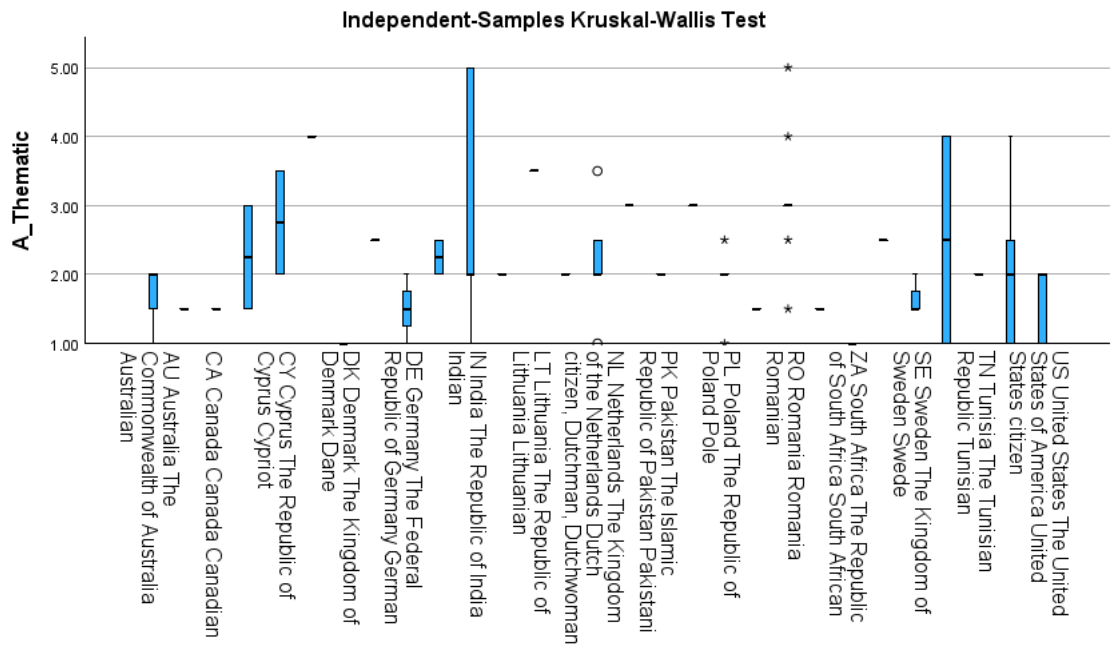
Appendix 14: Kruskal-Wallis Test Independent Variable (IV): Nationality

Hypothesis Test Summary				
	Null Hypothesis	Test	Sig. ^{a,b}	Decision
1	The distribution of A_Culture is the same across categories of Nationality.	Independent-Samples Kruskal-Wallis Test	.395	Retain the null hypothesis.
2	The distribution of A_Outdoors_Adventure is the same across categories of Nationality.	Independent-Samples Kruskal-Wallis Test	.358	Retain the null hypothesis.
3	The distribution of A_Events is the same across categories of Nationality.	Independent-Samples Kruskal-Wallis Test	.274	Retain the null hypothesis.
4	The distribution of A_Wellness is the same across categories of Nationality.	Independent-Samples Kruskal-Wallis Test	.119	Retain the null hypothesis.
5	The distribution of A_Lake_Cruise is the same across categories of Nationality.	Independent-Samples Kruskal-Wallis Test	.133	Retain the null hypothesis.
6	The distribution of A_Recreation is the same across categories of Nationality.	Independent-Samples Kruskal-Wallis Test	.502	Retain the null hypothesis.
7	The distribution of A_Thematic is the same across categories of Nationality.	Independent-Samples Kruskal-Wallis Test	.242	Retain the null hypothesis.
a. The significance level is .050.				
b. Asymptotic significance is displayed.				









Appendix 15: Visitor survey: Descriptive Statistics

Descriptive Statistics									
	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
E1R I am someone who tends to be quiet.	1217	1.00	5.00	2.8389	1.12113	.183	.070	-.861	.140
I am someone who is outgoing, sociable.	1217	1	5	3.37	.989	-.355	.070	-.374	.140
I am someone who is dominant, acts as a leader.	1217	1	5	3.10	1.016	-.248	.070	-.572	.140
E4R I am someone who prefers to have others take charge.	1217	1.00	5.00	3.2219	.90961	-.091	.070	-.415	.140
I am someone who is full of energy.	1217	1	5	3.59	.901	-.406	.070	-.185	.140
E6R I am someone who is less active than other people.	1217	1.00	5.00	3.8348	1.03070	-.780	.070	-.085	.140
I am someone who is compassionate, has a soft heart.	1217	1	5	4.10	.775	-.863	.070	1.205	.140
A2R I am someone who can be cold and uncaring.	1217	1.00	5.00	4.1175	.96407	-1.003	.070	.316	.140
A3R I am someone who is sometimes rude to others.	1217	1.00	5.00	4.0066	1.01872	-.733	.070	-.547	.140
I am someone who is respectful, treats others with respect.	1217	1	5	4.44	.611	-1.175	.070	3.773	.140
I am someone who assumes the best about people.	1217	1	5	3.67	.913	-.476	.070	-.096	.140
A6R I am someone who tends to find fault with others.	1217	1.00	5.00	3.5538	.90081	-.300	.070	-.528	.140
C1R I am someone who tends to be disorganised.	1217	1.00	5.00	3.7387	1.08856	-.721	.070	-.239	.140

