A Comparison of Psychopathy Subtypes Based on Gender Differences and Identity Integration

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Abstract

Previous literature on primary and secondary psychopathy has insufficiently focused on gender differences among psychopathy subtypes. Likewise, studies assessing the relationship between psychopathy and identity integration are scarce. The present study aimed to provide more information on the gender differences in primary and secondary psychopathy as well as its relationship with identity integration. Men were expected to score higher on primary psychopathy whilst women were expected to score higher on secondary psychopathy. Primary psychopathy was expected to positively correlate with identity integration, while secondary psychopathy was expected to negatively correlate with identity integration. The sample consisted of 435 participants (M = 35.22) of which 57.9% were female and 42.1% were male. The study used cross-sectional data and a correlational research design. The Levenson Self-Report Psychopathy Scale and the Severity Indices of Personality Problems – Short Form were used. Gender was the independent variable and primary and secondary psychopathy and identity integration were the dependent variables. An independent samples t-test, a Pearson's correlation and a One-Way ANOVA were performed to assess the hypotheses. No substantial gender differences among the psychopathy subtypes were found. A small positive correlation was found between primary psychopathy and identity integration as well as between secondary psychopathy and identity integration. Finally, there were no gender differences in identity integration scores.

Keywords: psychopathy, primary psychopathy, secondary psychopathy, gender differences, identity integration

When people think of psychopaths, a name that often comes to mind is Hannibal Lecter. We tend to imagine this individual as being incredibly manipulative, an amazing liar, highly intelligent, perceptive, extremely dangerous, athletic, cannibalistic, prone to being very obsessed with someone else; the list goes on and on (Harris, 2009). Another name that might come to mind is Ted Bundy, who has also been described as charming, manipulative, deceptive, intelligent, dangerous and athletic (Michaud & Aynesworth, 2019). These two men, fictitious or not, seem to have quite some things in common. One detail that is often overlooked, is the simple fact that these two examples are both men. The media has reported on a lot of male serial killers in the past. However, there are examples of women who committed similar crimes and whom have generally not received as much attention from the media. For example, Aileen Wuornos, Dorothea Puente and Nannie Doss (Belmonte, 2018). The name Ted Bundy seems familiar to more people than, for instance, Dorothea Puente, which seems to point to a gender bias in the media when it comes to psychopaths and/or serial killers. This gender bias in the public's perception of these criminals might have influenced the course of scientific research, as researchers have seemed to be more inclined to focus on samples comprising of males as opposed to their female counterparts (e.g., Dolan & Völlm, 2009; Verona & Vitale, 2018). One of the aims of the present study is to illustrate that psychopathy is not a predominantly male construct.

Numerous studies have been conducted on psychopaths and some of the aforementioned traits of infamous psychopaths are part of the description of the disorder. First, Cleckley (2015) identified 16 characteristics of psychopathy. Charm, intelligence, untruthfulness and lack of remorse are among the characteristics that he identified (Cleckley, 2015). Second, Hare (1991) developed the four-factor model of psychopathy (PCL-R), which consists of the Interpersonal, Affective, Lifestyle and Antisocial domains. Superficial charm,

pathological deception, lack of remorse or guilt and lack of empathy are also mentioned in this model (Hare, 1991). A more complete description of the various conceptualisations and characteristics of psychopathy and the differences between them has been provided by Vien & Beech (2006).

Based on the aforementioned models, psychopathy has been divided into two distinct subtypes. First, a distinction was made between symptomatic and idiopathic psychopathy (Karpman, 1941; Karpman, 1946), where symptomatic psychopathy is based on motivation and idiopathic psychopathy on behaviour. Subsequent studies have elaborated on Karpman's idea and resulted in the distinction between primary and secondary psychopathy (Lykken, 1995; Skeem et al., 2007). According to this distinction, primary psychopathy is characterised by unemotionality, callousness, manipulativeness and being calculating, as well as by a lack of fear, guilt, remorse, empathy and anxiety. The aetiology of this subtype is thought to be mainly genetic. In contrast, secondary psychopathy is characterised by impulsivity, emotionality, anxiousness, hostility, aggressiveness, volatility and being self-destructive as well as a tendency to being disorganised and exhibiting risky behaviour. The aetiology of this second subtype is thought to be more based on environmental factors (Karpman, 1946; Lykken, 1995).

