The Utility of Broad versus Specific Measures of Personality for Assessing Adolescent Antisociality

Kimberly P. Mularczyk[1], Ann H. Farrell[2], Anthony A. Volk[3], & Angela S. Book[4]

[1] *Department of Psychology, Carleton University*
[2] *Counselling Psychology, Faculty of Education, University of Ottawa*
[3] *Department of Child and Youth Studies, Brock University*
[4] *Department of Psychology, Brock University*

Recent strides in research have led to the identification of personality correlates of antisocial behavior in adults (Book et al., 2016; Dinić & Wertag, 2018). Still, there remain significant gaps, particularly regarding adolescent personality, which likely serve as precursors to adult antisociality. One area of debate is the utility of broad measures of personality versus more narrowly focused measures. The former is more generalizable, whereas the latter may offer specific predictions. We examined relationships between a general measure of personality and two specific measures of psychopathic traits along with a range of antisocial outcomes among two community-samples of adolescents. Canonical correlation analyses revealed that broad personality traits (HEXACO) share quite a large degree of overlap with psychopathic traits (ICU, APSD-YV; Study 1 = 60%; Study 2 = 55%). This common variance was associated with adolescent classroom incivility, aggression, and bullying in both samples. However, after accounting for general personality using the HEXACO, specific psychopathy measures predicted additional variance in the antisocial outcomes. Results suggest that the congruence among one's research objectives, the diversity or type of sample, and the measures' capabilities best inform measures selected to assess adolescent antisociality. Findings lend support to the idea that general measures of antisociality can be used to reliably assess a spectrum of antisocial behavior in community samples of adolescents.

Keywords: HEXACO personality, ICU, APSD-YV, psychopathic traits, callousness, adolescence, antisocial, bullying, aggression, incivility

Many clinicians, psychologists, and researchers undertake efforts to assess the characteristics associated with antisocial thoughts and behaviors throughout development. In the past two decades, researchers

---

Author info: Correspondence should be sent to: Kimberly P. Mularczyk, Carleton University, Department of Psychology, Ottawa, Ontario, Canada, 1125 Colonel By Drive, K1S 5B6. Email: kimberly.mularczyk@carleton.ca
North American Journal of Psychology, 2020, Vol. 22, No. 4, 679-700.

have found that broad (e.g., lexical trait inventories) and specific (e.g., psychopathy) measures of personality have strong associations with antisocial thoughts and behaviors in adults (Hare & Babiak, 2006; Jones et al., 2011; Lee & Ashton, 2004). Personality traits tend to be more rigid during adulthood (Ashton & Lee, 2001) and more malleable during adolescence (Hill et al., 2013)—a crucial formative period for personality development. Due to this, researchers continue to question whether broad or specific personality traits relate to propensities for engaging in antisocial behavior in the same way for adolescents as these traits do in adults (Boccaccini et al., 2007; Book et al., 2012; Farrell et al., 2014; Vitacco & Vincent, 2006; Wendt et al., 2017).

To date, much of the research focus regarding the potential links between psychometric differences (or similarities) on broad personality measures versus specific measures of psychopathy has centered on the Five-Factor Model and adult samples (Decuyper et al., 2009; Gaughan et al., 2012; Miller & Lynam, 2003). Our study thus has three main objectives to address these gaps in the literature. First, we examine the use of a newer broad personality measure that better captures antisocial personality traits, the HEXACO, to determine the overlap between broad versus specific antisocial personality measures (Book et al., 2015). Second, we wish to determine the independent predictive utility of these broad traits compared to more specific trait measures. Finally, we use an adolescent sample given the lack of empirical data on the aforementioned two questions in adolescents alongside the importance of adolescence as a stage for the development and "hardening" of personality traits (Klimstra, 2013).

Different Types of Personality Measures Assess Antisociality

Broad and specific personality measures can assess antisocial traits and determine their relation to antisocial outcomes. On the one hand, broad measures like the HEXACO Personality Inventory (HEXACO; Lee & Ashton, 2004), assess a variety of attitudes, cognitions, and judgments that elucidate a complete spectrum of individual differences (Grist & McCord, 2010; Shiner & Caspi, 2012). On the other hand, specific measures, such as those of antisocial personality traits, include measures that assess specific characteristics related to Machiavellianism, narcissism, and psychopathy (the Dark Triad), as well as sadism (the Dark Tetrad; Book et al. 2016). Of these four independent but overlapping clusters of antisocial personality traits, characteristics of psychopathy have the most robust predictive relationship with antisocial outcomes (Harris et al., 2015). Psychopathy refers to traits that assess either interpersonal, affective, lifestyle, or behavioral characteristics that,

when present at higher levels, are highly associated with the tendency to indulge in exploitive and self-serving behavior (Hare, 1993).

In contrast to specific measures, broad personality measures offer a critical practical advantage: they tend to be easier to administer to non-clinical samples, and these assessments are less stigmatizing (Edens & Vincent, 2008). The HEXACO—a newer, six-factor personality model—is amongst the more promising broad personality measures. Typically, broad personality measures also offer enhanced cross-culturally validity due to their highly plausible developmental and evolutionary explanations (Ashton & Lee, 2007); this is indeed the case with the HEXACO. The HEXACO is structurally similar to the well-known Big Five (Five-Factor Model; Goldberg, 1990), but instead, was developed with an evolutionary framework in mind that cross-culturally replicated with samples of adults, and resulted in a distinct additional factor closely linked to antisociality at lower levels of endorsement (Ashton & Lee, 2007).

Each of the six factors on the HEXACO range on a continuum from low to high, and have particular adaptive trade-offs (see Ashton & Lee [2007] for a review). The HEXACO is an especially useful tool for antisociality research. Lower levels of the following four HEXACO factors consistently capture a range of antisocial tendencies in adults (Ashton & Lee, 2007): *Honesty-Humility* (i.e., H; intentional exploitation, manipulation), *Emotionality* (i.e., E; lower sentimentality, anxiety, fear), *Agreeableness* (i.e., A; general anger, intolerance of being exploited), and *Conscientiousness* (i.e., C; impulsivity, disorganization). The remaining two factors, *Extraversion* (X) and *Openness to Experience* (O), are comparable to their counterparts within the Five-Factor Models and they typically do not play a prominent role in predicting antisociality.

Two studies have shown that the degree of shared variance among the HEXACO and specific measures of antisociality among adults is substantial. Book and colleagues (2015) found that the H, E, A, and C factors alone shared a statistically significant amount of variance with all subscales of the Dark Triad (up to 75%) and Book et al. (2016) found the same in later studies using the Dark Tetrad (84%) measure that includes sadism. In other words, commonly used measures that assess psychopathic traits overlapped significantly with the four broad HEXACO traits assessing tendencies such as, for example, poor behavioral regulation, disagreeableness, intentional exploitation, and lower emotional responsivity. Moreover, in a third recent study, lower H had a near-perfect overlap (latent correlation of -.95) with the core of the Dark Triad (Hodson et al., 2018). Yet, whether these same findings would emerge with adolescent samples is unknown due to the potentially

more fluid nature of adolescent personality traits (Klimstra, 2013), including psychopathy (da Silva et al., 2015).