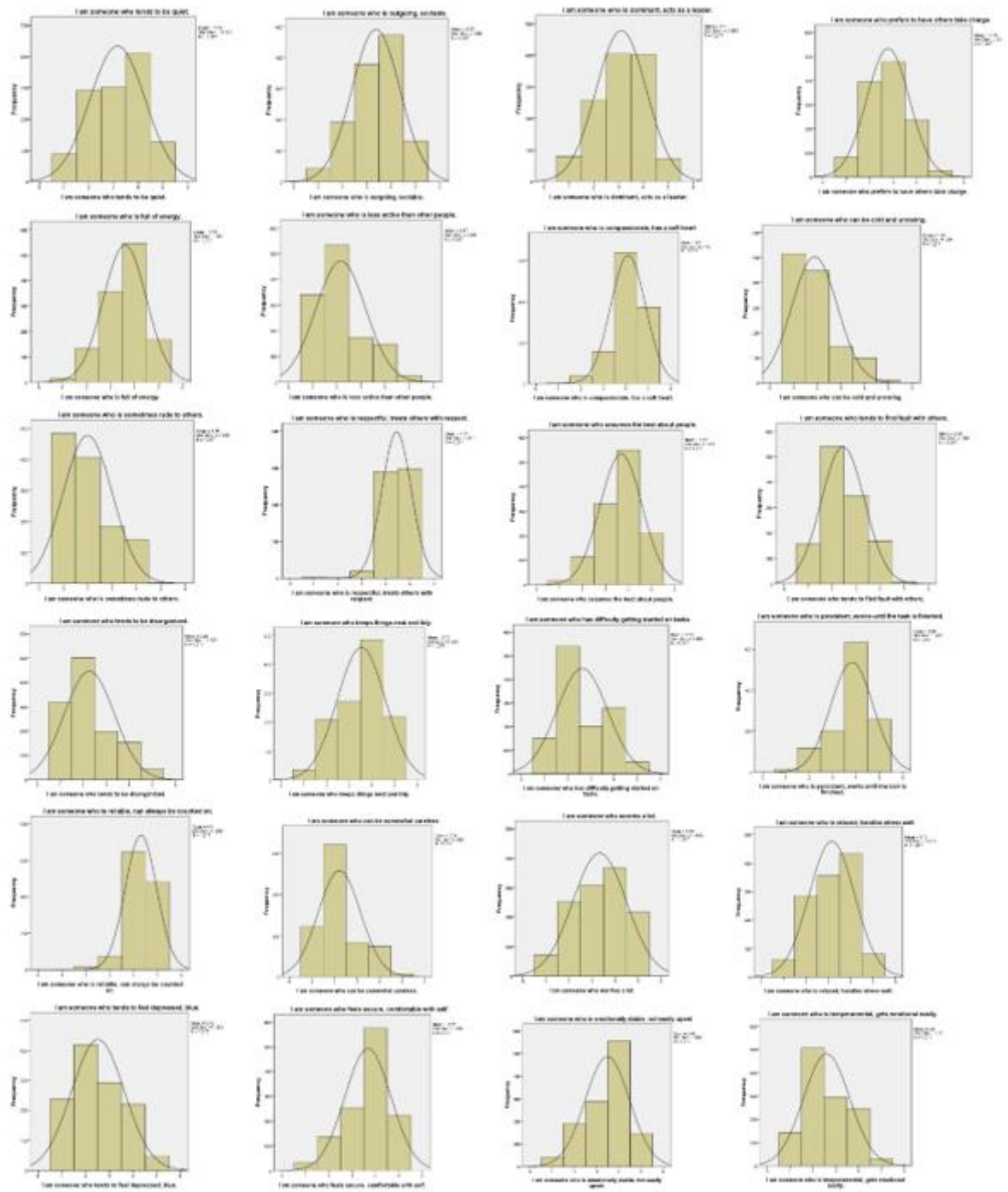
I am someone who keeps things neat and tidy.	1217	1	5	3.53	1.061	-.418	.070	-.629	.140
C3R I am someone who has difficulty getting started on tasks.	1217	1.00	5.00	3.378 8	1.08911	-.411	.070	-.819	.140
I am someone who is persistent, works until the task is finished.	1217	1	5	3.83	.905	-.752	.070	.259	.140
I am someone who is reliable, can always be counted on.	1217	1	5	4.30	.659	-.851	.070	1.578	.140
C6R I am someone who can be somewhat careless.	1217	1.00	5.00	3.789 6	.93899	-.782	.070	.128	.140
I am someone who worries a lot.	1217	1	5	3.33	1.164	-.215	.070	-.885	.140
N2R I am someone who is relaxed, handles stress well.	1217	1.00	5.00	2.845 5	1.01751	.219	.070	-.707	.140
I am someone who tends to feel depressed, blue.	1217	1	5	2.52	1.113	.336	.070	-.761	.140
N4R I am someone who feels secure, comfortable with self.	1217	1.00	5.00	2.327 0	.98585	.686	.070	.048	.140
I am someone who is emotionally stable, not easily upset.	1217	1	5	3.48	.999	-.537	.070	-.310	.140
N5R I am someone who is temperamental, gets emotional easily.	1217	1.00	5.00	2.521 8	.99904	.537	.070	-.310	.140
I am someone who is fascinated by art, music, or literature.	1217	1	5	3.69	1.049	-.577	.070	-.377	.140
O2R I am someone who has few artistic interests.	1217	1.00	5.00	3.471 7	1.15397	-.394	.070	-.844	.140
O3R I am someone who has little interest in abstract ideas.	1217	1.00	5.00	3.337 7	1.06692	-.244	.070	-.694	.140

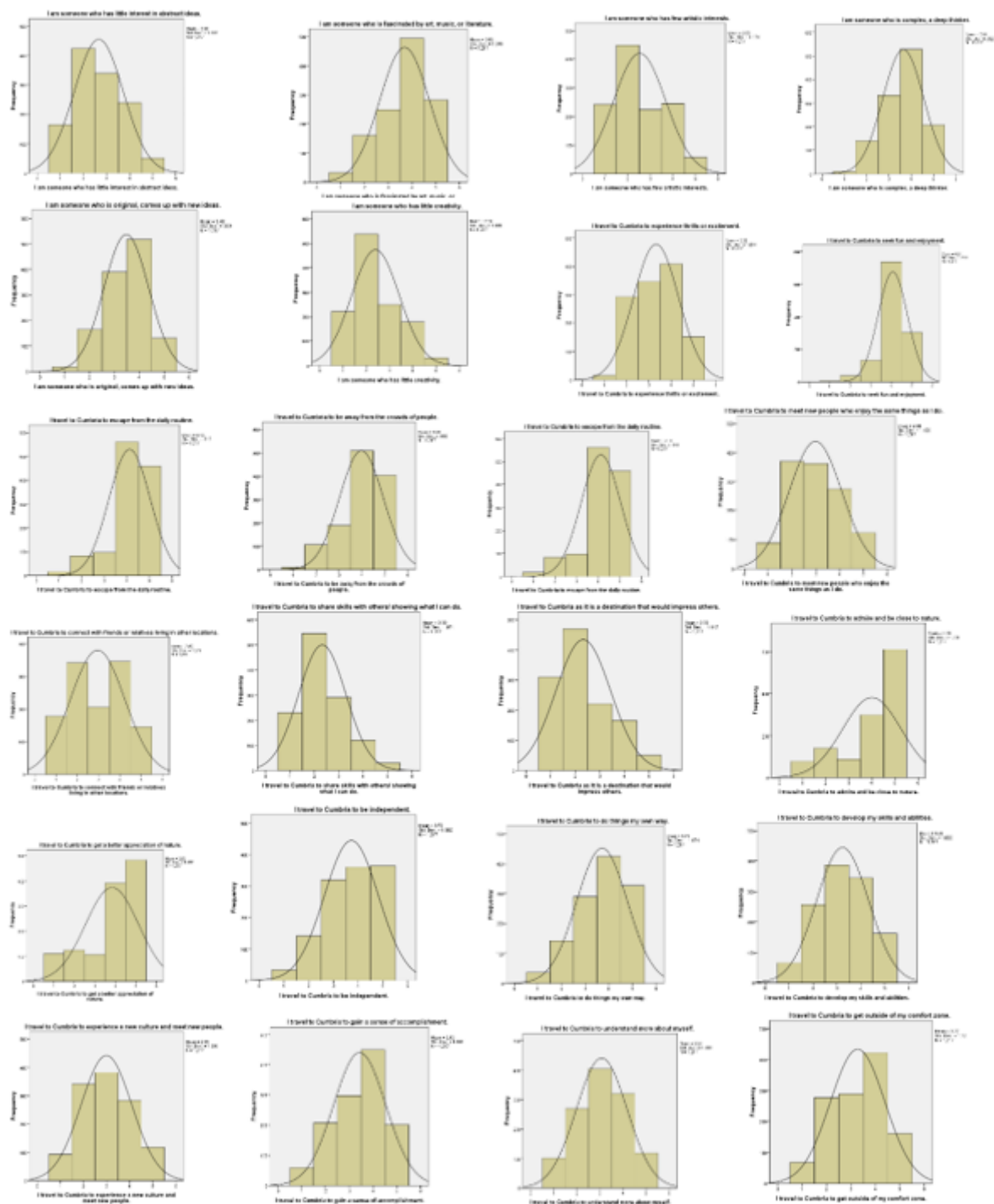
I am someone who is complex, a deep thinker.	1217	1	5	3.64	.922	-.367	.070	-.408	.140
I am someone who is original, comes up with new ideas.	1217	1	5	3.48	.904	-.326	.070	-.312	.140
O6R I am someone who has little creativity.	1217	1.00	5.00	3.605 6	1.02625	-.553	.070	-.370	.140
I travel to Cumbria to explore the unknown/ do something new.	1217	1	5	3.85	.916	-.791	.070	.275	.140
I travel to Cumbria to experience thrills or excitement.	1217	1	5	3.32	1.014	-.025	.070	-.932	.140
I travel to Cumbria to seek fun and enjoyment.	1217	1	5	4.07	.718	-.872	.070	1.760	.140
I travel to Cumbria to escape from the daily routine.	1217	1	5	4.12	.918	-1.204	.070	1.320	.140
I travel to Cumbria to be away from the crowds of people.	1217	1	5	3.98	.955	-.785	.070	.000	.140
I travel to Cumbria to meet new people who enjoy the same things as I do.	1217	1	5	2.98	1.109	.168	.070	-.781	.140
I travel to Cumbria to connect with friends or relatives living in other locations.	1217	1	5	2.95	1.275	.017	.070	-1.183	.140
I travel to Cumbria to share skills with others/ showing what I can do.	1217	1	5	2.32	.971	.619	.070	.035	.140
I travel to Cumbria as it is a destination that would impress others.	1217	1	5	2.32	1.117	.636	.070	-.419	.140
I travel to Cumbria to admire and be close to nature.	1217	1	5	4.01	1.271	-1.101	.070	-.053	.140
I travel to Cumbria to get a better	1217	1	5	3.83	1.297	-.969	.070	-.248	.140

