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Social and emotional intelligence moderate the relationship between psychopathy traits and social perception

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ABSTRACT

This research explored how psychopathy relates to individuals' ability to discriminate trustworthy and untrustworthy faces and faces displaying Duchenne versus non-Duchenne smiles. Participants ($N = 150$) categorized faces as trustworthy or untrustworthy in Study 1. Participants ($N = 151$) categorized faces as displaying Duchenne or non-Duchenne smiles in Study 2. Participants in both studies then completed measures of psychopathy, emotional intelligence, and social intelligence. In Study 1, higher levels of secondary psychopathy were associated with reduced trustworthiness detection for individuals lower in emotional intelligence. Both primary and secondary psychopathy were associated with reduced trustworthiness detection for individuals lower in social intelligence. In Study 2, higher levels of primary psychopathy were associated with reduced accuracy at discriminating Duchenne from non-Duchenne smiles for individuals lower in emotional and social intelligence. Independent of social and emotional intelligence, higher levels of secondary psychopathy were associated with reduced accuracy in discriminating trustworthy from untrustworthy faces and Duchenne from non-Duchenne smiles; primary psychopathy was unrelated to trustworthiness and smile discrimination accuracy. These studies suggest that the relationship between psychopathy and accurate identification of trustworthiness and affiliation cues in faces is influenced by the dimension of psychopathy and levels of emotional and social intelligence, respectively. Implications of these findings are discussed.

1. Introduction

Psychopathy is a personality construct marked by several characteristics, including boldness (e.g., low fear), disinhibition (e.g., poor impulse control), and a lack of empathy (Skeem, Polaschek, Patrick, & Lilienfeld, 2011). Research has linked higher levels of psychopathy with negative psychosocial outcomes, such as increased violent behavior and alcohol use (Neumann & Hare, 2008). One common conceptualization of psychopathy involves the distinction between primary versus secondary psychopathy. Specifically, primary psychopathy, thought to have a moderate genetic component, is associated with callous and manipulative behavior, superficial relationships, and a lack of negative affect (Skeem et al., 2011). Primary psychopathy is often defined by weak reactivity of the defensive fear system and is evidenced by reduced fear-potentiated-startle response when viewing aversive pictorial stimuli (Benning, Patrick, & Iacono, 2005) along with reduced amygdala activity to fearful stimuli (Birbaumer et al., 2005). Alternatively, secondary psychopathy, believed to be more strongly associated with environmental causes (e.g., abuse or rejection), is associated with neuroticism, impulsivity, emotional reactivity, and aggression (Lynam, Whiteside, & Jones, 1999; Morrison & Gilbert, 2001). Secondary psychopathy is defined by a disinhibition component (i.e., externalizing propensity) and is evidenced by impaired performance on frontal lobe tasks (i.e., tasks assessing self-regulation; Morgan & Lilienfeld, 2000). Additionally, secondary psychopathy is associated with fewer stable relationships and reduced adaptive functioning (e.g., antisocial behavior; Poythress & Skeem, 2005).

1.1. Psychopathy and emotion recognition

One reason why individuals higher in psychopathy may experience maladaptive psychosocial consequences is that they may process emotional information communicated by others differently than less psychopathic individuals (Lykken, 1995). Indeed, numerous studies demonstrate that individuals higher in psychopathy as an overarching construct demonstrate reduced accuracy in identifying basic facial expressions of emotion, most notably for expressions of fear and sadness (Blair, Colledge, Murray, & Mitchell, 2001; Blair et al., 2004; Montagne et al., 2005). This suggests that individuals with higher levels of psychopathy struggle to recognize others' distress cues, which may contribute to their increased antisocial behavior (Blair, 1995).

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Nonetheless, the relationship between psychopathy and emotion recognition accuracy may be more complex when considering the dimensions of psychopathy separately. Whereas much of the previously reported findings explored the relationship between psychopathy as a unitary construct and emotion recognition accuracy, recent research indicates that primary and secondary psychopathy may be differentially related to emotion recognition accuracy. For example, Del Gaizo and Falkenbach (2008) found that primary psychopathy is associated with more accurate perception of fearful faces, whereas secondary psychopathy was unrelated to emotional expression recognition accuracy. Conversely, Prado, Treeby, and Crowe (2015) found that although higher levels of both primary and secondary psychopathy were associated with reduced accuracy in identifying a variety of facial expressions, this deficit was actually more pronounced for individuals scoring higher in primary relative to secondary psychopathy. The inconsistency across these studies further demonstrate the need to assess psychopathy as a multi-dimensional construct when exploring its relation to social perception accuracy, at least in the context of emotion recognition.

1.2. Psychopathy and complex social perception

Initial research seems to indicate that psychopathy is associated with emotion recognition impairments and that such impairments may be moderated by type of psychopathy. However, this research has not yet explored how psychopathy may be related to more nuanced aspects of social perception. The human face is an extremely dynamic social stimulus that not only communicates emotion, but also information regarding an individual's motives and intentions (e.g., Parkinson, 2005). Thus, one of our primary goals was to determine how psychopathy may relate to more nuanced kinds of social perception: the ability to identify trustworthiness (or lack thereof) as well as the ability to discriminate between genuine (Duchenne) smiles and posed (non-Duchenne) smiles in faces.