Adolescent Antisociality in Relation to Personality Traits

The HEXACO was initially developed and validated for use with adults. Still, this general personality model has been especially useful in predicting lower to moderate adolescent antisocial outcomes. HEXACO traits related to antisociality (i.e., H, E, A, and C), especially lower Honesty-Humility, are predictive of school-related antisocial behavior (Allgaier et al., 2015), general aggression (MacDonell & Willoughby, 2020), bullying (Book et al., 2012, 2015; Farrell et al., 2014; Farrell & Volk, 2017), proactive relational aggression (Knight et al., 2018) and reactive aggression (versus revenge; Book et al., 2019). In contrast to proactive relational aggression, reactive aggression relates more to lower A (Dinić & Wertag, 2018). On the opposite end, higher ratings on these traits, or in other words, prosocial traits, also relate to civility (Farrell et al., 2016).

For the measurement of psychopathic traits in adolescents, the most commonly used self-report instrument is the *Antisocial Processing Screening Device-Youth Version* (APSD-YV; Frick & Hare, 2001). This measure assesses psychopathic characteristics in clinic-referred youth to, in part, guide treatment intervention strategies for adjudicated adolescents (Kimonis et al., 2008). The APSD-YV demonstrates predictive validity for detecting both high-level antisociality like general and violent offending (Silverthorn et al., 2001), and low-level antisociality, like administrative infractions and general aggression (Gumpel, 2014; Perenc & Radochonski, 2014; Spain et al., 2004). The APSD-YV has also been used to assess psychopathic traits among adolescents of Chinese (Li et al., 2017) or Singaporean (Liang et al., 2020) ethnicity. An alternative to the APSD-YV is the *Inventory of Callous Unemotional Traits* (ICU; Frick, 2004; Kimonis et al., 2008; Roose et al., 2010). The ICU provides a more focused assessment of the affective components of psychopathic traits, namely callousness, a key marker of psychopathic personality disorder in adults (Hare, 1993). Researchers have found associations between the ICU and adverse emotional functioning, aggression, childhood conduct disorder, and offending behavior (Kimonis et al., 2008; Laajasalo et al., 2014; Pechorro et al., 2016). Longitudinal studies show that the combination of adolescent CU traits/antisocial behavior is related to the onset of adult psychopathy (Hawes et al., 2017).

Current Study

In this study, we examined how measures of specific personality traits that assess components of psychopathy (ICU/APSD-YV) overlapped with HEXACO traits within two community samples of adolescents. Following this, we compared the predictive utility of each broad and specific personality instrument for assessing antisocial outcomes in adolescents that ranged from lower to higher intensity (classroom incivility, aggression, bullying). We expected all subscales of the ICU and APSD-YV to overlap negatively with the Honesty-Humility, Emotionality, Agreeableness, and Conscientiousness personality factors, as was found in prior research with adults (Book et al., 2015, 2016). We predicted that this common variance would predict antisocial outcomes. Finally, given that specific psychopathy measures were designed to assess antisocial tendencies, we expected the ICU and APSD-YV would exhibit incremental validity over and above the HEXACO in predicting antisocial outcomes.

METHOD

Study 1

Participants. Adolescents (N = 225, 53.8% boys, M_{age} = 14.05, SD_{age} = 1.50; 49.6% White) were recruited from a variety of extracurricular clubs including, sports teams, tutoring centers, and youth groups. We estimate that about 72% of the sample came from urban parts of Southern Ontario and that 28% of the sample came from rural parts of Southern Ontario. Most of the sample self-identified as White (49.6%). Additional ethnicities included: European (15.3%), Asian (3.6%), African (2.2%), Native Canadian (1.3%), American (1.3%), and South American (0.4%). Some participants did not report any ethnicity (25.8%). Socio-economic statuses (SES) reported include primarily middle class (69.3%; above middle-class = 17.3%; below middle-class = 12.4%). The remaining participants did not report any SES (0.9%).

Study 2

Participants. Adolescents (N = 396; 58.2% girls, M_{age} = 14.64, SD_{age} = 1.52; 73.7% White) were recruited from a variety of extracurricular clubs, including sports teams, church groups, and youth groups. We estimate that about 74% of the sample came from urban parts of Southern Ontario and that 26% of the sample came from rural parts of Southern Ontario. Additionally, in this sample roughly 4% of these samples were recruited from local youth shelters that catered to homeless or legally-challenged youth or youth resource centers. Most of the sample self-identified as White ethnicity (73.7%), with fewer reporting Asian (6.1%), African Canadian (1.0%), Native Canadian (0.5%), and Mixed (4.3%)

ethnicity. Participants also reported "Other" (4.8%) or did not report an ethnicity (9.6%). SES reported include primarily middle-class (65.6%; above middle-class = 22.8%; below middle-class = 12.1%). Some participants did not report any SES (0.5%).

Measures

Psychopathic Traits. In Study 1, participants completed the *Inventory of Callous Unemotional Traits* (ICU; Frick, 2004; Kimonis et al., 2008), which measures callous, unemotional, and uncaring traits through three subscales (rated on a four-point scale [0 = not at all true and 3 = definitely true]).

Table 1. Descriptive Statistics for All Variables

Variable	*M*	*SD*	*α*
HEXACO			
Honesty-Humility	3.22/*3.44*	.58/*.57*	.78/*.67*
Emotionality	3.14/*3.23*	.59/*.60*	.78/*.75*
eXtraversion	3.52/*3.33*	.53/*.63*	.78/*.80*
Agreeableness	3.06/*3.24*	.54/*.53*	.78/*.68*
Conscientiousness	3.21/*3.52*	.56/*.57*	.78/*.75*
Openness	3.06/*3.06*	.59/*.60*	.77/*.71*
ICU/*APSD-YV*			
Callous/*Callous-Unemotional*	5.09/*3.31*	4.25/*1.96*	.75/*.50*
Unemotional/*Narcissism*	7.12/*2.97*	3.18/*2.36*	.73/*.71*
Uncaring/*Impulsivity*	7.05/*3.69*	4.12/*1.89*	.79/*.57*
Antisocial Outcomes			
Classroom Incivility	2.00/*1.77*	.72/*.59*	.88/*.82*
Aggression	1.71/*1.47*	.50/*.59*	.94/*.84*
Bullying	1.29/*1.14*	.45/*.25*	.71/*.77*

Note. Study 1 $N = 222$; Study 2 $N = 396$.
Study 2 subscales and values are italicized. α = Cronbach's alpha.

In Study 2, participants completed the 20-item self-report *Antisocial Process Screening Device-Youth Version* (APSD-YV; Frick & Hare, 2001), which measures callous-unemotional, narcissism, and impulsivity traits through three subscales (rated on a three-point scale [0 = not at all true and 2 = definitely true]). As seen in Table 1, the Cronbach's alpha reliabilities for all ICU subscales were good. Consistent with previous

studies (Frick & Hare, 2001), callous-unemotional and impulsivity subscales had lower reliability.

Broad Personality. In Study 1, participants completed the 100-item version of the *HEXACO Personality Inventory-Revised* (HEXACO PI-R; Lee & Ashton, 2004), and in Study 2, participants completed the 60-item version (rated on a five-point scale [1 = strongly disagree and 5 = strongly agree]; Ashton & Lee, 2009). The Cronbach's alpha reliabilities for all HEXACO subscales were good (see Table 1 for reliabilities) and consistent with psychometric properties, and demonstrated validity, as in previous studies (Book et al., 2012; Lee & Ashton, 2009).