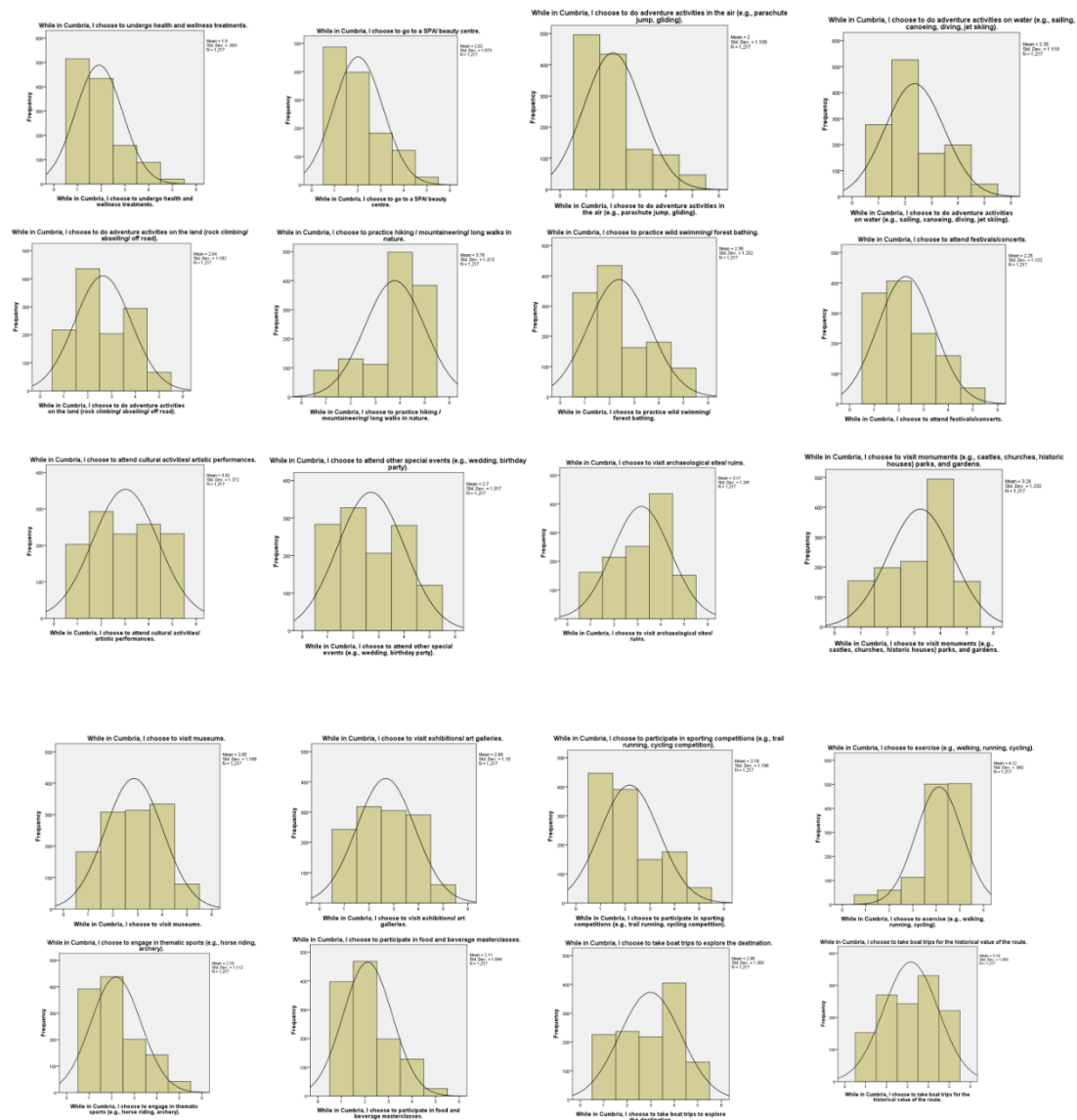
appreciation of nature.									
I travel to Cumbria to be independent.	1217	1	5	3.72	1.092	-.472	.070	-.619	.140
I travel to Cumbria to do things my own way.	1217	1	5	3.71	1.074	-.540	.070	-.445	.140
I travel to Cumbria to develop my skills and abilities.	1217	1	5	3.23	1.092	-.101	.070	-.720	.140
I travel to Cumbria to experience a new culture and meet new people.	1217	1	5	2.99	1.099	.106	.070	-.737	.140
I travel to Cumbria to gain a sense of accomplishment.	1217	1	5	3.43	1.101	-.390	.070	-.630	.140
I travel to Cumbria to understand more about myself.	1217	1	5	3.07	1.099	-.075	.070	-.676	.140
I travel to Cumbria to get outside of my comfort zone.	1217	1	5	3.27	1.120	-.223	.070	-.857	.140
I travel to Cumbria to think about good times I have had in the past.	1217	1	5	3.30	1.140	-.283	.070	-.786	.140
I travel to Cumbria to reflect on past memories.	1217	1	5	3.21	1.186	-.208	.070	-.933	.140
While in Cumbria, I choose to do adventure activities in the air (e.g., parachute jump, gliding).	1217	1	5	2.00	1.108	1.094	.070	.414	.140
While in Cumbria, I choose to do adventure activities on water (e.g., sailing, canoeing, diving, jet skiing).	1217	1	5	2.35	1.118	.653	.070	-.476	.140
While in Cumbria, I choose to do adventure activities on the land (rock climbing/ abseiling/ off road).	1217	1	5	2.64	1.182	.284	.070	-1.016	.140
While in Cumbria, I choose to practice	1217	1	5	3.78	1.213	-.957	.070	-.064	.140

