Impulsivity and psychopathy: Associations between the Barrett Impulsivity Scale and the Psychopathy Checklist revised

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A R T I C L E   I N F O
Article history:
Received 11 May 2010
Received in revised form 1 September 2010
Accepted 2 February 2011

Keywords:
Psychopath
Psychopathy Checklist-revised (PCL-R)
Impulsivity
Barrett Impulsivity Scale (BIS-11)

A B S T R A C T
Impulsivity is often cited as a core dysfunction in those who are high in psychopathic traits. However, both impulsivity and psychopathy are both multi-faceted constructs. We examined a 3-factor model of self-reported impulsivity (Barrett Impulsivity; BIS-11) against the 2-factor and 4-facet model of psychopathy as defined by the Psychopathy Checklist-Revised (PCL-R). Those high on 'secondary psychopathy' (Factor 2 and Facets 3 and 4 of the PCL-R) showed increased impulsivity as it related to acting with thinking (Motor Scale of BIS) and lack of future planning (Non-Planning scale of BIS), but not did not show any elevated features of poor concentration or distraction (Attention Scale of BIS). On the other hand, there was some evidence that 'primary psychopathy' (Factor 1 of PCL-R) was associated with reduced impulsivity as it relates to future planning (Non-Planning scale of BIS). Thus, our results show that only some psychopaths show increased impulsivity and that not all forms of impulsivity are raised.

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1. Introduction

Psychopathy is one of the most important personality concepts within the fields of both clinical and forensic psychology and psychiatry. It is often conceptualised in terms of a combination of personality traits and socially deviant behaviours (e.g., Hare, 2003; Patrick, 2010). It appears to have some relation to the notion of Antisocial Personality Disorder (APD) as defined by DSM-IV, though the two are not synonymous. In particular, traditional and contemporary conceptualisations of psychopathy place greater emphasis on the personality traits, whilst these are relegated to associated features in the DSM-IV diagnosis of APD (for discussions see Hare, 2003).

Psychopaths are typically described as having the traits of callousness, insincerity, a lack of anxiety and an impulsive nature. It is this last trait, that of 'impulsiveness' that is the focus of this paper. Some previous research has shown that impulsivity appears to be a core feature of psychopathic individuals (Blackburn and Coid, 1998), and is contained in older conceptualisations (e.g., Craft, 1965). However, certain findings in the research literature do not seem to fit easily with the notion that psychopaths are marked by impulsive behaviour. For example, Woodworth and Porter (2002) examined cases of murder and classified them as either cold-blooded (planned) or hot-blooded (reactive/impulsive). Whilst the murderers defined as psychopaths committed both types of homicide, they were responsible for nearly all the cold-blooded killings. Hence, this result seems to point towards a planned and deliberate risk taker, rather than an impulsive reactor (see also Cima and Raine, 2009; Vitacco et al., 2009).

Despite these behaviours, and the prolific offending histories that are often associated with some psychopathic individuals, it appears that psychopathic individuals have a great proficiency in persuading others of their good intentions and that they should be released from secure settings (Porter et al., 2009). Again, this ability does not seem to match the idea of someone who is impulsive or reactive. Likewise, many clinincians find it hard to reconcile the calculating and carefully planned manipulative behaviours that they encounter from some psychopathic individuals with the notion of the reactive behaviours and lack of planning that the notion of high impulsivity implies.

1.1. Varieties of psychopathy

One possible reason for the apparent lack of impulsivity in some psychopaths lays in the notion that psychopathy is not a unitary concept. For many years there has been the notion that psychopathic individuals can be classified into primary and secondary psychopaths (Karpman, 1948; Lykken, 1957). Primary psychopaths are thought to be low in anxiety and fear, and have low sensitivity to cues for harm, punishment or non-reward. Conversely, secondary psychopaths are thought to be over-sensitive to cues of punishment or reward and therefore can overreact to situations. So thus conceptualised, it would appear that the concept of impulsivity is most likely associated with the secondary psychopath and not the primary variety. A common modern method of defining psychopathy is the Psychopathy Checklist- Revised (PCL-R; Hare, 2003), Harpur et al. (1998) also found that this instrument had two factors and there appears to be a reasonable...
match between these two factors and the notion of the primary and secondary psychopath (see Hicks et al., 2004).

