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Psychopathy and Perception of Vulnerability

by

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A thesis submitted in partial fulfillment
of the requirements for the degree of
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Criminology
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Abstract

Prior research has shown that psychopathic traits correlate with ability to make more accurate assessments of vulnerability based on nonverbal cues (Wheeler, Book, & Costello, 2009; Book, Costello, & Camilleri, 2013). The current study aims to provide further support for this finding, examine effect of criminal experience, and determine if the finding generalizes to females and non-Caucasians. An online survey was conducted, where each participant was shown several videos of people walking alone down a hallway. After each video, they were asked to rate the vulnerability of the depicted person. Higher levels of psychopathic traits (measured by the Elemental Psychopathy Assessment (EPA; Lynam et al., 2011)) were found to correlate with more accurate assessments of vulnerability when white or black males were assessing videos of males of their same race. Prior criminal behavior, however, did not relate to better accuracy, despite its relation to psychopathic traits. Results for females were not consistent with findings for males, indicating the finding may not generalize across gender. Potential reasons for these findings are discussed.

Introduction

Persons high in psychopathic traits are prolific offenders, often committing many different types of crime (Hemphill & Hare, 2004), and recidivating at greater rates than those low in psychopathic traits (Serin, Peters, & Barbaree, 1990). It is uncertain why this connection exists, but most research assumes that it is related to their personality traits such as impulsivity, callousness, and lack of remorse (Harpur, Hare, & Hakstian, 1989). Do psychopaths merely commit crime whenever the mood strikes them? Or do they pick up on the vulnerability of certain individuals or situations, preying upon the weak like a true human predator?

Recent research (Wheeler, Book & Costello, 2009; Book, Costello & Camilleri, 2013) suggests people with elevated levels of psychopathic traits may possess greater skill in picking out vulnerable persons as potential targets, merely by observing the individual's body language. In these prior studies, the participants watched videos of both victims and non-victims walking, and were asked to rate their vulnerability in terms of whether or not the individual would be a "good victim," (i.e., easy to mug). Vulnerability ratings were then compared with the videoed person's report of whether or not he or she had been victimized before. Persons with higher psychopathy scores were found to be more accurate in this task, suggesting that higher psychopathy is associated with better perception of vulnerability. The authors suggested that the results may indicate that psychopaths use a different, rather than deficient (due to their lack of empathy), method of emotional processing.

Although there is initial evidence that individuals high in psychopathic traits are attuned to others' vulnerability, several questions remain unanswered. First, research has not examined

whether or not criminal experience could affect the ability of the participants to identify vulnerability. A prolific offender is probably better at identifying an “easy mark” than a novice would be, and persons higher in psychopathic traits are likely to have longer criminal histories. Thus, it remains unclear whether it is psychopathic traits or criminal experience that is driving this relationship. Second, previous research has examined the relationship between psychopathic traits and victim vulnerability only among males (Wheeler et al., 2009). However, other research demonstrates that psychopathic females do not demonstrate the same cognitive and perceptual deficits that males do (Vitale, Maccoun, Newman, 2011). These mixed findings suggest that it is unknown whether the same positive correlation between psychopathy scores and accuracy in identification of vulnerability exists for females. Lastly, previous studies have relied on Caucasian “victims,” leaving a void as to whether the relationship between psychopathic traits and accurately identifying crime victims is generalizable to African-American “victims.” The current study expands the prior research by including females as observing participants, including nonwhites as video participants, and adding a measure of criminal experience that is separate from the psychopathy measure.

Background

Psychopathy was first detailed by Hervey Cleckley in his 1941 book *The Mask of Sanity*. With this work, Cleckley hoped to better define and standardize the diagnosis of psychopathy. Through his clinical observations, he identified several characteristics that marked psychopathy as distinct from other mental disorders commonly diagnosed at that time. However, despite Cleckley's work, more standardization for this diagnosis was needed. This came through the work of Robert Hare, and the development of the Psychopathy Checklist, which, in revised form (PCL-R) is still used to identify psychopathy today (Hare, 2003).