hiking / mountaineering/ long walks in nature.									
While in Cumbria, I choose to practice wild swimming/ forest bathing.	1217	1	5	2.38	1.252	.659	.070	-.662	.140
While in Cumbria, I choose to attend festivals/concerts.	1217	1	5	2.28	1.152	.632	.070	-.511	.140
While in Cumbria, I choose to attend cultural activities/ artistic performances.	1217	1	5	3.02	1.372	.021	.070	-1.260	.140
While in Cumbria, I choose to attend other special events (e.g., wedding, birthday party).	1217	1	5	2.70	1.317	.224	.070	-1.184	.140
While in Cumbria, I choose to visit archaeological sites/ ruins.	1217	1	5	3.17	1.241	-.341	.070	-.957	.140
While in Cumbria, I choose to visit monuments (e.g., castles, churches, historic houses) parks, and gardens.	1217	1	5	3.24	1.232	-.469	.070	-.867	.140
While in Cumbria, I choose to visit museums.	1217	1	5	2.85	1.168	-.030	.070	-.981	.140
While in Cumbria, I choose to visit exhibitions/ art galleries.	1217	1	5	2.68	1.180	.096	.070	-1.036	.140
While in Cumbria, I choose to participate in sporting competitions (e.g., trail running, cycling competition).	1217	1	5	2.18	1.196	.778	.070	-.488	.140
While in Cumbria, I choose to exercise (e.g., walking, running, cycling).	1217	1	5	4.12	.992	-1.361	.070	1.682	.140
While in Cumbria, I choose to engage	1217	1	5	2.18	1.112	.754	.070	-.270	.140

in thematic sports (e.g., horse riding, archery).									
While in Cumbria, I choose to participate in food and beverage masterclasses.	1217	1	5	2.11	1.044	.784	.070	-.109	.140
While in Cumbria, I choose to take boat trips to explore the destination.	1217	1	5	2.98	1.305	-.178	.070	-1.206	.140
While in Cumbria, I choose to take boat trips for the historical value of the route.	1217	1	5	3.16	1.303	-.148	.070	-1.138	.140
While in Cumbria, I choose to go to a SPA/ beauty centre.	1217	1	5	2.02	1.073	.885	.070	-.071	.140
While in Cumbria, I choose to undergo health and wellness treatments.	1217	1	5	1.90	.993	1.049	.070	.509	.140
Valid N (listwise)	1217								







Appendix 16: Visitor survey: Personality traits

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.817
Bartlett's Test of Sphericity	Approx. Chi-Square	12534.026
	df	435
	Sig.	.000

Total Variance Explained									
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.241	17.471	17.471	5.241	17.471	17.471	3.786	12.619	12.619
2	3.044	10.147	27.618	3.044	10.147	27.618	3.182	10.607	23.225
3	3.018	10.061	37.680	3.018	10.061	37.680	2.967	9.891	33.117
4	2.416	8.054	45.734	2.416	8.054	45.734	2.851	9.504	42.621
5	1.771	5.903	51.637	1.771	5.903	51.637	2.705	9.016	51.637
6	1.115	3.717	55.354						
7	1.092	3.640	58.993						
8	.905	3.016	62.010						
9	.899	2.996	65.006						
10	.859	2.863	67.869						
11	.784	2.612	70.481						
12	.740	2.468	72.949						
13	.698	2.326	75.275						
14	.628	2.094	77.369						
15	.591	1.972	79.340						
16	.566	1.886	81.226						
17	.541	1.802	83.027						
18	.517	1.725	84.752						
19	.487	1.624	86.376						

20	.481	1.604	87.980						
21	.461	1.535	89.515						
22	.450	1.499	91.014						
23	.415	1.382	92.397						
24	.402	1.341	93.738						
25	.360	1.199	94.937						
26	.351	1.172	96.109						
27	.339	1.129	97.238						
28	.289	.962	98.200						
29	.279	.930	99.130						
30	.261	.870	100.000						
Extraction Method: Principal Component Analysis.									

Rotated Component Matrix ^a					
	Component				
	1	2	3	4	5
I am someone who is emotionally stable, not easily upset.	-.824				
I am someone who worries a lot.	.795				
I am someone who is relaxed, handles stress well.	-.780				
I am someone who is temperamental, gets emotional easily.	.747				
I am someone who tends to feel depressed, blue.	.703				
I am someone who feels secure, comfortable with self.	-.686				
I am someone who tends to be disorganised.		.789			
I am someone who keeps things neat and tidy.		-.742			
I am someone who is persistent, works until the task is finished.		-.700			
I am someone who can be somewhat careless.		.663			
I am someone who has difficulty getting started on tasks.		.632			
I am someone who is reliable, can always be counted on.		-.551			
I am someone who can be cold and uncaring.			-.714		

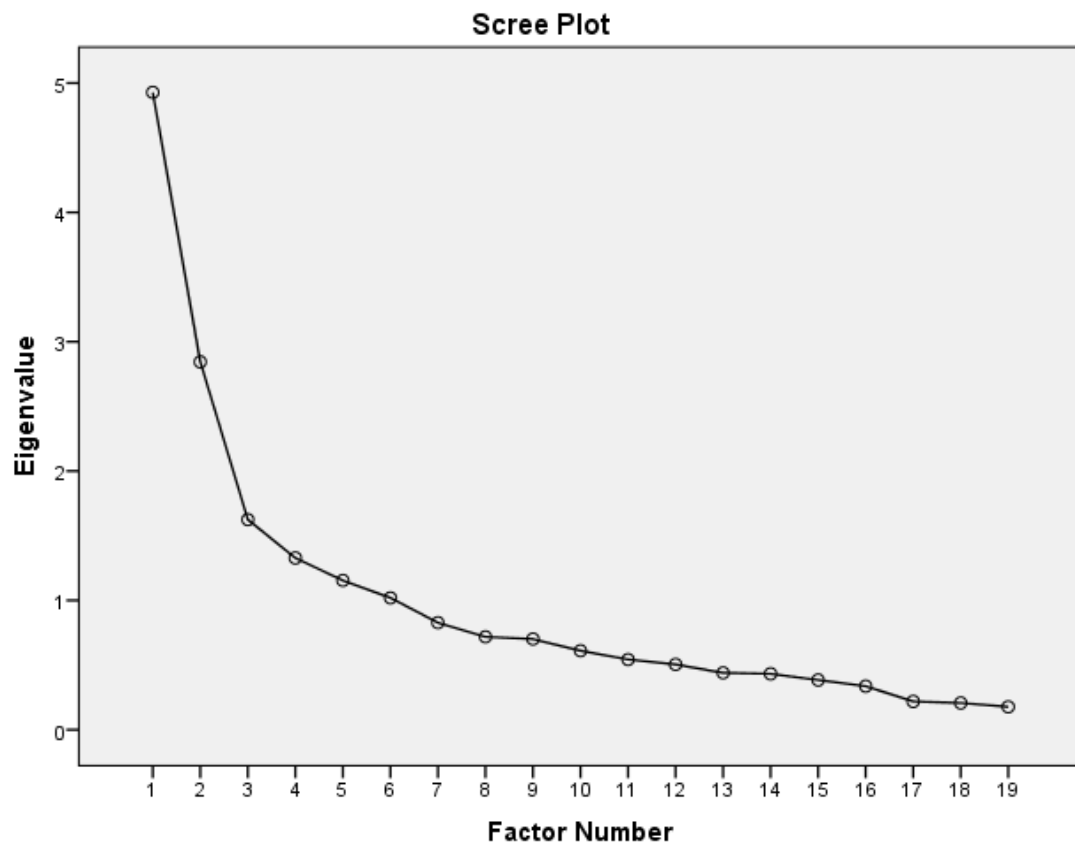
I am someone who is sometimes rude to others.			-.705		
I am someone who assumes the best about people.			.666		
I am someone who tends to find fault with others.			-.657		
I am someone who is compassionate, has a soft heart.			.653		
I am someone who is respectful, treats others with respect.			.587		
I am someone who is outgoing, sociable.				.755	
I am someone who tends to be quiet.				-.727	
I am someone who is full of energy.				.683	
I am someone who is dominant, acts as a leader.				.672	
I am someone who is less active than other people.				-.492	
I am someone who prefers to have others take charge.				-.459	
I am someone who has little interest in abstract ideas.					-.723
I am someone who is fascinated by art, music, or literature.					.715
I am someone who has little creativity.					-.662
I am someone who has few artistic interests.					-.641
I am someone who is original, comes up with new ideas.					.612
I am someone who is complex, a deep thinker.					.567
Extraction Method: Principal Component Analysis.					
Rotation Method: Varimax with Kaiser Normalization.					
a. Rotation converged in 6 iterations.					

