THE UTILITY OF CALLOUS-UNEMOTINAL TRAITS IN THE PREDITION OF DEVIATION BEHAVIORS

By Kari P. Kovacs

Callous-unemotional (CU) traits are key features of psychopathy, certain personality disorders, and antisocial behaviors. However, little research has focused on whether CU traits predict less severe forms of antisocial behavior, or deviation behaviors. In addition, few attempts have taken a comprehensive approach to measuring deviant behavior that captures the scope of less severe behaviors present within the normal population. The goal of this research was to investigate the relationship between behavioral deviations and CU traits to determine if CU traits predicted higher rates of everyday occurring deviations. In addition, this research adopted a statistical approach to measuring behavioral deviation based on items from several pre-existing measures of deviance falling within the deviation category proposed by Hagen's (1984) model. This study was administered through Amazon Mechanical Turk® via Qualtrics survey software, and recruited 535 adult participants. All survey materials were counterbalanced. Scores were created by using z-scores for each item to calculate a mean overall behavioral deviation score while mean perceived harm was used to further categorize behaviors. Hierarchical multiple regression included Self-Report Psychopathy Inventory (SRP-III) subscales interpersonal manipulation (IM), callous affect (CA), erratic lifestyles (EL), and criminal tendencies CT) as independent variables; CA was the main subscale used to measure CU traits. Overall behavioral deviation and five levels of behavioral deviation varying as a function of perceived harm were included as dependent variables. Results from hierarchical multiple regressions revealed that CA was not a significant predictor of behavioral deviations. In two models IM was significant, but the effects were small. EL and CT were the most important predictors across all models. These results suggest that CU traits do not predict overall behavioral deviation once measures of impulsivity and other antisocial tendencies are held constant.

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by

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Introduction

Callous-unemotional (CU) traits play an important role in both clinical and theoretical research. CU traits refer to maladaptive characteristics involving egocentrism, callous use of others, poor empathy and emotionality, lack of responsibility for one's actions, and lack of remorse (van Leeuwen, Rogers, Gibbs, & Chabrol, 2014), and have been included in higher-order personality constructs such as psychopathy (Barry et al., 2000). The importance of these traits in severe behavioral problems such as conduct disorder has even led researchers to investigate CU traits as a construct unto itself and not merely as a subtype of other personality constructs or disorders (Herpers, Rommelse, Bons, Buitelaar, & Scheepers, 2012).

Most notable is the association between CU traits and psychopathy. Considered a multifaceted construct consisting of several elements, psychopathy describes individuals characterized by deficits marked deficiencies in interpersonal, affective, lifestyle, and antisocial dimensions (Neumann, Hare, & Newman, 2007). The affective dimension in particular considers callous individuals who lack empathy and guilt or remorse, while interpersonal refers to tendencies which include grandiosity, pathological lying and manipulation of others. The lifestyle and antisocial dimensions, on the other hand, refer to thrill seeking, impulsivity, and the tendency to engage in criminal behaviors. In some conceptualizations of psychopathy affective and interpersonal dimensions are considered core traits, whereas lifestyle and antisocial dimensions constitute secondary traits (Newman, MacCoon, Vaughn, & Sadeh, 2005).

Although it has been suggested that presence of overt antisocial behaviors, such as early behavioral problems, should be discarded from psychopathy models in favor of traits considered more intrinsic to the construct (e.g. irresponsibility, pathological lying, etc.; Skeem & Cooke, 2010), antisocial tendencies have been found to overlap significantly with the other dimensions (Hare & Neumann, 2010). Antisocial tendencies and behaviors seem to share a notable connection with CU traits, and together they are able to more adequately predict externalizing behaviors, such as future violence (Vitacco, Neumann, & Jackson, 2005). Moreover, CU traits are considered to be the central link between the development of psychopathy in adulthood and the presence of antisocial behaviors (Van Leeuwen et al., 2014). Thus, considering antisocial behaviors in relation to CU traits is of particular importance.

Prior research has demonstrated that CU traits share a strong relationship with antisocial behavior (Pardini, 2006; Rhee et al., 2013; Christen, Frick, Hill, Tyler, & Frazer, 1997), and has furthermore established CU traits as stable characteristics resulting in several different maladaptive trajectories (Frick & Dantagnan, 2005; Frick, Stickle, Dandreaux, Farrel, & Kimonis, 2005; Hodgins, 2007; Frick & White, 2008; Fontaine, McCrory, Boivin, Moffitt, & Viding, 2011). Children with CU traits and conduct problems (e.g., arguing with adults, bullying, stealing, etc.) have shown more severe patterns of conduct problems compared to those without CU traits (Christian et al., 1997) and are more likely to have a greater number and variety of conduct problems as well as higher rates of self-reported delinquency (Frick et al., 2003).

In addition, Frick and colleagues (2003) found that children with conduct problems but without CU traits did not show higher rates of delinquency compared to those higher in CU traits. However, researchers also found that children high on CU traits showed greater rates of self-reported delinquency regardless of whether conduct problems were present or not. Therefore, it may be possible that CU traits play a role in the ability to predict less severe forms of antisocial behavior in addition to more severe forms.

Antisocial Behavior and Deviant Behavior

The relationship between CU traits and onset of antisocial behaviors has been well established through past research, particularly in violent offenders (Pardini, 2006; Rhee et al., 2013), but little is known about whether these traits contain the same predictive utility for less severe forms of behavior, or for deviant behavior. For the purposes of this paper, antisocial behaviors and deviant behaviors are considered to be related parts of the same construct. Antisocial behaviors, like deviant behaviors, deviate from standard rules of conduct (Erickson, 1962), but are additionally intended to harm or disadvantage another person, or lack consideration for the well-being of others (Van Leeuwen et al., 2014). On the other hand, antisocial behaviors are conceptualized largely as harmful behaviors while deviant behavior is not always harmful. In this regard, antisocial behaviors can be thought of as a specific type of deviant behavior rather than constituting deviance as a whole.

Because deviant behavior is more widespread throughout the population it is not an easy construct to measure. Deviant behavior is relative in nature in that it is a) subjectively determined by the social group, and b) behaviors which constitute deviance are subject to change over time (Erickson, 1962). Furthermore, deviant behaviors constitute a multitude of possible behaviors, all of which are subject to change over time. To address these issues the varieties of deviance proposed by John Hagan's (1984) analysis of crime and deviance in Canada served as the main guiding model for defining features of different types of deviant behaviors.

According to this model, crime and deviance can be measured along three dimensions: agreement about the norm, severity of social response, and perceived social harm (Hagan, 1994). Using these dimensions, deviance and crime can be gathered into four main categories ranging along a continuum. Consensus and conflict crimes exist at one end of the continuum where there is generally higher agreement over the seriousness of the act, relatively high amounts of perceived harm, and severe societal responses. As one moves down the spectrum, behaviors are considered less criminally deviant and more socially deviant: there is less agreement over the severity of these behaviors, perceived harm decreases, and social reactions become less severe in most cases.

Deviations, which will entail the focus of this research, are more ambiguous than consensus or conflict crimes in regard to which acts are considered deviant, but contain some element of harm whereas social diversions do not (Hagan, 1994). In addition to the three dimensions already discussed, frequency with which an act or acts occur is also taken into account when separating different types of deviance. Typically, the most

severe acts occur infrequently. According to Hagen's model, frequency of certain acts occurring increases as one moves down the continuum toward diversions, which are relatively harmless and thought to occur with some regularity across the neurotypical population.

Current Study

This research included a range of behaviors falling mainly within the parameters of deviation behaviors as defined by Hagen's (1984) model in order to determine whether CU traits are able to predict engagement in less severe forms of behavior. For the purposes of this paper, deviations will be labelled and referred to as *behavioral deviations.* It has not been well established as to whether CU traits can predict less severe behaviors, such as behavioral deviations. As noted earlier, Frick and colleagues (2003) found that children with high CU traits tended to report more delinquent behavior regardless of whether conduct problems were present, suggesting that CU traits would also be important predictors for engaging in behavioral deviations. However, Dadds, Fraser, Frost, and Hawes (2005) found that while severe behaviors loaded heavily on the antisocial subscale of the Antisocial Process Screening Device the same was not true of less severe behaviors normal for the age group. In the context of less severe behaviors CU traits may not be as important, but because a great deal of past research has demonstrated an important link between CU traits and antisocial behaviors it could be expected that they would also be predictive of engaging in behavioral deviations.