Antisocial Outcomes

Classroom Incivility. In both studies, participants completed the 10-item *Adolescent Attitudes Toward Classroom In/Civility Questionnaire* (rated on a five-point scale [1 = definitely wrong and 5 = definitely okay]; Farrell et al., 2016). The Cronbach's alpha reliabilities for incivility were good and consistent with previous research (e.g., Farrell et al., 2016; Spadafora et al., 2016).

Aggression. In Study 1, participants completed 24 items assessing aggression perpetration (Little et al., 2003) with half of the items assessing reactive aggression and the other half assessing instrumental aggression (rated on a four-point scale [1 = not at all true and 4 = completely true]). In Study 2, participants completed six items assessing aggression perpetration adapted from Dodge and Coie (1987), with half of the items assessing reactive aggression and the other half assessing proactive aggression (rated on a four-point scale [1 = never and 4 = almost always]). The Cronbach's alpha reliabilities for aggression were good in both studies and consistent with previous research (e.g., Book et al., 2012; Little et al., 2003).

Bullying. In both Studies 1 and 2, participants completed five items assessing bullying perpetration in a variety of behaviors, including physical, verbal, and relational bullying (Volk & Lagzdins, 2009). Participants rated items on a five-point scale (1 = that hasn't happened, and 5 = several times a week). The Cronbach's alpha reliabilities for bullying were good in both studies, and consistent with previous research (e.g., Book et al., 2012).

Procedure

In both studies, researchers recruited adolescents at extracurricular club meetings. For both studies, extracurricular adult leaders were contacted through phone or email to get their permission to present the study to their adolescents. If the leaders agreed, a time was arranged for researchers to attend group meetings and verbally brief adolescents about

the study. In Study 1, questionnaires were handed out in hard copy, whereas in Study 2, participants were provided with a website link to access the questionnaires online. In both cases parental consent was required alongside adolescent assent and forms were required to be returned/completed online within a week. Adolescents received $20 (Study 1) and $15 (Study 2) in compensation. A university research ethics board approved both studies. The two studies were independent and part of more extensive studies on adolescent development.

RESULTS

Preliminary Correlations

Tables 2.1. and 2.2. contain the correlations among study variables. The ICU (Study 1) factors were most strongly related to lower H, A, and C HEXACO factors, but not E. For the following study, the APSD-YV (Study 2) factors were most strongly related to lower H, E, A, and C HEXACO factors. Concerning antisocial outcomes, H, A, and C were significantly and negatively related to levels of incivility, aggression, and bullying in both studies. All three factors of the ICU correlated with the antisocial outcomes measured. In both studies, age was negatively related to A, and girls were significantly higher on H, and E. Older adolescents

Table 2.1. Study 1 and Study 2 Pearson Correlations

	1. Age	2. Gender	3. H	4. E	5. X	6. A	7. C	8. O
1.	-	.04	-.08	**.18**	-.13	**-.19**	-.11	.05
2.	*-.05*	-	***.29***	***.47***	-.09	-.08	.08	.11
3.	***-.17***	***.14***	-	***.26***	-.10	***.32***	**.17**	.12
4.	*-.05*	***.32***	***.15***	-	-.09	-.02	.05	***.19***
5.	***-.12***	*-.07*	***.18***	***-.11***	-	***.19***	**.18**	**.16**
6.	***-.17***	*.08*	***.36***	*-.06*	***.33***	-	***.22***	.04
7.	***-.11***	***.21***	***.38***	***.18***	***.25***	***.26***	-	***.24***
8.	***.12***	***.14***	*.10*	***.18***	*.01*	*.06*	***.18***	-
9.	*.06*	***-.21***	***-.34***	***-.22***	***-.28***	***-.23***	***-.41***	***-.12***
10.	***.12***	*-.09*	***-.46***	*-.07*	*-.09*	***-.32***	***-.27***	*-.07*
11.	***.17***	*-.07*	***-.29***	*-.08*	*-.07*	***-.37***	***-.47***	***-.14***
12.	***.28***	*-.07*	***-.43***	***-.20***	*-.09*	***-.23***	***-.36***	*-.06*
13.	*.10*	***-.18***	***-.34***	*-.03*	***-.12***	***-.32***	***-.34***	***-.12***
14.	***.11***	***-.11***	***-.30***	*-.01*	*-.08*	***-.20***	***-.22***	*-.02*

Note. Study 1 $N = 222$; Study 2 $N = 396$. a. Gender was coded with Boy = 1, Girl = 2 in Study 1; Boy = 0, Girl = 1 in Study 2. 1. Age, 2. Gender[a], 3. Honesty-Humility, 4. Emotionality, 5. eXtraversion, 6. Agreeableness, 7. Conscientiousness, 8. Openness, 9. Callous/*Callous-Unemotional*, 10. Unemotional/*Narcissism,* 11. Uncaring/*Impulsivity,* 12. Classroom Incivility, 13. Aggression, 14. Bullying. Significant correlations where $p < .05$ are bolded. Significant correlations where $p < .01$ are bolded and underlined. Study 2 subscales and values are italicized.

had higher E and Uncaring traits in Study 1, as well as higher Narcissism, Impulsivity, and O, as well as lower H, X, C traits in Study 2. Older adolescents reported higher levels of incivility and bullying in both studies, but additionally, had higher levels of aggression in Study 1.

Table 2.2. Study 1 and Study 2 Pearson Correlations

	9. Call */CU*	10. Unemo */Nar*	11. Uncar */Imp*	12. Class Inciv	13. Aggress	14. Bully
1.	.10	-.05	**.18**	**.35**	**.24**	**.28**
2.	**-.23**	**-.21**	**-.18**	**-.19**	**-.15**	**-.25**
3.	**-.40**	**-.19**	**-.35**	**-.45**	**-.53**	**-.37**
4.	**-.23**	**-.53**	**-.26**	**-**.13	-.12	-.09
5.	**-.16**	**-.16**	**-.16**	-.06	-.08	-.11
6.	**-.28**	-.11	**-.39**	**-.18**	**-.40**	**-.27**
7.	**-.34**	-.09	**-.42**	**-.26**	**-.27**	**-.17**
8.	-.13	-.13	**-.25**	-.03	-.13	.03
9.	-	**.27**	**.48**	**.49**	**.51**	**.38**
10.	***.33***	-	**.22**	.11	.07	.04
11.	***.12***	***.39***	-	**.34**	**.36**	**.25**
12.	***.36***	***.34***	***.27***	-	**.50**	**.35**
13.	***.33***	***.45***	***.27***	***.37***	**-**	**.44**
14.	***.27***	***.41***	***.21***	***.26***	***.44***	-

Note. Study 1 $N = 222$; Study 2 $N = 396$. a. Sex was coded with Boy = 1, Girl = 2 in Study 1; Boy = 0, Girl = 1 in Study 2. 1. Age, 2. Gender[a], 3. Honesty-Humility, 4. Emotionality, 5. eXtraversion, 6. Agreeableness, 7. Conscientiousness, 8. Openness, 9. Callous/*Callous-Unemotional*, 10. Unemotional/*Narcissism,* 11. Uncaring/*Impulsivity,* 12. Classroom Incivility, 13. Aggression, 14. Bullying. Significant correlations where $p < .05$ are bolded. Significant correlations where $p < .01$ are bolded and underlined. Study 2 subscales and values are italicized.

