

5-1-2019

Intelligence and Interpersonal Functioning in Youth and Young Adults with Varying Levels of Psychopathic and Callous-Unemotional Traits

Marie Feyche

Follow this and additional works at: https://ecommons.udayton.edu/uhp_theses



Part of the [Psychology Commons](#)

eCommons Citation

Feyche, Marie, "Intelligence and Interpersonal Functioning in Youth and Young Adults with Varying Levels of Psychopathic and Callous-Unemotional Traits" (2019). *Honors Theses*. 210.

https://ecommons.udayton.edu/uhp_theses/210

This Honors Thesis is brought to you for free and open access by the University Honors Program at eCommons. It has been accepted for inclusion in Honors Theses by an authorized administrator of eCommons. For more information, please contact frice1@udayton.edu, mschlangen1@udayton.edu.

**Intelligence and Interpersonal
Functioning in Youth and Young Adults
with Varying Levels of Psychopathic and
Callous-Unemotional Traits**



Honors Thesis

Marie Feyche

Department: Psychology

Advisor: Tina D. Wall Myers, Ph.D.

May 2019

Intelligence and Interpersonal Functioning in Youth and Young Adults with Varying Levels of Psychopathic and Callous-Unemotional Traits

Honors Thesis

Marie Feyche

Department: Psychology

Advisor: Tina D. Wall Myers, Ph.D.

May 2019

Abstract

The current study examined 30 youth and young adults ages 12-21 who were receiving therapy services at South Community, Inc. The intelligence and interpersonal functioning of individuals with varying levels of psychopathic and callous-unemotional (CU) traits was studied. Although there are a variety of conceptualizations of psychopathy, this study used the Triarchic Model of Psychopathy (TriPM), which defines the three factors of psychopathy as boldness, meanness, and disinhibition. CU traits are a downward extension of psychopathy, overlapping with the meanness factor, and are embodied by an absence of guilt, remorse, and the expression of superficial emotion. “Successful” psychopathy is a term applied to individuals who have psychopathic traits but are non-antisocial and function at a comparable level to individuals lacking psychopathic traits. Interpersonal functioning refers to one’s ability to interact with others; a significant distinction between successful and unsuccessful psychopathy involves interpersonal skills. Both verbal and abstract intelligence were assessed. Participants completed the Triarchic Personality Measure (TriPM), the Inventory of Callous-Unemotional Traits (ICU), the Interpersonal Reactivity Index (IRI), and the Shipley Institute of Living Scale-Second Edition (Shipley-2) in order to assess their levels of psychopathy, CU traits, interpersonal functioning, and intelligence. It was hypothesized that individuals with high levels of CU traits, psychopathy, and intelligence would have higher levels of interpersonal functioning than individuals with high levels of CU traits and psychopathy but low levels of intelligence. It was also hypothesized that this relation will be particularly true for abstract intelligence. This is supported by previous research suggesting low intelligence is present in psychopathic individuals who exhibit antisocial and violent behavior and may correlate with the predisposition to callous-unemotional behavior in youth.



Table of Contents

Abstract	Title Page
Introduction	1
Method	6
Data Analysis	9
Results	9
Discussion	13
References	17

Intelligence and Interpersonal Functioning in Youth and Young Adults with Varying
Levels of Psychopathic and Callous-Unemotional Traits

Traditionally, psychopathic individuals have been understood to be more cold and unemotional than charismatic and social. Over the years, there have been a variety of conceptualizations. In 1904, Kraepelin listed seven subtypes of psychopathy in his textbook: excitable, unstable, impulsive, eccentric, liars and swindlers, antisocial and quarrelsome (Kraepelin, 1915). In contrast, Schneider proposed ten varieties of psychopathic individuals: hyperthymic, depressive, insecure, self-distrusting, fanatic, attention seeking, labile, explosive, affectionless, weak-willed, and asthenic (Schneider, 1934). Schneider also emphasized that antisocial behavior comes second to personality deviation in individuals with psychopathic traits (Schneider, 1958). Kernberg suggested that individuals with psychopathic traits are extreme variants of the narcissist, as psychopathy is a dangerous subtype (Kernberg, 1975). Meloy listed numerous characteristics differentiating psychopathy from narcissistic personality disorder, including the aggressive drive, absence of passivity, presence of cruel behavior, and the absence of moral justification of behavior in individuals with psychopathic traits (Meloy, 1988).