More recently, there have been attempts to subdivide the notion of psychopathy even further, with 3-factor (Cooke and Michie, 2001) and 4-factor (or facets as they are referred to in order to distinguish them from the two factors; Hare, 2003) models being proposed. This latter four factor model has ‘facets’ of (1) Interpersonal, which reflect the person’s interactions with others which are often superficial, grandiose and deceitful, (2) Affective, which reflect the person’s poverty of emotions, empathy and remorse, (3) Lifestyle, which reflect the person’s impulsive, irresponsible and unfocussed lifestyle, and (4) Antisocial, which reflect their criminal and antisocial behaviours. In this paper we adopt a four-facet approach derived from the PCL-R as it appears that the four-facet model includes the three-facet model whilst maintaining a measure of antisocial behaviour (facet 4) that includes criminal behaviours.

1.2. Varieties of impulsivity

A cursory reading of the literature that relates to impulsivity shows that it includes a wide-range of theoretical constructs, behaviours and traits (Enticott and Ogloff, 2006; Evenden, 1999; Reynolds et al., 2006). It can also be measured using a variety of techniques ranging from an individual’s self-report of their behaviours and attitude, through to laboratory-based tasks. One example of the self-report measure is the Barratt Impulsiveness Scale (BIS). BIS has a long history (Stanford et al., 2009) and has undergone many revisions. In its current form (BIS-11; Patton et al., 1995) it consists of 30 items that are responded to on a 4-point scale. As well as providing an overall impulsivity score the BIS provides scores on 3 factors. The ‘Attention’ factor reflects poor concentration and thought intrusions, the ‘Motor’ factor reflects acting without thinking, and the ‘Non-planning’ factor indeed reflects a lack of future planning. This 3-factor solution has been explored in many populations and there are reports of both successes in replicating this structure (Stanford et al., 2009), and failures to replicate this structure often resulting in two-factor solutions. For example, Haden and Shiva (2008) found a two-factor solution in a sample of male forensic inpatients, with factors they termed Motor Impulsiveness and Nonplanning impulsiveness, though these were not identical to those within the 3-factor solution of Patton et al. (1995). We note that many other scales and studies also provide for a multi-factor view of the concept of impulsivity (e.g., Whiteside and Lynam, 2001).

Despite the importance of the concept of impulsivity to the concept of psychopathy there have been remarkably few studies of impulsivity as defined by the BIS and psychopathy as defined by the PCL. The one exception to this is the study of Jackson et al. (2007). In this study they administered the screening version of the PCL (PCL-SV1; Hart et al., 1995) as well as the BIS-11 to a subsample of the MacArthur Violence Risk Assessment Study (Monahan et al., 2001). This sample consisted of civil psychiatric patients. Using a structural equation model they found significant associations for all four facets of the PCL for the Caucasian sample, though the fits were far stronger for facets 3 and 4 than for facets 1 and 2. For the African American sample the associations were much weaker for all facets, and only those for facets 3 and 4 achieved statistical significance. Therefore, these results support the notion that only certain aspects of psychopathy are associated with impulsivity, but that this might vary across samples. Unfortunately, Jackson et al. did not present data for the different factors of impulsivity.

In the present study we aimed to examine the relationship between the factors of psychopathy and those of the BIS. We hypothesised that increased impulsivity would be associated with high scores on Factor 2 of the PCL-R, and with Facet 3 (Lifestyle) and Facet 4 (Antisocial). We also entertained the possibility that high Factor 1, and in particular Facet 1 (Interpersonal), scores might be associated with low impulsivity scores. Consideration of the BIS scales suggests that these relationships to the PCL-R scores should be present for the Motor and the Nonplanning scales, but not for the Attention scale as there is no indication that psychopathy is related to poor concentration and/or thought intrusions.

2. Method

All experimental protocols and data collection methods were given ethical permission by both Grendon Prison Research and Advisory Committee and the Ethical Committee of the School of Psychology, Cardiff University. All participants gave written informed consent to participate in the experimental procedures, the clinical interviews and for the researchers to have full access to their prison records.