Appendix 17: Visitor survey: Factor analysis: Travel motivation

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.817
Bartlett's Test of Sphericity	Approx. Chi-Square	9981.017
	df	190
	Sig.	.000

Total Variance Explained									
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.928	25.935	25.935	4.502	23.695	23.695	1.918	10.092	10.092
2	2.844	14.967	40.903	2.514	13.234	36.928	1.911	10.056	20.148
3	1.625	8.551	49.454	1.280	6.737	43.665	1.808	9.518	29.666
4	1.328	6.990	56.444	.905	4.761	48.426	1.702	8.959	38.625
5	1.154	6.074	62.518	.613	3.228	51.654	1.559	8.206	46.831
6	1.020	5.366	67.884	.557	2.930	54.584	1.473	7.753	54.584
7	.828	4.356	72.240						
8	.718	3.780	76.020						
9	.701	3.690	79.710						
10	.611	3.215	82.925						
11	.543	2.859	85.784						
12	.505	2.658	88.442						
13	.440	2.316	90.758						
14	.432	2.276	93.033						
15	.384	2.023	95.056						
16	.337	1.772	96.829						
17	.219	1.151	97.979						
18	.207	1.088	99.067						

19	.177	.933	100.000						
Extraction Method: Principal Axis Factoring.									



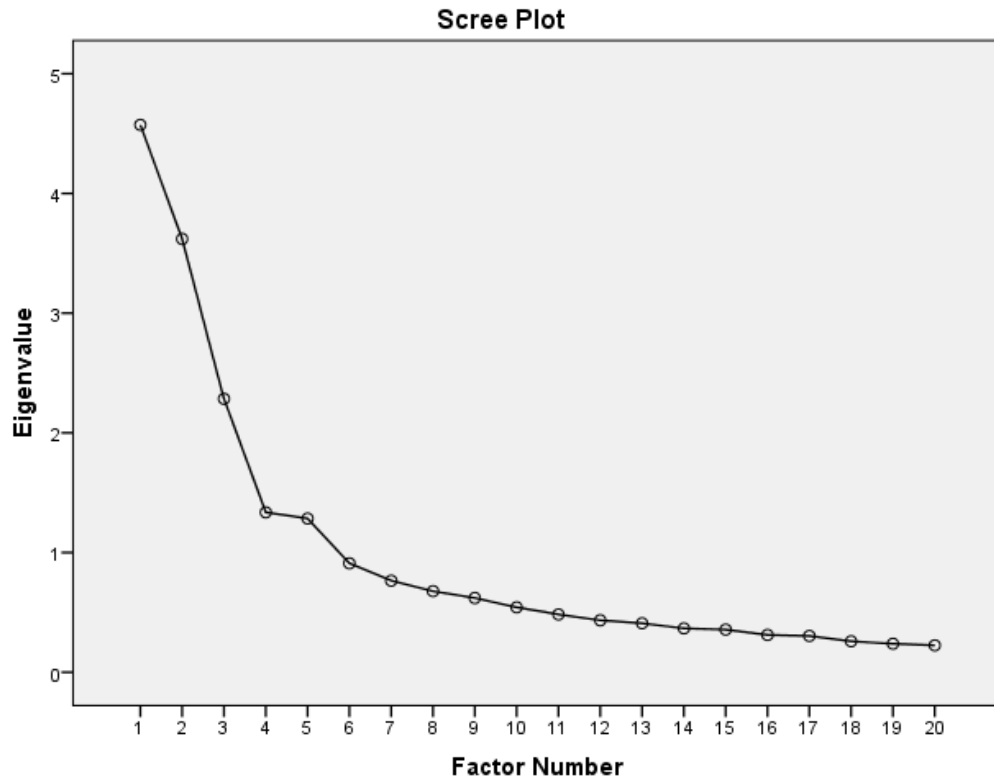
Rotated Factor Matrix ^a						
	Factor					
	1	2	3	4	5	6
NA1 I travel to Cumbria to admire and be close to nature.	.922					
NA2 I travel to Cumbria to get a better appreciation of nature.	.778					
ESC2 I travel to Cumbria to escape from the daily routine.	.436					
SD1 I travel to Cumbria to develop my skills and abilities.		.653				
SA2 I travel to Cumbria to get outside of my comfort zone.		.649				

SD3 I travel to Cumbria to gain a sense of accomplishment.		.602				
SD2 I travel to Cumbria to experience a new culture and meet new people.		.438				
REC1 I travel to Cumbria to share skills with others/ showing what I can do.			.655			
REL3 I travel to Cumbria to connect with friends or relatives living in other locations.			.621			
REL2 I travel to Cumbria to meet new people who enjoy the same things as I do.			.602			
REC2 I travel to Cumbria as it is a destination that would impress others.			.442			
AU2 I travel to Cumbria to do things my own way.				.792		
AU1 I travel to Cumbria to be independent.				.782		
NO1 I travel to Cumbria to think about good times I have had in the past.					.854	
NO2 I travel to Cumbria to reflect on past memories.					.832	
NS2 I travel to Cumbria to experience thrills or excitement.						.669
NS1 I travel to Cumbria to explore the unknown/ do something new.						.592
NS3 I travel to Cumbria to seek fun and enjoyment.						.574
Extraction Method: Principal Axis Factoring. Rotation Method: Varimax with Kaiser Normalization.						
a. Rotation converged in 7 iterations.						