In 1941, Cleckley was the first person to operationalize the construct of psychopathy in his work, *The Mask of Sanity*. According to Cleckley, the psychopathic individual has behavior that is disturbed compared to societal norms, but this person is not insane. Individuals with psychopathic traits superficially relate to other people but have chaotic and irresponsible interpersonal behavior due to their lack of regard for other peoples' feelings. Cleckley provided sixteen characteristics of psychopathy: superficial

charm and good intelligence, lack of delusions, lack of nervousness, unreliability, untruthfulness and insincerity, absence of remorse, poor judgement, egocentricity, incapacity for love, poverty in affective reactions, loss of insight, unresponsiveness in interpersonal relations, uninviting behavior with, and sometimes without, alcohol, suicide threats that are typically not carried out, impersonal sex life, and failure to follow a life plan (Cleckley, 1941).

The Triarchic Model of Psychopathy (TriPM) is a three-factor model. It lists boldness, meanness, and disinhibition as the primary factors of psychopathy (Drislane, Brislin, Kendler, Andershed, Larsson, & Patrick, 2015). Boldness describes high self-assurance and tolerance, and the ability to remain calm despite pressure (Patrick et al., 2009). It also refers to thrill-seeking and fearlessness (Dotterer et al., 2017). Boldness correlates positively with interpersonal skills (Drislane et al., 2015). Meanness is characterized by rebellion, excitement seeking, cruelty, and the lack of attachment to others, (Patrick et al., 2009). Meanness has a negative correlation with empathy and agreeableness. It has a positive correlation with CU and narcissistic traits, as well as with the Psychopathic Personality Inventory (PPI) subscales Coldheartedness and Machiavellian Egocentricity (Drislane et al., 2015). Disinhibition refers to a phenotypic disposition to impulse control issues (Patrick, Fowles, & Krueger, 2009) and can predict antisocial behavior (Dotterer, Waller, Cope, Hicks, Zucker, Nigg, & Hyde, 2017). whereas disinhibition is positively correlated with antisocial behavior (Drislane et al., 2015).

Callous-unemotional (CU) traits, which are embodied by an absence of guilt, remorse, and the expression of superficial emotion, have been considered a hallmark of psychopathy (Frick, Ray, Thornton, & Kahn, 2013). CU traits can be conceptualized as a

downward extension of psychopathy, as these traits are understood to be a developmental precursor to psychopathy (Frick, 2009). CU traits focus on a group of antisocial youth who are especially severe, stable, and aggressive. These youth display aggression that is more premeditated and motivated for personal gain than other youth who exhibit severe conduct problems. Youth with high levels of CU traits display weaker emotional responses in distressful situations. (Frick & Ray, 2014).

There has been empirical support for the presence of psychopathic traits in non-antisocial individuals, which has been termed “successful” psychopathy. These individuals function at a comparable level to individuals lacking psychopathic traits, making their psychopathic traits more discrete (Steinert, Lishner, Vitacco, & Hong, 2017). There are various models for successful psychopathy. First, in the differential-severity model, it is suggested that successful psychopathy is a milder version of clinical psychopathy. In the moderated-expression model, it is proposed that successful psychopathy is an atypical manifestation of clinical psychopathy. Behavior for individuals with successful psychopathic traits may be influenced by factors such as parenting or intelligence. Lastly, the differential-configuration model suggests that individuals with successful psychopathy express personality traits differently, including boldness and conscientiousness, than individuals with clinical psychopathy (Lilienfeld, Watts, & Smith, 2015).

Interpersonal functioning refers to one’s ability to interact with others. Problematic social functioning is a component of all personality disorders, as individuals with personality disorders exhibit interpersonal functioning that deviates from the norms of society (Hengartner, Müller, Rodgers, Rössler, & Ajdacic-Gross, 2014) Fix and Fix

conducted a study that gave evidence supporting the idea that higher levels of psychopathy are related to higher levels of interpersonal functioning (Fix & Fix, 2015). This study gave questionnaires to college students, a non-incarcerated population. Results indicated that interpersonal skills positively predicted psychopathy, but empathy and social responsibility did not. This suggests that successful psychopathy and unsuccessful psychopathy are characterized by manipulative traits and deviancy. Successful psychopathy, however, involves the ability to understand interpersonal dynamics better than individuals with unsuccessful psychopathy, allowing individuals with characteristics of successful psychopathy to respond more appropriately. Therefore, a significant distinction between successful and unsuccessful psychopathy involves interpersonal skills. (Fix & Fix, 2015).

