



Psychopathy and internalizing psychopathology

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ABSTRACT

There is general consensus in clinical and research literature that the core feature of psychopathy consists of an affective deficit. However, previous studies tend to find weak and inconsistent associations between psychopathy and measures of internalizing psychopathology. In this study we test whether the predominant practice of using questionnaires to assess internalizing psychopathology has influenced the results of previous research. We argue that questionnaires measure general distress rather than specific symptoms of internalizing psychopathology, and that the validity of questionnaires might be impaired by psychopathic traits, such as impression management and lack of affective experience. Combining a questionnaire (Depression Anxiety Stress Scales-21; DASS-21) and a semi-structured interview (Structured Clinical Interview for DSM-IV-R Axis 1 Disorders; SCID-I) for internalizing psychopathology, we test the differential association of both measures with the Psychopathy Checklist–Revised (PCL-R) in a sample of 89 male detainees. In accordance with our prediction, we found moderate negative associations between the Interpersonal and Affective facets of the PCL-R and SCID-I, but no significant associations with the DASS-21. We found no evidence that psychopathic traits decrease the validity of the responses on a questionnaire. We conclude that the interpersonal and affective features of psychopathy are negatively related to specific symptoms of internalizing psychopathology, but not with general distress.

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1. Introduction

Psychopathy is a severe personality disorder that consists of interpersonal, affective, and behavioral features. On the interpersonal level, psychopaths are grandiose, arrogant, callous, dominant, and manipulative. Affectively, they are short-tempered, unable to form strong emotional bonds with others, and lacking in guilt or empathy. These interpersonal and affective features are associated with a socially deviant lifestyle characterized by irresponsible, impulsive, rule-breaking behavior, and a tendency to ignore or violate social conventions and mores (Cleckley, 1976; Hare, 2003; Hare & Neumann, 2005, 2008). From a clinical point of view, a lack of internalizing psychopathology has long been considered an essential feature of psychopathy. The authors who laid the foundation of the current concept of psychopathy defined it as anti-neurosis, i.e., lacking the inner conflict, guilt, nervousness, and anxiety that are typical in neurotic individuals (e.g. Cleckley, 1976; Karpman, 1941; McCord & McCord, 1964). Moreover, several recent theories on psychopathy present this affective deficit as the core feature of psychopathy (Blair, Mitchell, & Blair, 2005; Fowles & Dindo, 2006; Patrick, 2007). Nevertheless, the Psychopathy Checklist–Revised (PCL-R; Hare,

2003), now considered the golden standard for the assessment of psychopathy, does not contain items that explicitly probe for a lack of internalizing psychopathology. During the early development phase of the PCL-R, lack of anxiety did not emerge as a discriminating feature of psychopathy in a forensic population (Hare, 2003). Moreover, the empirical evidence for absence of internalizing psychopathology in psychopaths is inconsistent. This contrast between clinical descriptions and theories on the one hand, and empirical evidence on the other hand, can mean two things: either the theories on the affective deficit in psychopathy are inadequate, or the PCL-R does not fully succeed in measuring the concept of psychopathy. Therefore, the relation between psychopathy and internalizing psychopathology remains one of the main topics in current psychopathy research (Lilienfeld, 1994; Patrick, 2006; Skeem & Cooke, 2010). In this study, we aim to contribute to this topic by highlighting a factor that might blur the association between internalizing psychopathology and psychopathy, namely the dominant practice of using questionnaires to measure depression, anxiety and fear. As we will elaborate below, we have reasons to believe that the use of a questionnaire versus an interview method for assessing internalizing symptoms will result in different associations. Our aim is to compare the association between the PCL-R and scores for internalizing psychopathology gathered with questionnaire and semi-structured interview methods. We will start by expounding the current theoretical model of psychopathy and internalizing psychopathology, in addition to its empirical evidence.

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The relation between psychopathy and internalizing psychopathology has been conceptualized in the dual deficit or dual process theory (Fowles & Dindo, 2006; Patrick, 2007). This theory is a combination of (1) the two-factor model of psychopathy, and (2) the reinforcement sensitivity theory by Gray (Gray & McNaughton, 2000). The two-factor model of psychopathy is a factor-analytically derived model according to which the PCL-R consists of a personality factor (the interpersonal and affective traits) and a behavioral factor (impulsive, irresponsible and antisocial behavior) (Hare, 2003). The personality factor consists of interpersonal grandiosity, dominance, manipulation, and affective superficiality and callousness. The behavioral factor taps into an impulsive and irresponsible lifestyle, and antisocial behavior (both criminal and non-criminal). Each factor can be traced to a specific neuropsychological deficit or dysfunction. Gray postulated three interacting neuropsychological systems underlying emotion, motivation, and learning: the Fight/Flight/Freeze System (FFFS), the Behavioral Inhibition System (BIS), and the Behavioral Activation System (BAS). In the revised reinforcement sensitivity theory (Gray & McNaughton, 2000), the FFFS is thought to mediate responses to all aversive stimuli (conditioned and unconditioned) and leads to avoidance behavior (fight/flight/freeze). Subjectively, activity of the FFFS is experienced as fear. The BAS functions as a reward system that mediates responses to appetitive stimuli (conditioned and unconditioned) and leads to approach behavior. The BIS is considered a system that detects and resolves conflicts between the FFFS and BAS. This means that when a stimulus simultaneously activates avoidance and approach behavior (i.e., a dangerous but rewarding situation such as stealing money), then the BIS will block these conflicting behaviors and, through recursive loops, increase the negative valence of the stimulus until resolution occurs either in favor of approach or avoidance. During this recursive process, the individual scans his/her memory and the environment for cues that might help to resolve the conflict. Subjectively, the activity of the BIS is experienced as worry, apprehension, and the feeling that action might lead to a bad outcome.