Although CU traits will be the main focus of this research, other psychopathic traits will be taken into account as well. Much of the research on CU traits and antisocial behavior in children has used measures specific only to CU traits without taking into account other psychopathic traits. It is possible, however, that it is other psychopathic traits that account for engagement in antisocial behavior as opposed to CU traits, resulting in an indirect association between CU traits and antisocial behavior produced by the interrelatedness of psychopathic traits in general. A similar issue may exist if the event an association between CU traits and behavioral deviations is found. Still, there is evidence that in large samples of institutionalized and psychiatric patients that a higher-order factor accounted for more variance in the affective dimension of psychopathy than either the lifestyle or antisocial dimensions (Neumann et al., 2007). Regardless, it is worth considering the role played by other psychopathic traits in accounting for the association between CU traits and behavioral deviations given the likely conceptual overlap between antisocial behavior and behavior deviations.

It is important to note that some overlap with diversions and conflict crime is expected as this conceptualization is of a continuous nature and suggests no precise distinction between the categories. Rather, the borders that define them may display mixed features of the categories in closest proximity to one another. Furthermore, even though deviant behaviors typically carry a negative connotation it does not imply that all forms of deviant behavior are in fact negative. Some forms of deviant behavior are perpetrated for the betterment of some groups or society as a whole. However, the focus of this research is on less severe behaviors with negative implications, defined as

behavioral deviations. These behaviors are perceived as somewhat harmful, occur with greater frequency across the population, and would be met with less severe social reactions (e.g., subject to institutional sanctions and minor criminal sanctions) than antisocial or criminal behaviors.

Methods

Participants

This study recruited 535 adult participants through Amazon Mechanical Turk®. Ages of participants ranged from 18 to 78 (*M*= 37.68), and the majority of the participants were male (60.2%). The majority of the participants also reported being white (76.6%) with an average annual income of approximately $42,000 (*M*= $42,588.34). Settings were enabled in the Amazon Mechanical Turk® platform so that only respondents from the United States would be able to participate. Permission to participate was obtained prior to administration of study materials through an online signature of informed consent (see Appendix A). Participants were compensated $1.00 for participating in the study.

Materials

The main instrument used to evaluate and measure deviations was a survey of items designed to capture this construct. This instrument includes a range of different behaviors which fall within the category of behavioral deviations (see Appendix A). Items for the survey were developed based on behavioral items from five different

preexisting scales (see Appendix D): the Normative Deviance Scale (Vazsonyi, Pickering, Junger, & Hessing, 2001), the Workplace Deviance Scale (Bennett & Robinson, 2000), the 22-Item Normative Deviance Scale (Cho, 2014), the Sexual Deception Scale (Marelich, Lundquist, Painter, and Mechanic, 2008), and the Definitions of Infidelity Questionnaire (Thompson & O'Sullivan, 2015). Measures containing items were selected based on a literature review of available instruments used to study deviant behavior. Some measures included behaviors that were more severe (e.g., assault with a deadly weapon, rape, etc.) than what the definition of behavioral deviations entail and would involve severe criminal penalties. These were excluded from the pool of items included on the survey. Items were also checked for redundancy, and redundant items were combined into one item or one item was maintained and the other excluded. Ten items developed for the purposes of this project were added to assess behaviors which could not be found on any preexisting inventories and scales, but which nonetheless may capture behaviors falling within the category of deviations.

Participants were instructed to indicate how many times they have ever engaged in each behavior throughout the course of their life on a scale ranging from 0/Never to 100+. Participants were also asked to indicate how harmful they thought each particular behavior was on a 4-point scale ranging from 1 (not at all harmful) to 4 (very harmful). The purpose of gauging the perceived harm of each item was to a) examine the relationship it shares with behavioral deviation, and b) if there is a significant relationship, investigate if CU traits also predicted items by function of perceived harm.

The Self-Report Psychopathy inventory (SRP-III; Paulhus, Neumann, & Hare, 2015) was also used to assess personality traits pertinent to the construct of psychopathy, and more specifically CU traits. The current form, the SRP-III, is a 64 item self-report inventory designed to measure psychopathic traits within community samples based on the four-factor structure of the Psychopathy Checklist (PCL-R; Hare et al., 1990). The SRP-III has shown to have sound psychometric properties, and is considered an adequate instrument for use in non-clinical samples (Gordts, Uzieblo, Neumann, Van den Bussche, & Rossi, 2015). Moreover, the SRP-II is one of the most common instruments used to measure psychopathy, and because it includes other psychopathic factors which covary with CU traits it was considered an adequate instrument for this research. The four factors include Interpersonal Manipulation (IM; manipulation and pathological lying), Callous Affect (CA; low empathy and lack of concern for others), Erratic Lifestyles (EL; recklessness and impulsivity), and Criminal Tendencies (CT; antisociality and criminal behaviors). Of particular importance to this research is the CA factor which refers to affective characteristics, including lack of remorse or guilt, shallow affect, callous lack of empathy, and failure to accept responsibility. This was the main variable used to measure CU traits. Other survey measures were administered along with the deviation survey and the SRP-III, but for the purposes of this research were excluded from analysis.

Procedure

The study was administered online through Amazon Mechanical Turk® via an anonymous link to Qualtrics internet survey software. Once posted on the platform, the

link was only visible to MTurk workers who were aged 18 or older and were United States citizens. Informed consent was obtained at the beginning of the study, and participants were asked to provide demographic information (see Appendix B) after other materials to avoid potential biases and priming effects. This study was part of a larger study that included several other measures, but for the purposes of this research only the behavioral deviation survey and the SRP-III were used for analyses. All measures were randomized to ensure items from separate scales and questionnaires did not exert undue influence on each other. Participants were given three hours to complete the online materials, and after finishing the study were debriefed through an online form (see Appendix C).

Results

Data Screening

The data were screened for pattern responding by examining the frequency of missed attention filters throughout the sample. Those who missed more than two out of ten attention filters, or approximately 3% of the sample (15 participants), were excluded from further analyses, resulting in a sample size of 520. Several multivariate outliers were detected as well, but because results did not substantially differ when compared to retaining the full sample these cases were retained in all further analyses. Item descriptive statistics indicated that several items displayed a positive skew. Internal consistency for the pool of behavioral deviation items was examined using Cronbach's alpha, and showed an adequate internal consistency of .95. Each item was standardized using z-scores, which addressed the problematic skew of several items. Items were then combined into a mean composite score to obtain an overall behavioral deviation variable. Higher scores on the composite indicated higher engagement in the behaviors compared to the typical respondent. Item descriptive statistics are reported in Table 1 and variable descriptive statistics are reported in Table 2 (see Appendix E for all tables and figures).

Predictors of Overall Behavioral Deviations

To determine whether CU traits predict engagement in overall deviation behavior, a three stage hierarchical multiple regression was conducted with overall behavioral deviation as the dependent variable and the four SRP-III subscales (CA, IM, EL, CT) as

the predictors of theoretical interest. Biological sex was used as a control variable on Block 1 based on previous findings that reveal sex differences in the degree of reported psychopathic traits (Cale & Lilienfeld, 2002) and the tendency for sex differences to inflate the apparent association between psychopathy and other psychological variables (Lishner, Swim, Hong, & Vitacco, 2011; Lishner, Vitacco, Jiang, Hong, & Neumann, 2015). The CA subscale was included in Block 2 along with the IM and EL subscales. The three SRP-III subscale scores are included together to help control for common source method variance that may be shared between CA scores and behavioral deviation scores that is also present in the other subscale scores, as well as to evaluate the independent contribution of CA to the prediction of behavioral deviation. The CT subscale was included on Block 3 as this subscale contains items relating specifically to antisocial behaviors that would be considered behavioral deviations and was expected to be highly redundant with the dependent variable. Correlations between all predictor variables and dependent variables used in the following regression analyses are reported in Table 3. Bivariate correlations revealed that CA, as well as the other three psychopathic traits, were positively associated with overall behavioral deviation.

The first hierarchical multiple regression revealed that sex contributed significantly to the regression model in Block 1, F (1, 518) = 12.01, $p < .002$, and accounted for 2.3% of the variation in overall behavioral deviation. Introducing the CA, IM and EL subscale variables in Block 2 explained an additional 18.8% of variation in overall behavioral deviation, and this change in R^2 was significant, F (3, 515) = 40.88, $p < .001$. Adding the CT subscale variable to the model to Block 3 explained an additional

10.8% of the variation in overall behavioral deviation and the change in R^2 was significant, F (1, 514) = 81.94, $p <$ .001. When including CT in the model all other predictors became non-significant, except for EL. Together the five independent variables accounted for 31.9% of the variance in overall behavioral deviation (see Table 4 Appendix E).