Psychopathy is a personality disorder defined by egocentric, callous, and antisocial thought processes and behaviors. In the PCL-R, characteristics of psychopathy are divided into two factors, composed of four facets. Factor one comprises interpersonal and affective facets, while factor two encompasses lifestyle and antisocial facets. The interpersonal facet covers the psychopath's superficially charming, manipulative, deceitful, and megalomaniacal tendencies. The second facet is probably the most familiar as a result of its use in many pop-culture depictions of psychopathy. This affective facet includes the psychopath's lack of deep feeling, empathy, and remorse. The lifestyle facet from factor 2 paints the psychopathic personality as parasitic, impulsive and irresponsible. The antisocial facet is largely derived from the individual's behavioral history, including a history of behavioral problems, delinquency, and versatile criminality (Skeem, Polaschek, Patrick, & Lilienfeld, 2011). The use of this fourth facet, largely derived from antisocial behavior, is contested by other research, as it generally relies on official files and background information that would not regularly be available for

assessment among persons in non-incarcerated and non-clinical populations. It also risks creating a tautology of the relationship between psychopathy and offending/recidivism (Douglas, Vincent, & Edens, 2006).

Having found the construct of psychopathy to be useful in a forensic context, researchers sought various ways to study it in non-incarcerated populations. Despite the success of the PCL-R in forensic settings, it has notable drawbacks for research purposes. The extensive interview and review of file data that it requires can take as long as three hours per case (Skeem et al., 2011). In addition, several researchers suggested that psychopathy existed outside of forensic and correctional populations, labeling this subclinical variant as “successful psychopathy” (Lynam & Derefinko, 2006). The qualifier “successful” is meant to indicate that such individuals have avoided a lengthy criminal career and incarceration. This led to the development of several self-report measures of psychopathy, including the Self-Report Psychopathy Scale Version III (as used in Wheeler et al., 2009) and the Elemental Psychopathy Assessment (Lynam et al., 2011). These measures allow researchers to study psychopathic traits among non-forensic samples.

Psychopathy and Victim Vulnerability Assessment

As suggested above, there is some speculation, but scant empirical evidence, to suggest that those with elevated psychopathic traits might be particularly astute at identifying vulnerable individuals. For instance, Book, Quinsey, and Langford (2007) had participants observe a pair of individuals in conversation and assess their assertiveness. They found that those higher in psychopathic traits were better at this task, which inspired further research into the topic. This study suggests that those higher in psychopathic traits are better at reading nonverbal cues in the body language people use while having a conversation.

Other research has focused more specifically on victim vulnerability. Wheeler et al. (2009) pioneered the examination of psychopathic traits as they relate to accuracy in assessing vulnerability in gait. For their study, they first acquired twelve videos of four males and eight females, all of Caucasian descent, walking alone down a hallway. They asked the subjects of the videos if they had ever been victimized (defined as “equal to or greater than bullying”) and, if so, how many times. Half of the participants (two males and four females) identified themselves as victims (Wheeler et al., 2009). These videos were then analyzed for vulnerability cues in the person’s gait, based on the work of Grayson and Stein (1981). Some examples of nonverbal vulnerability cues are a unilateral walk, non-postural gait, or lifting (as opposed to swinging) of feet (Grayson & Stein, 1981). People who reported having been victimized were more likely than their non-victim counterparts to display these vulnerability cues. The researchers then recruited 47 male students to participate in the second part of the study. These participants were first administered the Self-Report Psychopathy Scale: Version III (Paulhus, Hemphill, & Hare, in press, as cited in Wheeler et al., 2009). Then a researcher instructed each participant to put themselves in the role of a mugger and rate, on a scale of one to ten, whether or not they thought the person would make a good victim. The participants then watched each video, rated it, and provided an explanation of their rating. Accuracy was computed by recording a response of one to five as indicating nonvictim, and six to ten as indicating victim. If the video participant’s self-reported victimization status matched the rating given by the observing participant, a one was recorded for that response; if it did not match, a zero was recorded. Using this method, Wheeler et al. found a positive correlation between psychopathy score and accuracy of assessment ($r = .38, n = 48, p < .01$). Based on these results, the authors suggested that those higher in psychopathic traits are better able to read body language, and therefore better able to identify

vulnerable targets. This may explain why those victimized once are often victimized again (Kilpatrick & Acierno, 2003).

The most recent exploration of the connection between psychopathy and gait assessment accuracy used an incarcerated sample to see if the findings generalized among those higher in psychopathy (Book et al., 2013). The inmates were drawn from a Canadian maximum security facility, and had all been convicted of at least one violent offense. Participants agreed to allow their file information to be consulted for the study, which included a score from the PCL-R. This measure was used as the basis for assessing one's level of psychopathic traits. The researchers used the videos from the prior study (Wheeler et al., 2009) as their target videos. As before, the participants were asked to rate each target's vulnerability on a ten point scale. The same recoding was done, with one to five for a non-victim and six to ten for a victim. This study further supports the findings of Wheeler et al. (2009) in that those with higher levels of psychopathic traits were more accurate in identifying victim vulnerability. They suggested that these studies indicate that psychopaths are "social predators" (Book et al., 2013). Like the prior study, this one used only male observers, and included no specific analysis of possible racial differences.

