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Investigating gender differences in psychopathy using a non-clinical sample: Exploring the impact of empathy, anxiety and self-control

Philippa Laskey & Elizabeth A. Bates

The current study aimed to investigate gender differences within primary and secondary psychopathy and how cognitive empathy, emotional empathy, anxiety, and self-control were associated in a non-clinical sample. Men displayed significantly higher rates of primary psychopathy than women, but no significant difference was found for secondary psychopathy. It was found that low cognitive empathy, low emotional empathy, and low self-control predicted primary psychopathy for men and women; however, high anxiety was an added predictor for women. Both low cognitive empathy and low self-control predicted secondary psychopathy for both men and women. The implications of the gender differences found will be discussed in the context of current assessment tools and psychopathy research.

WHILE PSYCHOPATHY as a construct is well established, there has been an increase in research attention into its two subtypes; primary psychopathy is associated with a deficit in affective responses and therefore is characterised by being manipulative, egotistical, and having a lack of anxiety or empathy. Secondary psychopathy is associated with individuals following an antisocial, reward-seeking, and aggressive lifestyle characterised by a lack of self-control. Much of our knowledge in this area comes from clinical populations, but further investigation in non-clinical individuals would be useful to explore the impact on behaviour in this population.

Psychopathy in non-clinical samples

Psychopathic traits do exist in the general population, but the base rate tends to be lower than in the Criminal Justice System (Dolan & Doyle, 2007). More recent research suggests that psychopathic traits fall upon a continuum rather than being categorical, which implies that research into non-clinical

samples is essential to fully understand psychopathy. Psychopathic traits are shared by the entire population to varying degrees; therefore, it follows that this continuum of traits should be observable in a non-clinical sample (Levenson et al., 1995).

Gender differences in psychopathy

Past research has generally focused on psychopathy in male samples, but when men and women have been compared, most studies find higher rates in men (Dolan & Völlm, 2009). This is an issue when considering most research into psychopathy in women has attempted to investigate the disorder by applying criteria designed for men (Forouzan & Cooke, 2005). There is little evidence to suggest that psychopathic traits are any less relevant to women, but they may be expressed differently. For example, de Vogal and Lancel (2016) found that female psychopathic offenders are less likely to be violent, but more likely to display manipulative or self-destructive behaviour than their male counterparts.

In fact, Dolan and Völlm (2009) suggest that traditional assessment tools require adjustment before being used with women, to account for differences. Therefore, perhaps the key to investigating gender differences further is to investigate individual personality traits that are associated with the construct.

Gender differences in psychopathic traits

One personality trait which is commonly associated with psychopathy is a lack of empathy which can be split into two subtypes. Cognitive empathy is the ability to recognise emotional states in others, and emotional empathy refers to the ability to generate an appropriate emotional reaction in response to the others' emotions. This association between psychopathy and deficits in empathy is well documented; however, the association between psychopathy and empathy subtypes remains unclear. Some studies state that only emotional empathy is related to psychopathy (Wai & Tiliopoulos, 2012), whereas others find no association between psychopathy and empathy subtypes (Domes et al., 2013). This relationship has been seen within male (e.g. Brook & Kosson, 2013) and female (e.g. Verona, Bresin & Patrick, 2013) samples, but few studies look at the relationship in terms of empathy subtypes.

Anxiety has also been found to be associated with psychopathy. Previous research suggests individuals with psychopathy have a reduced capacity for experiencing anxiety (Hale et al., 2004) although more recently, research indicates that primary psychopathy specifically is associated with a lack of anxiety, whereas secondary psychopathy is more often associated with high anxiety (Rogstad & Rogers, 2008). Little is known about the sex specific effects of this relationship; Lee and Salekin (2010) found that, for both men and women, primary psychopathy was associated with lower anxiety, whilst secondary psychopathy was associated with higher anxiety. Further investigation into this personality trait and its role in psychopathy subtypes is necessary.

Research using clinical samples has suggested low self-control is more often associated with secondary psychopathy, rather than with primary psychopathy (Prado, Treeby & Crowe, 2015). In contrast, when looking at non-clinical samples it has been found that low self-control is related to both primary and secondary psychopathy (Poythress & Hall, 2011). This implies that there may be differences between clinical samples and non-clinical samples in how self-control presents in psychopathy. There is a lack of research concerning gender differences in the relationship between self-control and psychopathy. The evidence presented indicates that, as with empathy and anxiety, the role of self-control in psychopathy is far from clear.