The concept of secondary psychopathy seems to overlap with the conceptual definition of borderline personality disorder (BPD; Ridings & Lutz-Zois, 2014). For instance, both these disorders share characteristics like emotion dysregulation as well as identity disturbance (Widiger, 2014). Identity integration can be defined as someone possessing a coherent sense of who they are (Syed & McLean, 2015). Identity disturbance occurs when the degree of identity integration is dysfunctional. Thus, when someone fails to have a coherent sense of self, this can be defined as poor identity integration. This is a renowned key characteristic of BPD (American Psychiatric Association, 2013) but it has also been

suggested as being a potential characteristic of secondary psychopathy (Cierpialkowska, et al., 2018).

It has also been suggested that secondary psychopathy could be placed along a continuum with other personality disorders, such as antisocial personality disorder (ASPD) and BPD (Yildirim & Derksen, 2015). According to Yildirim and Derksen (2015), this is based on the fact that primary psychopathy is often seen as a condition on its own based on emotional deficiency, whereas secondary psychopathy has a more environmental component which fits more with the definition of an emotional disturbance. Components associated with secondary psychopathy (impulsivity, emotionality, anxiousness, aggressiveness, etc.) are strikingly similar to symptoms of BPD. For instance, symptoms such as identity disturbance, impulsivity, affective instability and anger issues (American Psychiatric Association, 2013).

Given the conceptual similarities between secondary psychopathy and BPD, it could be plausible that evidence-based treatments for BPD could also prove effective for secondary psychopaths. One study by Babcock and Michonski (2019) suggested that while BPD patients have been proven to benefit from Dialectical Behaviour Therapy (DBT), primary psychopaths benefit more from affective empathy and validation training. This is in line with the suggestion by Harris and Rice (2006) that primary and secondary psychopaths may require different treatments because of the difference in their aetiology and conceptualisation. Due to the aforementioned similarities, it would be plausible for DBT to benefit secondary psychopaths as well (Ridings & Lutz-Zois, 2014). However, the sample of this study only consisted of males. It is worth noting that more research into the gender differences between primary and secondary psychopathy could aid in the search for effective (and possibly different) treatment methods that would be beneficial for these two distinct subtypes.

Furthermore, research into the relationship between psychopathy and identity integration is scarce. One study concluded that egocentrically-impulsive psychopaths

frequently show a borderline personality organisation (BPO), including a more frequent use of primitive (i.e., child-like) defence mechanisms (Cierpialkowska, et al., 2018). However, this study measured identity integration by measuring BPO and had a different conceptualisation of primary and secondary psychopathy. A weak, negative correlation between psychopathic traits and identity integration can be found in a study performed by Garofalo et al. (2018), even though this was not necessarily the aim of their study. Moreover, a possible indication of a difference in the degree of identity integration between male and female psychopaths can be derived from the finding that women with psychopathy more often had BPD and showed more manipulative and self-destructive behaviour as compared to their male counterparts (de Vogel & Lancel, 2016). In this study, however, no distinction was made between primary and secondary psychopathy.

As previously discussed, there appears to be a gender bias in the media and psychopathy literature. Such that the vast majority of older studies done on the subject have mainly used male samples and this is often pointed out as a limitation by more recent studies (e.g., Dolan & Völlm, 2009; Verona & Vitale, 2018). This bias is problematic because measurement instruments have thus been developed by studying male samples and may yield different results when applied to female samples (Bolt et al., 2004; Salekin et al., 1997). Moreover, gender differences in psychopathology exist which can be described on the basis of three levels: 1) genetic differences; 2) biological and social differences (for instance, different biological maturation rates, differences in socialisation, differences in endocrinological make-up); and 3) differences in risk and protective factors due to differences in emotional expression and cognitive styles (Rutter et al., 2003). Because these differences exist, it would be incorrect to assume that the manifestations of a disorder (e.g., psychopathy) would be the same in men and women, which in turn could affect both the diagnosis of a disorder as well as the effectiveness of treatments.