Appendix 18: Visitor survey: Factor analysis: Visitor activities

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.810
Bartlett's Test of Sphericity	Approx. Chi-Square	10628.655
	df	190
	Sig.	.000

Total Variance Explained									
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.573	22.865	22.865	4.165	20.823	20.823	2.659	13.297	13.297
2	3.620	18.100	40.965	3.194	15.968	36.791	2.633	13.167	26.464
3	2.285	11.423	52.388	1.811	9.057	45.848	2.174	10.869	37.333
4	1.336	6.681	59.068	1.008	5.040	50.888	1.958	9.792	47.125
5	1.284	6.422	65.490	.810	4.049	54.937	1.562	7.811	54.937
6	.910	4.552	70.042						
7	.765	3.826	73.868						
8	.677	3.386	77.254						
9	.621	3.103	80.357						
10	.542	2.712	83.069						
11	.483	2.416	85.485						
12	.434	2.170	87.654						
13	.409	2.046	89.700						
14	.366	1.832	91.532						
15	.356	1.782	93.314						
16	.311	1.557	94.871						
17	.304	1.518	96.390						
18	.259	1.293	97.683						
19	.238	1.192	98.875						
20	.225	1.125	100.000						
Extraction Method: Principal Axis Factoring.									



Rotated Factor Matrix ^a					
	Factor				
	1	2	3	4	5
HIS2 While in Cumbria, I choose to visit monuments (e.g., castles, churches, historic houses) parks, and gardens.	.835				
MUS1 While in Cumbria, I choose to visit museums.	.821				
MUS2 While in Cumbria, I choose to visit exhibitions/ art galleries.	.671				
HIS1 While in Cumbria, I choose to visit archaeological sites/ ruins.	.536				
BOA1 While in Cumbria, I choose to take boat trips to explore the destination.	.503				
SPO3 While in Cumbria, I choose to engage in thematic sports (e.g., horse riding, archery).		.786			
GAS1 While in Cumbria, I choose to participate in food and beverage masterclasses.		.689			

SPO1 While in Cumbria, I choose to participate in sporting competitions (e.g., trail running, cycling competition).		.643			
RCN3 While in Cumbria, I choose to practice wild swimming/ forest bathing.			.725		
RCN1 While in Cumbria, I choose to practice hiking / mountaineering/ long walks in nature.			.669		
ADV1 While in Cumbria, I choose to do adventure activities on water (e.g., sailing, canoeing, diving, jet skiing).			.594		
ADV3 While in Cumbria, I choose to do adventure activities on the land (rock climbing/ abseiling/ off road).			.487		
ENT2 While in Cumbria, I choose to attend cultural activities/ artistic performances.				.916	
ENT1 While in Cumbria, I choose to attend festivals/concerts.				.538	
BOA2 While in Cumbria, I choose to take boat trips for the historical value of the route.				.520	
HEA1 While in Cumbria, I choose to go to a SPA/ beauty centre.					.838
HEA2 While in Cumbria, I choose to undergo health and wellness treatments.					.804
Extraction Method: Principal Axis Factoring. Rotation Method: Varimax with Kaiser Normalization.					
a. Rotation converged in 5 iterations.					

Appendix 19: Profiles of clusters

Visitor profile	Reserved Explorers (Cluster 1)	Culturally Curious (Cluster 2)	Diligent Adventurers (Cluster 3)	Social Explorers (Cluster 4)	Balanced Explorers (Cluster 5)	Total	Chi-square p-value
	Count (% within Cluster number of case)						
Gender							
Male	38 (18.5)	96 (39.8)	96 (37.9)	96 (43.4)	131 (37.6)	457 (37.6)	43.717 P=0.000
Female	165 (80.5)	118 (54.6)	144 (59.8)	156 (61.7)	171 (56.6)	754 (62.0)	
Age							33.984 P=0.026
18-29	36 (17.6)	46 (21.3)	35 (14.5)	53 (20.9)	41 (13.6)	211 (17.3)	
30-39	29 (14.1)	45 (20.8)	45 (18.7)	54 (21.3)	43 (14.2)	216 (17.7)	
40-49	28 (13.7)	35 (16.2)	41 (17.0)	46 (18.2)	44 (14.6)	194 (15.9)	
50-59	49 (23.9)	39 (18.1)	60 (24.9)	50 (19.8)	85 (28.1)	283 (23.3)	
60+	61 (29.8)	50 (23.1)	60 (24.9)	48 (19.0)	88 (29.1)	307 (25.2)	
Nationality							229.222 P=0.022
AU Australia	0 (0.0)	4 (1.9)	1 (0.4)	3 (1.2)	6 (2.0)	14 (1.2)	
CA Canada	0 (0.0)	5 (2.3)	2 (0.8)	1 (0.4)	5 (1.7)	13 (1.1)	
CN China	6 (2.9)	3 (1.4)	0 (0.0)	2 (0.8)	0 (0.0)	11 (0.9)	
IN India	0 (0.0)	3 (1.4)	6 (2.5)	4 (1.6)	1 (0.3)	14 (1.2)	
GB United Kingdom	186 (9.7)	168 (77.8)	191 (79.3)	203 (80.2)	261 (86.4)	1009 (82.9)	
US United States	1 (0.5)	13 (6.0)	14 (5.8)	6 (2.4)	10 (3.3)	44 (3.6)	
Work status							60.366 P=0.000
Employed	119 (58.0)	126 (58.3)	154 (63.9)	163 (64.4)	180 (59.6)	742 (61.0)	
Self-employed	12 (5.9)	20 (9.3)	32 (13.3)	21 (19.8)	21 (7.0)	106 (8.7)	
Student	13 (6.3)	25 (11.6)	5 (2.1)	25 (9.9)	14 (4.6)	82 (6.7)	
Retired	49 (23.9)	38 (17.6)	44 (18.3)	36 (14.2)	84 (27.8)	251 (20.6)	

Unemployed	7 (3.4)	3 (1.4)	1 (0.4)	5 (2.0)	2 (0.7)	18 (1.5)	
Education							38.612 P=0.007
High school	25 (12.2)	12 (5.6)	22 (9.1)	26 (10.3)	34 (11.3)	119 (9.8)	
College	56 (27.3)	28 (13.0)	57 (23.7)	61 (24.1)	64 (21.2)	266 (21.9)	
Undergraduate	60 (29.3)	71(32.9)	68 (28.2)	75 (29.6)	98 (32.5)	372 (30.6)	
Master's Degree	27 (13.2)	50 (23.1)	46 (19.1)	46 (18.2)	47 (15.6)	216 (17.7)	
Postgraduate	24 (11.7)	47 (21.8)	40 (16.6)	32 (12.6)	49 (16.2)	192 (15.8)	
Past visits							50.577 P=0.000
None	14 (6.8)	27 (12.5)	11 (4.6)	21 (8.3)	23 (7.6)	96 (7.9)	
One time	36 (17.6)	43 (19.9)	41 (17.0)	48 (19.0)	50 (16.6)	218 (17.9)	
Two to four times	83 (40.5)	64 (29.6)	52 (21.6)	76 (30.0)	106 (35.1)	381 (31.3)	
Five or more times	70 (34.1)	77 (35.6)	135 (56.0)	107 (42.3)	123 (40.7)	512 (42.1)	
Travel partner							27.200 P=0.130
Alone	33 (16.1)	37 (17.1)	43 (17.8)	50 (19.8)	38 (12.6)	201 (16.5)	
With a partner	97 (47.3)	90 (41.7)	97 (40.2)	89 (35.2)	143 (47.4)	516 (42.4)	
With family	57 (27.8)	57 (26.4)	61 (25.3)	76 (30.0)	75 (24.8)	326 (26.8)	
With friends	14 (6.8)	30 (13.9)	34 (14.1)	34 (13.4)	43 (14.2)	155 (12.7)	
With a traveling group	2 (1.0)	2 (0.9)	2 (0.8)	2 (0.8)	3 (1.0)	11 (0.9)	
Trip purpose							26.065 P=0.053
Leisure	192 (93.7)	193 (89.4)	206 (85.5)	226 (89.3)	283 (93.7)		
Business	0 (0.0)	1 (0.05)	3 (1.2)	2 (0.8)	2 (0.7)		
Leisure and Business	6 (2.9)	16 (7.4)	22 (9.1)	14 (5.5)	7 (2.3)		
Other	7 (3.4)	5 (2.3)	10 (4.1)	11 (4.3)	10 (3.3)		

