Assessing Callous and Unemotional Traits in a Young Offender Sample: Support for the Inclusion of a Specifier in the Diagnosis of Conduct Disorder in the DSM-V

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DEDICATION

I would like to dedicate this thesis to Lindsay Stewart, BPSYC Class of 2008, for her inspiration and influence on my decision to enroll in the Behavioural Psychology Program.
ABSTRACT

Callous and unemotional (CU) traits encompass the affective domain of the psychopathy construct (Hart & Hare, 1996). An individual exhibiting these traits tends to lack remorse/guilt, lacks empathy, is unconcerned about their performance in everyday activities, and does not express emotion in adaptive ways. The fifth version of the Diagnostic and Statistical Manual (DSM-V) is set for publication in May of 2013. One of the proposed additions includes a CU specifier in the diagnosis of Conduct Disorder (CD). To meet the criteria for this specifier a person aged 17 and under must be diagnosed with CD and display at least two of the traits listed above. Numerous field trials have been conducted to support the addition of a specifier by determining if a statistically distinct subset of conduct disordered individuals with CU traits exists. The current study investigated this issue in a sample of Young Offenders of both genders.

A retroactive review of 50 young offender case files was conducted to determine the prevalence of CU traits as per specifier guidelines. Participants were assigned to groups based on gender and CD diagnosis. CU traits were assessed using the Psychopathy Checklist Youth Version (PCL: YV; Forth, Kosson, & Hare, 2003) and file information. Male and female subjects did not differ significantly on any variable measured, so the gender variable was collapsed and the sample was treated as a whole. CD group members were significantly more likely than non-CD group members to display CU traits. “Childhood onset” CD subjects displayed significantly more CU traits than “adolescent onset” CD subjects. Subjects diagnosed with both CD and Attention Deficit Hyperactivity Disorder (ADHD) were significantly more likely to display CU traits than those diagnosed with ADHD alone.

The findings support the inclusion of a CU specifier in the diagnosis of CD in the DSM-V. Recommendations for future research include examining the frequency of CU traits in a truly random sample of young offenders and determining the frequency of CU traits in individuals diagnosed with ADHD only. Another recommendation is develop and validate a new assessment instrument to measure CU traits in youth because of the questionable validity of vague trait descriptions in files.
ACKNOWLEDGEMENTS

I would like to thank my Agency Supervisor, Dr. Robert C. Rowe, for providing me with this thesis idea and for “opening my eyes” to the youth criminal justice system in the classroom and while on placement.

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Chapter I: Introduction

Summary

The DSM-IV identifies the current criteria for Conduct Disorder (CD) as a recurring and continual display of behaviour where the rights of others, or social regulations are infringed upon (Rowe et al., 2009, p. 688). Specifically, conduct problems include aggression towards people or animals, damage to others’ property, dishonesty or stealing, and defiance of rules (e.g., truancy, absconding from home, and disobeying curfew) (Scheepers, Buitelaar, and Matthys, 2011, p. 89). However, individuals who meet the diagnostic criteria for a diagnosis of CD are a diverse group of young people in terms of alternate developmental pathways, patterns of maladaptive traits, and maturation profiles. Currently the DSM-IV differentiates three subtypes of CD: childhood onset, adolescent onset, and unspecified (Moffitt et al., 2007, p. 4). Childhood onset is defined as meeting at least one condition prior to 10 years of age and adolescent onset is defined as an absence of any conditions prior to 10 years of age. The third subtype, unspecified, is used when the age of onset is unknown (Scheepers et al., 2011, p. 90).

The fifth version of the Diagnostic and Statistical Manual (Scheepers, Buitelaar, and Matthys, 2011) is set for publication in May of 2013. One of the proposed revisions to the manual is a specifier designed to identify a subset of CD-diagnosed individuals who exhibit a cluster of “callous and unemotional” (CU) traits. As described by (Scheepers et al., 2011), this cluster includes traits that will identify if conduct disordered youth possess a remorseful attitude, can show concern for the feelings of others, are interested in the success of their daily functioning, and whether emotions can be expressed in an adaptive manner.