Predictors of Behavioral Deviation as a Function of Perceived Harm

Also examined was whether CU traits predicted behavioral deviation as a function of perceived harm. The mean perceived harm of behavioral items ranged from 1.70 to 3.62 (M = 2.60), indicating items were perceived to fall within a range of harm considered be in the lower bounds of somewhat harmful to the upper bounds of harmful. Items were sorted from lowest to highest mean perceived harm and divided into five even groups (10 items per group). These were labeled low harm, moderate-low harm, moderate harm, moderate-high harm, and high harm. A mean composite score was created for each perceived harm group using raw mean frequency scores in order to examine whether the model fit appropriate theoretical parameters. By examining the mean frequencies across the groups it was revealed that as the average perceived harm of a group increased the average frequency of behavior tended to decrease, with one exception (moderate-low harm; see Table 5 Appendix E). However, based on the overall frequency trend of the four other groups of deviation behaviors, the model seemed appropriate for designating behavioral deviations based on Hagen's (1984) notion. Similar to what was done for the overall behavioral deviation composite measure, five

behavior deviation composite measures were computed using the items in each of the five perceived-harm groups. Specifically, within each perceived harm group, standardized scores for each of the 10 items were computed and then averaged. These perceived harm composite variables were then as dependent variables in five additional regression analyses using the same predictors included in the previous regression analysis. Descriptive statistics these perceived harm composites are reported in Table 2 (see Appendix E).

A hierarchical multiple regression was conducted for each of the five perceived harm composite measures. All independent variables and placement of variables in model blocks remained the same for these analyses as it was for the regression predicting overall behavioral deviation. For low harm behavioral deviation, the regression revealed that sex contributed significantly to the regression model in Block 1, F (1, 518) = 15.31, $p < .001$. Introducing the CA, IM and EL subscales in Block 2 explained an additional 26.5% of variation in low harm behavioral deviation and this change in R^2 was significant, F (3, 515) = 58.12, $p < .001$. Adding the CT subscale to the model in Block 3 explained an additional 9.8% of the variation in low harm behavioral deviation and this change in R^2 was significant, F (1, 514) = 80.14, $p < .001$. When including CT in the model the other psychopathic traits were not significant predictors, except for EL. Together the five independent variables accounted for 34.3% of the variance in low harm behavioral deviation (see Table 6 Appendix E).

For low-moderate harm behavioral deviation, the regression revealed that sex contributed significantly to the regression model in Block 1, F (1, 518) = 7.27, $p < .01$.

Introducing the CA, IM and EL subscale variables in Block 2 explained an additional 15.6% of variation in low-moderate harm behavioral deviation and this change in R^2 was significant, F (3, 515) = 32.36, $p <$ .001. Adding the CT subscale variable to the model in Block 3 explained an additional 11.5% of the variation in low-moderate harm behavioral deviation and this change in R^2 was significant, F (1, 514) = 82.51, $p <$ .001. When including CT in the model the other psychopathic traits were not significant predictors. Together the five independent variables accounted for 28.5% of the variance in low-moderate harm behavioral deviation (see Table 7 Appendix E).

For moderate harm behavioral deviation, the regression revealed that sex contributed significantly to the regression model in Block 1, F (1, 518) = 7.72, $p <$ .01. Introducing the CA, IM and EL subscales in Block 2 explained an additional 15.6% of variation in moderate harm behavioral deviation and this change in R^2 was significant, F (3, 515) = 32.44, $p <$ .001. Adding the CT subscale variable to the model explained an additional 6.0% of the variation in moderate harm behavioral deviation and this change in R^2 was significant, F (1, 514) = 39.69, $p <$ .001. When including CT in the model the other psychopathic traits were not significant predictors, except IM. Together the five independent variables accounted for 23.1% of the variance in moderate harm behavioral deviation (see Table 8 Appendix E).

For moderate-high harm behavioral deviation the regression revealed that sex contributed significantly to the regression model in Block 1, F (1, 518) = 10.84, $p <$ .01. Introducing the CA, IM and EL subscales in Block 2 explained an additional 13.2% of variation in behavioral deviation and this change in R^2 was significant, F (3, 515) =

26.59, $p < .001$. Adding the CT subscale variable to the model in Block 3 explained an additional 10.6% of the variation in moderate-high harm behavioral deviation and this change in R^2 was significant, F (1, 514) = 73.41, $p < .001$. When including CT in the model the other psychopathic traits were not significant predictors. Together the five independent variables accounted for 25.8% of the variance in moderate-high harm behavioral deviation (see Table 9 Appendix E).

For high harm behavioral deviation, the regression revealed that sex contributed significantly to the regression model in Block 1, F (1) = 14.48, $p < .001$. Introducing the CA, IM and EL subscales in Block 2 explained an additional 14.5% of variation in high harm behavioral deviation and this change in R^2 was significant, F (3) = 30.01, $p < .001$. Adding the CT subscale to the model in Block 3 explained an additional 11.2% of the variation in high harm behavioral deviation and this change in R^2 was significant, F (1) = 80.39, $p < .001$. When including CT in the model the other psychopathic traits were not significant predictors, except EL. Together the five independent variables accounted for 28.4% of the variance in high harm behavioral deviation (see Table 10 Appendix E).

Discussion

The goal of the current study was to investigate whether CU traits retained their predictive validity for engagement in less severe forms of deviant behavior, namely behavioral deviations. In order to accomplish this, a survey of items was developed based on behavioral items used in past research to study various types of deviant behavior. Using the CA subscale of the SRP-III as a measure of CU traits, the findings suggest that CU traits do not predict engagement in behavioral deviations when controlling for other psychopathic traits. Contrary to the results of bivariate correlations, which showed CA shared a moderate positive relationship with overall behavioral deviation, CA was not found to be a meaningful predictor of either overall behavioral deviation or behavioral deviation as a function of perceived harm compared to other psychopathic traits, specifically EL and CT. Although CA is related to behavioral deviation, it appears to do so through its relation to other psychopathic traits, which in turn are more uniquely predictive of behavioral deviation.

EL and CT contributed to the majority of the variance in explaining both overall behavioral deviation and behavioral deviation varying by perceived harm. When behavioral deviation items were grouped based on perceived harm IM was the only affective-interpersonal psychopathic trait found to be a significant predictor. However, it should be noted that the effect of IM was small and only retained significance in Block 3 when predicting moderate harm behavioral deviation, so the link between IM and behavioral deviation should be interpreted cautiously. It was shown in several analyses

that EL traits accounted for a substantial proportion of the variance in the model. These traits tend to describe individuals who are impulsive and irresponsible. It may be the case with regards to behavioral deviations that personality traits related to impulsivity become more important in predicting engagement in behavior.

The differences between psychopathic traits in their relation to engagement in behavioral deviations may also reflect differences between primary and secondary psychopathy (Newman et al., 2005). Primary psychopathy represents a prototypical portrait of psychopathy entailing mainly affective-interpersonal deficits and is reflected in the CA and IM subscales in the SRP-III. Secondary psychopathy typically describes individuals who are impulsive, irresponsible, and have a tendency to engage in law breaking activities, and is therefore reflected in the EL and CT subscales of the SRP-III. The findings of this study may distinguish between these two types of psychopathy, and suggest that perhaps secondary psychopathy tends to drive more deviant engagement in negative behaviors in general, whereas features of primary psychopathy may only matter in specific types of behavioral deviations. This notion is supported by evidence suggesting that while both primary and secondary psychopathic individuals tended to engage more in risky and criminal behaviors, secondary psychopathic individuals displayed more instances of being arrested and being in trouble with the law (Lee & Salekin, 2010).

Together these results suggest that CA does not retain predictive validity for engagement in negative behavior deviations more generally. CU traits with features specific to IM may play a role in engagement of behaviors perceived as moderately

harmful, but these effects were small and superseded by those of EL and CT traits, suggesting that traits involving impulsivity, irresponsibility, and the tendency to engage in law breaking behaviors are critical variables accounting for engagement in behavioral deviations. There are, however, other variables and factors that may be at play and limit the conclusions drawn. Although this research measured behavioral deviations and the perceived harm associated with them, it did not measure intent or motivation. Differences in motivation and intent may account for more in whether CU traits predict behavior than just in the frequency of engagement itself and whether that behavior was perceived to be harmful.

Another limitation of the research is the bias that may be present within the measures. This research was conducted in conjunction with a larger project and used several measures in one survey. It is possible that other measures may have affected item response on the behavioral deviation survey. However, measures were randomized to ensure these effects did not occur, and it is important to note that effects were found in the analyses despite the number of measures administered to participants. Furthermore, the pool of items generated for this study may not include several other behaviors which may be relevant as behavioral deviations, such as behaviors involving technological innovations. This research did not intend to develop a scale measuring behavioral deviations, but is proposing a method to measure it without assuming a relative stability in the measure. The decreased frequency in engagement in behavioral deviations as perceived harm increased suggests that Hagen's (1984) model may provide an appropriate method for distinguishing between different types of behaviors. However,

this trend was not consistent as low-moderate harm behavioral deviations displayed lower frequencies then would be expected for the level of perceived harm. The model seems appropriate overall given that four out of five displayed frequencies are consistent with Hagen's model, but future research may want to further address whether these inconsistencies replicate.