A potential weakness of both Wheeler et al. (2009) and Book et al. (2013) is their choice of measures of psychopathy. In the first study, the Self-Report Psychopathy Scale: Version III was used. Book et al. used the PCL-R. Both measures share the same issue: they include a measure of criminal behavior. It is debated whether criminal experience is a characteristic of psychopathy or just a frequent correlate (Douglas et al., 2006). Thus, while both studies concluded that there was a relationship between psychopathy and victim vulnerability accuracy, it could very well be the case that it was their previous antisocial behavior that was driving this relationship. Because it makes sense that persons with greater criminal history might be better at

picking out victims, this may be the case for the phenomena observed by the Wheeler et al. and Book et al. studies.

Another potential weakness of previous research is that the influence of race has been largely ignored. Psychopathy is known to exist across race and culture (Sullivan & Kosson, 2006), but it is not certain that all research conclusions, often based on white or majority-white samples, apply for other races or ethnicities. While the literature on generalizability is growing (see Sullivan & Kosson, 2006 for review), there is still much to be learned. In their analysis of the Pittsburgh Youth Study data, Vachon, Lynam, Loeber, and Stouthamer-Loeber (2012) found that known psychopathy correlates (e.g., delinquency, antisocial personality disorder, and impulsivity) have the same relationship to psychopathy in nonwhites as in whites. However, they suggested future research should examine “specific affective and information-processing deficits,” (Vachon et al., 2012, p.268) which were not included in their study. The vulnerability assessment accuracy relationship may be more of an advantage than a deficit, but it still merits specific examination across race, to be certain of its generalizability. If effects observed for white persons are not seen for nonwhite persons, it would completely redirect the search for an explanation of this relationship.

Like most research on psychopathy (Verona & Vitale, 2006), Wheeler et al. and Book et al. both focused on males. This was a reasonable decision, as males have higher average rates of psychopathic traits and greater criminal activity, compared to females. However, this choice leaves a gap in knowledge: will the same association, of higher psychopathic traits with greater victim-identification accuracy, bear out for women? Several studies have examined the potential differences between men and women in terms of expression, associated deficiencies, and etiology of their psychopathic traits. Lower average levels of psychopathy and criminal behavior

may be partially due to females' differing expression of psychopathic traits and antisocial or aggressive behaviors (Wynn, Høiseth, & Petterson, 2012). Women may display more relational rather than physical aggression (Verona & Vitale, 2006), which would not generally be considered criminal behavior. Female psychopaths perform more normatively than males in lexical decision and passive avoidance tasks (Vitale et al., 2011). Women also display higher empathy (Baron-Cohen & Wheelwright, 2004), which may counteract arguably the essential element of psychopathy – lack of empathy. These studies suggest that researchers should test hypotheses using female samples before assuming that conclusions derived from male samples apply equally to females. It is therefore important to examine whether Wheeler et al.'s (2009) observed correlation generalizes to women as well.

Hypotheses

In order to address some of the limitations of previous research, the current study tested five hypotheses. First, higher levels of psychopathic traits should correlate with greater accuracy in a similar manner to prior work by Wheeler et al. (2009) and Book et al. (2013). Second, higher levels of psychopathic traits should be associated with greater lifetime criminality, which is also supported by prior work (Lynam et al., 2011; Miller, Hyatt, Rausher, Maples & Zeichner, 2014). The researchers thus expect (Hypothesis three) that greater criminal experience will be related to better accuracy. To the extent that hypothesis two is confirmed, it opens the possibility that psychopathy is related to more accurate assessments of victim vulnerability due to criminal experience. The last two hypotheses relate to specific populations not covered by prior research in this area: women and African Americans. While there is evidence to suggest caution in assuming that findings in regard to psychopathy apply across gender (Vitale et al., 2011; Verona & Vitale, 2006), there is no evidence to suggest this particular finding does not generalize.

Therefore, it is hypothesized that the correlations observed in males will be found for females as well. Lastly, the researchers also expect to find that results for African American participants will show the same patterns between variables as appear among Caucasians.