As with every such revision, this specifier will be examined in field trials before inclusion. Such trials will be designed to determine if the proposed subgroup can be reliably identified. It is assumed that this will add to diagnostic and treatment related decisions.

Purpose

This study was designed to attempt to provide data on the prevalence of callous and unemotional traits in a young offender sample. These data will be relevant to Frick and Moffitt’s (2010) proposal to include a CU specifier in the diagnosis of Conduct Disorder. Kahn, Frick, Youngstrom, Findling, and Kogos-Youngstrom (2012) suggested that research on the influence of a CU subtype is needed in a participant sample like incarcerated youth, where a diagnosis of CD may be quite frequent. This study also endeavours to determine the existence of a reliable CD/CU subgroup of female young offenders because many CU-focused studies concentrate on male participants. Additional data will be provided on the link between callous-unemotional traits, and the current CD subtypes and Attention Deficit Hyperactivity Disorder (ADHD).

It is hypothesized that a subset of young offenders diagnosed with CD will meet the criteria for the specifier and that CD-diagnosed individuals will display more CU traits as per specifier guidelines in comparison to a non-CD subset.

Overview

The following chapter will highlight the relevant literature concerning the prevalence of Conduct Disorder in young offenders, the history of CU traits and the DSM, and the proposed criteria for the CU specifier in the DSM-V. In addition, the stability of CU traits, the justification for including a CU specifier in the DSM-V, and areas in need of research will be discussed. The psychometric properties of the Psychopathy Checklist: Youth Version (PCL: YV; Forth, Kosson, & Hare, 2003) will also be reviewed because of the substantial overlap between PCL: YV content, CD, and the proposed specifier. The method will be explained in detail and a visual and
statistical analysis of the results will follow. Lastly, a discussion will conclude the thesis providing a summary, strengths and limitations, contribution to the behavioural psychology field, and implications for future research.
Chapter II: Literature Review

Prevalence of Conduct Disorder in Young Offenders

Fazel, Doll, and Langstrom (2008) conducted a methodical evaluation and meta-analysis of the available information on the prevalence of psychiatric disorders among detained youth in juvenile correctional centers (p. 1011). A selection of research studies were analyzed using database searches from 1966 to 2006 that estimated mental disorder prevalence among male and female youth offenders less than 19 years of age. Studies that met requirements for the meta-analysis included those where psychiatric diagnoses were determined based on interviews and psychometric assessment measures. There were a total of 25 surveys that met criteria for the meta-analysis, and thus the clients originated from a variety of countries including the “United States, United Kingdom, Australia, Russia, Holland, Denmark, Canada, and Spain” (p.1012). Specifically, a total of fifteen studies were included for the meta-analysis of conduct disorder. This constituted a total sample of 14,677 youth offenders. The prevalence of CD ranged from 40.9% - 64.7% at a 95% confidence interval for 7818 male youth, and 32.4% - 73.2% at a 95% confidence interval for 1007 female youth (p.1015). The authors do not explore possible reasons for the high variability.

Fazel et al. found that on average, conduct disorder, compared to other disorders (e.g., ADHD & major depression), was the most frequent psychiatric disorder among incarcerated youth offenders, with prevalence at approximately a little above 50%. Fazel et al. mention that psychiatric disorders are more common in detained youth compared to same aged youth in the community (p. 1016). The meta-analysis findings suggest that conduct disordered youth have a higher risk of committing crimes severe enough to warrant detention. The conclusion of the meta-analysis indicated that CD is a common disorder among young offenders.