According to the dual deficit theory, the personality factor of psychopathy is linked to underactivity in the BIS system, and possibly to underactivity in the FFFS system as well (Corr, 2010). This would result in less conflict between approach and avoidance behavior, less worry about possible negative outcomes, and less fear when confronted with aversive situations or stimuli. As a consequence, the personality factor of psychopathy is expected to be negatively associated with measures of fear and anxiety. A number of studies using a variety of questionnaires to measure fear and anxiety have indeed found a negative association between the personality factor of the PCL-R and fear/anxiety in offender samples (Blonigen et al., 2010; Harpur, Hare, & Hakstian, 1989; Hicks & Patrick, 2006). However, a large number of studies using the same questionnaires in offender samples found weak negative (or even weak positive) associations between the PCL-R and fear/anxiety (Hale, Goldstein, Abramowitz, Calamari, & Kosson, 2004; Hare, 2003; Schmitt & Newman, 1999).

On the other hand, the behavioral factor of the PCL-R would be associated with a deficient BAS system, which is reflected in behavior that is hyper-reactive to opportunities for reward. Evidence for this claim is found in research on the correlates of the behavioral factor: this factor is correlated with measures for impulsivity (Benning, Patrick, Hicks, Blonigen, & Krueger, 2003), drug abuse, and externalizing personality disorders (Coid et al., 2009; Pham & Saloppé, 2010). Within the dual deficit theory, it is postulated that the behavioral features of psychopathy are positively associated with both fear and anxiety. This positive association would be the result of the increased exposure to adverse outcomes because of the inability to regulate approach behavior: impulsive and externalizing individuals suffer more often from the negative consequences of risky but rewarding behavior (e.g., criminal actions leading to legal proceedings, irresponsible behavior leading to criticisms and quarrels at home or at work,...).

Evidence for the positive association between the behavioral factor and fear/anxiety was found in some studies (Blonigen et al., 2010; Hale et al., 2004; Hicks & Patrick, 2006), but not in others (Hare, 2003; Harpur et al., 1989; Schmitt & Newman, 1999). Hare (2003, p. 104) summarized the results of zero-order correlational analyses in different samples and with different questionnaires for anxiety; his conclusion is that '[o]n balance, the available evidence suggests that psychopathy is, at best, weakly and inconsistently related to self-report anxiety and fear scales'.

The predominant practice of using questionnaires might obfuscate the relation between internalizing psychopathology and psychopathy. We have three arguments for why the use of the questionnaire method will result in different associations with psychopathy, in comparison to the interview method.

First, psychopaths are notorious for their dishonesty (Cleckley, 1976; Hare, 2003). They lie easily in situations in which they can obtain a tangible benefit, but they also lie just for fun. They have an inclination to impression management, i.e., looking good in situations where good impressions would be beneficial, or creating a negative impression if they think this is desirable. A number of studies have confirmed that psychopathic individuals have a higher propensity to malingering (Edens, Buffington, & Tomacic, 2000; Kucharski, Duncan, Egan, & Falkenbach, 2006; Porter & Woodworth, 2007). On the other hand, there is evidence that psychopaths are not particularly successful in deceiving (Edens, Buffington, & Tomacic, 2000; Klaver, Lee, Spidel, & Hart, 2009). Interview assessment allows one to check whether their interpersonal style corresponds to the reported symptoms of internalizing psychopathology (e.g., major depression and social phobia), which is not possible with questionnaires. Therefore, we expect that malingering more strongly influences scores on a questionnaire than scores on an interview.