Method

In order to examine the effects of psychopathic traits on perception of vulnerability across race and gender (of both target and observer), and thus to test the hypotheses presented above, the present study employs a two stage approach. Each stage draws from independent samples of college students. The first stage, phase one, was designed to collect videos for use in phase two. In the second stage, phase two, the participants rated the vulnerability of the persons in the videos from phase one. Only the data from phase two was used to test the stated hypotheses.

Participants

The 32 participants of phase one included 17 females and 15 males. Eighteen reported their race as white, 7 as black, 6 as other, and one declined to identify. Three-fourths reported their ethnicity as not Hispanic or Latino. They ranged in age from 19 to 33, with a mean age of 22.7 (SD = 3.3).

The observing participants ranged in age from 18 to 58, with a mean age of 20.8 (SD= 4.3), median of 20, and most common age of 18. Further, participants were 54.9% female, 77.3% white, 12.2% black, and 20.2% Hispanic or Latino.

Measures

Victimization Survey. This measure was specifically created for the current study. However, it was found to be reliable ($\alpha = .78$). This survey asks if the participant has been a victim of ten different crimes over the course of their lifetime, in a Yes/No format. The crimes correspond, on the victimization side, to 10 of the 14 crimes included in the Crime and

Analogous Behaviors scale for the offender side. Higher scores indicate being the victim of a greater variety of different types of victimization. The mean was 3.58 (SD=2.47), and ranged from 0-10. Using this measure, it was determined that 4 (24%) of the female participants' videos and 9 (60%) of the male participants' videos would be labeled victim videos for analysis purposes, with the other 13 female videos and 6 male videos labeled as nonvictims.

Elemental Psychopathy Assessment. The Elemental Psychopathy Assessment (EPA; Lynam et al., 2011) is a 178 item self-report measure that is designed to assess psychopathy. It was used in the second phase of the study only. In both our data and prior data, the alpha for the measure is .95 (Lynam et al., 2011; Miller, Hyatt, et al., 2014). The EPA measures eighteen traits, as well as providing an overall psychopathy score. The overall psychopathy score is calculated by totaling each of the eighteen subscores, which each range from 1 to 5. Therefore, the minimum score possible is 18, and the highest score possible is 90. The mean score for the sample was 47.46, with a range between 28 and 69.67, and a standard deviation of 6.86. Higher scores on the Elemental Psychopathy Assessment indicate higher levels of psychopathic traits, whereas lower scores indicate lower levels of psychopathic traits.

Crime and Analogous Behavior Scale. The Crime and Analogous Behavior scale (CAB; Miller & Lynam, 2003) is a self-report measure that assesses criminal history, and thus criminal experience. Items related to vice crimes such as substance use and gambling were removed since they lack relevance to the current study. The measure was found to be reliable in its modified form ($\alpha = .80$). Higher scores on this measure indicate greater variety of prior criminal activity. Scores for observer participants ranged from 0 to 14, with a mean of 2.8 (SD=2.65).

Video Target Rating Scales. In this scale, the participants in the second phase of the study were asked to put themselves in the role of a mugger and used a rating scale of 1 to 10 to rate how vulnerable the recorded person was to being mugged, with 1 being not at all vulnerable, and 10 being extremely vulnerable. This scale is derived from a similar measure used in previous studies (Book, Costello, & Camilleri, 2013; Wheeler, Book, & Costello, 2009). As in those studies, the observer's 1-10 ratings were recoded into correct (1) and incorrect (0). This was determined by whether or not the victimization status of the video participant matched the observer participant's rating. If the video participant had not previously been victimized, and the observer rated them as 6-10 (vulnerable), the observer participant would receive a 0, indicating an inaccurate assessment. Conversely, if the observer participant rated the same video as 1-5 (less vulnerable), their response would be marked as 1, indicating an accurate assessment. Overall accuracy was calculated by adding the accuracy values and dividing by the number of videos watched. Accuracy for subgroups was calculated this way as well, with only videos of people of the indicated race and gender included.

Procedure

The study had two phases, each of which is detailed below. Essentially, Phase one was conducted in order to develop the stimulus materials for Phase two. The primary analyses, and all hypothesis tests, were focused on Phase two.

