Personality and Individual Differences 52 (2012) 45–50

Contents lists available at SciVerse ScienceDirect

Personality and Individual Differences

journal homepage: www.elsevier.com/locate/paid

The differential association between alexithymia and primary versus secondary psychopathy

Gwendoline C. Lander [a], Catherine J. Lutz-Zois [a,*], Mark S. Rye [b], Jackson A. Goodnight [a]

[a] University of Dayton, Dayton, OH, USA
[b] Skidmore College, NY, USA

ARTICLE INFO

Article history:
Received 22 April 2011
Received in revised form 18 August 2011
Accepted 25 August 2011
Available online 2 October 2011

Keywords:
Primary and secondary psychopathy
Alexithymia

ABSTRACT

Using a sample of 104 college students, this study tested the hypothesis that alexithymia is positively related to secondary (also known as "neurotic psychopathy"), but not primary psychopathy (i.e., inability to form emotional bonds with others and a fear insensitivity). Participants completed the TAS-20 (alexithymia), the LSRP (primary and secondary psychopathy), the PPI-R (psychopathy), and the trait version of the STAI (trait anxiety). The interaction between the latter two measures was used as a second index of primary and secondary psychopathy. Support was found for the study hypothesis with both methods of assessing psychopathy (i.e., the LSRP subscales or the combination of the PPI-R and the STAI). These results further our understanding of both alexithymia and psychopathy.

1. Introduction

Definitions of alexithymia and psychopathy both emphasize emotional processing deficits (Kroner & Forth, 1995). Alexithymia is defined as difficulty identifying and distinguishing between feelings and bodily sensations of emotional arousal, and difficulty describing feelings to others (Taylor, Bagby, & Parker, 1992). Individuals with alexithymia also have difficulties empathizing with the others' feelings (Guttman & Laporte, 2002). Such deficits closely correspond to deficits seen in persons high in psychopathy. Psychopathy is characterized by interpersonal and affective deficits such as manipulative behavior, callousness, and difficulties empathizing with others as well as a socially deviant or antisocial lifestyle (Hare, 2003). Studies have documented the specific emotion processing deficits of both alexithymia and psychopathy such as difficulties in interpreting facial expressions (Dolan & Fullam, 2006), understanding emotional tone in language (Herve, Hayes, & Hare, 2003), and describing one's own feelings (Luminet, Rime, Bagby, & Taylor, 2004).

Because of the conceptual overlap between the two disorders, studies have begun to explore the association between alexithymia and psychopathy. Using the Toronto Alexithymia Scale (TAS) and the Psychopathy Checklist-Revised (PCL-R), two studies have examined the association between alexithymia and psychopathy in clinical or criminal samples (Kroner & Forth, 1995; Louth, Hare, & Linden, 1998). While both studies found positive correlations between the PCL-R factor 2 (social deviance) and TAS, interestingly, they found negative correlations (Kroner & Forth, 1995) or no relationship with the PCL-R factor 1 (interpersonal and affective impoverishment) (Louth et al., 1998). This pattern of relationships is somewhat surprising in that one might initially presume that the deficits in empathy that are characteristic of the PCL-R factor 1 would be the same traits that are common to alexithymia.

These findings raise the intriguing question of whether alexithymia is more closely associated with secondary psychopathy than primary psychopathy. The distinction between primary and secondary psychopathy was first made by Karpman (1941), in which he asserted that primary psychopathy might be a heritable deficit characterized by callousness, lack of empathy, and fear insensitivity. In contrast, he described secondary psychopathy as being shaped by a combination of heritable and environmental causes (e.g., childhood abuse). Unlike those high in primary psychopathy, those with secondary psychopathic characteristics possess the capacity to form emotional bonds with others and experience feelings of anxiety and guilt. Both those with primary and secondary psychopathy are prone to aggression and criminal activities. However, for those with secondary psychopathy these behaviors are less planful and more impulsive, while for those with primary psychopathy these behaviors appear to be more driven by sensation seeking tendencies (Skeem, Johansson, Andershed, Kerr, & Louden, 2007). This is consistent with research (e.g., Fowles & Dindo, 2006) linking primary psychopathy to subcortical deficits (brain regions tied to fear sensitivity) and secondary psychopathy to prefrontal cortex deficits (brain regions tied to executive functions including attention and planning). Such theorizing is in line

* Corresponding author. Address: Department of Psychology, University of Dayton, Dayton, OH 45469-1430, USA.
E-mail address: catherinezois@netzero.net (C.J. Lutz-Zois).

0191-8869/$ - see front matter © 2011 Elsevier Ltd. All rights reserved.
doi:10.1016/j.paid.2011.08.027

with a number of studies suggesting that primary psychopathy is negatively correlated with behavioral inhibition, whereas secondary psychopathy is positively correlated with behavioral activation (see Wallace, Malterer, & Newman, 2009, for a more complete review).

The PCL-R was not developed to specifically measure primary and secondary psychopathy (Brinkley, Diamond, Magaletta, & Heigel, 2008; Skeem et al., 2007). However, some theorists have asserted that persons with primary psychopathy may possess characteristics of factor 1, and persons with secondary psychopathy may possess characteristics of factor 2 (Levenson, Kiehl, & Fitzpatrick, 1995; Mealey, 1995). Thus, the finding from the studies by Kroner and Forth (1995) and Louth et al. (1998) that the TAS is strongly correlated with factor 2 of the PCL suggests a possible link between alexithymia and secondary psychopathy.