History of CU Traits and the DSM

The psychopathy construct and its association with conduct disorder appeared in the third edition of the Diagnostic and Statistical Manual (DSM-III; American Psychiatric Association, 1980) (Frick & Ellis, 1999). The DSM-III introduced a socialized and an undersocialized subtype for CD. The socialized type defined is the development of social bonds and loyalty to a peer group; albeit an antisocial one. The undersocialized subtype highlighted psychopathy features and a lack of loyalty to any peer group. Specifically, the CU criteria incorporated in the undersocialized subtype specified that “There is generally a lack of concern for the feelings, wishes, and well-being of others, as shown by callous behavior” and “Appropriate feelings of remorse are generally absent” (American Psychiatric Association, 1980, p. 45). Hart and Hare (1996) suggest that these traits are an essential component to the concept of psychopathy. Frick and Ellis (1999) state that the undersocialized subtype was altered in the revised version of the DSM-III due to misunderstandings with the definition. The subtype was eventually removed in the fourth edition of the DSM, thereby, disregarding a potentially important association with psychopathy in the diagnosis of conduct disorder.

Proposed Criteria for the Callous-Unemotional Specifier in the DSM-V

Please see Appendix A for the full criteria proposed by Frick and Moffitt (2010).
Stability of CU traits

Scheepers, Buitelaar, and Matthys (2011) mention that CU characteristics are fairly stable through biological development from childhood to early adulthood; this remains constant when juvenile conduct difficulties and criminogenic influences for antisocial behaviour are controlled (p. 91). Based on their review of the relevant literature, these authors point to a significant genetic component to the CD/CU symptom cluster, and estimate the heritability to be in the 0.81 range. Scheepers et al. explain that this genetic predisposition is more influential in the development of Conduct Disorder in childhood than in the maintenance of the disorder during teenage years. They suggest that during adolescence environmental variables have a greater impact.

Munoz and Frick’s (2007) study examined the psychometric properties of the Antisocial Process Screening Device (APSD; Frick & Hare, 2002), specifically, the self-report form. A participant sample of 91 children, 47 male and 44 female, were assessed at yearly intervals over the next four years. This sample was derived from a larger participant sample of 1136 children from grades 3 to 7 who were screened to display DSM-IV symptoms and callous-unemotional characteristics. The participants were selected from an urban and rural school area, and the children had a mean age of 10.7. This group of 1136 children was then divided into four subgroups based on parent and teacher ratings of CU traits and conduct problems; mean cut off scores were also used to aid in assigning the participants into their prospective groups. The groups had varying levels of conduct problems and CU attributes to ensure a diverse representation of traits. Twenty-five children from each of the four groups were selected for the cited study. Only 76 of the total participants provided data at all three phases of assessment. The mean age of the children at the first assessment period was 13.4 years. The APSD was administered to the youth and parent at each of the assessment periods and self-report scores were compared to parent ratings. Cross-informant correlations for the APSD’s CU facet ranged from .32 to .56 (p < 0.01). This was based on self and parent report across the three assessment phases. The internal consistency was .50 to .61.

In a previous study using the same participant sample from Munoz and Frick (2007), callous-unemotional traits were demonstrated to have stability over a four year period based on parent report (Frick, Kimonis, Dandreaux, & Farrell, 2003). Once again, the APSD was administered to parents during the first assessment period which assisted in dividing the 1136 children into four groups. There were a total of 98 participants used for the current study; 92% completed two follow up assessments, and 72% completed all three yearly follow up assessments. Frick et al. reported that the results on the APSD’s CU facet, based on parent report, had an internal consistency of .72 to .76 across the three yearly assessment periods and a total stability of .90 p < 0.001. The results for the CU domain in the previous two studies signify a moderate correlation of stability of CU traits based on self-report when compared to parent ratings and a high correlation of stability of traits based on parent report alone.

CU Traits and Comorbid Conduct Disorder/Attention Deficit Hyperactivity Disorder

A group of children and youth aged 4 to 17 were clinically assessed for comorbid disorders based on Conduct Disorder subtypes (Connor, Ford, Albert, & Doerfler, 2007). A total sample of 53 children met the diagnosis for Conduct Disorder and consisted of 47 males and 6 female participants. The sample was 87% Caucasian, 4% African American, 6% Latino, and 4% other. Participants came from households of varying economic status. Results showed a high
comorbidity between CD and ADHD at 98% for childhood onset; however, only 6% for adolescent onset.