Phase One. Participants in the first phase were drawn from an upper-level Criminology class in which they were given extra credit to make an appointment and show up to the research study. Upon arrival, participants were given a consent form to sign to agree to participate in the research project, and then instructed to walk down the hall to another room where another researcher was waiting to conduct the actual study. In the destination room, participants

completed a survey that inquired about their demographic information and experiences as a victim of crime, if any. They would then be debriefed, with the researcher informing them that they had been recorded without their knowledge as they walked down the hallway. The participant was then asked if they agreed to allow their video to be used for phase two, and, if so, to sign a document to that effect. Phase one yielded thirty-one videos, all of which showed the student walking down a hallway by themselves. All participants were walking away from the camera such that their face was never seen in the video clips.

Phase Two. Participants in this phase were students in a large introductory Criminology class who chose to participate in an online survey as part of their research credit for that class. After completing a short demographic questionnaire, each participant viewed a total of sixteen videos: four each of female victims, female non-victims, male victims, and male non-victims. Each video was eight seconds long, with no audio. The order in which each group of videos, and the order of individuals within each group, were both randomized. Also, where there were more than four videos per category (female non-victims, etc.) that day, the four videos shown were randomly selected from those in the category, but no participant saw the same individual more than once.

On the same screen as the video, each participant completed the video target rating scale for that video. After rating all of the videos shown, each participant completed the Elemental Psychopathy Assessment (Lynam et al., 2011) and the Crime and Analogous Behaviors scale (Miller & Lynam, 2003).

Results

To get an overall sense of how accurate the vulnerability assessments in the sample were, one sample t-tests were conducted using .5 (50%) as the comparison point, to represent purely chance accuracy. These tests indicated that participants in the study were not significantly better or worse than chance at assessing vulnerability overall ($t_{(246)} = 1.842, p = .067$). In spite of the overall results, the participants were significantly better than chance at assessing vulnerability in white females ($t_{(244)} = 3.832, p < .001$), but significantly worse than chance at assessing vulnerability in both white and black males ($t_{(242)} = -3.827, p < .001$ for whites, $t_{(237)} = -2.078, p = .039$ for blacks). These results suggest that under some circumstances, participant's ratings of vulnerability were significantly different from chance. The analyses now turn to identifying what factors might influence this.

Considering the findings of prior research (Wheeler et al., 2009; Book et al., 2013), the first set of analyses focused on the relationship between psychopathic traits (of the participants) and the accuracy of their vulnerability ratings. Overall, EPA score did not relate significantly to accuracy ($r = -.058, n = 235, p = .378$). Because the above analyses found some differences when examining the vulnerability of specific sex and race subgroups, similar analyses were examined here. Participants with higher EPA scores were significantly less accurate when assessing videos of black males ($r = -.146, n = 228, p = .028$). That is, people with higher levels of psychopathic traits were worse at determining whether or not black males were vulnerable. All of the remaining correlations were nonsignificant (see Table 1).

These initial, racial differences in identifying vulnerable victims suggest that not all victims (based on race and sex) are perceived similarly. Moreover, there might be notable racial and sex differences in terms of those judging victim vulnerability. To assess the veracity of these possibilities, the next set of analyses focused on race and sex-specific analyses.

White Males

Consistent with the overall results, derived from the entire sample, white males were not significantly better or worse than chance at assessing vulnerability overall ($t_{(87)} = 1.078$, $p = .284$). However, a more nuanced examination reveals why this was the case. Specifically, white males were significantly better than chance when assessing white females ($t_{(87)} = 3.467$, $p = .001$) and significantly worse than chance when assessing white and black males ($t_{(87)} = -2.041$, $p = .044$; $t_{(85)} = -2.294$, $p = .024$, respectively). Assessments for black female videos were neither more nor less accurate than chance ($t_{(56)} = -1.094$, $p = .279$).

Considering that one of the main goals of this research was to attempt to replicate the results of Wheeler et al. (2009), correlations were computed to examine the relationship between EPA and accuracy within race and gender. Wheeler et al. (2009) observed a relationship between psychopathy and vulnerability assessment accuracy derived from videos of only white people shown to observers that were predominately white males. Therefore, the sample from this study was broken down by race and gender to more closely approximate the prior study. The data from this study also produced a significant positive correlation ($r = .246$, $n = 87$, $p = .022$), providing support for the possible presence of a relationship between psychopathy and ability to pick out vulnerable persons, at least for white males viewing other white males. However, as seen in Table 1, the relationship between psychopathic traits and accuracy of victim assessment did not generalize for videos of white females, or African Americans (males or females).