Appendix 20: Node Structure: Focus Groups

Nodes		Search Nodes		
Name		Files	References	
Adoption barriers		1	2	
Attitudes towards personality-based approach		1	12	
Collaborative innovation		1	2	
Destination mobile application		1	14	
Diversifying visitor distribution		1	1	
Market segmentation strategies		1	12	
Segmentation strategies		1	3	
Visitor profiles and personas		1	8	

Node structure

Appendix 21: NVivo Wheel Chart: Focus Groups



NVivo wheel chart showing the thematic coding framework applied to both focus groups. Each segment corresponds to a major theme or node created during the analysis process.

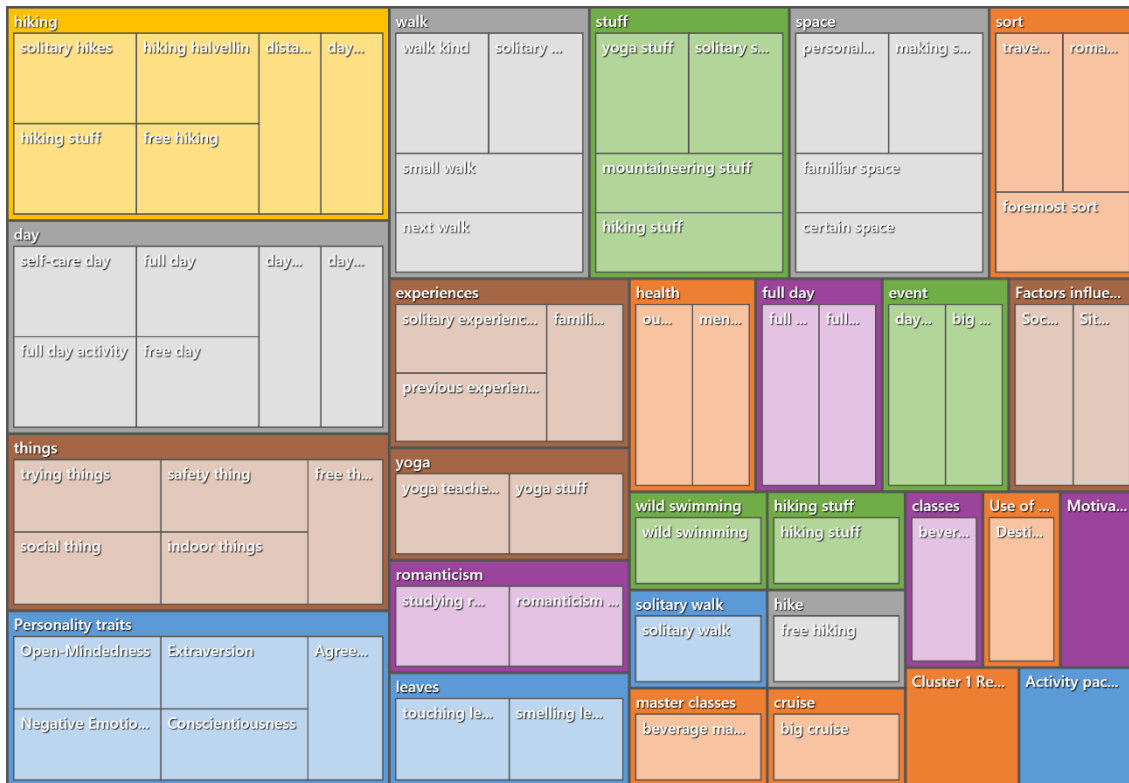
Appendix 22: NVivo Node Structure: Visitor interviews

Nodes			
Name	Files	References	
Activity package selection		22	88
Cluster 1 Reserved Explorers		3	77
Cluster 2 Culturally Curious		4	89
Cluster 3 Diligent Adventurers		6	120
Cluster 4 Social Explorers		5	81
Cluster 5 Balanced Explorers		7	96
Factors influencing activities		0	0
Socio-demographic factors		22	92
Situational factors		15	45
Motivations for visiting		21	54
Personality traits		0	0
Extraversion		21	94
Open-Mindedness		22	73
Conscientiousness		22	83
Negative Emotionality		22	73
Agreeableness		19	37
Use of technology		0	0
Platforms used		22	73
Destination app		22	129

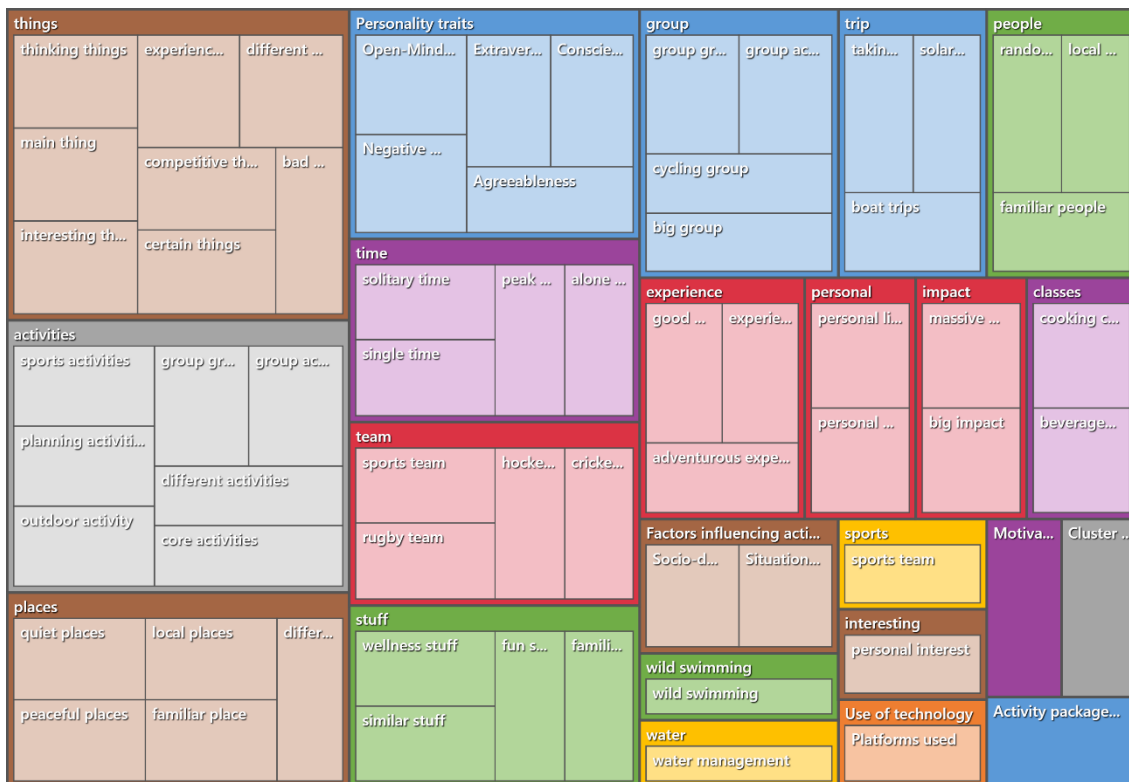
This node structure summarises the main themes and subthemes developed during the thematic analysis. Each node reflects the number of sources (interviews) and references (individual coded segments). The structure supports transparency in theme development and illustrates how codes were grouped under higher-level categories.