Intelligence has been studied in the literature as a moderator and component of psychopathic traits. Intelligence is defined as one's capability to gather and apply knowledge (Breakspear, 2013). One type of intelligence is verbal, and it refers to how well someone can use words. Another type, abstract intelligence, refers to how well someone can perceive and interpret the visual-spatial world. Abstract intelligence is also referred to as spatial intelligence (Gardner, 1993). Initially, theories about the correlation between psychopathy and intelligence in adults suggested that adults with psychopathic traits have high intelligence (Hampton, Drabick, & Steinberg, 2014). In juveniles, one study suggested that verbal intellectual ability is related to psychopathic traits, specifically superficial interpersonal reactions (Salekin, Neumann, Leistico, & Zalot, 2004). However, research findings have been inconsistent when looking at the correlation between intelligence and aggressive behavior in youth and young adults with

psychopathic traits. Some research has suggested that there is a significant relationship between verbal intelligence and CU traits. Individuals who have a high verbal intelligence and high levels of CU traits have the greatest reported violent delinquency (Muñoz, Frick, Kimonis, & Aucoin, 2008). Other research has contrasted this idea, giving evidence that more violent individuals have high levels of psychopathic traits but low levels of intelligence (Bate, Boduszek, Dhingra, & Bale, 2014). Support for the theory that individuals with psychopathic traits have low intelligence involves the spatial component of intelligence. Spatial impairments are correlated with the emergence of antisocial behavior because facial expressions, recognition, attention, and nonverbal orientation are negatively impacted. When the functions are impaired early in life, it can burden the caretaker of the individual, weakening the bond and predisposing the individual to callous-unemotional behavior. Studies have found severe spatial intelligence impairment in adults with psychopathic traits, and there are similar findings for children with callous-unemotional traits (de Tribolet-Hardy, Vohs, Mokros, & Habermeyer, 2013).

The current study examined the intelligence and interpersonal functioning in individuals with varying levels of CU traits and psychopathy. It was hypothesized that youth and young adults with high levels of CU traits and psychopathy and a high intelligence would have greater interpersonal functioning than those with high levels of CU traits and psychopathy but low intelligence. It was also hypothesized that this relation will be particularly true for abstract intelligence.

Method

Participants

Participants were to be recruited from South Community, Inc., a mental health agency located in Moraine, OH. Participants were eligible to participate if they were referred for therapy services. The current sample consisted of 30 individuals. There were 8 males and 22 females. Participants were ages 12-21, with an average age of 16.97. Concerning race, 13.34% of participants were African American, 76.67% were Caucasian, and 10.0% were Mixed/Biracial. Concerning ethnicity, 93.34% of participants were Non-Hispanic/Latino and 6.67% were Hispanic. The highest level of education completed by their parents was some high school for 13.34% participants, high school graduate/GED for 26.67%, technical/vocational training for 6.67%, some college for 20.0%, an associate's degree (2-year) for 20.0%, a bachelor's degree (4-year) for 6.67%, and a master's degree for 6.67%. Participants were eligible to win 4 of 80 \$25 gift cards as compensation for their time.

Procedure

This study was approved by the Institutional Review Board (IRB) on January 2, 2018 as part of the Mediators and Moderators for Intervention Success study. Participants in this study completed surveys. These surveys were read aloud to participants by a researcher in order to account for low reading levels. This was done in an interview-like format at South Community's Inc., Kettering Boulevard location.

Measures

The measures for the current sample contain the same as those collected for the Mediators and Moderators for Intervention Success study.

Psychopathy. Participants completed the Triarchic Personality Measure (TriPM), which contains 58 items. These items measure psychopathy based on the triarchic model of psychopathy which uses boldness, meanness, and disinhibition as the three domains. Each item requires a response based on a 4-point Likert scale, where 0 = true, 1 = mostly true, 2 = mostly false, 3 = false. The scores were reverse scored so that higher values indicated higher levels of psychopathy. This study has given evidence of sufficient internal consistency for each of the three domains, α s = .590 to .900. Good construct validity is suggested through the moderate correlation between TriPM scales with overall Psychopathy Checklist-Revised (PCL-R), Psychopathy Personality Inventory (PPI), Levenson Self-Report Psychopathy Scale (LSRP), Self-Report Psychopathy Scale (SRP-III), and Youth Psychopathic Traits Inventory YPI scores (Sellbom & Phillips, 2012; Stanley et al., 2013).

Callous-Unemotional Traits. Participants completed the self-report version of the Inventory of Callous-Unemotional Traits (ICU; Kimonis, Frick, Skeem, Marsee, Cruise, Munoz, Auccion, & Morris, 2008). The ICU contains 24 items and measures the affective deficits of psychopathy using a 4-point Likert scale, ranging from 0 = “Not at all true” to 3 = “Definitely true” in order to indicate how accurately each statement describes the participants. This study demonstrated sufficient internal consistency, α s = .728 to .850. The ICU score has consistently been related to antisocial behavior (Essau, Sasagawa, & Frick, 2006; Fanti, Frick & Georgiou, 2009; Kimonis et al., 2008; Roose, Bijttebier, Decoene, Claes, & Frick, 2010) and is negatively correlated with prosocial behavior in adolescent samples.