White Females

Next, results for white female observers were examined. White females were significantly worse than chance when assessing vulnerability in white males ($t_{(91)} = -3.021, p = .003$), but were not significantly different from chance (50%) for the remaining groups.

No significant correlation was found between EPA score and accuracy when assessing within-group (white female) videos ($r = .008, n = 85, p = .945$). The only significant correlation uncovered was that the EPA score correlated negatively with accuracy when assessing videos of black males ($r = -.223, n = 82, p = .044$). Nonsignificant correlations can be found in Table 1.

Black Males

All prior analyses were repeated for the black male observer group. Accuracy for all groups, when assessed by black males, was determined to be not significantly different from chance (50%). This nonsignificant result may be due to the small size of this category, with each t-test only including six to eleven participants.

Within-group accuracy correlated positively with EPA score ($r = .635, n = 10, p = .049$), meaning black males with more psychopathic traits appear to be better at assessing vulnerability in other black males. The EPA score did not correlate significantly with accuracy for any other group (See Table 1).

Black Females

Assessment by black females did not differ significantly from chance (50%) for any single race-gender category or overall. Just as for black males, this may have been due to a small sample size for this category, with the t-tests including only 13 to 17 individuals. Moreover, results for black female observers yielded no significant correlations between the EPA score and accuracy for any group (See Table 1).

Table 1. Correlations of EPA score and Accuracy of Observer Groups (rows) on Video Groups (columns).

Observer	Video Groups				
	All	White Males	White Females	Black Males	Black Females
All	-.058 (<i>n</i> = 235, <i>p</i> = .378)	.045 (<i>n</i> = 235, <i>p</i> = .494)	-.056 (<i>n</i> = 235, <i>p</i> = .392)	-.146* (<i>n</i> = 228, <i>p</i> = .028)	-.011 (<i>n</i> = 151, <i>p</i> = .896)
White Males	.008 (<i>n</i> = 87, <i>p</i> = .942)	.246* (<i>n</i> = 87, <i>p</i> = .022)	-.052 (<i>n</i> = 87, <i>p</i> = .635)	-.203 (<i>n</i> = 85, <i>p</i> = .062)	-.006 (<i>n</i> = 57, <i>p</i> = .968)
White Females	-.119 (<i>n</i> = 85, <i>p</i> = .279)	-.161 (<i>n</i> = 85, <i>p</i> = .141)	.008 (<i>n</i> = 85, <i>p</i> = .945)	-.223* (<i>n</i> = 82, <i>p</i> = .044)	.073 (<i>n</i> = 56, <i>p</i> = .595)
Black Males	.318 (<i>n</i> = 10, <i>p</i> = .371)	.408 (<i>n</i> = 10, <i>p</i> = .242)	-.088 (<i>n</i> = 10, <i>p</i> = .809)	.635* (<i>n</i> = 10, <i>p</i> = .049)	.209 (<i>n</i> = 6, <i>p</i> = .692)
Black Females	-.271 (<i>n</i> = 18, <i>p</i> = .277)	-.390 (<i>n</i> = 18, <i>p</i> = .11)	-.245 (<i>n</i> = 18, <i>p</i> = .327)	-.206 (<i>n</i> = 17, <i>p</i> = .428)	.046 (<i>n</i> = 13, <i>p</i> = .882)

**p* < .05

CAB

The above analyses examined the relationships between the psychopathy and the ability to accurately assess vulnerability in body language. Consistent with previous research (Wheeler et al., 2009; Book et al. 2013), there was some evidence of a link between the two. An alternative explanation is that accuracy of assessments of vulnerability is influenced not by the psychopathic personality, but instead by criminal experience that is often associated with the psychopathic personality. This is corroborated in the current data: the EPA scores correlated positively with CAB scores in the overall sample ($r = .373$, $n = 205$, $p < .001$). This relationship is consistent with previous research (Lynam et al., 2011; Miller, Hyatt, et al., 2014), Because prior studies that produced positive correlations between psychopathy and accuracy also used a measure that included criminal experience (PCL-R and its derivative, SRP III), it is important to examine whether prior offending is also related to accurately identifying vulnerable victims.

At the broadest level, the CAB did not appear to relate to accuracy for the overall sample (See Table 2). To more fully examine this possible relationship, analyses by sex and racial subgroups were conducted. These analyses parallel those above that focused on the EPA. In only

one instance was the CAB related to the accuracy of assessment of victim vulnerability, and that was for black females rating black males ($r = .646, n = 15, p = .009$; See Table 2, row 5).