It is important to remember that psychopathy is a heterogeneous construct within itself as well as across genders. By failing to account for gender differences, the differences in the manifestation of psychopathy may be overlooked and important distinctions may thus be misunderstood. Consequently, there would not be enough information to develop effective treatment methods. Perhaps a way to get a little closer to a possible treatment, is to look at the differences in prevalence rates of primary and secondary psychopathy among men and women as well as the degree of identity integration among these subtypes. Based on the aforementioned similarities, identity integration may play an important role in identifying comorbid (personality) disorders, that may utilise evidence-based treatments which could therefore prove useful for psychopathic individuals as well.

As of yet, not many studies have focused on the specific prevalence rates of gender differences in primary and secondary psychopathy. The studies that have investigated these rates yielded mixed results. One study suggests that primary psychopathy is more often present in males as compared to females (Falkenbach et al., 2017). Other studies suggest that women are more likely to be secondary psychopaths as compared to men (e.g., Laskey & Bates, 2018; Moffett et al., 2020). Yet another study showed a female sample in which overall scores on primary psychopathy were higher compared to females scoring on secondary psychopathy. However, there were more males scoring higher on primary psychopathy than females (Blanchard & Lyons, 2016). Thus, there seems to be some consensus that men have a higher overall score on both primary and secondary psychopathy as compared to women.

The scarcity of studies on the relationship between psychopathy and identity integration seems unusual since secondary psychopathy is thought to overlap with BPD of which poor identity integration is an important characteristic. Besides, gender differences in the prevalence rates of primary and secondary psychopathy are quite arbitrary. It is important

to gather more information on these topics in order to fill in the gaps that exist in the literature which, in turn, could aid the development of treatments that could possibly reduce recidivism and perchance even the severity of the disorder.

The present study aims to provide more information on the distinction between primary and secondary psychopathy among men and women. Furthermore, by looking at the relationship between primary and secondary psychopathy and identity integration, more insight could be gained into treatment options, which could, in turn, benefit clinical practice.

The research question of the present study has been formulated as follows: What are the gender differences in primary and secondary psychopathy and how do gender and primary and secondary psychopathy relate to identity integration scores? The hypotheses were that 1) men are expected to score higher on primary psychopathy as compared to women; 2) women are expected to score higher on secondary psychopathy as compared to men; 3) primary psychopathy is expected to be associated with higher identity integration scores; 4) secondary psychopathy is expected to be associated with lower identity integration scores; and 5) men are expected to have higher identity integration scores compared to women.

Method

Procedure

The participants in the sample were recruited by master psychology students during their internships in several outpatient psychiatric facilities. They were provided with an informed consent letter stating that the study would have no effect on their treatment and that their participation was entirely voluntary. Those who agreed to participate in the study, were requested to fill out a set of questionnaires, which would be completed during treatment sessions. The compensation that they received comprised of five euros.

Another group of students (bachelor and master) acquired data from the community using an online questionnaire. All participants were required to fill out an informed consent form, which all participants signed. This group of participants did not receive any compensation. The procedure involving the participants were all in accordance with the ethical standards of the Ethical Review Board (ERB) of Tilburg University. For more information on the recruitment of participants and ethical approval see Bogaerts et al., (2021).

Participants

The total sample consisted of 435 participants ($N = 435$) after excluding participants with an age older than 60 years, missing values on the questionnaires, and gender. Both participants from the community as well as those from a criminal setting or with a criminal background were included. Participants older than 60 years were excluded because of the possible associations with confounding variables such as cognitive decline. Age-related cognitive decline could confound results as suggested by previous studies that have investigated the relationship between psychopathic behaviour and age (e.g., Mendez, et al. 2011). Seeing that the present study solely focused on psychopaths, the participants whose Levenson Self-Report Psychopathy Scale (LSRP) scores indicated them to be non-psychopaths were removed from the sample. The sample consisted of 252 females (57.9%) and 183 males (42.1%). The mean age of the sample was $M = 35.22$, with a minimum of 18 years old and a maximum of 60 years old. Finally, demographic sample characteristics such as ethnicity, education, social status and income are summarised in Appendix A.