The second argument stems from the emotional deficit of psychopathy. Lilienfeld and Fowler (2006) recently pointed out that it might be problematic to ask individuals who never experience internalizing symptoms to report on their absence. When one has never experienced anxiety or depression, one is unable to grasp the emotional complexity and depth that is implied in items on internalizing psychopathology. Because of their shallow affect, psychopaths might equate sadness with frustration and boredom, and anxiety with displeasure and impatience. Thus, psychopaths may very well interpret the items in an idiosyncratic way, thereby undermining their validity. This problem can be considered as a consequence of what Cleckley (1976, p. 379) coined as the core deficit in psychopaths: semantic aphasia. 'In semantic aphasia [...] inner speech or verbal thought is seriously crippled, and the patient usually cannot formulate anything very pertinent or meaningful within his own awareness. He cannot by gesture or verbal approximations hint at his message because he lacks the inner experience on which a message might be formulated'. We therefore have reasons to assume that the psychopath's response on items referring to internalizing symptoms on a questionnaire might not be valid. While they may be reporting something similar, it is most likely not what is intended in the item. During an interview, the interviewer can evaluate the clinical validity of symptoms reported by the interviewee, and check whether the emotional presentation corresponds to the reported symptoms. Therefore, we expect that the emotional deficit influences symptom reporting more strongly on a questionnaire than during an interview.

However, a third argument has to be considered. The procedural differences between questionnaire and semi-structured interview assessment methods have implications for the construct being measured (Coyne, 1994; Harris & Brown, 2010). In semi-structured interviews primary symptoms (e.g., mood disturbance in the case of major depression or re-experiencing in the case of PTSD) are given more importance than secondary symptoms (e.g., sleep disturbances in major depression), while in questionnaires all symptoms are valued equally. Semi-structured interviews stipulate a minimum

duration for symptoms (e.g., a month), while this is not the case in questionnaires. Semi-structured interviews, unlike questionnaires, work with exclusion criteria for other mental or physical disorders, and the impact of substance abuse. Moreover, in contrast to questionnaires, semi-structured interviews allow the interviewer to challenge and discuss the respondent's answers. These procedural specifications contribute to the specificity of the assessment of internalizing psychopathology with semi-structured interviews. Questionnaires on internalizing psychopathology, on the other hand, are inundated with items that are sensitive to mild distress. Indeed, it has been noted that questionnaires on anxiety and depression measure general distress instead of specific symptoms of anxiety or depression (Clark & Watson, 1991; Coyne, 1994; Keedwell & Snaith, 1996). High scores on these questionnaires may indicate internalizing psychopathology, but may equally indicate general distress without internalizing psychopathology (e.g., distress due to prison circumstances), physical symptoms of a medical condition, or side effects of medication or drugs. This does not imply that semi-structured interviews are more valid than questionnaires, but that they measure a different construct. More importantly, this can have consequences for the study of psychopathy and internalizing psychopathology. It has been proposed that high-psychopathic individuals can experience some level of distress, which is superficial and short-lived (Cleckley, 1976) or a consequence of negative life experiences, such as imprisonment (Frick, Lilienfeld, Ellis, Loney, & Silverthorn, 1999). Therefore, low- as well as high-psychopathic individuals can report general distress on a questionnaire in prison circumstances.

In this study we test the associations between the PCL-R and two methods of assessment for internalizing psychopathology. We take care to align the questionnaire and interview assessment as much as possible: both assessments take place within a short period of time, both address symptoms during the previous month, and both address a wide range of symptoms of internalizing psychopathology (Harris & Brown, 2010). Recent factor analytical studies have indicated that the personality factor of the PCL-R can be broken down into two facets: an Interpersonal and an Affective facet. Furthermore, there is general agreement that the behavioral factor also consists of two components—a Lifestyle and an Antisocial facet—although some authors have argued that the Antisocial facet should not be included in the PCL-R as it contains too strong a reference to criminal behavior (Skeem & Cooke, 2010). In this study, we will work with the PCL-R total scores and four facet scores (Hare & Neumann, 2005). This will allow us to examine whether the manipulative and deceitful traits of psychopathy (i.e., the Interpersonal facet of the PCL-R) or the emotional deficit of psychopathy (i.e., the Affective facet of the PCL-R) moderate the relation between an interview and a questionnaire method of measuring internalizing psychopathology. Furthermore, we included a measure of social desirability in our study. Previous studies have shown that items designed to assess depression and anxiety are much less likely to be endorsed by people who score high on a measure of social desirability (Soubelet & Salthouse, 2011). This may be particularly the case in a population that is characterized by high levels of conning and impression management. Therefore, we will test whether social desirability moderates the relation between an interview and a questionnaire method of measuring internalizing psychopathology. We test the following hypotheses:

1. the interpersonal and affective personality traits of psychopathy are negatively associated with internalizing psychopathology;
2. these associations are more strongly negative with the interview measure of internalizing psychopathology in comparison to the questionnaire measure;
3. the correspondence between interview and questionnaire measures of internalizing psychopathology decreases at higher levels of the Interpersonal and/or Affective facet of the PCL-R and/or social desirability.