Appendix 23: NVivo Tree Maps

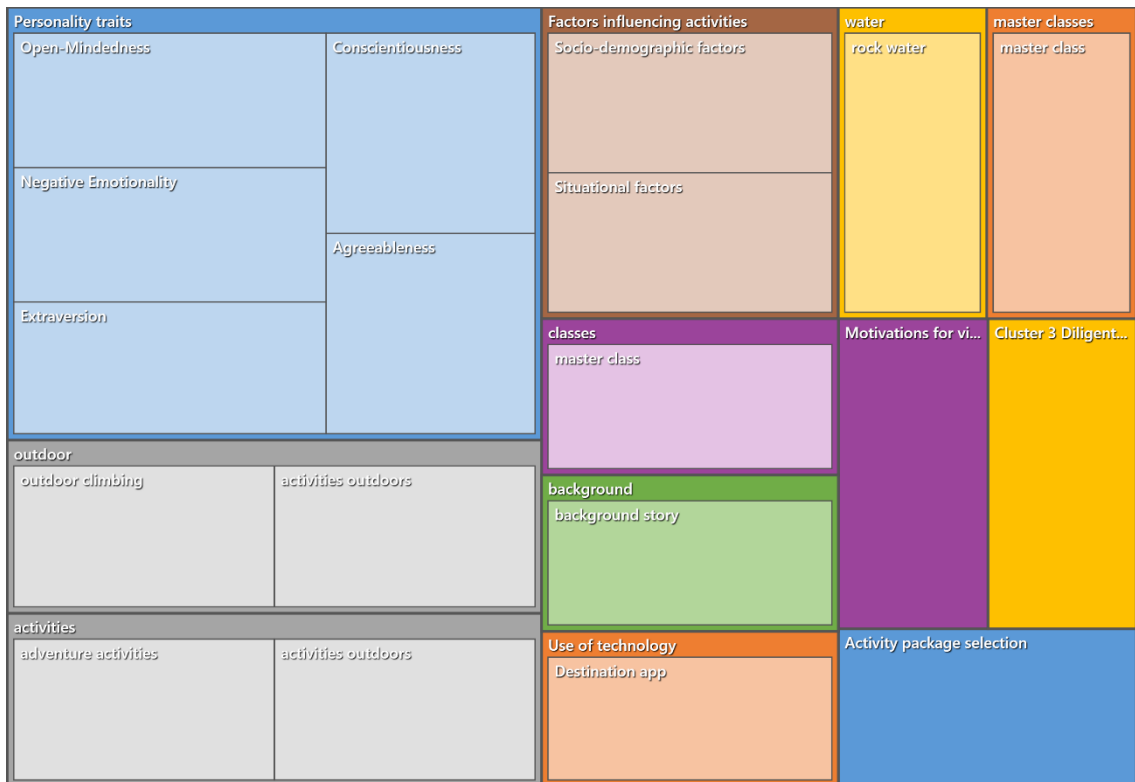
Tree Map: Cluster 1 – Reserved Explorers



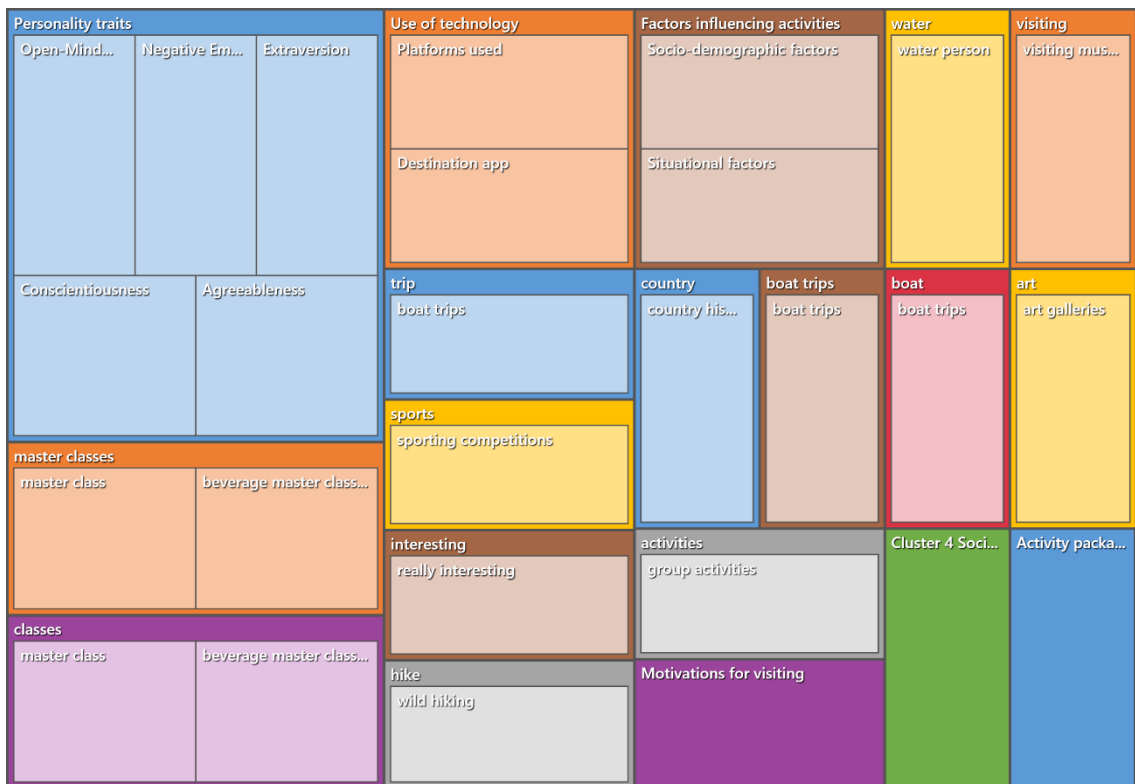
Tree Map: Cluster 2 – Culturally Curious



Tree Map: Cluster 3 – Diligent Adventurers



Tree Map: Cluster 4 – Social Explorers



Tree Map: Cluster 5 – Balanced Explorers