The current study

The current study aimed to discover whether gender differences exist within psychopathy subtypes. It was predicted that men would score higher on both primary and secondary psychopathy than women. When considering the psychopathy subtypes, it was predicted that primary psychopathy would be associated with low emotional empathy and low anxiety. Secondary psychopathy was predicted to be associated with high anxiety and low self-control. It was not expected that cognitive empathy would be related to either psychopathy subtype. These relationships between psychopathic traits and psychopathy subtypes were predicted to be the same across gender.

Method

Participants and Procedure

The sample consisted of 363 participants (209 women and 154 men), aged from 18 to 56 ($M = 25.80$, $SD = 8.20$). In regard to ethnicity 86.5 per cent of the sample were white, 5.2 per cent were Asian, 4.7 per cent were Mixed, 2.2 per cent were Other, and 1.4 per cent were Black. Questionnaires were available for completion online (97.25 per cent) and by hard copy. The sample was a mix of commu-

nity and student participants. Full ethical approval was gained from the University Ethics Committee before data collection commenced.

Measures

Levenson Self-Report Psychopathy Scale (LSRP). The Levenson Self-Report Psychopathy Scale (LSRP; Levenson, et al., 1995) was used to measure psychopathy as it was designed for research with non-clinical samples. It is a 26-item questionnaire which measures primary (16 items) and secondary psychopathy (10 items). The LSRP achieved good internal consistency for both primary ($\alpha = .88$) and secondary psychopathy ($\alpha = .77$).

Interpersonal Reactivity Index (IRI). The Interpersonal Reactivity Index (IRI; Davis, 1983) was used to measure empathy as its perspective taking and fantasy scales are related to cognitive empathy and its empathic concern and personal distress scales are related to emotional empathy. The IRI is a 28-item questionnaire which measures empathy using four seven-item subscales. The IRI achieved good internal consistency for cognitive empathy ($\alpha = .79$), and emotional empathy ($\alpha = .83$).

Dispositional Anxiety Measure (DAM). To measure anxiety, the Dispositional Anxiety Measure (DAM) was used (Bates, 2012). The DAM was developed to measure the general

Table 1: Mean frequency (standard deviations), *F* and *d* values for primary psychopathy and secondary psychopathy.

	Male (<i>N</i> =154)	Female (<i>N</i> =209)	Sample Mean (<i>N</i> =363)	<i>d</i> value ^a	<i>F</i> value ^b
Primary Psychopathy	31.68 (9.55)	28.37 (7.29)	29.77 (8.47)	.40	13.97**
Secondary Psychopathy	20.90 (5.27)	20.45 (5.15)	20.64 (5.20)	.09	.69

** $p < .001$

Table 2: Standard multiple regression of primary psychopathy onto cognitive empathy, emotional empathy, anxiety, and self-control for men and women.

Variables	β	<i>t</i>	Sig	R ²	Adj R ²
Men:					
Cognitive empathy	-.27	3.84	<.001		
Emotional empathy	-.38	5.03	<.001		
Anxiety	.06	.75	.455		
Self-control	-.37	5.70	<.001	.42	.41
Women:					
Cognitive empathy	-.23	3.79	<.001		
Emotional empathy	-.35	5.21	<.001		
Anxiety	.17	2.42	.017		
Self-control	-.33	5.29	<.001	.31	.30

For secondary psychopathy, for men ($F(4, 149) = 41.13, p < .001$) and women ($F(4, 204) = 49.56, p < .001$), cognitive empathy and self-control were both significant negative predictors (see Table 3).

tendency to become anxious or worried and consists of 10 items. The DAM achieved good internal consistency in the current study ($\alpha = .87$).

Self-Control Scale (SCS). To measure self-control the Self-Control Scale (SCS; Tangney, Baumeister & Boone, 2004) was used. The SCS is a 36-item questionnaire which is used to test the implementation of general self-control behaviours. The SCS achieved good internal consistency in the current study ($\alpha = .90$).

Results

Gender differences

Gender differences were investigated using a multivariate analysis of variance (MANOVA). Table 1 shows that men scored significantly higher on primary psychopathy than women $F(1, 361) = 13.97, p < .001, 95\% \text{ CI } [0.19, 0.61]$ but no significant gender difference was found for secondary psychopathy $F(1, 361) = .69, p = .408, 95\% \text{ CI } [-0.12, 0.29]$.