Finally, this study only speaks to deviation among behaviors generally considered by society at large to be mildly to moderately negative. It does not address deviation among behaviors generally considered by society at large to be positive. As noted earlier, there are some forms of behaviors that are perpetuated for the betterment of individuals and human society in general. It may be an area of interest for future research to investigate CU trait differences in those who engage in positive versus negative forms of deviance. In addition, it may be advantageous to further distinguish between those engage in deviant behaviors less than the normative distribution as well as those who engage more.

This study was correlational and so no strong conclusions can be drawn regarding the causal link between CU traits and behavioral deviation. Moreover, these findings invite a host of different questions. What other characteristics are inherently different between behavioral deviations and antisocial behaviors that may implicate the importance of other personality variables over CU traits? Do intent and motivation interact with personality traits to be able to more accurately predict engagement in behavioral deviations and antisocial behaviors in general? The findings from this study do not support CU traits' role in predicting less severe forms of behavior overall. This evidence

in addition to future information may be useful for practitioners and clinicians in order to better understand the characteristics of those who engage in antisocial behaviors versus less severe forms. For instance, based on this research, it may be more advantageous to develop treatment protocols that address impulsivity, such as teaching skills that promote self-regulation, as opposed to protocols that address only the affective features of psychopathy. It also adds evidence to the body of literature on psychopathy, offering a view which doesn't just focus on antisocial behaviors but those which are seen more frequently in the general population.

APPENDIX A:
Informed Consent

Value Endorsement and Behavior Study: Informed Consent
University of Wisconsin Oshkosh

The Department of Psychology supports the practice of protecting human participants in research. The following information is provided so that you can decide whether you wish to participate in the present study. Your participation is solicited but is strictly voluntary. We assure you that your name and responses will remain confidential.

If you decide to participate in this study, you will be asked to complete questionnaires that assess your beliefs, attitudes, behavior, and the types of values you endorse.

Participation in this study will last approximately 1 hour. Some questions contain content that may create strong emotion for some readers. Although participation in this study will not directly benefit you, we believe that the information you provide will be useful in furthering our understanding of how people behave and the kinds of values they endorse.

If you agree to participate, you will be free to withdraw at any time. If you decide not to participate in this study, please exit out of the study. If you do decide to withdraw from the study, any information collected from you up to that point will then be destroyed.

Please be aware that any work performed on Amazon Mturk® can potentially be linked to information about you on your Amazon public profile page, depending on the settings you have for your Amazon profile. We will not be accessing any personally identifying information about you that you may have put on your Amazon public profile page. We will store your Mturk® worker ID separately from the other information you provide to us. If you do choose to provide your e-mail address for a summary of the results, it will not be connected with your survey responses in any way.

Once data have been collected from you via Mturk®, the researchers will take the following step to ensure anonymity: The researchers will assign you a participant ID number. All further handling and analysis of the data will only involve this ID number. This will ensure that the data cannot be linked to you. We will not release information about you in any way or form that could identify you.

If you have any questions, please ask us or contact:

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920-915-2014

If you have any complaints about your treatment as a participant in this study, please call or write:

Chair, Institutional Review Board for
Protection of Human Participants
c/o Grants Office
UW Oshkosh
920-424-1415

Although the chairperson may ask for your name, all complaints are kept in confidence.

Consent Statement: By clicking "Submit," I am confirming that I am at least 18 years old and have received an explanation of the study. I agree to participate. I understand that my participation in this study is strictly voluntary, and that I may withdraw at any time.

APPENDIX B:
Materials

Behavioral Deviation Survey

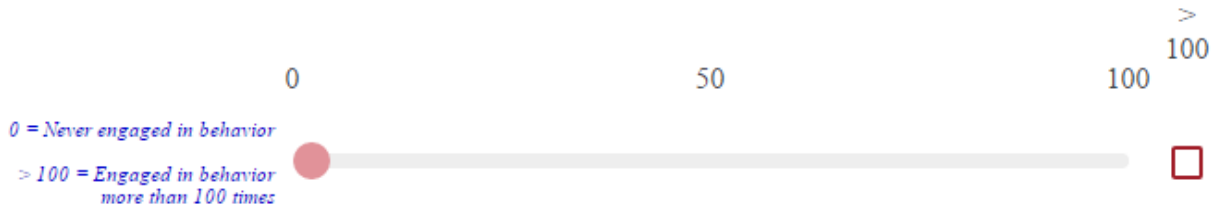
Instructions: This section contains a range of different behaviors. You will be asked to indicate how many times you have ever engaged in each behavior throughout your lifetime. For example, if a question asks, “How many times have you ever gone bowling?” you would move the slider to indicate the number of times you have engaged in this behavior (if ever) based on your best estimate on a scale ranging from 0 through 100.

If you think you have engaged in a behavior more than 100 times, you would check the >100 box.

You will also be asked to indicate how harmful in general you think each behavior is to others on a scale ranging from "Not at all harmful" to "Very harmful". We consider harm to include mental and emotional distress, not just physical harm.

There are no right or wrong answers. Any information you provide will be kept highly confidential.

(All items were given the following response scale asking to estimate the number of times an individual has engaged in each type of behavior:)



(All items will be additionally ask how harmful each behavior is considered to be to others in the following response format:)

How harmful to others do you think this behavior is?

- Not at all harmful
- Somewhat harmful
- Harmful
- Very harmful

Behavioral Items on Deviation Survey

How many times have you ever written graffiti on public property (e.g. bus seats, restroom walls, buildings, ect.)?

How many times have you ever in any way damaged public property (e.g., bus seats, movie theater seats, street signs, ect.)?

How many times have you ever lied about your age or used a fake I.D. to buy alcohol before you turned 21?

How many times have you ever consumed alcohol to a point where you don't remember part or most of the night?

How many times have you ever used "soft" drugs (e.g. marijuana, shrooms, ect.)?

How many times have you ever used "hard" drugs (e.g., crack, cocaine, heroin, ect.)?

How many times have you ever driven a car recklessly (e.g., excessive speeding, driving after drinking, cutting in and out of traffic, having too many passengers in the car, failing to yield to other vehicles, ect.)?

How many times have you ever texted or surfed the internet on your cell phone while driving?

How many times have you ever cheated on school/college/university tests (e.g., cheat sheet, copy from neighbor, etc.)?

How many times have you ever been sent out of a classroom because of "bad" behavior (e.g. inappropriate behaviors, cheating etc.)?

How many times have you ever been suspended or expelled from school/college/university?

How many times have you ever knowingly plagiarized on an essay or work document?

How many times have you ever gone to school and/or work when you were drunk or high on drugs?

While underage, how many times have you ever stayed away from school/classes when your parent(s) thought you were there?

While underage, how many times have your parents received a phone call because you got in trouble at school?

How many times have you ever skipped school and/or work pretending you are ill?

How many times have you ever stolen or tried to steal a motor vehicle (e.g., car, motorcycle, ect.)?

How many times have you ever failed to return extra change that you knew a cashier gave you by mistake?

How many times have you ever tried to deceive a cashier to your advantage (e.g. flash a larger bill and give a smaller one)?

How many times have you ever knowingly or intentionally written a bad check?

How many times have you let the air out of the tires of a car or bike?

How many times have you ever made nuisance/obscene telephone calls?

How many times have you ever hit or threatened to hit a person?

How many times have you ever used fake money or other things in a candy, soda, or cigarette machine?

While underage, how many times have you ever stayed out all night without informing your parents about your whereabouts?

How many times have you ever carried any object you could use as a weapon with the intention of using it in a fight (e.g., knife, razor, switchblade, club, bat, gun, ect.)?

How many times have you ever made fun of someone?

How many times have you made an ethnic, religious, or racial remark at work and/or school?

How many times have you ever cursed at or said something hurtful to someone in a way that was not meant to be a joke?

How many times have you ever played a mean prank on someone?

How many times have you ever publicly embarrassed someone?

How many times have you ever intentionally injured an animal, not including hunting or fishing?

How many times have you ever intentionally not paid for something, such as food in a restaurant or an admission fee for entertainment?

How many times have you ever borrowed money from someone when you knew you would never repay them?

How many times have you ever read through someone else's emails, instant messages, or cell texts without their permission?

How many times have you ever used the identity of another person or made-up identity in emails, blogs, chat rooms, or elsewhere on the internet?

How many times have you ever intentionally copied and sent to others copyright protected materials (e.g., computer software programs (not shareware), movies, video games, ect.)?