Intelligence. Participants completed the Shipley Institute of Living Scale-Second Edition (Shipley-2) (Shipley, Gruber, Martin, & Klein, 2009), which is a self-report measure that gives a good estimation of Wechsler Adult Intelligence Scale (WAIS-III) IQ scores and verbal and non-verbal reasoning ability. It measures cognitive functioning and impairment (Shipley et al., 2009). The verbal portion is a vocabulary test that has the participant select the most accurate synonym from four options for a set of 40 words. In the non-verbal portion, the participant must solve 25 abstract patterns (e.g., A, B, C, D, ___), which increase in difficulty. Each portion has 10 minute time limit on the vocabulary test and a twelve minute time limit on the abstraction test. Concurrent validation evidence suggests that the Shipley-2 has a strong correlation with the WAIS-III ($r = .45$ to $.87$) and with the Wonderlic Personnel Test ($r = .47$ to $.64$) (Shipley et al., 2009). According to the manual, test-retest reliability is $r = .87$ to $.94$.

Interpersonal Functioning. Participants completed the Interpersonal Reactivity Index (IRI; Davis, 1980), which contains 28 items. There is a five-point Likert scale that ranges from 0 = “Does not describe me well” to 4 = “Describes me very well”. The internal consistency for the four subscales of this measure (*Perspective Taking*, *Fantasy*, *Empathetic Concern*, and *Personal Distress*) has been reported to be sufficient, ranging from $\alpha = .543$ to $.835$. The *Perspective Taking* and *Empathetic Concern* subscales correlate with prosocial tendencies (Batson, Early, & Salvanari, 1997; Batson, Fultz, & Shoenrade, 1997), more Openness and Agreeableness as Big Five traits (De Corte et al., 2007), and less antisocial and aggressive behavior (Richardson, Green, & Lago, 1998; Richardson, Hammock, Smith, Gardner, & Signo, 1994).

Data Analysis

It was hypothesized that interpersonal functioning would be greater in youth and young adults with high levels of CU traits and psychopathy and high intelligence than in youth and young adults with high levels of CU traits and psychopathy but low intelligence. It was also hypothesized that these relationships would be especially strong for abstract intelligence. To test this hypothesis, I conducted a 2x2 ANOVA design based on whether or not participants were above or below the mean on the ICU and whether they were above or below the mean of the Shipley-2 total. The second 2X2 ANOVA is based on whether participants are above or below the mean on the ICU and on the Shipley-2 verbal. The third 2X2 ANOVA is based on whether participants are above or below the mean on the ICU and on the Shipley-2 abstract. I conducted a fourth 2x2 ANOVA design based on whether or not participants were above or below the mean on the TriPM and whether they were above or below the mean on the Shipley-2 total. The fifth 2X2 ANOVA is based on whether participants were above or below the mean on the TriPM and on the Shipley-2 verbal. The sixth 2X2 ANOVA is based on whether participants were above or below the mean on the TriPM and on the Shipley-2 abstract. In these designs, interpersonal functioning was examined as the dependent variable.

Results

Descriptive statistics for the ICU, IRI, TriPM, Shipley-2 Verbal, Shipley-2 Abstract, and Shipley-2 Total are displayed in Table 1. Bivariate correlations are displayed in Table 2. The TriPM, ICU, and IRI all did not have significant correlations with the Shipley-2 Verbal, Abstract, and Total ($p > .05$). The TriPM, ICU, and IRI all had significant correlations with each other ($p < .05$). The TriPM and ICU were positively

correlated with each other and negatively correlated with the IRI. The Shipley-2 Verbal, the Shipley-2 Abstract, and the Shipley-2 Total all had significant, positive correlations with one another ($p < .05$).

Concerning the results of the 2X2 ANOVA between the TriPM and the Shipley-2 Total, the main effect for the TriPM was significant, $F(1,21) = 5.512, p = .029$. The main effect for the Shipley-2 Total was not significant, $F(1,21) = 1.030, p = .322$. The interaction effect was not significant, $F(1,21) = 2.56, p = .125$. Second, for the results of the 2X2 ANOVA between the TriPM and the Shipley-2 Verbal, the main effect for the TriPM was significant, $F(1,21) = 5.304, p = .032$. The main effect for the Shipley-2 Verbal was not significant, $F(1,21) = 1.024, p = .323$. The interaction effect was not significant, $F(1,21) = .174, p = .681$. The results of the 2X2 ANOVA between the TriPM and the Shipley-2 Abstract are shown in Figure 1. The main effect for the TriPM was significant, $F(1,21) = 5.845, p = .025$. The main effect for the Shipley-2 Abstract was not significant, $F(1,21) = .546, p = .468$. The interaction effect was not significant but approached significance, $F(1,21) = 3.820, p = .064$.