Canonical Correlation Analyses

To determine whether there was a statistically significant overlap between the measure of broad personality and specific measures of psychopathic traits in two community samples of adolescents, one canonical correlation analysis (CCA) was conducted for each sample with the HEXACO and the measure of psychopathic traits. Only the first canonical variate functions were interpreted, given that the immediate overlap between the measures was of most interest to the current study. CCA findings show how much residual variance each successive function explains after accounting for the first canonical function (Sherry & Henson, 2005). Canonical loadings of .40 and higher met the criteria for being defined as a meaningful contributor to the canonical model (see Table 3; Sherry & Henson, 2005).

As predicted, in Study 1, the first CCA revealed that the HEXACO accounted for a statistically significant amount of variance in the ICU, $F(18, 503.95) = 10.78$, $p < .001$. A Wilk's λ of 40 indicates that the HEXACO accounted for 60% of the variance in the measure of callous/unemotional traits. Canonical loadings showed that lower ratings of E, H, C, and A, listed in order of contribution, related to higher ratings of uncaring, unemotional, and callous traits. In Study 2, the HEXACO also accounted for a statistically significant amount of variance in the APSD-YV, $F(18, 1013.06) = 18.26$, $p < .001$, accounting for 55% of the variance in psychopathic traits (Wilk's $\lambda = .45$). Canonical loadings showed that lower ratings of C, H, and A were associated with higher ratings of impulsivity, narcissism, and callous-unemotional traits.

Table 3. Summary Information for the Broad Personality and Psychopathy Canonical Models

	Study 1 *Function 1*			Study 2 *Function 1*		
Variable	β	r_s	r_s^2 (%)	β	r_s	r_s^2 (%)
HEXACO & ICU/*APSD-YV*						
Honesty-Humility	-.27	**-.56**	31.36	*-.31*	***-.69***	*47.61*
Emotionality	-.61	**-.68**	46.24	*-.15*	*-.29*	*8.41*
eXtraversion	-.25	-.33	10.81	*.02*	*-.33*	*10.89*
Agreeableness	-.30	**-.49**	24.01	*-.36*	***-.64***	*40.96*
Conscientiousness	-.32	**-.55**	30.25	*-.58*	***-.84***	*70.56*
Openness	-.10	-.34	11.56	*-.08*	*-.26*	*6.76*
Callous/*Callous-Unemotional*	.28	**.68**	46.24	*.55*	***.68***	*46.24*
Unemotional/*Narcissism*	.51	**.69**	47.61	*.22*	***.63***	*39.69*
Uncaring/*Impulsive*	.58	**.80**	64.00	*.63*	***.77***	*59.29*

Note. β = standardized canonical function coefficient; r_s = structure coefficient; r_s^2 = squared structure coefficient. Structure coefficients (r_s) greater than |.40| are bolded. Study 2 subscales and values are italicized.

Unexpectedly, Emotionality did not contribute to the canonical variate. The standardized canonical coefficients represent the *core* overlapping variance between the specific and general measures of personality (within each study). As expected, in Study 1, this core was positively correlated with incivility, $r(203) = .43$, $p < .001$, as well as with aggression, $r(204) = .38$, $p < .001$, and bullying, $r(202) = .33$, $p < .001$. In Study 2, the core had significant positive and moderate to large correlations with classroom incivility, $r(355) = .49$, $p < .001$, aggression, $r(351) = .46$, $p < .001$, and bullying, $r(347) = .32$, $p < .001$.

Hierarchical Multiple Regressions

In both studies, three hierarchical multiple regressions were conducted (utilizing classroom incivility, aggression, and bullying as the three antisocial outcomes) to examine the predictive utility of these broad and specific measures of personality. All models and hierarchical model changes accounted for a statistically significant amount of variance in the antisocial outcomes, and findings remained relatively consistent across studies (see Tables 4 and 5).

Table 4. Study 1 Hierarchical Multiple Regressions of the ICU and HEXACO on Antisocial Outcomes

	Classroom Incivility			Aggression			Bullying		
Predictor	*B*	*SE*	*β*	*B*	*SE*	*β*	*B*	*SE*	*β*
Step 1									
Age	**.18**	.03	.38	**.08**	.02	.25	**.08**	.02	.31
Gender	**-.30**	.10	-.21	-.12	.07	-.12	**-.22**	.06	-.26
R^2	**.18**			**.07**			**.15**		
F	**19.55**			**7.03**			**16.09**		
Step 2									
Age	**.15**	.03	.33	**.08**	.02	.15	**.06**	.02	.23
Gender	-.08	.10	-.05	-.12	.07	.01	**-.19**	.06	-.22
H	**-.46**	.09	-.37	**-.41**	.06	-.47	**-.15**	.05	-.21
E	-.10	.09	-.08	.01	.06	.01	-.02	.05	-.03
X	-.04	.08	-.03	-.06	.06	-.06	**-.11**	.05	-.14
A	.03	.10	.02	-.12	.07	-.12	**-.14**	.06	-.17
C	**-.24**	.09	-.18	**-.14**	.06	-.15	-.03	.05	-.03
O	.03	.09	.03	-.03	.05	-.04	.05	.05	.07
ΔR^2	**.17**			**.31**			**.13**		
F	**11.79**			**13.69**			**8.44**		
Step 3									
Age	**.15**	.03	.33	**.05**	.02	.15	**.06**	.02	.24
Gender	-.03	.10	-.02	.04	.07	.04	**-.17**	.06	-.20
H	**-.34**	.09	-.27	**-.34**	.06	-.39	**-.12**	.05	-.17
E	-.10	.10	-.08	-.03	.07	-.04	-.08	.06	-.11
X	.01	.09	.00	-.05	.06	-.05	**-.12**	.05	-.15
A	.06	.10	.04	-.10	.07	-.10	**-.15**	.06	-.19
C	**-**.12	.09	-.09	-.07	.06	-.08	-.00	.06	-.00
O	.03	.08	.02	-.04	.05	-.04	.04	.05	.06
Callous	**.06**	.01	.35	**.04**	.01	.29	**.02**	.01	.20
Unemo-tional	-.02	.02	-.07	**-.02**	.01	-.14	**-.02**	.01	-.16
Uncar-ing	.00	.01	.00	.00	.01	.00	-.01	.01	-.07
ΔR^2	**.09**			**.07**			**.02**		
F	**12.10**			**13.02**			**7.29**		
R^2	**.41**			**.45**			**.31**		

Note. H = Honesty-Humility, E = Emotionality, X = eXtraversion, A = Agreeableness, C = Conscientiousness, O = Openness. Significant correlations where $p < .05$ are bolded. Significant correlations where $p < .01$ are bolded and underlined.