How many times have you ever used cheat codes to or third party programs that give you an advantage over other players?

How many times have you ever downloaded music that you did not pay for?

How many times have you ever stopped taking or never started taking medications prescribed for a major psychiatric disorder, such as bipolar disorder and/or schizophrenia, just because you didn't want to take them?

How many times have you ever told someone ‘‘I love you’’ but really didn’t just to have sex with them?

How many times have you ever had sex with someone just so you could tell your friends about it?

How many times have you ever had sex with someone, then never returned their calls after that?

How many times have you ever faked ‘‘who you are’’ in order to have sex with somebody?

How many times have you ever gotten a partner really drunk or stoned in order to have sex with them?

How many times have you ever had sex with someone in order to get and/or maintain resources from them (e.g. money, clothes, companionship)?

How many times have you ever had unprotected sex (e.g., did not use a condom, diaphragm, or other device meant for protection against the transfer of STI’s)?

How many times have you ever intentionally not told someone you had an STI during a sexual encounter? (*Note: if you have never had an STI or did not know you may have had one please mark “0/Never”*)

How many times have you ever had sex with someone the same day you met them at a party, bar, or other social event?

While in a committed relationship, how many times have you ever engaged in sexual behaviors with someone other than your partner (e.g., sexual intercourse, oral sex, masturbation, ect.)?

While in a committed relationship, how many times have you ever intensely or romantically kissed someone other than your partner?

While in a committed relationship, how many times have you ever sent sexually explicit messages by text or e-mail to someone other than your partner?

While in a committed relationship, how many times have you ever created a profile on and/or browsed a dating website?

While in a committed relationship, how many times have you ever sent affectionate/flirtatious texts or e-mails to someone other than your partner?

SRP-III

Directions: Please rate the degree to which you agree with the following statements about you using the scale below. You can be honest because your name will not be associated with your answers.

1	**2**	**3**	**4**	**5**
Disagree Strongly	Disagree	Neutral	Agree	Agree Strongly

_____ 1. I'm a rebellious person. (EL)

_____ 2. I'm more tough-minded than other people. (CA)

_____ 3. I think I could "beat" a lie detector. (IM)

_____ 4. I have taken illegal drugs (e.g., marijuana, ecstasy). (EL)

_____ 5. I have never been involved in delinquent gang activity. (CT)

_____ 6. I have never stolen a truck, car or motorcycle. (CT)

_____ 7. Most people are wimps. (CA)

_____ 8. I purposely flatter people to get them on my side. (IM)

_____ 9. I've often done something dangerous just for the thrill of it. (EL)

_____ 10. I have tricked someone into giving me money. (CT)

_____ 11. It tortures me to see an injured animal. (CA)

_____ 12. I have assaulted a law enforcement official or social worker. (CT)

_____ 13. I have pretended to be someone else in order to get something. (IM)

_____ 14. I always plan out my weekly activities. (EL)

_____ 15. I like to see fist-fights. (CA)

_____ 16. I'm not tricky or sly. (IM)

_____ 17. I'd be good at a dangerous job because I make fast decisions. (EL)

_____ 18. I have never tried to force someone to have sex. (CT)

_____ 19. My friends would say that I am a warm person. (CA)

_____ 20. I would get a kick out of 'scamming' someone. (IM)

_____ 21. I have never attacked someone with the idea of injuring them. (CT)

_____ 22. I never miss appointments. (EL)

_____ 23. I avoid horror movies. (CA)

_____ 24. I trust other people to be honest. (IM)

_____ 25. I hate high speed driving. (EL)

_____ 26. I feel so sorry when I see a homeless person. (CA)

_____ 27. It's fun to see how far you can push people before they get upset. (IM)

_____ 28. I enjoy doing wild things. (EL)

_____ 29. I have broken into a building or vehicle in order to steal something or vandalize. (CT)

_____ 30. I don't bother to keep in touch with my family any more. (CA)

_____ 31. I find it difficult to manipulate people. (IM)

_____ 32. I rarely follow the rules. (EL)

_____ 33. I never cry at movies. (CA)

_____ 34. I have never been arrested. (CT)

_____ 35. You should take advantage of other people before they do it to you. (IM)

_____ 36. I don't enjoy gambling for real money. (EL)

_____ 37. People sometimes say that I'm cold-hearted. (CA)

_____ 38. People can usually tell if I am lying. (IM)

_____ 39. I like to have sex with people I barely know. (EL)

_____ 40. I love violent sports and movies. (CA)

_____ 41. Sometimes you have to pretend you like people to get something out of them. (IM)

_____ 42. I am an impulsive person. (EL)

_____ 43. I have taken hard drugs (e.g., heroin, cocaine). (CT)

_____ 44. I'm a soft-hearted person. (CA)

_____ 45. I can talk people into anything. (IM)

_____ 46. I never shoplifted from a store. (CT)

_____ 47. I don't enjoy taking risks. (EL)

_____ 48. People are too sensitive when I tell them the truth about themselves. (CA)

_____ 49. I was convicted of a serious crime. (CT)

_____ 50. Most people tell lies every day. (IM)

_____ 51. I keep getting in trouble for the same things over and over. (EL)

_____ 52. Every now and then I carry a weapon (knife or gun) for protection. (CT)

_____ 53. People cry way too much at funerals. (CA)

_____ 54. You can get what you want by telling people what they want to hear. (IM)

_____ 55. I easily get bored. (EL)

_____ 56. I never feel guilty over hurting others. (CA)

_____ 57. I have threatened people into giving me money, clothes, or makeup. (CT)

_____ 58. A lot of people are "suckers" and can easily be fooled. (IM)

_____ 59. I admit that I often "mouth off" without thinking. (EL)

_____ 60. I sometimes dump friends that I don't need any more. (CA)

_____ 61. I would never step on others to get what I want. (IM)

_____ 62. I have close friends who served time in prison. (CT)

_____ 63. I purposely tried to hit someone with the vehicle I was driving. (CT)

_____ 64. I have violated my probation from prison. (CT)

Demographic Questions

Directions: Please complete each fill out the following questions below.

22. What is you biological sex? (Please check one option.)

_____ Male

_____ Female

_____ Other (if you wish to do so, you may specify): _____

2. What is your gender identity (Please select all that apply)

[ ] Woman

[ ] Man

[ ] Transgender (Someone whose gender does not align with the social expectations

of their assigned sex at birth)

[ ] Non-binary gender (Someone whose gender identity/expression can be described

as neither man nor woman, between or beyond genders, or some combination of

genders.)

[ ] Other (please specify)_____

3. What is your race/ethnicity? (Please select all that apply)

[ ] African American

[ ] Asian (please specify): _____

[ ] Black

[ ] Hispanic, Latino/a (please specify): _____

[ ] Indian Subcontinent

[ ] Middle Eastern (please specify): _____

[ ] Native American/ Alaska Native/ First Nations (please specify): _____

[ ] Native Hawaiian or Pacific Islander (please specify): _____

[ ] White

[ ] Other race or ethnicity (please specify): _____

4. What is your age in years? _____

5. What is your highest level of education?

_____ Some High School
_____ High School Degree/ GED
_____ Some College
_____ Associate's/ Technical Degree
_____ Bachelor's Degree (in progress)
_____ Bachelor's Degree
_____ Some Graduate Credits
_____ Graduate Degree (please specify): _____

6. How many hours a week are you currently employed (note: if unemployed, please write in 0)? _____

7. Which of the following best describes your religious orientation? (Please check one option.)

_____ Atheist (I do not believe a higher power exists)

_____ Agnostic (I am unsure of whether a higher power exists)

_____ Religious/Spiritual (I do believe in a higher power)

8. In general, how religious do you consider yourself to be?

1	2	3	4	5	6	7	8	9
Not at all Religious								Extremely Religious

9. How spiritual do you consider yourself to be?

1	2	3	4	5	6	7	8	9
Not at all Spiritual								Extremely Spiritual

10. How often do you attend religious services/spiritual activities? (Please check one option.)

_____ Never

_____ Less than once a year

_____ About once or twice a year

_____ Several times a year

_____ About once a month

_____ 2-3 times a month

_____ Nearly every week

_____ Every week

_____ Several times a week

11. Please select the number that best indicates where you fall on the following scale:

0	1	2	3	4	5	6	7	8	9	10
Extremely					Middle of					Extremely

Liberal the Road
Conservative

12. With which political party are you most likely to affiliate with? (Please select one option.)

_____ Republican Party

_____ Democratic Party

_____ Independent American Party

_____ Green Party

_____ Tea Party

_____ Libertarian Party

_____ Other; please specify _____

APPENDIX C:
Debriefing Form

Value Endorsement and Behavior Study: Debriefing Information

Thank you for participating in this study. The purpose of this form is to provide you with more in-depth information about the study. This study was developed to examine the association between personality traits and religious and/or spiritual beliefs, social values, and lifestyle behavior. To examine this, participants completed several questionnaires designed to assess an individual's religious beliefs, social values, lifestyle behaviors, personality characteristics, and demographic information.