Concerning the results of the 2X2 ANOVA between the ICU and the Shipley-2 Total, the main effect for the ICU was significant, $F(1,21) = 25.150, p = .000$. The main effect for the Shipley-2 Total was not significant, $F(1,21) = .007, p = .936$. The interaction effect was not significant, $F(1,21) = .218, p = .645$. For the results of the 2X2 ANOVA between the ICU and the Shipley-2 Verbal, the main effect for the ICU was significant, $F(1,21) = 27.297, p = .000$. The main effect for the Shipley-2 Verbal was not significant, $F(1,21) = .153, p = .700$. The interaction effect was not significant, $F(1,21) = 2.501, p = .129$. Concerning the results of the 2X2 ANOVA between the ICU and the

Shiple-2 Abstract, the main effect for the ICU was significant, $F(1,21) = 24.864, p = .000$. The main effect for the Shiple-2 Abstract was not significant, $F(1,21) = .038, p = .847$. The interaction effect was not significant, $F(1,21) = .124, p = .728$.

Table 1
Descriptive Statistics

Measure	Minimum	Maximum	M	<i>sd</i>
TriPM	32.00	136.00	69.17	21.42
ICU	8.00	66.00	25.86	12.00
IRI	26.00	96.00	62.86	15.40
Shiple-2 Verbal	50.00	125.00	95.20	17.95
Shiple-2 Abstract	55.00	112.00	88.64	16.81
Shiple-2 Total	44.00	122.00	90.76	18.84

Note. *sd* = standard deviation; M = Mean; TriPM = Triarchic Personality Measure; ICU = Inventory of Callous-Unemotional Traits; IRI = Interpersonal Reactivity Index; Shiple-2 = Shiple Institute of Living Scale – Second Edition.

Table 2

Bivariate Correlations

Measure		1	2	3	4	5	6
1. TriPM	Pearson Correlation	—					
	Sig. (2-tailed)						
2. ICU	Pearson Correlation	.667	—				
	Sig. (2-tailed)	.000					
3. IRI	Pearson Correlation	-.507	-.781	—			
	Sig. (2-tailed)	.006	.000				
4. Shipley-2 Verbal	Pearson Correlation	.059	-.095	.150	—		
	Sig. (2-tailed)	.781	.653	.474			
5. Shipley-2 Abstract	Pearson Correlation	.171	-.094	.012	.650	—	
	Sig. (2-tailed)	.414	.657	.954	.000		
6. Shipley-2 Total	Pearson Correlation	.122	-.114	-.067	.903	.905	—
	Sig. (2-tailed)	.562	.589	.750	.000	.000	

Note. TriPM = Triarchic Personality Measure; ICU = Inventory of Callous-Unemotional Traits; IRI = Interpersonal Reactivity Index; Shipley-2 = Shipley Institute of Living Scale – Second Edition.