However, EPA and CAB did not significantly correlate for black females ($r = .009, n = 16, p = .974$).

Table 2. Correlations of CAB score and accuracy of observer groups (rows) on video groups (columns).

Observer	Video Groups				
	All	White Males	White Females	Black Males	Black Females
All	.001 <i>(n = 207, p = .994)</i>	-.084 <i>(n = 207, p = .226)</i>	-.057 <i>(n = 207, p = .413)</i>	-.045 <i>(n = 201, p = .523)</i>	.051 <i>(n = 131, p = .56)</i>
White Males	-.053 <i>(n = 79, p = .643)</i>	-.117 <i>(n = 79, p = .306)</i>	-.010 <i>(n = 79, p = .927)</i>	-.086 <i>(n = 77, p = .455)</i>	-.024 <i>(n = 50, p = .868)</i>
White Females	.055 <i>(n = 77, p = .637)</i>	-.154 <i>(n = 77, p = .181)</i>	-.036 <i>(n = 77, p = .757)</i>	-.131 <i>(n = 74, p = .266)</i>	.131 <i>(n = 52, p = .354)</i>
Black Males	.653 <i>(n = 6, p = .16)</i>	.617 <i>(n = 6, p = .192)</i>	-.264 <i>(n = 6, p = .613)</i>	.301 <i>(n = 6, p = .562)</i>	-.655 <i>(n = 3, p = .546)</i>
Black Females	.13 <i>(n = 16, p = .632)</i>	-.164 <i>(n = 16, p = .543)</i>	-.085 <i>(n = 16, p = .753)</i>	.646** <i>(n = 15, p = .009)</i>	.027 <i>(n = 11, p = .936)</i>

* $p < .05$ ** $p < .01$

Analyses After Removing Suspicious Data

Out of concern for potential undue influence of cases where the participant may have been lying to make themselves look better, or otherwise answering inconsistently, the correlations were re-calculated excluding a few suspicious cases. Such cases were assessed using “too good to be true” and infrequency measures built into the EPA (Lynam et al., 2011, p.111). Suspicious cases were defined as those with values greater than two standard deviations above the mean for the “too good to be true” and/or infrequency measures. Correlations excluding the suspicious cases largely remained the same in the overall sample, beyond the negative relationship between EPA score and accuracy on black male videos now being slightly stronger, and still significant ($r = -.201, n = 198, p = .004$; Compare Table 1, row 1). The only change for the white male subgroup was the emergence of a significant negative relationship between EPA

score and accuracy on black male videos ($r = -.235$, $n = 77$, $p = .04$), just as found in the overall data and the white female subgroup. No notable changes were observed when the suspicious cases were removed from the white female sub-group. For black males, when the suspicious cases were removed, the correlation between the EPA and accuracy on within-group (black male) videos is no longer significant, but is still large ($r = .645$, $n = 7$, $p = .118$). After removing suspicious cases, black females still do not show a correlation between the CAB and the EPA ($r = -.011$, $n = 14$, $p = .971$). However, the positive correlation between the CAB and accuracy on black male videos still persists ($r = .663$, $n = 13$, $p = .013$).

Discussion

This research, in large part, confirms the findings of prior research by showing a positive relationship between psychopathy score (using the Elemental Psychopathy Assessment of Lynam et al. (2011)) and accuracy when assessing the vulnerability of persons based on a short video of them walking (Wheeler et al., 2009; Book et al., 2013). However, the current research indicates that this association may be unique to males, and may only appear when assessing males of their same race, which marks a notable distinction between this and prior work. White males observing white males and black males observing black males both showed a positive correlation between their accuracy and their level of psychopathic traits, but all other EPA and accuracy correlations were negative or nonsignificant.

One of the primary aims of the research was to determine if differences in criminal experience, which correspond to differences in levels of psychopathic traits, would account for increased vulnerability assessment accuracy. The data do not support this hypothesis, as there were no corresponding correlations of the CAB with accuracy in the situations where the CAB correlated with EPA. Essentially, since criminal experience does not correlate with accuracy in most cases, it is unlikely that the correlation between psychopathy and accuracy could be explained by the relationship between psychopathy and criminal experience. The only positive correlation of accuracy and criminal experience was for black females assessing black males, but there was no corresponding EPA correlation for the CAB correlation. Also, because that sample is rather small, caution is warranted when drawing conclusions from that data.