We realize that you might feel a bit uncomfortable about some of the questions that were asked. It is important to remember that there is no correct or incorrect response to any of the questionnaires in this study, and that your responses are anonymous. This means that your identity cannot be connected to any of your responses. However, if you still have any concerns about this study, then please contact Dr. David Lishner (lishnerd@uwosh.edu). He will be more than happy to discuss any concerns you may have.

Again, thank you very much for your participation. We value the time and the energy you spent in this study and it is our hope that the data you have provided will help us to better understand human psychology.

Once your responses have been saved, you will receive a code. Please write this code down and keep it for your records. When prompted, enter the code in order to confirm that you have participated. Once you have entered your code, you will be compensated for your time.

Please be aware that you are being compensated for completing the study **only once**. Should you decide to complete the study again, you will not be compensated a second time. Only **one** set of responses will be retained and analyzed for the purposes of this study. Additional completions will therefore **not** result in more data for the researchers, nor will they result in additional compensation.

We ask that you please not discuss this research with anyone else at least until the end of summer, so that they can participate in a genuine way as well.

Again, thank you very much for your participation. We value the time and energy you spent in this study and it is our hope that the data you have provided will help us to better understand human psychology.

Appendix D:

Measures Used for Behavioral Deviation Items

Normative Deviance Scale (NDS ; English)

Vazsonyi, Pickering, Junger, & Hessing (2001)

Now we would like to ask you about activities and behaviors in which you may or may not

have been involved. Please indicate which of the following acts you have done during your

teenage or young adulthood years and how many times you have done them.

Please answer the next few questions in the following way:

A = no/never B = once/one time C = 2-3 times D = 4-6 times E = 6 or

Have you ever . . . ?

VANDALISM

G1. Smashed bottles on the street, school grounds, or other areas?

G2. Intentionally damaged or destroyed property belonging to your parents or other family members

(brothers or sisters)?

G3. Intentionally damaged or destroyed property belonging to a school, college, or university?

G4. Intentionally damaged or destroyed other property (signs, windows, mailboxes, parking meter,

etc.) that did not belong to you?

G5. Intentionally damaged or destroyed property belonging to your employer or at your workplace?

G6. Slashed or in any way damaged seats on a bus, in a movie theater, or something at another

public place?

G7. Written graffiti on a bus, on school walls, on rest room walls, or on anything else in a public

place?

G8. Committed acts of vandalism when coming or going to a football game or other sports event?

ALCOHOL

G9. Consumed hard liquor (e.g. tequila, whiskey, vodka, or gin) before you were 21?

G10. Consumed alcoholic beverages (e.g. beer, wine, or wine coolers) before you were 21?

G11. Got drunk (intentionally) just for the fun of it (at any age)?

G12. Got drunk just to fit in and be part of the crowd (at any age)?

G13. Lied about your age to buy alcohol before you turned 21?

G14. Had an older brother/sister or friend buy alcohol for you?

G15. Bought alcohol for a brother/sister or friend?

DRUG USE

G16. Used tobacco products regularly (e.g., cigarettes, chew, snuff etc.)

G17. Used “soft” drugs such as marijuana (grass, pot)?

G18. Used “hard” drugs such as crack, cocaine, or heroin?

G19. Gone to school when you were drunk or high on drugs?

G20. Gone to work when you were drunk or high on drugs?

2

G21. Gone to a concert when you were drunk or high on drugs?

G22. Gone to a club/dance/party when you were drunk or high on drugs?

G23. Gone to a club/dance/party to get drunk or high on drugs?

G24. Sold any drugs such as marijuana (grass, pot), cocaine, or heroin?

SCHOOL MISCONDUCT

G25. Cheated on school/college/university tests (e.g., cheat sheet, copy from neighbor, etc.)?

G26. Been sent out of a classroom because of “bad” behavior

(e.g. inappropriate behaviors, cheating etc.)?

G27. Been suspended or expelled from school/college/university?

G28. Stayed away from school/classes when your parent(s) thought you were there?

G29. Intentionally missed classes over a number of days for "no reason," just for fun (e.g., there was

no family emergency)?

G30. Run away from home and stayed out all night?

G31. Been in trouble at school so that your parents received a phone call about it?

G32. Skipped school/work (pretending you are ill)?

GENERAL DEVIANCE

G33. Been in an automobile accident (including fender benders/bumpers) since you received your

driving permit/license.

G34. Intentionally disobeyed a stop sign or a red traffic light while driving a vehicle?

G35. Been on someone else's property when you knew you were not supposed to be there?

G36. Failed to return extra change that you knew a cashier gave you by mistake?

G37. Tried to deceive a cashier to your advantage (e.g. flash a larger bill and give a smaller one)?

G38. Wrote a bad check (knowingly/intentionally)?

G39. Let the air out of the tires of a car or bike?

G40. Lied about your age to get into a nightclub/bar?

G41. Made nuisance/obscene telephone calls?

G42. Avoided paying for something (e.g. movies, bus or subway rides, food, etc.)?

G43. Used fake money or other things in a candy, coke, or stamp machine?

G44. Shaken/hit a parked car just to turn on the car's alarm?

G45. Drove over the speed limit just for fun?

G46. Visited a hospital emergency room?

G47. Broken things around the house?

G48. Stayed out all night without informing your parents about your where abouts?

G49. Been pulled over by the police for speeding?

G50. Been pulled over by the police for something other than speeding?

G51. Appeared before court?

G52. Been arrested?

THEFT

G53. Stolen, taken, or tried to take something from a family member or relative (e.g. personal

items,money,etc.)?

3

G54. Stolen, taken, or tried to take something worth $10 or less (e.g. newspaper, pack of gum, mail,

money,etc.)?

G55. Stolen, taken, or tried to take something worth between $10 and $100 (e.g. shirt, watch,

cologne, video game cartridge, shoes, money, etc.)?

G56. Stolen, taken, or tried to take something worth more than $100 (e.g. leather jacket, car stereo,

bike, money, etc.)?

G57. Stolen, taken, or tried to take something that belonged to “the public” (e.g. street signs,

construction signs, etc.)?

G58. Stolen or tried to steal a motor vehicle (e.g., car or motorcycle)?

G59. Bought, sold, or held stolen goods or tried to do any of these things?

ASSAULT

G60. Hit or threatened to hit a person?

G61. Hit or threatened to hit your parent(s)?

G62. Hit or threatened to hit other students/peers or people?

G63. Used force or threatened to beat someone up if they didn't give you money or something else

you wanted?

G64. Been involved in gang fights or other gang activities?

G65. Beaten someone up so badly they required medical attention?

G66. Carried a knife, razor, switchblade, club, bat, gun, or any other object you could use as a weapon

(e.g. pepper spray, etc.)?

G67. Carried a knife, razor, switchblade, club, bat, gun, or any object you could use as a weapon with

the intention of using it in a fight?

G68. Witnessed a crime against a person (e.g., assault, rape, robbery, etc.)?

G69. Witnessed a crime against property (e.g., theft, vandalism, etc.)?

G70. Been a victim of a crime against your person (e.g., assault, rape, robbery, etc.)?

G71. Been a victim of a crime against your property (e.g., theft, vandalism, etc.)?