2. Method

2.1. Participants

The data for this study were collected within the context of the research project of the first author and were used for several other manuscripts (Declercq, Willemsen, Audenaert, & Verhaeghe, 2012; Willemsen, De Ganck, & Verhaeghe, accepted for publication; Willemsen, Vanheule, & Verhaeghe, 2011). This doctoral dissertation focused on psychopathy, internalizing psychopathology and violent crime in detainees with long-term sentences (i.e., 5 years or more of imprisonment). For that purpose, two prisons in Flanders (Bruges and Oudenaarde) were contacted that are known to accommodate many detainees with long-term sentences. Prison-based psychologists selected 655 detainees from all sentenced prisoners in these two prisons according to file data on the following criteria: competency in the Dutch language sufficient for interview and questionnaire completion, absence of psychotic symptoms and having been declared fully responsible for their actions in respect of the index offence. The 655 detainees were invited by mail to participate in this study; 140 responded to the mail, with a final total of 89 men included after giving written informed consent (13.6% response rate). The 51 respondents who could not be included did not differ from the 89 participants with respect to age, racial/ethnic origin and index offence. The main reason for refusal was possibly the lack of incentive offered. Feedback from inmates also indicated that they had great difficulty with our request to access their criminal and prison files.

In the final sample ($n = 89$), 29% were convicted for (attempted) manslaughter or murder, 26% for a violent crime (robbery, assault or battery), 39% for a sexual crime (indecent assault or rape of a minor or adult), and 6% for other crimes (drugs, fraud or burglary). Inmates participated on a voluntary basis after supplying written informed consent. No incentive was given. The racial and ethnic composition of the sample was 86% Caucasian, 12% North Africans, and 2% other. The mean age of the sample at the time of the interview was 39.6 years ($SD = 12.08$, range = 20–73 years). The samples from Bruges and Oudenaarde prison did not differ in racial/ethnic origin or age, but did differ significantly in index offence ($\chi^2(2) = 8.35$, $p < .05$). In the Bruges prison sample, half of the convictions had been for sexual crimes; in the Oudenaarde prison just over half had homicide convictions.

2.2. Instruments

2.2.1. Psychopathy

Psychopathy was assessed via ratings on the Psychopathy Checklist—Revised (PCL-R; Hare, 2003). Ratings were based on information gathered from a semi-structured clinical interview and review of file information. The interviewer was a clinical psychologist who received training in administering and scoring the PCL-R. Recent factor analytical studies on the PCL-R indicated that the PCL-R consists of two factors (Interpersonal/Affective and Lifestyle/Antisocial), which can be broken down into four facets (Interpersonal, Affective, Lifestyle, and Antisocial) (Hare & Neumann, 2005). In order to check the interrater reliability, PCL-R ratings made by clinical psychologists working in the prisons were made available to the authors at the end of the data collection process. In that way, we obtained independent PCL-R ratings for 42% of the participants. Interrater reliability as determined by the intraclass correlation coefficient (absolute agreement) for a single rating, using a two-way random effects model, was .79 for the Interpersonal/Affective Factor, .76 for the Lifestyle/Antisocial Factor, and .82 for the PCL-R total score. Cronbach's alpha as an index of internal consistency was good for the Interpersonal Facet (.81), the Affective Facet (.78), the Lifestyle Facet (.78), the Antisocial Facet (.69), and the total PCL-R scale (.83). The mean PCL-R total score was 22.8 ($SD = 8.47$; range 1–36); 34% of the sample scored below

20 on the PCL-R, and 29% of the sample scored equal to or above the cut-off of 30.

2.2.2. Interview measure of Internalizing psychopathology

The participants were interviewed about *current* (i.e. the past month) symptoms of major depressive disorder, panic disorder, social phobia, simple phobia, obsessive-compulsive disorder, posttraumatic stress disorder and generalized anxiety disorder, using the Structured Clinical Interview for DSM-IV-R Axis 1 Disorders (SCID-I). The presence of symptoms was scored on a three-point Likert scale from 0 (absent) to 1 (uncertain) to 2 (present). Recent factor analytical research on the comorbidity of affective disorders has found that these disorders load on one general factor of internalizing psychopathology (Cox, Clara, & Enns, 2002; Vollebergh et al., 2001). This finding permits us to aggregate distinct but closely related syndromes. A dimensional score for current internalizing psychopathology was calculated by summing the ratings of the following symptoms: the 9 symptoms of a depressive episode in the context of a major depressive disorder, the 13 symptoms of a panic attack in the context of a panic disorder, the different types of social phobia (fear of speaking, eating, writing, general, and/or other social phobia), the different types of phobias (animal, nature, blood-injection, situational, and/or other type), different types of obsessive compulsive symptoms (checking, symmetry/ordering, contamination, and/or hoarding), the 17 symptoms of posttraumatic stress disorder, and the six somatic symptoms in the context of generalized anxiety disorder. This resulted in a scale with a mean of 4.8 ($SD = 8.69$; skewness = 2.59 with $SE = .26$ and kurtosis = 7.49 with $SE = .51$). In 18 participants (i.e., 20% of the total sample) at least one diagnosis of current internalizing psychopathology was established.