Measures

Levenson Self-Report Psychopathy Scale

The Levenson Self-Report Psychopathy Scale (LSRP; Levenson et al., 1995) is a self-report questionnaire consisting of 26 items. Each item is rated on a Likert Scale with four answer options ranging from “strongly disagree” to “strongly agree” and is mainly used in

non-institutionalised samples. 16 of the items measure primary psychopathy (F1) and mainly focus on manipulation and lack of empathy. Examples of primary psychopathy items are: “I enjoy manipulating other people’s feelings” and “looking out for myself is my top priority”. The 10 remaining items measure secondary psychopathy (F2) and focus more on behavioural aspects (i.e., antisocial behaviour). Examples of secondary psychopathy items are: “I have been in a lot of shouting matches with other people” and “I don’t plan anything very far in advance”. The phrasing of several items has been reversed to reduce responder bias. An example of such an item is: “I feel bad if my words or actions cause someone else to feel emotional pain”.

Three thresholds exist, where a score range of 0 to 48 makes up the non-psychopathic group; a score range of 49 to 57 indicates the mixed group; and scores of 58 or higher make up the psychopathic group. Thus, the higher the score, the higher the self-reported level of psychopathy. The present study found a Cronbach’s alpha of 0.61, which indicates a moderate reliability. This is in line with previous studies, which have shown the Cronbach’s alpha of the LSRP to range from 0.60 to 0.70 (moderate) for Factor 2 and from 0.80 to 0.90 (very good) for Factor 1, which could be due to the fact that F1 consists of more items than F2. (Weiss et al., 2020; Miller et al., 2008). Furthermore, the validity of the LSRP is considered good, although some researchers suggest that a three-factor structure would be more suitable for this questionnaire (Garofalo et al., 2019).

Severity Indices of Personality Problems: Short Form

The Severity Indices of Personality Problems – Short Form (SIPP-SF; Verheul et al., 2008) is a self-report measure consisting of 60 items and has been derived from the SIPP-118. This questionnaire is used to measure five domains of maladaptive personality functioning. These pertain to self-control, identity integration, relational capacities, responsibility and social concordance, all of which consist of 12 items. Each of these items is

scored on a Likert scale with four answer options that range from “fully disagree” to “fully agree”. Higher scores pertain to greater personality functioning and lower scores to lesser personality functioning (Verheul et al., 2008).

The present study solely focuses on the identity integration domain, which entails the coherence of identity, i.e., the extent to which someone has the capacity to see themselves and their own life as stable, integrated, and purposive (Verheul et al., 2008). Example items are “I am often confused about what kind of person I really am” and “It is hard for me to really enjoy doing things”. In the current study, this domain showed Cronbach’s alpha to be 0.88, which is regarded as indicating good reliability and is similar to the value found by Bogaerts et al., (2021). Furthermore, the validity of the SIPP-SF has been shown to be good across different age groups (Rossi et al., 2017).

Statistical Analyses

All analyses were performed using IBM SPSS Version 28.0. The present study used a quantitative research design, specifically a cross-sectional design which meant that no causal conclusions could be drawn. In order to compare the gender differences in primary and secondary psychopathy, a one-tailed independent samples t-test was performed, where gender was the independent variable and primary and secondary psychopathy were the dependent variables and for which a significance level of $\alpha = 0.05$ was used. A Levene’s test was conducted to assess the assumption of homogeneity of variance. The test was significant for primary psychopathy ($p = .003$). However, due to the large enough sample size, this did not pose a problem for the interpretation of the analysis. For secondary psychopathy, the Levene’s test was not significant ($p = .993$) and therefore no assumptions were violated. Finally, a G*Power analysis (Faul et al., 2007) was conducted (medium effect size $d = .50$ and $\alpha = .05$), which showed that an equal group size of $n = 51$ and a total sample size of $n = 102$ was required to achieve a power of 0.80.