The researchers expected to find the same effect for females as found for males in prior studies (Wheeler et al., 2009; Book et al., 2013). Not finding the same effect could be due to a number of factors. One possibility is the influence of higher average empathy on the part of females (Baron-Cohen & Wheelwright, 2004). It is possible that higher empathy relates to better accuracy. At the same time, higher psychopathic traits relate to decreased empathy (Skeem et al., 2011). These two relationships could be counteracting each other, and obscuring a relationship between higher levels of psychopathic traits and greater accuracy. To address this possibility, future replication should include a measure of empathy, especially one including multiple types of empathy, as research by Blair (2005) has noted that psychopaths may not be deficient in all types of empathy. Another possibility relates to the differential expression of aggression in psychopathic females (Verona & Vitale, 2006). In the current study, participants were tasked with considering the vulnerability to a physically aggressive act. Perhaps females with elevated psychopathic traits are not very skilled at assessing such vulnerability. However, they might be more attuned to identifying vulnerability for relationally aggressive acts.

Limitations

Wheeler, Book, and Costello (2009) established that those previously victimized did display the vulnerability cues detailed by Grayson and Stein (1981). In the current study, no such analysis was examined. That is, there was no consultation with a body language expert to have the videos analyzed for vulnerability cues. Future research might consider doing this in order to have a clearer indication of whether there are signs of vulnerability.

The choice of location for the videos, while convenient and similar to the original study, may have also influenced the obtained results. First, since the environment was both on campus and inside a building, it could be that the body language displayed by video participants is

different because they feel that they are in a safe environment. Research by Johnston, Hudson, Richardson, Gunns, and Garner (2004) has detailed a difference in body language based on perception of the safeness of the environment. However, modifying this safety/non-safety perception for each individual would require informing the participants that they were being recorded, which may introduce further complications. Second, the observer participants may have been biased in their assessment of the videos by using environmental factors to make their vulnerability judgment. Future research should therefore explore the effects of different contexts as well as consider measuring the video participants' perception of safety and the effects thereof.

Another potential limitation of this research is its use of a student sample, as opposed to a community or offender sample. The Elemental Psychopathy Assessment was designed to detect pathological levels of personality traits, across multiple types of samples. For context, the community sample used by Miller, Rausher, Hyatt, Maples and Zeichner (2014), which oversampled for higher levels of psychopathic traits, yielded a mean EPA score of 51.38 (SD: 7.05). The mean EPA score of the inmate sample used in Lynam et al. (2011; as reported in Miller, Rausher, et al. 2014) was 49.72 (SD: 7.08). Having used a sample of college students, and not having oversampled for higher levels of psychopathic traits, the current mean EPA of 47.46 (SD: 6.86) is on the lower side of these figures. However, despite different sample origins (students and inmates, respectively), both Wheeler et al. (2009) and Book et al. (2013) found the same strength of correlation between psychopathy and accuracy. This suggests the phenomena to be observable at all levels of psychopathic traits, as it is based on the variability of psychopathic traits alongside the variability in accuracy, and that the effect is not diminished by lower base rates of psychopathy.

If future research seeks to examine racial/ethnic differences more closely, the researchers should oversample the groups they examine, in order to be more confident in their findings regarding that population. The exploratory conclusions derived here, regarding the effect of psychopathic traits in black males and females, should be examined more closely in a future study before it can be said with confidence that the effects are the same across race. Also, researchers should ensure that participants not only see videos of both males and females and victims and non-victims, but also see equal numbers of the racial/ethnic categories about which they seek to draw conclusions. The use of randomization to determine the videos shown, while strong in terms of preventing effect of presentation order or the effect of idiosyncratic individual videos, decreased the statistical power of within-group analyses for black males and black females. This occurred because not all black male or black female participants saw a black male or black female video, and therefore they had no accuracy data to compare.

In conclusion, this research largely corroborates prior findings that males higher in psychopathic traits have greater accuracy in assessing vulnerability based on an individual's gait (Wheeler et al., 2009; Book et al., 2013), so long as that individual is also male and of the same race. By examining, and subsequently ruling out, the role of the potential influence of criminal experience, the current findings strengthen the argument that the findings are, in fact, related to psychopathic traits. However, this study indicates that the relationship cannot be assumed to apply among women as well. More research is needed to clarify these findings and to determine if other, so far unmeasured, factors may drive this relationship, as well as to see if the findings across race hold up with a larger sample size.

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