Table 5. Study 2 Hierarchical Multiple Regressions of the APSD-YV and HEXACO on Antisocial Outcomes

	Classroom Incivility			Aggression			Bullying		
Predictor	*B*	*SE*	*β*	*B*	*SE*	*β*	*B*	*SE*	*β*
Step 1									
Age	**.11**	.02	.29	**.04**	.02	.11	.02	.01	.10
Gender	-.07	.06	-.06	**-.21**	.06	-.18	-.05	.03	-.09
R^2	**.09**			**.05**			**.02**		
F	**18.26**			**8.75**			**3.13**		
Step 2									
Age	**.08**	.02	.21	.01	.02	.04	.01	.01	.03
Gender	.08	.06	.07	**-.12**	.06	-.11	-.02	.03	-.05
H	**-.30**	.05	-.29	**-.16**	.06	-.16	**-.10**	.03	-.21
E	**-.12**	.05	-.12	.06	.05	.06	.02	.02	.04
X	.06	.05	.06	.02	.05	.02	.00	.02	.00
A	-.06	.06	-.05	**-.22**	.06	-.20	-.04	.03	-.07
C	**-.22**	.05	-.21	**-.21**	.06	-.21	**-.05**	.03	-.11
O	-.01	.05	-.01	-.05	.05	.05	.01	.02	.02
ΔR^2	**.20**			**.17**			**.09**		
F	**17.99**			**12.11**			**5.23**		
Step 3									
Age	**.08**	.02	.21	.01	.02	.03	.00	.01	.02
Gender	.10	.06	.08	-.11	.06	-.09	-.02	.03	-.03
H	**-.24**	.06	-.23	-.05	.06	-.05	-.03	.03	-.08
E	-.09	.05	-.09	.08	.05	.09	.03	.02	.07
X	.08	.05	.09	.03	.05	.04	.01	.02	.02
A	-.03	.06	-.02	**-.17**	.06	-.15	-.01	.03	-.01
C	**-.16**	.06	-.15	**-.16**	.06	-.16	-.02	.03	-.05
O	.00	.05	.00	-.05	.05	-.05	.01	.02	.02
CU	**.05**	.02	.18	**.03**	.02	.11	**.02**	.01	.15
Nar	.02	.01	.07	**.07**	.01	.27	**.03**	.01	.30
Impuls	.01	.02	.04	-.01	.02	-.02	.00	.01	.02
ΔR^2	**.03**			**.07**			**.10**		
F	**15.03**			**12.67**			**8.15**		
R^2	**.30**			**.29**			**.20**		

Note. H = Honesty-Humility, E = Emotionality, X = eXtraversion, A = Agreeableness, C = Conscientiousness, O = Openness, CU = Callous, Unemotional, Nar = Narcissism, Impuls = Impulsive. Significant correlations where $p < .05$ are bolded. Significant correlations where $p < .01$ are bolded and underlined.

The HEXACO accounted for a statistically significant amount of variance in each of the antisocial outcomes. First, regression results showed that being a boy and being older typically related to a higher endorsement of the antisocial outcomes. Lower H and C, as well as higher callous and callous-unemotional traits, predicted higher endorsement of each of the antisocial outcomes, including classroom incivility, aggression, and bullying. Study 1 showed that lower X and A predicted higher bullying. Study 2 showed that lower E predicted higher classroom incivility, and lower A predicted higher aggression.

Additionally, higher narcissism and lower unemotional traits were related to both aggression and bullying. Overall, the HEXACO accounted for more unique variance than the ICU and APSD-YV in the specific measures of personality by accounting for more variance in the antisocial outcomes, except for bullying in Study 2. Despite being included in the third step, after socio-demographic characteristics and broad traits were accounted for, the psychopathy measures accounted for a significant amount of variance in antisocial outcomes.

DISCUSSION

As expected, our data show a large overlap between broad personality (as measured by the HEXACO) and specific measures of psychopathic traits (ICU and APSD-YV), with HEXACO traits of Honesty-Humility, Emotionality, Agreeableness, and Conscientiousness generally overlapping with psychopathy measures. These results are consistent with previous research in adults (Book et al., 2015, 2016), indicating that specific and broad adolescent personality measures also overlap significantly in adolescents. This study also contributed novel research on the relationships between antisocial personality traits and outcomes in a community based, rather than clinical or adjudicated samples, of adolescents.

Of the four HEXACO traits expected to relate to psychopathy, Emotionality was the only factor that overlapped with the ICU but *not* the APSD-YV. Individuals with a psychopathic personality disorder often have little remorse for victims and show lower levels of anxiety and fear, which are characteristics of the HEXACO's Emotionality (Fanti et al., 2009; Hare, 1993; Kotler & McMahon, 2005). Emotionality only had a significant negative relationship with the callous-unemotional subscale of the APSD-YV (that may further validate the Emotional ICU link), and therefore did not contribute to the shared multivariate relationship among the full two sets of measures. These data may also partly relate to the lower reliability of the APSD-YV CU subscale. The remaining three hypothesized HEXACO factors (H, A, and C) were negatively related to all psychopathy scales, contributing this shared overlap among the broad and specific measures.

The links between uncaring and impulsive traits in the psychopathy measures, and Conscientiousness in the broad personality measure, are consistent with previous research that supports the position that antisocial adolescents who are more likely to engage in higher-risk antisocial behavior tend to have a more irresponsible lifestyle (Hare, 1993; Kerig & Stellwagen, 2010; Waller et al., 2017). Honesty-Humility, which also measures arrogance, exploitation, and greed, as mentioned, had a near-perfect overlap with the core of the Dark Triad in an adult sample

(Hodson et al., 2018). Therefore, the consistent link between Honesty-Humility with both specific measures' subscales in adolescents is in accord with research conducted with adults (Gaughan et al., 2012). Researchers describe lower Agreeableness as being another essential trait for characterizing individuals with antisocial or psychopathic traits (Book et al., 2015; Lilienfeld et al., 2015), as these individuals are often more angry, argumentative, impatient, and vindictive. Overall, these findings suggest that the predictive validity among traits within either broad or specific measures of personality in adolescents tends to revolve around impulsive, predatory, and retaliatory personality traits. We, therefore, turn next to the relationships between such traits and three escalating levels of antisocial outcomes examined.

In both studies, the core overlap of the specific and broad measures had moderate to large correlations with the antisocial outcomes. The HEXACO accounted for more variance in its inclusion than the specific measures in all but one category (APSD-YV and bullying). Although this is likely due in part to its order in the regression, it does illustrate the significant ability of a general personality scale to capture significant variance across a range of antisocial behavior. HEXACO traits appeared to account for more variance in the lower-intensity antisocial outcomes, which likely is impacted by the broad nature of the factors. Specifically, the crucial factors for predicting antisocial behavior were primarily lower levels of Honesty-Humility (in combination with the ICU) and Conscientiousness (in combination with the APSD-YV).