In order to determine the association between primary and secondary psychopathy and identity integration, a Pearson's correlation was computed. However, after inspecting the scatterplots, it was not clear whether the data would adhere to the assumption of linearity. The Linearity Test was performed to assess the linearity of the association between primary psychopathy and identity integration, which resulted in a non-significant value for deviation from linearity (p = .299), indicating that a linear relationship does exist between primary psychopathy and identity integration. The same was done for the association between secondary psychopathy and identity integration, which yielded the same conclusion (p = .090) and thus this assumption was not violated. The assumption of normality was violated for identity integration. Whereas the distributions for both primary and secondary psychopathy approximated a normal distribution, the distribution of the identity integration scores was positively skewed. In spite of this, the Pearson's correlation is rather robust against violations of this kind (Havlicek & Peterson, 1976), and thus could still be used. Finally, a G*Power analysis (Faul et al., 2007) was conducted (α = .05), which indicated that a total sample size of n = 67 was required to achieve a power of 0.80.

In order to assess the difference in identity integration scores in men and women, a one-way ANOVA was performed with gender as the independent variable and identity integration as the dependent variable. The Levene's test for homogeneity of variance did not yield a significant result (p = .468), which meant that the assumption of homogeneity of variance was not violated. On the other hand, the assumption of normality was violated. However, ANOVA is considered to be robust against violation of this assumption (Blanca et al., 2017). No post hoc tests were performed because gender only consisted of two groups and therefore the results of the ANOVA were sufficient. Finally, a G*Power analysis was performed (Faul et al., 2007) which indicated that in order to achieve a power of 0.80, a minimum sample size of n = 34 was required (with d = 0.50 and α = 0.05).

Results

The means and standard deviations were computed for primary psychopathy, secondary psychopathy and identity integration. This was calculated for men and women separately, as well as men and women combined. An overview of these descriptive statistics can be found in Table 1.

Table 1

Descriptive Statistics of Psychopathy and Identity Integration

	Gender	*N*	*M*	*SD*
Primary Psychopathy	Female	252	45.26	4.07
	Male	183	43.79	5.15
	Combined	435	44.64	4.61
Secondary Psychopathy	Female	252	29.67	3.11
	Male	183	29.36	3.01
	Combined	435	29.54	3.06
Identity Integration	Female	252	43.18	5.20
	Male	183	43.22	6.01
	Combined	435	43.20	5.55

Gender differences in primary and secondary psychopathy

Gender differences in primary and secondary psychopathy were computed using an independent samples t-test. This analysis was performed in order to assess hypotheses one and two. The results indicated that primary psychopathy scores in men were not significantly higher than those of women $t(433) = 3.32$, $p = .99$. Therefore, the first hypothesis was rejected.

There was no significant difference in secondary psychopathy scores between men and women $t(399) = 1.05$, $p = .147$. Hence, the second hypothesis was rejected. The mean secondary psychopathy scores for men and women were almost equal, with women presenting slightly higher mean scores as compared to men (see Table 1).

It is worth mentioning that upon further analysis, an effect was found which indicated that significantly more women scored higher on psychopathy than men. Therefore, if the first hypothesis had been reversed, a significant effect would have been obtained $t(433) = 3.32$, $p < .001$.

Identity integration

The means and standard deviations of identity integration in men and women can be found in Table 1. In order to assess hypotheses three and four, Pearson correlations were computed. First, a very weak positive correlation was found between primary psychopathy and identity integration $r(433) = .15$, $p = .002$. However, such a small correlation could be considered negligible. Despite this, the third hypothesis was accepted because of its significance. Secondly, it was found that the association between secondary psychopathy and identity integration had a weak correlation of $r(433) = .349$, $p < .001$. Due to the fact that this was a positive relationship, the fourth hypothesis was rejected.

Subsequently, a one-way ANOVA was conducted to assess the difference in identity integration among men and women (hypothesis five). No statistically significant difference was found in the levels of identity integration scores between men and women $F(1, 433) = .004$, $p = .95$ using a significance level of $\alpha = .05$. Therefore, the fifth hypothesis was rejected.

Discussion

The aim of the present study was to investigate the gender differences between primary and secondary psychopathy and how these two psychopathy subtypes differed in

terms of the degrees of identity integration. The research question of the present study was: What are the gender differences in primary and secondary psychopathy and how do gender and primary and secondary psychopathy relate to identity integration scores?