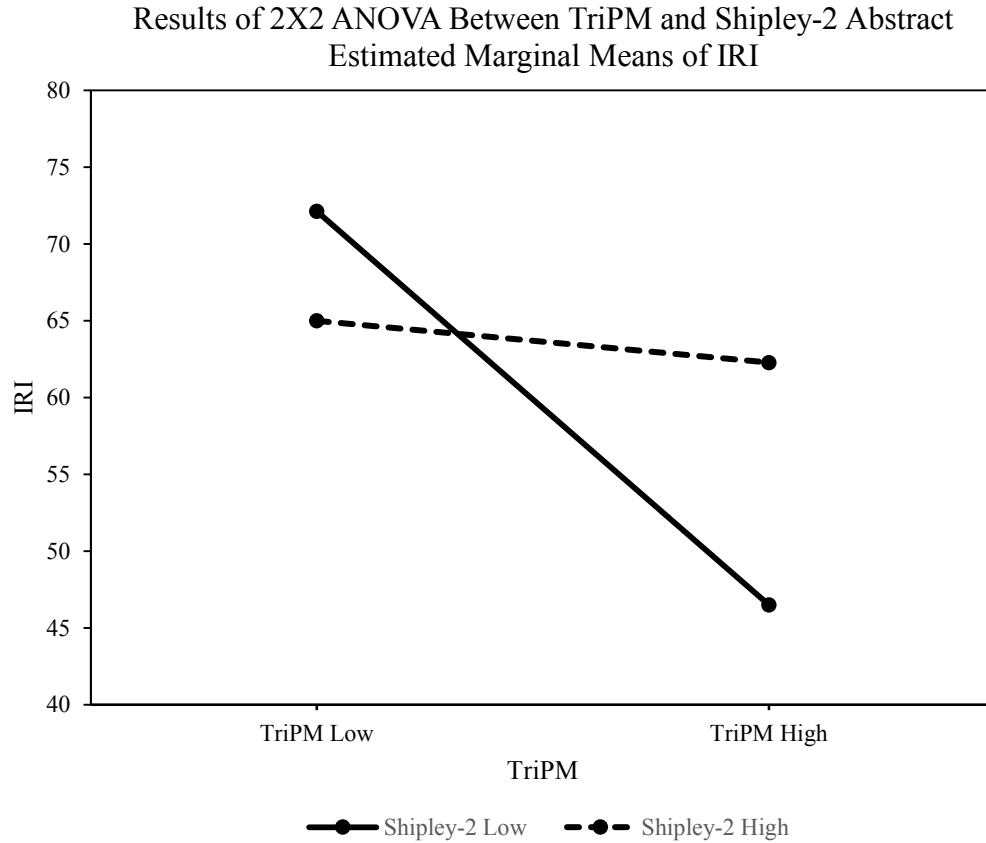


Figure 1. Interaction between psychopathic traits and abstract intelligence on interpersonal functioning.

Discussion

The results of this study suggest that interpersonal functioning is the same in youth and young adults with high levels of psychopathic or CU traits and high intelligence in comparison to youth and young adults with high levels of psychopathic or CU traits but low intelligence. There was, however, an interaction approaching significance between psychopathic traits and abstract intelligence, which supports the hypothesis that the relation would be greater for abstract intelligence in comparison to verbal intelligence. For individuals who have low levels of abstract intelligence, interpersonal functioning was greater in individuals who have low levels of psychopathy

in comparison to those with high levels of psychopathy. Results displayed more stable levels of interpersonal functioning across high and low levels of psychopathy for high levels of abstract intelligence. Therefore, the level of abstract intelligence may be a moderating variable in the level of interpersonal functioning in psychopathic individuals. Intelligence aside, there is a main effect for psychopathy. As TriPM or ICU scores increase, IRI scores decrease. It also suggests that interpersonal functioning is the same in youth and young adults with high levels of psychopathic traits and high intelligence than in youth and young adults with high levels of psychopathic traits but low intelligence.

This study adds to the growing body of research because it gives evidence that there is not an interaction between intelligence and interpersonal functioning in those with elevated levels of psychopathy. The lack of interaction was unexpected because in the moderated-expression model of “successful” psychopathy, intelligence is a moderator to interpersonal behavior in psychopathic individuals (Lilienfeld et al., 2015). It was not surprising that the interaction between psychopathy and abstract intelligence was approaching significance, making it stronger than the interaction between psychopathy and verbal intelligence. Past studies have found abstract intelligence impairments in adults with psychopathy. However, because there have been similar findings concerning the presence of abstract intelligence impairments in children with CU traits, it was surprising that this interaction was not significant or approaching significance when the ICU was used rather than the TriPM (de Tribolet-Hardy et al., 2010). This study also supports previous research because of the inverse correlation between psychopathy and interpersonal functioning. Not only are psychopathic individuals traditionally understood

to be antisocial, but problematic interpersonal functioning is a component of all personality disorders in general (Hengartner et al., 2014).

This study has several strengths. One strength is the age span of participants, ranging from early adolescence to early adulthood. Development occurs between the ages of 12 and 21, so varying levels of development are accounted for due to this age range, as is the fact that continued education could increase IQ in older participants. Second, there are two different measures used for maladaptive personality traits: the TriPM and the ICU. This takes into consideration the varying stages of the development of psychopathy. CU traits, measured by the ICU, are a precursor to psychopathy, measured by the TriPM.

There are also several limitations within this study. One limitation is that the TriPM, ICU, and IRI are all self-report, so there is shared method variance. Participants may not respond accurately, inflating or deflating their responses. This hurts the reliability and validity of the study. Another limitation is the small sample size; fewer participated than expected. More participants help to increase power, which aids with finding statistically significant differences and helps to avoid the failure to find a relationship between variables when there actually is a relationship present.

Because of the small sample size, these findings should be considered preliminary findings and future research is necessary to explore further findings. This future research can expand on this study by specifically examining the TriPM subscale, boldness, and the ICU subscale, uncaring. Boldness correlates positively with interpersonal skills (Drislane et al., 2015). Uncaring correlates positively with trait psychopathy, which correlates positively with interpersonal skills (Fix & Fix, 2015). The positive correlation between

higher levels of psychopathy and higher levels of interpersonal skills relates to the concept of “successful” psychopathy.