Our findings are consistent with previous evidence that the Honesty-Humility factor is the most prominent predictor of multiple forms of adolescent antisocial behavior (Allgaier et al., 2015; Book et al., 2012; Farrell et al., 2014; Knight et al., 2018). Similarly, in two recent studies, Conscientiousness was also a prominent predictor of bullying (Farrell & Volk, 2017; Volk et al., 2018). Agreeableness predicted bullying in Study 1 and general aggression in Study 2, suggesting that A relates to antisociality, but less so than H and C. In contrast to our expectations, we did not find any significant associations between Emotionality and the antisocial outcomes once the psychopathy measures were introduced. This finding is in accordance with adult research that casts doubt on the importance of empathy in predicting antisocial outcomes (Bloom, 2017; Vachon et al., 2014). It may also be that the callous aspect of the specific psychopathy measures negated the variance that might otherwise be accounted for by the broader factor of Emotionality.

Our specific measure factors generally had lower standardized beta weights than the HEXACO factors, but they still exhibited incremental validity. As implied above, this was particularly noticeable for the most intense of the three antisocial outcomes, bullying, suggesting that

specific measures of antisocial personality like psychopathy may be more useful in capturing higher intensity antisocial outcomes. This fits with the conception of psychopathy as a measure of more serious antisocial tendencies (Hare, 1993; Lilienfeld et al., 2015). As has been observed in previous studies (Frick & Hare, 2001), the callous-unemotional factor in the APSD-YV was the strongest predictor of antisociality. The unemotional (Study 1) and narcissism (Study 2) factors additionally predicted aggression and bullying outcomes, offering support for their role as unique predictors of antisocial outcomes (Frick, 2004; Kimonis et al., 2008; Roose et al., 2010).

Implications

The large degree of shared variance between the measures we used indicates that both broad and specific measures can be complementary for the study of adolescent antisociality in community samples of adolescents. The combination reflects the core features of antisociality (disagreeable, exploitative, impulsive, and unemotional). Furthermore, the same traits from each measure consistently predicted antisocial outcomes ranging from lower to higher intensity, further supporting the predictive utility of both measures.

On the one hand, the HEXACO is a parsimonious personality model that captures a full spectrum of individual human differences (Ashton & Lee, 2007). The HEXACO adequately captures the core of antisociality, while simultaneously capturing a broader profile of an individual (i.e., Extraversion, Openness). The HEXACO has also demonstrated cross-cultural validity and reliability in subscales across diverse languages and samples (Ashton & Lee, 2007), making this measure more accessible and generalizable across populations. The two psychopathy measures, however, exhibited incremental validity as they predicted unique variance after controlling for the HEXACO. This broad range may help reduce the stigma of labeling an individual as "antisocial" or "psychopathic," and in turn, reduce socially desirable biases. The HEXACO is less stigmatizing and may be both better received as a general screening measure (e.g., potentially used by schools to get to know students without legal consequences), as well as less open to obvious social desirability.

Broad measures like the HEXACO may be more easily administrated in schools by teachers or coaches on sports teams, for example, which may help to prevent the escalation of antisociality with earlier detection. The HEXACO cannot be used to diagnose antisocial behavior or psychopathic traits, but it might prove useful in targeting certain issues for treatment without the stigmatization effect of constructs like psychopathy. Furthermore, the HEXACO may help clinicians

differentiate between the motives of different forms of negative behavior. Rather than being a somewhat monolithic construct like psychopathy, clinicians can focus on addressing issues with anger, callousness, impulsivity, and/or selfishness separately based on a client's risk needs or deficits. This can be done using interventions that promote prosocial behavior and personality traits by working with, rather than against, individual differences in personality (e.g., Ellis et al., 2016; Yeager et al., 2013).

On the other hand, more specialized forensic scales can be used when there is a stronger need for protecting others or predicting recidivism, given their ability to better predict highly antisocial behavior. Specific measures like the ICU and APSD-YV seem to be better equipped by design to detect higher-risk antisocial behavior even in community samples, which tend to have low levels of antisocial behavior. Importantly, however, specific measures that only target higher-risk behavior may exclude adolescents who are just beginning to show signs of antisociality early in development. Missing these potential early warning signs of antisocial development in an adolescent may accelerate from relatively minor adolescent antisocial tendencies into more serious adulthood antisocial propensities (Arbuckle & Cunningham, 2012; Gumpel, 2014). This task may be made all the more challenging by the relative mobility of personality traits during adolescence (Klimstra, 2013).

In sum, given the costs and benefits of broad versus specific antisocial personality measures, the choice of which to use should be based on one's research objectives, sample demographics and the potential for biased answering or diagnoses. These meta-level questions should be addressed prior to starting the research, and the logic underlying them should be communicated in the study's research design. Broader measures may reflect a greater capacity for theoretical unification with other domains of knowledge, whereas specific measures may offer a slightly greater degree of predictive power in accounting for antisocial behaviors. The former therefore lend themselves more to theoretical goals while the latter lend themselves more to applied goals. In cases where researchers hope to achieve both theoretical depth and predictive power for examining deviant behavior, we ultimately recommend the use of a combination of broad and specific measures of personality.

Limitations

Measures of antisociality or psychopathic traits can feel stigmatizing to some; therefore, the use of self-report measures can evoke potent socially desirable responses. Self-reports can also increase the possibility

of shared method variance. Researchers may apply a multi-informant approach by including parent, teacher, or observer reports. By ensuring confidentiality, we attempted to minimize biases in social desirability. Also, we found that some of the psychopathy subscales had lower reliability (see Table 1). Researchers have found that the internal consistency of the callous-unemotional and impulsivity subscales in the APSD-YV, in particular, have been generally low (Li et al., 2017; Poythress et al., 2006). There does remain a need to further validate the concepts and antisocial outcomes of classroom incivility, aggression, and bullying with a greater range of measures. The fact that these APSD-YV subscales were still able to contribute unique variance to antisocial outcomes suggests some confidence in the construct validity of these scales. Finally, the participants in both studies were predominately Caucasian, middle class, and a cross-sectional community sample. Thus, we are unable to ascertain the long-term predictive utility of these measures across adolescence and into adulthood and are unable to determine whether results could be generalized to adjudicated or justice-involved youth. Future research may adopt a longitudinal design and test whether similar findings present in more heterogeneous samples of adolescents.

REFERENCES

Allgaier, K., Zettler, I., Wagner, W., Püttmann, S., & Trautwein, U. (2015). Honesty–humility in school: Exploring main and interaction effects on secondary school students' antisocial and prosocial behavior. *Learning and Individual Differences*, *43*, 211–217. https://doi.org/10.1016/j.lindif.2015.08.005

Arbuckle, N. L., & Cunningham, W. A. (2012). Understanding everyday psychopathy: Shared group identity leads to increased concern for others among undergraduates higher in psychopathy. *Social Cognition*, *30*(5), 564–583. https://doi.org/10.1521/soco.2012.30.5.564

Ashton, M. C., & Lee, K. (2001). A theoretical basis for the major dimensions of personality. *European Journal of Personality*, *15*(5), 327–353. https://doi.org/10.1002/per.417

Ashton, M. C., & Lee, K. (2007). Empirical, theoretical, and practical advantages of the HEXACO model of personality structure. *Personality and Social Psychology Review*, *11*(2), 150–166. https://doi.org/10.1177/1088868306294907

Ashton, M. C., & Lee, K. (2009). The HEXACO–60: A short measure of the major dimensions of personality. *Journal of Personality Assessment*, *91*(4), 340–345. https://doi.org/10.1080/00223890902935878

Bloom, P. (2017). *Against empathy: The case for rational compassion*. Random House.