The first hypothesis was that men were expected to score higher on primary psychopathy as compared to women. The results of the present study suggested that, in this sample, the opposite was true. Surprisingly, the present study found that women scored significantly higher than men on primary psychopathy. This unexpected result invariably disproves the first hypothesis.

However, previous literature does not support such finding. As previously discussed, it is usually the case that men exhibit higher primary psychopathy scores as compared to women (Falkenbach et al., 2017; Laskey & Bates, 2018; Moffett et al., 2020). Blanchard and Lyons (2016) found that the women in their sample ($N = 362$) scored higher on primary psychopathy than on secondary psychopathy, but regardless of this effect, men scored higher on both subtypes. This contradicting finding is puzzling since research has shown that women consistently score lower on both psychopathy subtypes as compared to men (Nicholls et al., 2005) and that primary psychopathy males score higher on primary traits than do primary psychopathy females (Falkenbach et al., 2017). Perhaps this finding could be accounted for by the fact that, in the present sample, the female group was larger than the male group. This could give rise to the possibility that the number of female psychopaths as opposed to male psychopaths was larger in this sample (i.e., more males were excluded on the basis of not scoring high enough on psychopathy as opposed to females, resulting in the female group being larger). Another possibility is that women scored higher on specific primary psychopathy traits as compared to the men. A third possibility is that because the sample did not differentiate between participants with or without a criminal background, a different male-female ratio existed. This unusual finding could also be a strength of the present study,

as it might illustrate how this area of research has been overshadowed by male samples in the past. The fact that the number of female participants was higher in the present study is already an indication that psychopathy is not a predominantly male construct.

The second hypothesis was that women were expected to score higher on secondary psychopathy as compared to men. Even though women scored, on average, slightly higher than men on secondary psychopathy, this effect was not significant. This finding is somewhat in line with previous studies. The reason for this hypothesis to deviate from previous literature had to do with the more (dysfunctional) emotional features of secondary psychopathy. For example, Falkenbach et al. (2017) found that women showed more pathology as compared to men. Seeing that secondary psychopathy and BPD seem to be linked, it may be plausible to assume that women would thus tend to exhibit more secondary psychopathic traits. However, Falkenbach et al. (2017) found no marked difference on secondary psychopathy scores between men and women and the present study is thus in line with this finding. This could mean that women potentially show more subtle differences in the manifestation of specific secondary psychopathy traits and/or differences in comorbidity rates between secondary psychopathy and other disorders as compared to their male counterparts. This is a notion that could have implications for future research in that there may already be evidence-based treatments available for possible comorbid disorders. For instance, if there is BPD comorbidity, perhaps some of the overlapping symptoms could be treated using evidence-based treatment methods suitable for BPD. A suggestion for future research would thus be to determine which overlapping symptoms exist among comorbid disorders that can already be treated and which specific symptoms are lacking in terms of treatability.

Due to the fact that both groups scored higher on primary psychopathy as compared to secondary psychopathy, there is a possibility that this could be explained by the LSRP having

more primary psychopathy items as compared to secondary psychopathy items (Levenson et al., 1995). Moreover, a possible confounding problem could have been the LSRP itself. Most psychopathy measures have been developed using male samples (Dolan & Völlm, 2009; Verona & Vitale, 2018) and this could potentially pertain to the LSRP as well. One study found an association between the LSRP and gender-specific test bias when predicting some components of psychopathy, even though the effect size was relatively small (Marion & Sellbom, 2011). However, this could also be considered a strength in the sense that it sheds some light on how important it is to have measurement instruments that take gender differences into account.

Future research could seek to minimise this type of problem by studying the qualitative differences in the manifestation of psychopathy across genders, which in turn could aid the development of psychopathy measures specifically tailored to women. One such suggestion was made by Dolan and Völlm (2009), postulating that a three-factor structure (as opposed to the commonly used two-factor structure) was found to be more suitable for women. Nonetheless, the finding that more women scored, on average, higher on both subtypes of psychopathy than men deviates from previous literature and demonstrates how important it is to compare these two psychopathy constructs based on gender in order to understand the differences in manifestations more clearly.