Audiotapes of the SCID-I interviews were independently rated by a student with a Bachelor's degree in Clinical Psychology. For 44% of the sample, dual SCID-I ratings were made by the student. Interrater reliability of the dimensional scale for current internalizing psychopathology as determined by the intraclass correlation coefficient (absolute agreement) for a single rating, using a two-way random effects model, was .71 for current Internalizing psychopathology.

2.2.3. Questionnaire measure of internalizing psychopathology

The Depression Anxiety Stress Scales (DASS-21; Lovibond & Lovibond, 1995) was used to assess current symptoms of internalizing psychopathology. According to Lovibond and Lovibond (1995), the DASS-21 consists of three scales: Depression, Anxiety, and Stress. This structure has been confirmed by factor analytical studies in clinical and non-clinical samples, and the scales present good construct validity (Antony, Bieling, Cox, Enns, & Swinson, 1998; Norton, 2007). The Depression scale consists of seven items that assess dysphoria, hopelessness, devaluation of life, self-depreciation, lack of interest/involvement, anhedonia, and inertia. The Anxiety scale consists of seven items that assess automatic arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious affect. The Stress scale also consists of seven items that assess difficulty relaxing, nervous arousal, and being easily upset, irritable and impatient. The sum of all items is a composite measure of internalizing symptoms. Respondents were asked to indicate how much each item applied to them on a 4-point Likert scale, ranging from 0 (did not apply to me at all) to 3 (applied to me very much, or most of the time). For the purpose of this study, the timeframe of the DASS-21 was altered to the past month in order to correspond with the SCID-I assessment.

The DASS-21 was filled in immediately after the SCID-I interview. Only 65 out of the 89 participants of this study completed this questionnaire because we decided to include this measure only after the research was going on for some time. Cronbach's alpha as an index of internal consistency was good for the DASS-21 total scale (.93). According to the manual, scale scores have to be multiplied by two. The mean score in our sample for the DASS-21 total scale was 46.2

($SD = 29.4$; skewness = .38 with $SE = .30$ and kurtosis = $-.65$ with $SE = .59$).

2.2.4. Social desirability

A short five-item version of the social desirability measure of Crowne-Marlowe was used. This measure has previously been translated into Dutch and used in questionnaires on antisocial behavior, e.g., the BDHI aggression questionnaire (Lange et al., 1995). Higher scores indicate the tendency to give answers concordant with conventional norms, and to avoid discordant answers. This scale for social desirability was filled in immediately after the DASS-21 questionnaire (therefore only 65 out of the 89 participants of this study completed this questionnaire). The internal consistency of this scale in the current sample of inmates was low ($\alpha = .53$), although this is partly due to the low number of items in this scale. The scores in the Social desirability scale were normally distributed (skewness = .15 with $SE = .30$ and kurtosis = $-.13$ with $SE = .60$).

2.3. Statistical analysis

First, the SCID-I ratings were transformed (logarithmic) in order to 'pull in' three outliers (i.e., values > 3 standard deviations from the mean); these transformed ratings are used for all subsequent analyses. We calculated Pearson correlations between PCL-R scores, Social desirability, and the dimensional scales of internalizing psychopathology (SCID-I and DASS-21). The differences between the correlation coefficients were tested using Steiger's Z-test for comparing correlation coefficients from one sample (Meng, Rosenthal, & Rubin, 1992). We then tested whether the Interpersonal and/or Affective facets of the PCL-R moderate the association between the two methods of measuring internalizing psychopathology. The same moderator effect was tested for Social desirability. We followed the recommendations made by Frazier, Tix, and Barron (2004) for conducting moderator analysis. We tested three moderator models: a first with the (standardized) Interpersonal facet as moderator, a second with the (standardized) Affective facet as moderator, and a third with the (standardized) Social desirability scores as moderator. In all models, the predictor is the (standardized) dimensional variable for symptoms of internalizing psychopathology as measured with the SCID-I, and the outcome is the DASS-21 total scale. In a hierarchical regression, the predictor and moderator were entered in the first step, and their product term was entered in the second step. The regression analyses were checked for the assumptions of linearity, homoscedasticity, and autocorrelations.

3. Results

Table 1 presents the correlation coefficients between PCL-R, Social desirability, and the dimensional scores on the DASS-21 and SCID-I.

Table 1
Correlations between PCL-R, social desirability, and dimensional scores for internalizing psychopathology as measured by SCID-I and DASS-21.