Sex-specific predictors

Table 2 shows that for men, cognitive empathy, emotional empathy, and self-control were significant negative predictors of primary psychopathy ($F(4,149) = 27.44, p < .001$). For women, cognitive empathy, emotional empathy, and self-control were

significant negative predictors, and anxiety was a significant positive predictor, of primary psychopathy ($F(4, 204) = 23.09, p < .001$).

Discussion

The current study aimed to be one of the first to investigate subtypes, gender differences, and personality traits associated with psychopathy, using a non-clinical sample. The results revealed that men scored significantly higher on primary psychopathy than women, but that no significant difference was found for secondary psychopathy. Low cognitive empathy, low emotional empathy, and low self-control all predicted primary psychopathy for men and women; however, women had an added predictor of high anxiety. Low cognitive empathy and low self-control predicted secondary psychopathy for both men and women. These results imply that there are sex-specific experiences of psychopathy.

These findings provided mixed support for previous literature; the majority of research stated that men would score higher than women in both primary and secondary psychopathy (e.g. Dolan & Völlm, 2009). This was partially replicated in the current study with men scoring significantly higher than women in primary psychopathy, but

Table 3: Standard multiple regression of secondary psychopathy onto cognitive empathy, emotional empathy, anxiety, and self-control for men and women.

Variables	β	t	Sig	R ²	Adj R ²
Men:					
Cognitive empathy	-.25	3.99	<.001		
Emotional empathy	-.07	1.04	.302		
Anxiety	.12	1.84	.067		
Self-control	-.64	10.75	<.001	.53	.51
Women:					
Cognitive empathy	-.12	2.27	.025		
Emotional empathy	-.04	.74	.458		
Anxiety	.04	.66	.508		
Self-control	-.67	12.59	<.001	.49	.48

with no significant gender difference for secondary psychopathy. Most of the research on empathy and psychopathy indicated that a lack of emotional empathy would be associated with primary psychopathy and that cognitive empathy would not be related to either psychopathy subtype (e.g. Verona et al., 2013). The results of the current study revealed that, both low cognitive empathy and low emotional empathy predicted primary and secondary psychopathy for men and women. Research into the relationship between anxiety and psychopathy stated that low anxiety would be related to primary psychopathy and high anxiety would be related to secondary psychopathy (e.g. Rogstad & Rogers, 2008). In contrast to this, the current research found that high anxiety predicted primary psychopathy, but only for women. Anxiety was not associated with secondary psychopathy for either men or women. In the literature, low self-control was associated with secondary psychopathy but not primary psychopathy (e.g. Prado et al., 2015). In the current study, low self-control predicted primary and secondary psychopathy for men and women. This mirrors the results found in Poythress and Hall's (2011) study where self-control was related to both primary and secondary psychopathy. It should be noted that this study and the current research both used non-clinical samples and provide support for there being a difference between clinical and non-clinical samples in psychopathy.

Limitations

It is well established that there is a stigma associated with possessing psychopathic traits, and this stigma may have prevented people completing the study (response rate = 25 per cent). Additionally, participants could have also under-reported psychopathic traits as a result of this stigma. Furthermore, the DAM (Bates, 2012) may not have been comprehensive enough to capture the true nature of the participants' anxiety levels, and could explain why anxiety

was not a more prominent predictor in the results. Perhaps using a more commonly used measure of anxiety would be more effective (e.g. The State-Trait Anxiety Inventory; STAI-T; Spielberger, Gorsuch & Lushene, 1970).

Future directions

While these results add to the literature on psychopathy, they do not provide complete clarification on the construct. The gender differences indicate sex specific effects; the utility of current assessment tools should be examined to ascertain whether they are useful for both men and women. Furthermore, low self-control and low cognitive empathy may have to be considered more important factors in primary and secondary psychopathy; especially as these traits predicted both psychopathy subtypes for both men and women. Finally, future studies should consider including both non-clinical and clinical participants in their samples to further test the idea that the populations may experience psychopathy differently.

Conclusion

To conclude, the results from this research have expanded knowledge on gender differences in psychopathy subtypes. The literature that already exists on psychopathy, its subtypes, and its traits has mixed results, and the current research adds yet another perspective to the knowledge base. However, it provides evidence for gender differences in psychopathy and its subtypes, and also further supports the use of non-clinical samples in psychopathy research.

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