Workplace Deviance Scale
Bennett & Robinson (2000)

Interpersonal Deviance
Made fun of someone at work
Said something hurtful to someone at work
Made an ethnic, religious, or racial remark at work
Cursed at someone at work
Played a mean prank on someone at work
Acted rudely toward someone at work
Publicly embarrassed someone at work

Organizational Deviance
Taken property from work without permission
Spent too much time fantasizing or daydreaming instead of working
Falsified a receipt to get reimbursed for more money than you spent on business expenses
Taken an additional or longer break than is acceptable at your workplace
Come in late to work without permission
Littered your work environment
Neglected to follow your boss's instructions
Intentionally worked slower than you could have worked
Discussed confidential company information with an unauthorized person
Used an illegal drug or consumed alcohol on the job
Put little effort into your work
Dragged out work in order to get overtime

22-Item Normative Deviance Scale

Cho (2014)

Types	Items
Personal crimes	Not counting fights you may have had with a brother or sister when you were a child, how many times have you beaten up someone or tried to physically hurt someone on purpose?
	How many times have you used a weapon with the intention to threaten or hurt someone?
Property crimes	How many times have you damaged someone else's property on purpose?
	Other than hunting or fishing, how many times have you intentionally injured an animal?
Theft	How many times have you stolen cash, goods, or property worth less than $50?
	How many times have you stolen cash, goods, or property more than $50?
	How many times have you intentionally not paid for something, such as food in a restaurant or an admission fee for entertainment?
Fraud	How many times, not counting family, have you borrowed money from someone when you knew you would never repay them?
	How many times, not counting immediate family members, have you used someone else's credit card, debit card, or checkbook without permission?
	How many times have you written a bad check on purpose?
	How many times, not counting immediate family members, have you taken someone's car or other motor vehicle without their prior knowledge and permission?
Acts of Identity and Privacy Violations of Computer and Internet Use	How many times have you read someone else's emails, instant messages, or cell texts without their permission?
	How many times have used the identity of another person or a made-up identity in e-mails, blogs, chat rooms, or elsewhere on the internet?
	How many times have you intentionally copied and sent to others copyright protected materials like computer software programs (not shareware), movies, and/or video games?
Drugs	How many times have you purposely gotten high using more than the recommended amount of prescription painkillers? (e.g., Tylenol with Codeine, Percocet, Vicodin, and/or OxyContin)
	How many times have you purposely gotten high by sniffing glue products and/or butane gas?
	How many times have you smoked marijuana?
	How many times have you used cocaine, crack, or methamphetamines (i.e., Philopon)?
	How many times have you used heroin?
	How many times have you used hallucinogens like LSD, mescaline, or ecstasy?
Tobacco and Alcohol	How often do you use tobacco (smoke, dip, or chew)?
	How many times have you consumed alcohol to the point that you don't remember some part of night?

The Sexual Deception Scale

Marelich, Lundquist, Painter, and Mechanic (2008)

Blatant Lying ("Have you ever...")

(1) Told someone "I love you" but really didn't just to have sex with them? [7.9%]

(2) Told someone "I care for you" just to have sex with them? [12.0%]

(10) Had sex with someone just so you could tell your friends about it? [10.1%]

(13) Told someone they'd be your boyfriend/girlfriend just so they would have sex with you? [3.4%]

(14) Had sex with someone, then never returned their calls after that? [14.2%]

(19) Faked "who you are" in order to have sex with somebody? [3.7%]

(12) Gotten a partner really drunk or stoned in order to have sex with them? [5.6%]

Self-Serving

(9) Had sex with someone in order to get resources from them (e.g. money, clothes, companionship)? [7.9%]

(8) Had sex with someone in order to maintain resources you get from them (e.g., money, clothes, companionship)? [11.6%]

(4) Had sex with someone so you would have someone to sleep next to? [9.4%]

Avoiding Confrontation

(6) Had sex with someone even though you didn't want to? [36.0%]

(7) Had sex with someone in order to maintain your relationship with them? [27.3%]

(11) Had sex with someone so they wouldn't break up with you? [11.6%]

(3) Had sex with someone so they would leave you alone? [18.4%]

(16) Had sex with someone because you wanted to please them? [51.3%]

Definitions of Infidelity Questionnaire (DIQ)
Thompson & O'Sullivan (2015)

DIQ Behaviors

Engaging in penile-vaginal intercourse with someone
Engaging in penile-anal intercourse with someone
Giving someone oral sex
Receiving oral sex from someone
Touching someone's genitals
Taking a shower with someone
Kissing someone intensely
Sending sexually explicit messages by text or e-mail to someone
Masturbating with someone over webcam
Receiving sexually explicit messages by text or e-mail from someone
Creating a profile on a dating website
Sending affectionate/flirtatious texts or e-mails to someone
Receiving affectionate/flirtatious texts or e-mails from someone
Browsing an online dating website alone
Receiving close emotional support from someone
Watching movies in a dark living room with someone
Being tagged in pictures with someone on a social networking site
Providing someone with close emotional support
Sharing secrets with someone
Dressing in a way to attract sexual attention
Accompanying someone to a formal event
Having a casual dinner with someone
Kissing someone on the cheek
"Checking out" (or admiring the look of) a waiter/ waitress
Viewing pornographic videos online alone
Giving someone a gift
Viewing pornographic magazines alone
Working/studying late with someone
Doing favors for someone
Liking/following someone on social media
Engaging in masturbation alone
Finding a celebrity attractive

Appendix E:

Tables and Figures

Table 1

Mean Frequency and Perceived Harm for Behavioral Deviation Items

Item	*M*	SD	PH
1. Vandalized or written graffiti on public property	5.5196	15.15745	2.31 (LMH)
2. Lied about your age or used a fake I.D. to buy alcohol before you turned 21	10.6112	21.69758	2.1 (LH)
3. Blacked out while drinking alcohol	10.7738	21.73994	3.04 (HH)
4. Used "soft" drugs	30.6393	39.58496	2.09 (LH)
5. Used "hard" drugs	8.2542	22.69648	3.36 (HH)
6. Driven a car recklessly	18.3645	29.06398	3.42 (HH)
7. Texted or surfed the internet on your cell phone while driving	23.7533	32.97148	3.37 (HH)
8. Cheated on school or college tests	8.5981	16.90747	2.1 (LH)
9. Been sent out of a classroom because of behavior problems	5.7495	15.56059	2.06 (LH)
10. Been suspended or expelled from a school, college, or university	2.7551	11.26119	2.17 (LMH)
11. Knowingly plagiarized on an essay or work document?	3.8355	13.14266	2.26 (LMH)
12. Gone to school and/or work when you were drunk or high on drugs?	9.0916	22.51959	2.75 (MHH)
13. Stayed away from school or classes when your parents thought you were there *	10.3570	21.12150	1.97 (LH)
14. Skipped school and/or work by pretending you were ill	17.7402	23.01762	1.7 (LH)
15. Stolen or tried to steal a motor vehicle	2.5140	11.91305	3.3 (HH)
16. Failed to return extra change that you knew a cashier gave you by mi...	7.0131	15.26918	2.16 (LMH)

17. Tried to deceive employees at stores or restaurants	3.8804	12.44978	2.4 (LMH)
18. Intentionally written a bad check	3.0262	12.02242	2.75 (MHH)
19. Let the air out of the tires of a car or bike for fun or to get back . . .	2.4037	11.22370	2.85 (MHH)
20. Made nuisance or obscene (e.g., prank) telephone calls	9.2056	18.04226	1.84 (LH)
21. Hit or threatened to hit a person	8.7215	18.07431	3.03 (MHH)
22. Used fake money or other things in a vending machine	2.7925	11.49075	2.14 (LH)
23. Stayed out all night without informing your parents . . . *	9.4168	19.98145	2.26 (LMH)
24. Carried any object you could use as a weapon with the intention of u...	5.9047	19.77581	3.23 (HH)
25. Gossiped and/or spread rumors about someone	27.6467	33.26120	2.61 (MH)
26. Made an ethnic, religious, or racial remark at work and/or school	11.5140	22.91728	2.74 (MHH)
27. Cursed at or said something hurtful to someone in a way that was not meant to be a joke	29.8355	33.69280	2.62 (MH)
28. Played a mean prank on someone	8.4579	17.71628	2.48 (LMH)
29. Publicly embarrassed someone	6.2355	14.18235	2.66 (MH)
30. Intentionally injured an animal, not including when hunting or fishing	2.8505	12.27860	3.42 (HH)
31. Intentionally not paid for something, such as food in a restaurant or clothes in a store	5.5364	14.56414	2.36 (LMH)
32. Borrowed money from someone when you knew you would never repay them	5.0131	14.58842	2.7 (MH)
33. Read through someone else's emails, instant messages, or cell texts	12.7383	22.49084	2.16 (LMH)
34. Used the identity of another person in emails, blogs, chat rooms . .	4.3626	15.61676	2.61 (MH)
35.Used cheat codes or third party programs that give you an advantage over other players	9.5421	23.00842	1.71 (LH)

36. Downloaded music and/or movies that you did not pay for	40.2523	42.31213	1.93 (LH)
37. Stopped taking or never started taking medications prescribed for a major psychiatric disorder **	3.3383	13.52247	2.93 (MHH)
38. Told someone ‘‘I love you’’ but really didn’t just to have sex . . .	4.9477	16.35139	2.8 (MHH)
39. Had sex with someone just so you could tell your friends about it	3.8019	13.30406	2.57 (MH)
40. Had sex with someone and then never returned their calls after that	5.2598	15.78263	2.55 (MH)
41. Faked who you are in order to have sex with somebody	3.0019	12.77851	2.72 (MH)
42. Gotten a partner drunk or stoned in order to have sex with him or her	3.4318	13.76075	3.21 (HH)
43. Had sex with someone in order to get and/or maintain resources from ...	3.9402	14.49048	2.78 (MHH)
44. Had unprotected sex (e.g., did not use a condom, diaphragm, or other...	34.7738	40.31467	2.8 (MHH)
45. Intentionally not told someone you had an STI during a sexual encounter	1.7664	10.29015	3.62 (HH)
46. Had sex with someone the same day you met him or her at a party, bar...	6.6598	16.33406	2.16 (LMH)
47. Engaged in sexual behaviors with someone other than your partner **	7.7383	20.03720	3.1 (HH)
48. Intensely or romantically kissed someone other than your partner**	6.1925	15.74404	2.88 (MHH)
49. Created a profile on and/or browsed an online dating site **	4.8318	16.92597	2.57 (MH)
50. Sent affectionate/flirtatious texts to someone other than your partner **	11.0411	25.08954	2.69 (MH)