Internalizing psychopathology	PCL-R total	Interpersonal facet	Affective facet	Lifestyle facet	Antisocial facet
Total sample (n = 89)					
SCID-I	-.26*	-.33**	-.36**	-.11	.07
Subsample (n = 65)					
Social desirability	-.26*	-.22	-.15	-.17	-.24
DASS-21 total	.05	-.05	-.10	.13	.12
SCID-I	-.26*	-.32**	-.36**	-.13	.07
Steiger's Z	2.53**	2.24*	2.19*	2.11*	.41

* $p \leq .05$.

** $p \leq .01$.

The correlations between PCL-R scores and Social desirability scores are all negative but only reach the 95% significance level for the PCL-R total score. The questionnaire and interview assessment of symptoms of internalizing psychopathology are moderately correlated (Pearson $r = .53$, $p < .01$). Concerning psychopathy and symptoms of internalizing psychopathology (hypothesis 1), we found significant negative correlations between the SCID-I scores, and PCL-R total, Interpersonal facet, and Affective facet scores in the total sample ($n = 89$).

In order to compare DASS-21 and SCID-I correlations with the PCL-R (hypothesis 2), we calculated a second series of SCID-I–PCL-R correlations in the reduced sample (i.e., the 65 participants for whom we have DASS-21 data). The correlation between SCID-I and PCL-R total score was significant and negative, and differed significantly from the corresponding DASS-21 correlation coefficient. The same was found for the Interpersonal and the Affective facet.

Finally, we proceeded to test whether psychopathy and/or social desirability moderates the association between two methods of measuring internalizing psychopathology (hypothesis 3). Results from three hierarchical regression analyses are reported in Table 2. In the first model, the Interpersonal facet was entered as a moderator. For the Interpersonal facet, we found a model that fits the data well in Step 1 ($F(2,62) = 12.87$, $p < .01$). The Adjusted R -square indicated that this model explains 27.1% of the variance in the DASS-21 scores. The Interpersonal facet has no effect on DASS-21 total scores, but the interview measure of current internalizing psychopathology has a significant effect. The entrance of the interaction term in Step 2 did not improve the model significantly (F change (1, 61) = 1.25, $p > .05$), therefore no evidence was found for an interaction effect.

Similar analysis was done for the Affective facet. Step 1 resulted in a good model ($F(2,62) = 12.40$, $p < .01$). The Adjusted R -square indicated that this model explains 26.3% of the variance in the DASS-21 scores. The Affective facet has no effect on DASS-21 total scores, but the interview measure of current internalizing psychopathology has a significant effect. The entrance of the interaction term in Step 2 did not improve the model significantly (F change (1, 61) = 2.98, $p > .05$), therefore no evidence was found for an interaction effect.

Finally, a moderator analysis was executed for the Social desirability scale. Step 1 resulted in a good model ($F(2,62) = 7.38$, $p < .01$). The Adjusted R -square indicated that this model explains 17.1% of the variance in the DASS-21 scores. Social desirability has no effect on DASS-21 total scores, but the interview measure of current internalizing psychopathology had a significant effect. The entrance of the interaction term in Step 2 did not improve the model significantly (F change (1, 61) = 2.01, $p > .05$), therefore no evidence was found for an interaction effect.

4. Conclusion

It has long been postulated by clinicians and researchers that psychopathy is characterized by a lack of anxiety and/or fear (Cleckley, 1976), and this idea is the basis for several of the most recent theories on psychopathy (Blair et al., 2005; Fowles & Dindo, 2006; Patrick, 2007). However, results from empirical studies on this topic have been inconsistent, and the role of anxiety in the psychopathy construct remains unclear (Hare & Neumann, 2008). The primary aim of this study was to investigate the association between psychopathy and internalizing psychopathology. In accordance with our first hypothesis, we found that the PCL-R Interpersonal and Affective facets are negatively associated with current internalizing psychopathology. This implies that the core personality features of psychopathy are protective factors against the development of internalizing symptoms. This finding contributes to the view that an essential affective deficit underlies the interpersonal and affective features of psychopathy (Cleckley, 1976; Fowles & Dindo, 2006; Patrick, 2007).

In accordance with our second hypothesis, we found that the association between psychopathy and internalizing psychopathology is influenced by the way in which internalizing psychopathology is operationalized. When internalizing psychopathology was measured with a questionnaire, we found weak trends that are very similar to previous studies in the literature, notably weak positive associations with the Interpersonal and Affective facets, and weak positive associations with the Lifestyle and Antisocial facets of psychopathy. When we used a semi-structured interview measure of internalizing psychopathology, we found significantly stronger correlations, at least for the PCL-R total, Interpersonal facet and Affective facet scores.