References

- Bate, C., Boduszek, D., Dhingra, K., & Bale, C. (2014). Psychopathy, intelligence and emotional responding in a non-forensic sample: an experimental investigation. *Journal of Forensic Psychiatry & Psychology, 25*(5), 600-612. doi:10.1080/14789949.2014.943798
- Batson, D. C., Early, S., Salvarani G. (1997). Perspective taking: imagining how another feels versus imagining how you would feel. *Personality and Social Psychology Bulletin, 23*(7), 751-758. <https://doi.org/10.1177/0146167297237008>
- Batson, C. D., Fultz, J., & Schoenrade, P. A. (1987). Distress and empathy: two qualitatively distinct vicarious emotions with different motivational consequences. *Journal of Personality, 1*(1), 19.
- Breakspear, A. (2013). A new definition of intelligence. *Intelligence & National Security, 28*(5), 678-693. doi:10.1080/02684527.2012.699285
- Byrd, Amy L., Hawes, Samuel W., Burke, Jeffery D., Loebera, Rolf, & Pardini, Dustin A. (2018). Boys with conduct problems and callous-unemotional traits: Neural response to reward and punishment and associations with treatment response. *Developmental Cognitive Neuroscience, 30*, 51-59. <https://doi.org/10.1016/j.dcn.2017.12.004>
- Cleckley, H. (1941) *The Mask of Sanity* (Mosby, St Louis).
- Davis, M. H. (1980). A multidimensional approach to individual differences in empathy. *JSAS Catalog of Selected Documents in Psychology, 10*, 85.
- De Corte, K., Buysse, A., Verhofstadt, L. L., Roeyers, H., Ponnet, K., & Davis, M. H.

- (2007). Measuring empathic tendencies: Reliability and validity of the Dutch version of the interpersonal reactivity index. *Psychologica Belgica*, 47, 235-260.
- de Tribolet-Hardy, F., Vohs, K., Mokros, A., & Habermeyer, E. (2013). Psychopathy, intelligence, and impulsivity in German violent offenders. *International Journal of Law and Psychiatry*, 37(3), 238-244.
- Dotterer, H. L., Waller, R., Cope, L. M., Hicks, B. M., Zucker, R. A., Nigg, J. T., & Hyde, L. W. (2017). Concurrent and developmental correlates of psychopathic traits using a triarchic psychopathy model approach. *Journal of Abnormal Psychology*, 126(7), 859-876. doi:10.1037/abn0000302
- Drislane, L. E., Brislin, S. J., Kendler, K. S., Andershed, H., Larsson, H., & Patrick, C. J. (2015). A triarchic model analysis of the youth psychopathic traits inventory. *Journal of Personality Disorders*, 29(1), 15-41. doi:10.1521/pedi_2014_28_144
- Essau, C. A., Sasagawa, S., & Frick, P. J. (2006). Callous-unemotional traits in a community sample of adolescents. *Assessment*, 13(4), 454-469.
- Fanti, K. A., Frick, P. J., & Georgiou, S., (2009). Linking callous-unemotional traits to instrumental and non-instrumental forms of aggression. *Journal of Psychopathology and Behavioral Assessment*, 31(4), 285-298.
- Fix, R. L., & Fix, S. T. (2015). Trait psychopathy, emotional intelligence, and criminal thinking: Predicting illegal behavior among college students. *International Journal of Law and Psychiatry*, 42-43 (Special Issue on New Challenges in Psychology and Law), 183-188. doi:10.1016/j.ijlp.2015.08.024
- Frick, P. J., (2009). Extending the construct of psychopathy to youth: implications for

understanding, diagnosing, and treating antisocial children and adolescents.

Canada Journal of Psychiatry, 54(12):803–812.

<https://doi.org/10.1177/070674370905401203>

Frick, P. J., & Ray, J. V. (2015). Evaluating Callous-Unemotional Traits as a Personality Construct. *Journal of Personality*, 83(6), 710-722. doi:10.1111/jopy.12114

Frick, P. J., Ray, J. V., Thornton, L. C., & Kahn, R. E. (2013). Annual research review: A developmental psychopathology approach to understanding callous-unemotional traits in children and adolescents with serious conduct problems. *Journal of Child Psychology and Psychiatry, And Allied Disciplines*, 55(6), 532-548.

doi:10.1111/jcpp.1215

Gardner, H. (1993). *Frames of mind: The theory of multiple intelligences*. New York: Basic.