2.1. Participants

Participants were recruited from a specialist Category B prison2 (Her Majesty’s Prison Grendon, UK), run as a therapeutic community. All offenders were adult male serious and/or repeat offenders who had been diagnosed as having a Personality Disorder by a psychiatrist using ICD-10 criteria (a requirement for admission to the therapeutic community). All inmates were maintained free from psychotropic medication as it was thought to interfere with the prisoner’s ability to benefit from therapy and was against the rules of the institution. All consecutive admissions within a 22-month period (September 2000–June 2002) were invited to participate in the study (n = 167).

Of the original 147 admissions, 16 people refused to participate, 5 people completed the BIS but refused to complete the PCL-R interview, and 1 person did not participate due to illiteracy. This study reports data from 125 offenders who completed both the BIS and PCL-R (85% of those invited to participate).

Of these remaining 125 participants, 109 (87%) classified themselves as ‘white’, 11 (9%) as “black” and 5 (4%) as “other”. All were male with an average age of 34.2 years (see Table 1 for further details of the sample).

2.2. Procedure and materials

Psychopathy Checklist-Revised (PCL-R; Hare, 1991) measures a common kernel of personality traits that can define the disorder of psychopathy. It consists of a 20-item evaluation of psychopathy that incorporates both interview assessments and file-based information. Each of the 20 items are scored on a three point scale from 0 to 2, where a score of 0 indicates that the item is not present for the individual; a score of 1 indicates that it may be present but that the evidence available is not strong enough to warrant a score of 2; and a score of 2 indicates that the item is definitely present. The possible range of scores on the PCL-R is therefore 0–40. The higher the score obtained the nearer

Table 1

<table>
<thead>
<tr>
<th>Description of sample.</th>
<th>Mean (S.D.)</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>34.3 (9.3)</td>
<td>21–66</td>
</tr>
<tr>
<td>NART IQ</td>
<td>97.6 (15.2)</td>
<td>69–126</td>
</tr>
<tr>
<td>Duration since admission (days)</td>
<td>56.6 (54.8)</td>
<td>3–411</td>
</tr>
<tr>
<td>Previous convictions</td>
<td>12.9 (10.6)</td>
<td>1–79</td>
</tr>
<tr>
<td>PCL-R total (0–40)</td>
<td>21.5 (8.6)</td>
<td>5–39</td>
</tr>
<tr>
<td>Factor 1 (0–16)</td>
<td>8.2 (4.3)</td>
<td>0–16</td>
</tr>
<tr>
<td>Factor 2 (0–18)</td>
<td>10.3 (4.8)</td>
<td>0–18</td>
</tr>
<tr>
<td>Facet 1 (0–8)</td>
<td>3.5 (2.5)</td>
<td>0–8</td>
</tr>
<tr>
<td>Facet 2 (0–8)</td>
<td>4.7 (2.4)</td>
<td>0–8</td>
</tr>
<tr>
<td>Facet 3 (0–10)</td>
<td>5.4 (3.0)</td>
<td>0–10</td>
</tr>
<tr>
<td>Facet 4 (0–10)</td>
<td>5.9 (3.2)</td>
<td>0–10</td>
</tr>
<tr>
<td>BIS total</td>
<td>71.8 (11.9)</td>
<td>44–104</td>
</tr>
<tr>
<td>BIS attention</td>
<td>17.6 (3.5)</td>
<td>10–26</td>
</tr>
<tr>
<td>BIS motor</td>
<td>26.8 (5.4)</td>
<td>16–43</td>
</tr>
<tr>
<td>BIS nonplanning</td>
<td>273.5 (5.5)</td>
<td>14–42</td>
</tr>
</tbody>
</table>

1 Research suggests that the PCL-R and the PCL-SV measure the same concepts at both total and factor levels (Guy and Douglas, 2006).

2 UK prisons are divided into 4 categories: Category A is for prisoners whose escape would be highly dangerous to the public or national security, Category B is for prisoners who do not require maximum security, but for whom escape needs to be made very difficult, Category C is for prisoners who cannot be trusted in open conditions but who are unlikely to try to escape, and Category D is for prisoners who can be reasonably trusted not to try to escape, and are given the privilege of an open prison.
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