Research is needed that directly tests this hypothesis using measures specifically designed to assess primary and secondary psychopathy. Only one study to our knowledge has presented data suggesting differential associations of alexithymia with secondary versus primary psychopathy (Grieve & Mahar, 2010). Grieve and Mahar (2010) presented a correlation matrix in which the association between TAS and primary psychopathy was smaller than the association between TAS and secondary psychopathy. However, the study did not hypothesize or provide a direct test of whether primary and secondary psychopathy were differentially associated with alexithymia, nor were their data conclusive in that regard, as correlations were significant for both primary and secondary psychopathy.

The current study differs from Grieve and Mahar (2010) by directly testing the hypothesis that alexithymia is associated with secondary, but not primary psychopathy, while ruling out potentially confounding effects. In addition, the current study differs from Kroner and Forth (1995) and Louth et al. (1998) by examining the association between psychopathy and alexithymia within a non-clinical, non-criminal sample. Different processes may operate for persons with psychopathy within community samples versus criminal samples (Brinkley et al., 2008; Mahmut, Homewood, & Stevenson, 2008), presumably because those within community samples are likely to display higher levels of adjustment and would be considered "subclinical" with respect to psychopathic attributes. Consequently, it is important to replicate findings on psychopathy using both criminal and community samples. Using two different methods of assessing primary versus secondary psychopathy, the current study tested the hypothesis that alexithymia is positively related to secondary but not primary psychopathy.

2. Methods

2.1. Participants

One hundred and four undergraduate students, 45 men and 59 women, from a medium-sized private university in the Midwest completed study measures in exchange for credit in their introductory psychology course. The average age of participants was 20-years-old (SD = 1.51), and the composition of racial backgrounds was as follows: 92% Caucasian, 4% African American, and 4% from other racial backgrounds.

2.2. Measures

2.2.1. Primary and secondary psychopathy

The distinction between primary and secondary psychopathy was assessed in two ways. First, the Levenson Self-Report Psychopathy Scale, which contains primary and secondary psychopathy subscales, was used (LSRP; Levenson et al., 1995). We also used the interaction between combination of scores on both the Psychopathic Personality Inventory-Revised (PPI-R; Lilienfeld, 2005) and State-Trait Anxiety Inventory (STAI; Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983) to operationalize primary versus secondary psychopathy. Specifically, the interaction between these variables was used in the primary analyses to predict alexithymia. Because individuals with primary psychopathy are thought to experience low anxiety, whereas those with secondary psychopathy are thought to experience high anxiety, this approach to assessing primary and secondary psychopathy has been advocated and used in previous research (Vassileva, Kosson, Abramowitz, & Conrad, 2005).

To provide further evidence for the validity of this second method, we calculated two hierarchical multiple regression equations. In the first analysis, the secondary psychopathy subscale of the LSRP served as the criterion variable, while STAI, PPI-R, and their product term served as predictors. Social desirability, age, and gender were included as covariates. As predicted, anxiety was found to significantly moderate the association between PPI-R and secondary psychopathy ($\beta = .22$, $p < .05$). Simple slopes analysis indicated that PPI-R scores were significantly positively associated with secondary psychopathy scores for individuals at 1 standard deviation above the mean in anxiety ($\beta = .28$, $p < .05$), but not for individuals at the mean of anxiety ($\beta = .05$, $p = .16$) or 1 standard deviation below the mean in anxiety ($\beta = .02$, $p = .89$). In contrast, in a second analysis using primary psychopathy as the criterion variable, anxiety was not found to be a significant moderator ($\beta = .13$, $p = .18$). These findings support the approach to assessing secondary psychopathy using a combination of high anxiety and high scores on the PPI-R advocated by Vassileva et al. (2005).

2.2.2. Levenson Self-Report Psychopathy Scale (LSRP)

The LSRP (Levenson et al., 1995) is a 26-item, self-report measure that assesses primary and secondary psychopathy. The items are endorsed on a 4-point scale ranging from "disagree strongly" to "agree strongly". The primary scale has 16 items that assess interpersonal and affective features of psychopathy (i.e., selfish, uncaring, and manipulative; e.g., "Looking after myself is my top priority"). The 10-item secondary scale assesses impulsivity and a self-defeating lifestyle (e.g., "I find myself in the same kinds of trouble time after time"). The LSRP demonstrates good test–retest reliability and convergent validity with other self-report measures of psychopathy (Lynam, Whiteside, & Jones, 1999).

2.2.3. Psychopathic Personality Inventory-Revised (PPI-R)

The PPI-R (Lilienfeld, 2005) is a self-report measure of the core personality traits of psychopathy. It includes 154 items (e.g., "I sometimes lie to see if I can get someone to believe me") presented on a 4-point Likert scale, ranging from "false" to "true" (the two middle options are "mostly false" and mostly true") with eight subscales. In this study, the total score was used to measure psychopathy, but the Fearlessness scale was excluded in order to avoid content overlap with the STAI. The PPI-R demonstrates good test–retest reliability (Lilienfeld, 2005), as well as good discriminant, convergent, and external validity in community samples (e.g., Uzieblo, Verschuere, Van den Bussche, & Crombez, 2010).

2.2.4. State-Trait Anxiety Inventory (STAI)

The STAI (Spielberger et al., 1983) is a 40-item scale that measures state and trait anxiety (20 items each) and has good reliability and validity (Spielberger, 1989). The current study used the Anxiety Trait (e.g., "I feel nervous and restless") subscale, which assesses long-term expressions of anxiety by asking people how they typically feel. The items on the A-Trait subscale are rated on a 4-point Likert scale ranging from "almost never" to "almost always" with a possible range of values from 20 to 80.