The third hypothesis was that primary psychopathy was expected to be positively associated with higher identity integration scores. A very small, positive correlation was found between primary psychopathy and identity integration. However, the correlation was very weak and therefore should be accepted with caution. Considering the fact that secondary but not primary psychopathy has been suggested to overlap with BPD, it seems appropriate to assume that those with primary psychopathy would have a more stable sense of self. Still, it is important to keep in mind that even though someone is categorised as being a primary

psychopath, this does not mean that they do not possess aspects of secondary psychopathy. Moreover, a study by Sprague et al. (2012) suggested that a different phenotypic expression of psychopathy may exist for women, which is similar to the expression of BPD. Thus, there could be a possibility that regardless of the distinct subtypes, psychopathic women would show different degrees of identity integration as compared to psychopathic men.

The fourth hypothesis was that secondary psychopathy was expected to be associated with lower identity integration scores. The rationale for these hypotheses came from the suggestion that BPD overlaps with secondary psychopathy of which identity integration/identity disturbance is an important aspect (Ridings & Lutz-Zois, 2014). Contrary to the hypothesis, a small positive correlation was obtained between secondary psychopathy and identity integration. It is plausible that a positive correlation was found due to the fact that virtually all participants scored high on identity integration (i.e., a ceiling effect was observed). Therefore, it is challenging to reliably determine the relationship between identity integration and psychopathy.

A limitation of the present study was the ceiling effect that seemed to have occurred among the identity integration scores. One reason for this could have been the combination of community and criminal participants in the sample. Identity integration was found to be indirectly linked to criminal behaviour (Bogaerts et al., 2021). Therefore, it is possible that there are differences in degrees of identity integration between these two different populations. In hindsight, separating these populations for the analysis may have been more appropriate and is suggested for future researchers. Another reason for the observed ceiling effect could have related to a slightly more complicated issue. As previously mentioned, it has been suggested that there could be a phenotypic difference in psychopathy expression among women (Sprague et al., 2012). Seeing that the present study did not run analyses to compare the degrees of identity integration between primary and secondary psychopathy

based on gender, there is a possibility that psychopathic women would demonstrate different degrees of identity integration as compared to psychopathic men. Future research, could therefore seek to investigate the degrees of identity integration based on psychopathic males and females separately.

As mentioned before, studies directly comparing identity integration scores with psychopathy scores are scarce. Future research could seek to compare the degree of identity integration in individuals with primary and secondary psychopathy by including participants with a comorbid borderline personality disorder and assessing whether these individuals would differ significantly in their primary and secondary psychopathy scores as compared to a control group where BPD comorbidity is absent. An approach such as this one could perhaps avoid the ceiling effect that was seen in the present study and even provide information on the effect that comorbidity of these two disorders could have on the behaviour that is exhibited by such individuals.

Given the scarcity of literature on this relationship, it is recommended that future research focus on identity integration in relation to primary and secondary psychopathy, as this could benefit the development as well as the effective employment of treatment methods in clinical practice. Understanding the relationship between identity integration and psychopathy could clarify whether existing treatments that are employed for BPD might be suitable for secondary psychopathy as well. Moreover, gender effects as suggested by Sprague et al. (2012) could mean that different treatments should be employed for men and women. Conclusively, another strength of the present study was that it illustrated a rather significant gap in the literature when it comes to the relationship between psychopathy and identity integration, despite there being several studies investigating the relationship between BPD and psychopathy.

The fifth hypothesis was that men were expected to have higher identity integration scores compared to women. The present study found that there was no difference in identity integration scores between men and women. As previously mentioned, no distinction was made based on psychopathy subtypes or on whether a participant belonged to a criminal or community population. Therefore, this finding may not be entirely reliable.

A different finding could have been observed if gender differences in identity integration had been subdivided among the psychopathy subtypes. Especially since this could have contrasted the difference in manifestation between men and women particularly when it comes to secondary psychopathy. Namely, when looking at gender differences in the diagnostic criteria of BPD, more women seem to fulfil the 'identity disturbance' criteria of BPD as compared to men (Johnson et al., 2003). Therefore, if BPD is as closely linked to secondary psychopathy as has been suggested, one would expect there to be at least some difference in identity integration scores between men and women.