In order to study the origin of this difference in correlations, we tested whether certain psychopathic traits, such as manipulation and the affective deficit, or socially desirable responses might invalidate the self-report of internalizing psychopathology on questionnaires. In contrast with our third hypothesis, we found no evidence for this proposition. In our study, malingering possibly had little impact on the questionnaire because there was no benefit at all connected with extreme (positive or negative) scores, and anonymity was guaranteed. This conclusion is corroborated by the significant negative correlation between the PCL-R total scores and the Social desirability scale: apparently, high-psychopathic participants were relatively unconcerned with presenting themselves in a positive light in the context of this study. We also found no evidence that the affective deficit of psychopathy produces an inadequate interpretation of the questionnaire. Finally, we found no evidence that a tendency to give socially desirable responses influenced the answers on the questionnaire. Therefore, the results of our study suggest that questionnaires on internalizing psychopathology can be used validly in a population

Table 2

Testing psychopathy and social desirability as moderator between interview measured Internalizing psychopathology (SCID-I) and questionnaire measured internalizing psychopathology (DASS-21) using hierarchical regression analysis.

Step and variable	B	SE B	B	95% CI	F statistic
Step 1					
PCL-R interpersonal facet (z score)	2.02	1.72	.13	−1.41–5.46	
SCID-I internalizing (z score)	8.04*	1.59	.57	4.86–11.22	12.87 (2,62)*
Step 2					
Interpersonal facet × internalizing	1.85	1.65	.13	−1.45–5.14	1.25 (1,61)
Step 1					
PCL-R affective facet (z score)	1.42	1.70	.10	−1.98–4.82	
SCID-I internalizing (z score)	7.92*	1.62	.56	4.68–11.16	12.40 (2,62)*
Step 2					
Affective facet × internalizing	2.54	1.47	.21	−.40–5.48	2.98 (1,61)
Step 1					
Social desirability (z score)	−2.97	1.69	−.20	−6.36–.42	
SCID-I internalizing (z score)	5.91*	1.70	.40	2.51–9.30	7.38 (2,62)*
Step 2					
Social desirability × Internalizing	−2.17	1.53	−.17	−5.22–.89	2.01 (1,61)

Note. * $p \leq .01$.

with a high degree of psychopathic traits, at least in situations where there are no obvious benefits from malingering. In situations where malingering has an obvious profit, this might not be the case (Kucharski et al., 2006).

We suggested in the [Introduction](#) that a questionnaire and a semi-structured interview measure different constructs, notably general distress versus specific symptoms of internalizing psychopathology. Therefore, the weak trends between psychopathy and questionnaires on internalizing psychopathology obtained in our study can be interpreted as evidence that high-psychopathic detainees experience no more and no less general distress during detention as low-psychopathic detainees. As Cleckley (1976, p. 348) put it, the psychopath can become “vexed and rebellious and frets in lively and constant impatience when confined” — as most prisoners do. On the other hand, the Interpersonal facet and the Affective facet are negatively associated with specific symptoms of internalizing psychopathology as measured by the SCID-I. The dual deficit theory on psychopathy does not allow us to explain this difference between questionnaires and interview measures of internalizing psychopathology. On the contrary: the stressful environment of prison would seem to be an excellent context to differentiate between people who are fearless, hypo-reactive to cues of potential punishment, and have a happy-go-lucky attitude (i.e., psychopathic individuals with underactive BIS and FFFS) from individuals with normal neuropsychological functioning. This difference should be reflected in the DASS-21 questionnaire, which was not the case. It is possible that the DASS-21 partially taps superficial and short-termed states of negative affect, which according to Karpman (1941), Cleckley (1976), and Lykken (1995) may be experienced by high-psychopathic individuals. The psychogenesis of symptoms of internalizing entails a complex process of psychological mechanisms, ranging (according to different theoretical frameworks) from affect regulation and mechanisms of defense to processes of fear conditioning, avoidance behavior and attentional biases (among others...). It appears that psychopathic individuals are not a priori devoid of negative affect, but that their processing of negative affect is different from non-psychopathic individuals, resulting in less symptoms of internalizing psychopathology.