We thought it prudent to explore these two forms of social perception for several reasons. First, the ability to discriminate trustworthy and untrustworthy faces and Duchenne versus non-Duchenne smiles are more nuanced kinds of social processing tasks (compared to recognition of basic facial or vocal emotions). Discrimination accuracy for basic facial expressions of emotion (e.g., anger versus happy facial expressions) tends to be greater than for social judgments related to trustworthiness and untrustworthiness and Duchenne versus non-Duchenne smiles (Bernstein, Young, Brown, Sacco, & Claypool, 2008; Sacco & Hugenberg, 2012; Young, Slepian, & Sacco, 2015). Thus, the latter two kinds of social judgment tasks are likely more complicated or require processing more cues in order to reach an accurate categorization. An important extension of the existing literature offered in the current studies is the ability to determine how psychopathy is related to these more nuanced kinds of social judgments.

Additionally, accurate social perception in these two domains has important social consequences. Evaluations of trustworthiness are important for establishing and maintaining social relationships, given that trustworthiness is one of the most critical factors in interpersonal relationships (Rempel, Holmes, & Zanna, 1985). Cues to a person's trustworthiness are readily communicated via the characteristics of an individual's face (e.g., jaw width, brow prominence; Todorov, Pakrashi, & Oosterhof, 2009; Young et al., 2015), and perceptions of trustworthiness based on facial structure are formed very rapidly and exhibit significant inter-rater agreement (Willis & Todorov, 2006). Importantly, some research demonstrates that facial appearance predicts actual trustworthiness in interpersonal contexts (Stirrat & Perrett, 2010). Given that past research has linked higher levels of psychopathy to an inability to maintain important social relationships, and because trust is one of the most important factors in interpersonal relationships, higher levels of psychopathy may be associated with reduced accuracy in identifying trustworthy and untrustworthy targets from facial structural cues.

Furthermore, Duchenne smiles are spontaneous facial signals that communicate that a person is experiencing genuine positive affect and an interest in affiliation and cooperation, whereas non-Duchenne smiles are displayed to facilitate deception and mask underlying negative affect (Lustgraaf, Sacco, & Young, 2015). Past research indicates that those with an acutely activated affiliation goal demonstrate an increased ability to discriminate Duchenne from non-Duchenne smiles so as to identify individuals who would be most likely to satiate their need to affiliate (Bernstein et al., 2008). It is possible that individuals scoring higher in psychopathy have trouble establishing and maintaining social relationships because they have a reduced ability to accurately discriminate facial signals of affiliation (Duchenne smiles) versus non-affiliation (non-Duchenne smiles). That is, to the extent that an individual can identify individuals who are trustworthy and are genuinely interested in affiliation, they would be more likely to effectively establish and maintain positive social relations. Such a capacity may be deficient in those scoring high in psychopathy, which could help explain past research demonstrating their reduced ability to maintain critical social relationships with others (Baird, 2002).

Relatively few studies have explored how various forms of psychopathy may relate to social perception outcomes (cf., Del Gaizo & Falkenbach, 2008; Prado et al., 2015). The studies that have explored different facets of psychopathy, specifically primary versus secondary, have produced contradictory results related to basic facial expression identification accuracy. No work has yet explored how dimensions of psychopathy relate to more nuanced categories of social perception. As such, the current work investigates how primary versus secondary psychopathy relate to social perception accuracy in the context of trust detection and the ability to detect affiliative intent. To the extent that the current results confirm or disconfirm the conflicting results relating psychopathy subtypes to basic emotion recognition, this work stands to offer clarification to this important area of inquiry.

1.3. Moderating roles of emotional and social intelligence

Finally, the current studies intend to fill a gap in the literature by examining potential moderating variables with respect to the relationship between psychopathy and social perception accuracy to clarify when higher levels of psychopathy may or may not be linked to deficits in social perception accuracy. As such, the current program of research not only assesses individuals' level of psychopathy (both primary and secondary) but also individuals' levels of trait social and emotional intelligence as potential moderators. We chose to assess social and emotional intelligence for two primary reasons: 1) social and emotional intelligence have been found to predict social perception accuracy, and 2) aspects of emotional and social intelligence have been associated with psychopathy.

Trait emotional intelligence is best described as a constellation of emotion-related self-perceptions and dispositions located at the lower levels of personality hierarchies (Petrides & Furnham, 2003; Petrides, Pita, & Kokkinaki, 2007). We chose to assess trait emotional intelligence for a number of reasons. First, trait emotional intelligence is related to life satisfaction (Martinez-Pons, 1997), affect intensity (Dawda & Hart, 2000), marital satisfaction (Schutte et al., 2001), and mood management behavior (Ciarrochi, Chan, & Bajgar, 2001). Thus, emotional intelligence is a critical component of affect regulation and relationship maintenance, which are considerable deficits in those scoring higher in psychopathy. Importantly, higher levels of emotional intelligence have been linked to increased efficiency and accuracy in identifying facial expressions of emotion (Austin, 2004; Petrides & Furnham, 2003). Past work has also demonstrated that individuals scoring higher in psychopathy also demonstrate reduced emotional intelligence (Malterer, Glass, & Newman, 2008; Petrides, Vernon, Schermer, & Veselka, 2011; Porter, ten Brinke, Baker, & Wallace, 2011), with secondary psychopathy being more consistently associated with emotional intelligence deficits than primary psychopathy (Ali, Amorim, & Chamorro-Premuzic, 2009;