Furthermore, Gabbard (2005) suggested that males with BPD are sometimes (wrongfully) diagnosed with antisocial personality disorder (ASPD) instead of BPD despite displaying BPD symptoms. This has implications for future research because it suggests a similarity or even comorbidity between these two disorders which could perhaps apply to both men and women. Indeed, comorbid BPD and ASPD appears to be associated with violent criminal offending and higher psychopathic traits than if someone suffers from BPD alone (Robitaille et al., 2017). Moreover, secondary psychopathy has been suggested to occur on a continuum with both BPD and ASPD (Yildirim & Derksen, 2015). Thus, this would be an interesting research avenue to pursue. Especially since this could have implications for the treatment of these individuals. Treatments that have shown to be effective for BPD (Salters-Pedneault, 2021), might thus benefit those with secondary psychopathy. These include: Cognitive Behavioural Therapy (CBT), Dialectical Behaviour Therapy (DBT), Mentalisation-

Based Treatment (MBT), Transference-Focused Psychotherapy (TFP), and Schema-Focused Therapy (SFT).

In conclusion, more research is needed in order to get a clearer picture of the qualitative differences in the expression of primary and secondary psychopathy based on gender. Moreover, the gaps in the literature that exist with regard to the association between identity integration and psychopathy should be filled in order to allow for a better understanding of the disorder and perhaps even the conceptualisation of it, which in turn could help the development and/or application of appropriate treatments. The present study points future research in a direction that thus far does not seem to have been pursued as much, even though this direction may prove a critical piece of an incredibly complicated puzzle.

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Appendix A

Sample Characteristics

Ethnicity		*N*	Percent	Valid Percent	Cumulative Percent
Valid	Afghan	1	0.20	0.30	0.90
	Antillean	2	0.50	0.60	1.40
	Caucasian	1	0.20	0.30	1.70
	German	4	0.90	1.10	2.90
	European	8	1.80	2.30	5.10
	Indonesian	1	0.20	0.30	5.40
	Iraqi	1	0.20	0.30	5.70
	Israeli	1	0.20	0.30	6.00
	Croatian/Bosnian	1	0.20	0.30	6.30
	Moroccan	3	0.70	0.90	7.10
	Dutch	314	72.20	89.70	96.90
	Dutch-Indonesian	4	0.90	1.10	98.00
	Romanian	1	0.20	0.30	98.30
	Surinamese	5	1.10	1.40	99.70
	Turkish	1	0.20	0.30	100.00
	Total	348	80.50	100.00	
Missing		87	20.00		
Total		435	100.00		

Education	*N*	Percent	Valid Percent	Cumulative Percent

Valid	Primary education	1	0.20	0.20	0.20
	LBO	10	2.30	2.30	2.50
	MVO	20	4.60	4.60	7.20
	HVO	59	13.60	13.70	20.80
	MBO	95	21.80	22.00	42.80
	VWO	68	15.60	15.70	58.60
	HBO	131	30.10	30.30	88.90
	WO	48	11.00	11.10	100.00
	Total	432	99.30	100.00	
Missing		3	0.70		
Total		435	100.00		

Social Status		*N*	Percent	Valid Percent	Cumulative Percent
Valid	Living with family	75	17.20	17.40	17.40
	Living with family (children)	7	1.60	1.60	19.10
	Single	94	21.60	21.90	40.90
	Single with children	11	2.50	2.60	43.50
	Married/cohabitation	87	20.00	20.20	63.70
	Married/cohabitation (children)	117	26.90	27.20	90.90
	Elderly home/other institution	2	0.50	0.50	91.40
	Blended family/no children	8	1.80	1.90	93.30
	Other	29	6.70	6.70	100.00
	Total	430	98.90	100.00	
Missing		5	1.10		
Total		435	100.00		

Income		*N*	Percent	Valid Percent	Cumulative Percent
Valid	Study financing	95	21.80	23.30	23.30
	Social assistance benefits	2	0.50	0.50	23.80
	Unemployment benefits	4	0.90	1.00	24.80
	Other benefits	7	1.60	1.70	26.50
	Pension	4	0.90	1.00	27.50
	Paid employment	295	67.80	72.50	100.00
	Total	407	93.60	100.00	
Missing		28	6.40		
Total		435	100.00		