Hampton, A. S., Drabick, D. G., & Steinberg, L. (2014). Does IQ moderate the relation between psychopathy and juvenile offending?. *Law and Human Behavior*, 38(1), 23-33. doi:10.1037/lhb0000036

Hengartner, M. P., Müller, M., Rodgers, S., Rössler, W., & Ajdacic-Gross, V. (2014). Interpersonal functioning deficits in association with DSM-IV personality disorder dimensions. *Social Psychiatry and Psychiatric Epidemiology (Print)*, (2), 317.

Kernberg, O. (1975). *Borderline Conditions and Pathological Narcissism* (Jason Aronson, New York).

Kraepelin, E. (1915) *Psychiatrie: Ein Lehrbuch* vol. 4 ed. 8 (Leipzig, JA Barth).

Lilienfeld, S. O., Watts, A. L., & Smith, S. F. (2015). *Successful Psychopathy: A*

Scientific Status Report. *Current Directions in Psychological Science*, 24(4), 298-303.

Meloy, J. R. (1988). *The Psychopathic Mind: Origins, Dynamics and Treatment* (Jason Aronson, Northvale, NJ)

Muñoz, L. C., Frick, P. J., Kimonis, E. R., & Aucoin, K. J. (2008). Verbal ability and delinquency: testing the moderating role of psychopathic traits. *Journal of Child Psychology & Psychiatry & Allied Disciplines*, 49(4), 414-421.

Patrick, C. J., Fowles, D. C., & Krueger, R. F. (2009). Triarchic conceptualization of psychopathy: Developmental origins of disinhibition, boldness, and meanness. *Development & Psychopathology*, 21(3), 913-938.
doi:10.1017/S0954579409000492

Ray, J. V., Frick, P. J., Thornton, L. C., Wall Myers, T. D., Steinberg, L., & Cauffman, E. (2017). Callous-unemotional traits predict self-reported offending in adolescent boys: The mediating role of delinquent peers and the moderating role of parenting practices. *Developmental Psychology*, 53(2), 319-328. doi:10.1037/dev0000210

Richardson, D. R., Green, L. R., & Lago, T. (1998). The relationship between perspective-taking and nonaggressive responding in the face of an attack. *Journal of Personality*, (2), 235. doi:10.1111/1467-6494.00011

Richardson, D. R., Hammock, G. S., Smith, S. M., Gardner, W., & Signo, M. (1994). Empathy as a cognitive inhibitor of interpersonal aggression. *Aggressive Behavior (Print)*, (4), 275.

Roose, A., Bijttebier, P., Decoene, S., Claes, L., & Frick, P. J. (2010). Assessing the

affective features of psychopathy in adolescence: A further validation of the inventory of callous and unemotional traits. *Assessment*, 17(1), 44-57.

doi:10.1177/1073191109344153

Salekin, R. T., Chen, D. R., Sellbom, M., Lester, W. S., & MacDougall, E. (2014).

Examining the factor structure and convergent and discriminant validity of the Levenson self-report psychopathy scale: is the two-factor model the best fitting model?. *Personality Disorders*, 5(3), 289-304. doi:10.1037/per0000073

Salekin, R. T., Neumann, C. S., Leistico, A. R., & Zalot, A. A. (2004). Psychopathy in

youth and intelligence: an investigation of Cleckley's hypothesis. *Journal of Clinical Child and Adolescent Psychology: The Official Journal for the Society Of Clinical Child and Adolescent Psychology, American Psychological Association, Division 53*, 33(4), 731-742.

Schneider, K. (1934). *Die Psychopathischen Personalitäten* (dritte Auflage, Franz

Deuticke, Leipzig und Wien).

Schneider, K. (1958). *Psychopathic Personalities* 9th ed. English tr. (Cassell, London).

Sellbom, M., & Phillips, T. R. (2012). An examination of the triarchic conceptualization

of psychopathy in incarcerated and nonincarcerated samples. *Journal of Abnormal Psychology*, (1), 208.

Shibley, W.C., Gruber, C.P., Martin, T.A., & Klein, A.M. (2009). *Shibley-2 manual*. Los

Angeles, CA: Western Psychological Services.

Stanley, J. H., Wygant, D. B., & Sellbom, M. (2013). Elaborating on the construct

validity of the Triarchic Psychopathy Measure in a criminal offender sample. *Journal of Personality Assessment*, 95(4), 343-350.

doi:10.1080/00223891.2012.735302

Steinert, S. W., Lishner, D. A., Vitacco, M. J., & Hong, P. Y. (2017). Conceptualizing successful psychopathy: An elaboration of the moderated-expression

model. *Aggression and Violent Behavior*, 3644-51. doi:10.1016/j.avb.2017.07.005