Boccaccini, M. T., Epstein, M., Poythress, N., Douglas, K. S., Campbell, J., Gardner, G., & Falkenbach, D. (2007). Self-report measures of child and adolescent psychopathy as predictors of offending in four samples of justice-

involved youth. *Assessment*, *14*(4), 361–374. https://doi.org/10.1177/1073191107303569

Book, A. S., Volk, A. A., & Hosker, A. (2012). Adolescent bullying and personality: An adaptive approach. *Personality and Individual Differences*, *52*(2), 218–223. https://doi.org/10.1016/j.paid.2011.10.028

Book, A., Visser, B. A., Blais, J., Hosker-Field, A., Methot-Jones, T., Gauthier, N. Y., Volk, A., Holden, R. R., & D'Agata, M. T. (2016). Unpacking more "evil": What is at the core of the Dark Tetrad? *Personality and Individual Differences*, *90*, 269–272. https://doi.org/10.1016/j.paid.2015.11.009

Book, A., Visser, B. A., & Volk, A. A. (2015). Unpacking "evil": Claiming the core of the Dark Triad. *Personality and Individual Differences*, *73*, 29–38. https://doi.org/10.1016/j.paid.2014.09.016

Book, A., Visser, B. A., Volk, A., Holden, R. R., & D'Agata, M. T. (2019). Ice and fire: Two paths to provoked aggression. *Personality and Individual Differences*, *138*, 247–251. https://doi.org/10.1016/j.paid.2018.10.010

da Silva, D., Rijo, D., & Salekin, R. (2015). The evolutionary roots of psychopathy. *Aggression and Violent Behavior*, *21*, 85–96. https://doi.org/10.1016/j.avb.2015.01.006

Decuyper, M., De Clercq, B., De Bolle, M., & De Fruyt, F. (2009). Validation of FFM PD counts for screening personality pathology and psychopathy in adolescence. *Journal of Personality Disorders*, *23*(6), 587–605. https://doi.org/10.1521/pedi.2009.23.6.587

Dinić, B. M., & Wertag, A. (2018). Effects of Dark Triad and HEXACO traits on reactive/proactive aggression: Exploring the gender differences. *Personality and Individual Differences*, *123*, 44–49. https://doi.org/10.1016/j.paid.2017.11.003

Dodge, K. A., & Coie, J. D. (1987). Social-information-processing factors in reactive and proactive aggression in children's peer groups. *Journal of Personality and Social Psychology*, *53*(6), 1146–1158.

Edens, J. F., & Vincent, G. M. (2008). Juvenile psychopathy: A clinical construct in need of restraint? *Journal of Forensic Psychology Practice*, *8*(2), 186–197. https://doi.org/10.1080/15228930801964042

Ellis, B. J., Volk, A. A., Gonzalez, J. M., & Embry, D. D. (2016). The meaningful roles intervention: An evolutionary approach to reducing bullying and increasing prosocial behavior. *Journal of Research on Adolescence*, *26*(4), 622-637.

Fanti, K. A., Frick, P. J., & Georgiou, S. (2009). Linking callous-unemotional traits to instrumental and non-instrumental forms of aggression. *Journal of Psychopathology & Behavioral Assessment*, 285–298.

Farrell, A. H., Della Cioppa, V., Volk, A. A., & Book, A. S. (2014). Predicting bullying heterogeneity with the HEXACO Model of personality. *International Journal of Advances in Psychology*, *3*(2), 30-39. https://doi.org/10.14355/ijap.2014.0302.02

Farrell, A. H., Provenzano, D. A., Spadafora, N., Marini, Z. A., & Volk, A. A. (2016). Measuring adolescent attitudes toward classroom incivility: Exploring differences between intentional and unintentional incivility. *Journal of Psychoeducational Assessment*, *34*(6), 577–588. https://doi.org/10.1177/0734282915623446

Farrell, A. H., & Volk, A. A. (2017). Social ecology and adolescent bullying: Filtering risky environments through antisocial personality. *Children and Youth Services Review*, *83*, 85–100. https://doi.org/10.1016/j.childyouth.2017.10.033

Frick, P. (2004). *The Inventory of Callous-Unemotional Traits*. Unpublished rating scale.

Frick, P., & Hare, R. (2001). *Antisocial Process Screening Device*. Multi-Health Systems.

Gaughan, E. T., Miller, J. D., & Lynam, D. R. (2012). Examining the utility of general models of personality in the study of psychopathy: A comparison of the HEXACO-PI-R and NEO PI-R. *Journal of Personality Disorders*, *26*(4), 513–523.

Goldberg, L. R. (1990). An alternative "description of personality": The Big-Five Factor structure. *Journal of Personality and Social Psychology*, *59*(6), 1216-1229.

Grist, C. L., & McCord, D. M. (2010). Individual differences in preschool children: Temperament or personality? *Infant and Child Development*, *19*(3), 264–274. https://doi.org/10.1002/icd.663

Gumpel, T. P. (2014). Linking psychopathy and school aggression in a nonclinical sample of adolescents. *Journal of School Violence*, *13*(4), 377–395. https://doi.org/10.1080/15388220.2014.889605

Hare, R., & Babiak, P. (2006). *Snakes in suits: When psychopaths go to work*. Harper Collins.

Hare, R. D. (1993). *Without conscience: The disturbing world of the psychopaths among us*. Pocket Books.

Harris, G., Rice, M., Quinsey, V., & Cormier, C. (2015). *Violent offenders: Appraising and managing risk* (3rd ed.). American Psychological Association.

Hawes, S. W., Byrd, A. L., Waller, R., Lynam, D. R., & Pardini, D. A. (2017). Late childhood interpersonal callousness and conduct problem trajectories interact to predict adult psychopathy. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, *58*(1), 55–63. https://doi.org/10.1111/jcpp.12598

Hill, P. L., Allemand, M., Grob, S. Z., Peng, A., Morgenthaler, C., & Käppler, C. (2013). Longitudinal relations between personality traits and aspects of identity formation during adolescence. *Journal of Adolescence*, *36*(2), 413–421. https://doi.org/10.1016/j.adolescence.2013.01.003

Hodson, G., Book, A., Visser, B. A., Volk, A. A., Ashton, M. C., & Lee, K. (2018). Is the Dark Triad common factor distinct from low Honesty-Humility? *Journal of Research in Personality*, *73*, 123–129. https://doi.org/10.1016/j.jrp.2017.11.012

Jones, S. E., Miller, J. D., & Lynam, D. R. (2011). Personality, antisocial behavior, and aggression: A meta-analytic review. *Journal of Criminal Justice*, *39*, 329–337. https://doi.org/10.1016/j.jcrimjus.2011.03.004

Kerig, P. K., & Stellwagen, K. K. (2010). Roles of callous-unemotional traits, narcissism, and Machiavellianism in childhood aggression. *Journal of Psychopathology and Behavioral Assessment*, *32*(3), 343–352. https://doi.org/10.1007/s10862-009-9168-7