Note: *Question framed in context of, “While underage”; ** Question framed in context of, “While in an exclusive relationship”; LH = Low Harm Behavioral Deviation; LMH = Low-Moderate Harm Behavioral Deviation; MH = Moderate Harm Behavioral Deviation; MHH = Moderate-High Harm Behavioral Deviation; HH = High Harm Behavioral Deviation

Table 2

Descriptive Statistics for Regression Variables

Measure	No. of items	*M* (*SD*)	Cronbach's α
Dev	50	0.00 (12.68)	.95
IM	16	36.67 (10.96)	.89
CA	16	35.69 (9.38)	.82
EL	16	39.19 (10.60)	.84
CT	16	25.04 (7.91)	.78
LH	10	0.00 (6.11)	.83
LMH	10	0.00 (7.15)	.89
MH	10	0.00 (6.69)	.86
MHH	10	0.00 (6.44)	.84
HH	10	0.00 (6.35)	.84

Note: Sex coded (0= Male; 1=Female); Dev = Behavioral Deviation Composite; CA = Callous Affect; IM = Interpersonal Manipulation; EL = Erratic Lifestyles; CT= Criminal Tendencies; LH = Low Harm Behavioral Deviation; LMH = Low-Moderate Harm Behavioral Deviation; MH = Moderate Harm Behavioral Deviation; MHH = Moderate-High Harm Behavioral Deviation; HH = High Harm Behavioral Deviation

Table 3

Bivariate Correlation Analysis for Variables Predicting Behavioral Deviation

	Dev	Sex	CA	IM	EL	CT	LH	LMH	MH	MHH	HH
Dev	-										
Sex	-.15*	-									
CA	.34*	-.41*	-								
IM	.37*	-.23*	.69*	-							
EL	.44*	-.27*	.55*	.63*	-						
CT	.55*	-.24*	.50*	.54*	.62*	-					
LH	.87*	-.14*	.32*	.38*	.54*	.53*	-				
LMH	.87*	-.07	.31*	.39*	.44*	.50*	.78*	-			
MH	.84*	-.10*	.27*	.39*	.42*	.39*	.62*	.68*	-		
MHH	.85*	-.13*	.28*	.31*	.42*	.47*	.65*	.65*	.65*	-	
HH	.86*	-.16*	.30*	.32*	.48*	.51*	.66*	.68*	.65*	.73*	-

Note: Sex coded (0= Male; 1=Female); Dev = Behavioral Deviation Composite; CA = Callous Affect; IM = Interpersonal Manipulation; EL = Erratic Lifestyles; CT= Criminal Tendencies; LH = Low Harm Behavioral Deviation; LMH = Low-Moderate Harm Behavioral Deviation; MH = Moderate Harm Behavioral Deviation; MHH = Moderate-High Harm Behavioral Deviation; HH = High Harm Behavioral Deviation

*$p < .05$

Table 4

Summary of Variables predicting Overall Behavioral Deviation

Variable	*B*	*t*	*R*	R^2
Block 1			.15	.02
Sex	-.15	-3.47*		
Block 2			.46	.21
Sex	-.006	-.15		
CA	.08	1.32		
IM	.12	1.97*		
EL	.32	6.20*		
Block 3			.57	.32
Sex	.007	.17		
CA	.02	.30		
IM	.05	.81		
EL	.13	2.51*		
CT	.44	9.05*		

Note: Sex coded (0= Male; 1=Female); Dev = Behavioral Deviation Composite; CA = Callous Affect; IM = Interpersonal Manipulation; EL = Erratic Lifestyles; CT= Criminal Tendencies

*$p < .05$

Table 5

Mean Frequency of Behavior for Each Perceived Harm Item Group

	No. of items	*M* (*SD*)	Cronbach's α
LH	10	13.08 (11.96)	.67
LMH	10	4.81 (6.81)	.72
MH	10	8.49 (9.22)	.65
MHH	10	7.22 (8.19)	.56
HH	10	6.90 (8.82)	.62

Note: Descriptive statistics reported above based on raw behavioral deviation scores; LH = Low Harm Behavioral Deviation; LMH = Low-Moderate Harm Behavioral Deviation; MH = Moderate Harm Behavioral Deviation; MHH = Moderate-High Harm Behavioral Deviation; HH = High Harm Behavioral Deviation

Table 6

Summary of Variables predicting Low Harm Behavioral Deviation

Variable	β	*t*	*R*	R^2
Block 1			.17	.03
Sex	-.17	-3.91*		
Block 2			.52	.27
Sex	-.01	-.30		
CA	.06	1.02		
IM	.07	1.30		
EL	.43	8.75*		
Block 3			.61	.37
Sex	.00	-.002		
CA	.00	-.001		
IM	.01	.10		
EL	.25	5.06*		
CT	.41	8.95*		

Note: Sex coded (0= Male; 1=Female); Dev = Behavioral Deviation Composite; CA = Callous Affect; IM = Interpersonal Manipulation; EL = Erratic Lifestyles; CT= Criminal Tendencies

*$p < .05$

Table 7

Summary of Variables predicting Low-Moderate Harm Behavioral Deviation

Variable	β	*T*	*R*	R^2
Block 1			.12	.01
Sex	-.12	-2.70*		
Block 2			.41	.17
Sex	.02	.42		
CA	.09	1.58		
IM	.15	2.90*		
EL	.24	4.52*		
Block 3			.53	.29
Sex	.03	.77		
CA	.03	.58		
IM	.07	1.25		
EL	.05	.85		
CT	.45	9.08*		

Note: Sex coded (0= Male; 1=Female); Dev = Behavioral Deviation Composite; CA = Callous Affect; IM = Interpersonal Manipulation; EL = Erratic Lifestyles; CT= Criminal Tendencies

*$p < .05$

Table 8

Summary of Variables predicting Moderate Harm Behavioral Deviation

Variable	β	*t*	*R*	R^2
Block 1			.12	.02
Sex	-.12	-2.78*		
Block 2			.41	.17
Sex	.001	.01		
CA	.03	.54		
IM	.19	3.15*		
EL	.24	4.55*		
Block 3			.48	.23
Sex	.01	.24		
CA	-.01	-.21		
IM	.14	2.34*		
EL	.10	1.82		
CT	.32	6.30*		

Note: Sex coded (0= Male; 1=Female); Dev = Behavioral Deviation Composite; CA = Callous Affect; IM = Interpersonal Manipulation; EL = Erratic Lifestyles; CT= Criminal Tendencies

*$p < .05$

Table 9

Summary of Variables predicting Moderate-High Harm Behavioral Deviation

Variable	B	*t*	*R*	R^2
Block 1			.14	.02
Sex	-.14	-3.29*		
Block 2			.39	.15
Sex	-.02	-.38		
CA	.09	1.47		
IM	.07	1.19		
EL	.27	5.06*		
Block 3			.26	
Sex	-.004	-.10		.57
CA	.03	.52		
IM	.002	.04		
EL	.08	1.54		
CT	.43	8.57*		

Note: Sex coded (0=Male; 1=Female); Dev = Behavioral Deviation Composite; CA = Callous Affect; IM = Interpersonal Manipulation; EL = Erratic Lifestyles; CT= Criminal Tendencies

**p < .05*

Table 10

Summary of Variables predicting High Harm Behavioral Deviation

Variable	B	*t*	*R*	R^2
Block 1			.17	.03
Sex	-.17	-3.81*		
Block 2			.42	.17
Sex	-.04	-.81		
CA	.08	1.34		
IM	.06	.93		
EL	.31	5.86*		
Block 3			.53	.28
Sex	-.02	-.55		
CA	.02	.34		
IM	-.02	-.28		
EL	.12	2.20*		
CT	.44	8.97*		

Note: Sex coded (0= Male; 1=Female); Dev = Behavioral Deviation Composite; CA = Callous Affect; IM = Interpersonal Manipulation; EL = Erratic Lifestyles; CT= Criminal Tendencies

**p < .05*

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