Our results contribute to the discussion on the construct validity of the PCL-R. There is a debate on the question of how far the concept of psychopathy as measured through the PCL-R has drifted from the concept of psychopathy as elaborated by Cleckley (Hare & Neumann, 2008; Patrick, 2006; Schmitt & Newman, 1999; Skeem & Cooke, 2010). The two major arguments in this discussion are the exclusion of lack of anxiety/fear and the inclusion of criminal behavior as diagnostic features of psychopathy in the PCL-R. Based on our results, we observed that the four facets of the PCL-R are differently correlated with internalizing psychopathology. Scales of a measure that do not correlate consistently with a theoretically relevant external criterion do not measure a homogeneous construct (Smith, McCarthy, & Zapsolski, 2009). In other words, the meaning of the psychopathy construct, as reflected in the PCL-R total score, is ambiguous. Our finding corroborates the results of previous studies that consistently find that the factors of the PCL-R are differently associated with external criteria, such as personality traits (Hall, Benning, & Patrick, 2004; Harpur et al., 1989), personality disorders (Coid et al., 2009), suicide (Verona, Patrick, & Joiner, 2001) and criminality (Roberts & Coid, 2007). This does not necessarily imply that certain facets should be excluded from the PCL-R. However, in order to measure an interpretable construct of psychopathy, it is more meaningful to focus on the factors and facets of the PCL-R instead of the total score. The Interpersonal and Affective facets tap personality traits that are associated with lower levels of internalizing psychopathology. These traits are more relevant for themes such as motives for violence (Declercq et al., 2012), robustness and treatment responsiveness. The Lifestyle and Antisocial facets tap behavioral features with little relation to internalizing psychopathology. These traits are more relevant when it comes to forensic issues such as impulsive behavior and risk assessment (Kennealy, Skeem, Walters, & Camp, 2010).

Although our sample consists of the most violent segment of offenders in the Belgian prison population and demonstrates a high level of externalizing pathology (a mean PCL-R score of 22.8), the level of internalizing psychopathology is considerably high: 20% of the participants manifest at least one current diagnosis of internalizing psychopathology. The distribution is asymmetrical with a large number of participants displaying no symptoms and a smaller number of participants displaying serious symptoms. The occurrence of internalizing psychopathology in our sample is more or less comparable to what has been found in previous studies. For instance, Blaauw, Roesch, and Kerckhof (2000) discussed several studies on the prevalence of mental disorders in European prisoners and found prevalence rates of current affective and anxiety disorders between 6% and 29%. Brink (2005) carried out a systematic review of 22 recent studies and reported rates of major depression between 2 and 22%.

These results indicate the great need for rehabilitation strategies that take into account the treatments for internalizing psychopathology. Affective disorders are associated with increased risk for prison violence and recidivism (Buller et al., 2010). However, the role of internalizing psychopathology in the trajectory to violent behavior seems to differ between various types of violent offenders. Research on violent offender personality types found that the one specific type of offender, the inhibited type, is characterized by abnormally high levels of depression and moderate levels of anxiety (Chambers, 2010). In this type, depression appears to play a crucial role in their offending behavior. Their depression is marked by a dysfunction of impulse control, which leads to violence and suicidal behavior. On the other hand, the primarily psychopathic type demonstrated no neurotic symptoms, no social anxiety, and no subjective distress. Their pathway to violent behavior is more instrumental, as they focus on positive outcomes from the offence and are not hindered by the threat of punishment. It is clear that the rehabilitation treatment for these types of offenders will be very different. Offenders of the inhibited type should receive assistance with their internalized hostility, in order to control their depressive tendencies that may lead to impulsive aggression. The primarily psychopathic type, on the other hand, might respond more positively to reward-oriented programs that tap into their optimistic outcome expectancy. This typology demonstrates that risk analysis of future violent behavior and the programming of rehabilitation treatments might benefit from the combined assessment of psychopathy and internalizing psychopathology.

Several limitations of the present study should be noted. Firstly, we used only one questionnaire to assess internalizing symptoms. Future studies should add some of the more frequently used instruments (see for instance those used by Hicks and Patrick (2006) or Schmitt and Newman (1999)) in order to enhance comparability. Secondly, it could be argued that interview assessment of internalizing psychopathology correlates more strongly with the PCL-R in comparison to the questionnaire method, because of shared method variance. However, had the method variance played a great role, then the correlation between similar methods of measuring different concepts (i.e., $r = -.26$ between SCID-I and PCL-R total) would have been larger than the correlation between different methods of measuring a similar concept (i.e., $r = .53$ between SCID-I and DASS-21). Moreover, the PCL-R and SCID-I are significantly different methods as the latter is not scored on file information. However, it would be interesting for future studies to include a questionnaire for psychopathy. This would allow researchers to make full comparison between questionnaire versus interview based measurements of psychopathy and internalizing psychopathology in a multitrait-multimethod analysis. Thirdly, as our sample is small and consists of male prisoners that are convicted of serious violent or sexual offences, our results cannot be generalized to the general prison population. Moreover, our study had to contend with a high degree of drop-out for reasons mentioned in the method section. The mean PCL-R total score of

22.8 in our sample is considerably higher than generally found in European samples (Hare, 2003), which indicates that our sample is not representative for the population of European or even Belgian detainees. There is evidence that the prevalence of internalizing psychopathology is higher in reception inmates in comparison to sentenced prisoners (Butler, Allnut, Cain, Owens, & Muller, 2005). Moreover, previous research has found a positive association between psychopathy and anxiety in female offenders (Vitale, Smith, Brinkley, & Newman, 2002). It is therefore possible that the results would be different when studying such samples. Future studies would benefit from using larger and more representative samples.

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