Kimonis, E. R., Frick, P. J., Skeem, J. L., Marsee, M. A., Cruise, K., Munoz, L. C., Aucoin, K. J., & Morris, A. S. (2008). Assessing callous–unemotional traits in adolescent offenders: Validation of the Inventory of Callous–Unemotional Traits. *International Journal of Law and Psychiatry*, *31*(3), 241–252. https://doi.org/10.1016/j.ijlp.2008.04.002

Klimstra, T. (2013). Adolescent personality development and identity formation. *Child Development Perspectives*, *7*(2), 80–84. https://doi.org/10.1111/cdep.12017

Knight, N. M., Dahlen, E. R., Bullock-Yowell, E., & Madson, M. B. (2018). The HEXACO model of personality and Dark Triad in relational aggression. *Personality and Individual Differences*, *122*, 109–114. https://doi.org/10.1016/j.paid.2017.10.016

Kotler, J. S., & McMahon, R. J. (2005). Child Psychopathy: Theories, Measurement, and Relations with the Development and Persistence of Conduct Problems. *Clinical Child and Family Psychology Review*, *8*(4), 291–325. https://doi.org/10.1007/s10567-005-8810-5

Laajasalo, T., Saukkonen, S., Kivivuori, J., Salmi, V., Lipsanen, J., & Aronen, E. T. (2014). Self-reported psychopathic-like features among Finnish community youth: Investigation of the factor structure of the antisocial personality screening device. *Journal of Adolescence*, *37*(7), 1185–1188. https://doi.org/10.1016/j.adolescence.2014.08.010

Lee, K., & Ashton, M. C. (2004). Psychometric Properties of the HEXACO Personality Inventory. *Multivariate Behavioral Research*, *39*(2), 329–358. https://doi.org/10.1207/s15327906mbr3902_8

Li, X., Chan, W. T., Ang, R. P., & Huan, V. S. (2017). Assessment of psychopathic traits in Singaporean adolescents: Validation of the Antisocial Process Screening Device (APSD). *Journal of Psychopathology and Behavioral Assessment*, *39*(2), 198–208. https://doi.org/10.1007/s10862-016-9579-1

Liang, J., Wang, M.-C., Luo, J., Liang, J., Zhang, X., & Gao, Y. (2020). Elaborating on the construct validity of the antisocial process screening device in Chinese children and adolescents: Across-informants and across-samples. *Current Psychology*, 1–13. https://doi.org/10.1007/s12144-020-00777-2

Lilienfeld, S. O., Watts, A. L., Smith, S. F., Berg, J. M., Latzman, R. D., & Francis Smith, S. (2015). Psychopathy deconstructed and reconstructed: Identifying and assembling the personality building blocks of Cleckley's chimera. *Journal of Personality*, *83*(6), 593–610. https://doi.org/10.1111/jopy.12118

Little, T. D., Henrich, C. C., Jones, S. M., & Hawley, P. H. (2003). Disentangling the "whys" from the "whats" of aggressive behavior. *International Journal of Behavioral Development*, *27*(2), 122–133. https://doi.org/10.1080/01650250244000128

MacDonell, E. T., & Willoughby, T. (2020). Investigating honesty-humility and impulsivity as predictors of aggression in children and youth. *Aggressive Behavior*, *46*(1), 97–106. https://doi.org/10.1002/ab.21874

Miller, J. D., & Lynam, D. R. (2003). Psychopathy and the Five-Factor Model of personality: A replication and extension. *Journal of Personality Assessment*, *81*(2), 168–178. https://doi.org/10.1207/S15327752JPA8102_08

Pechorro, P., Hidalgo, V., Nunes, C., & Jiménez, L. (2016). Confirmatory factor analysis of the Antisocial Process Screening Device: Self-report among incarcerated male juvenile offenders. *International Journal of Offender Therapy and Comparative Criminology*, *60*(16), 1856–1872. https://doi.org/10.1177/0306624X15588903

Perenc, L., & Radochonski, M. (2014). Psychopathic traits and reactive-proactive aggression in a large community sample of polish adolescents. *Child Psychiatry & Human Development*, *45*(4), 464–471. https://doi.org/10.1007/s10578-013-0432-4

Poythress, N. G., Dembo, R., Wareham, J., & Greenbaum, P. E. (2006). Construct validity of the Youth Psychopathic Traits Inventory (YPI) and the Antisocial Process Screening Device (APSD) with justice-involved adolescents. *Criminal Justice and Behavior*, *33*(1), 26–55. https://doi.org/10.1177/0093854805282518

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. https://doi.org/10.1177/1073191109344153

Sherry, A., & Henson, R. K. (2005). Conducting and interpreting canonical correlation analysis in personality research: A user-friendly primer. *Journal of Personality Assessment*, *84*(1), 37–48. https://doi.org/10.1207/s15327752jpa8401_09

Shiner, R., & Caspi, A. (2012). A temperament and the development of personality traits, adaptations, and narratives. In *Handbook of Temperament* (pp. 497–516). The Guilford Press.

Silverthorn, P., Frick, P. J., & Reynolds, R. (2001). Timing of onset and correlates of severe conduct problems in adjudicated girls and boys. *Journal of Psychopathology and Behavioral Assessment*, *23*(3), 171–181. https://doi.org/10.1023/A:1010917304587

Spain, S. E., Douglas, K. S., Poythress, N. G., & Epstein, M. (2004). The relationship between psychopathic features, violence and treatment outcome: The comparison of three youth measures of psychopathic features. *Behavioral Sciences & the Law*, *22*(1), 85–102. https://doi.org/10.1002/bsl.576

Vachon, D. D., Lynam, D. R., & Johnson, J. A. (2014). The (non)relation between empathy and aggression: Surprising results from a meta-analysis. *Psychological Bulletin*, *140*(3), 751–773. http://dx.doi.org.proxy.library.carleton.ca/10.1037/a0035236

Vitacco, M. J., & Vincent, G. M. (2006). Understanding the downward extension of psychopathy to youth: Implications for risk assessment and juvenile justice. *International Journal of Forensic Mental Health*, *5*(1), 29–38. https://doi.org/10.1080/14999013.2006.10471228

Volk, A. A., & Lagzdins, L. (2009). Bullying and victimization among adolescent girl athletes. *Athletic Insight*, *11*(1), 12–25.

Volk, A. A., Schiralli, K., Xia, X., Zhao, J., & Dane, A. V. (2018). Adolescent bullying and personality: A cross-cultural approach. *Personality and Individual Differences*, *125*, 126–132.

Waller, R., Hyde, L. W., Baskin-Sommers, A., & Olson, S. L. (2017). Interactions between callous unemotional behaviors and executive function in early childhood predict later socioemotional functioning. *Journal of Abnormal Child Psychology*, *45*(3), 597–609. https://doi.org/10.1007/s10802-016-0184-2

Wendt, G. W., Bartoli, A. J., Arteche, A., Wendt, G. W., Bartoli, A. J., & Arteche, A. (2017). Dimensions of youth psychopathy differentially predict concurrent pro- and antisocial behavior. *Brazilian Journal of Psychiatry*, *39*(3), 267–270. https://doi.org/10.1590/1516-4446-2016-2143

Yeager, D. S., Trzesniewski, K. H., & Dweck, C. S. (2013). An implicit theories of personality intervention reduces adolescent aggression in response to victimization and exclusion. *Child Development*, *84*(3), 970-988.