According to Frick and Ellis (1999), comorbid CD and ADHD is associated with a serious and prevalent pattern of antisocial behaviour (p. 164). Sevecke, Kosson, and Krischer’s (2009) study investigated the connection between psychopathy, ADHD, and CD in male and female young offenders. The participants were 219 incarcerated adolescent offenders of both genders (91 boys, 123 girls). Psychopathy was measured using the Psychopathy Checklist Youth Version (PCL: YV; Forth, Kosson, & Hare, 2003), CD was assessed using the International Personality Disorder Examination (IPDE; Loranger et al., 1994), and ADHD was determined using the self-report version of the Diagnostic System for Mental Disorders in Childhood and Adolescence (DISYPS-KJ; Dopfner & Lehmkuhl, 2000). The results determined moderate comorbidity between ADHD and CD. Correlations were $r = .27$ $p = 0.1$ for boys and $r = .33$, $p < .001$ for girls. Of some significance, gender differences were evident in the relationship between ADHD scores and dimensions of the psychopathy construct. Female ADHD subjects demonstrated higher loading than males on the affective domain (lack of remorse, shallow effect, callous/lack of empathy, and failure to accept responsibility) of the PCL: YV when comorbid CD was controlled. This suggests a relationship between the psychopathy affective domain and ADHD, independent of CD. Sevecke et al. indicate that there may be a possible correlation between a callous-unemotional personality and ADHD in adolescent female offenders (p. 590). A problem with this result pertains to the validity of self-report measures. Participants could have responded to self-report measures in a socially desirable manner, which could have mitigated the study’s findings.

**Justification for inclusion in the DSM-V**

Evidence for the existence of a CU subgroup among antisocial youth has been presented by Frick and White (2008). In a review of 32 studies, they found that antisocial youth with callous and unemotional traits make up an identifiable subgroup of individuals with difficult conduct issues, aggressive behaviour, and weak reactions to clinical interventions. Furthermore, additional studies revealed that delinquent youth with CU traits had problems recognizing the pain of others, difficulty in the cognitive appraisal of reinforcement and punishment signals, and displayed thrill-seeking behaviour with low anxiety inhibition.

Kahn, Frick, Youngstrom, Findling, and Kogos-Youngstrom (2012), employed the criteria for the proposed DSM specifier to assess prevalence of CU traits in youth from the community and clinic-referred case samples, and reported rates of 10 to 50%. The community sample consisted of 1136 children in grades 3 to 7 from two schools in a small southeastern urban area in the United States. The mean age was 10.7. The ethnic representation of the sample consisted of White (77%) and African American (19%) children; 53% of the sample was female. The clinic-referred sample consisted of 566 children aged 5 to 18 who were selected from a mental health center that provided services to four cities in the mid-western United States. The mean age was 10.6. This sample was ethnically represented by White (6%) and African American (88%) children; 40% were girls. Of some significance was the fact that Kahn et al. found that some individuals display CU traits without a diagnosis of Conduct Disorder and suggest future research with this sample. In the community sample, the prevalence of CU traits, as per specifier criteria, was 7% for non-diagnosed participants and 32% for CD-diagnosed participants. In the clinically-referred sample, prevalence of CU traits was 32% for non-diagnosed participants and 50% for CD-diagnosed participants.
Predictive Validity of the CU Specifier

McMahon, Kotler, and Wistikiewitz (2010) conducted a longitudinal study evaluating how CU attributes in youth are related to future antisocial behaviour. The participants were selected from elementary schools in North Carolina, Tennessee, Washington, and Pennsylvania. The subjects were classified as high risk based on neighbourhood crime and socioeconomic status data. The total normative participant sample included 754 participants; 51% were male. The sample was ethnically represented by 43% Black, 52% European, and 5% of an unidentified ethnicity (p.756). It was reported that integrating a CU attribute specifier for youth diagnosed with Conduct Disorder increased the positive prediction of future antisocial acts throughout youth and into adulthood. A validity coefficient of 0.89 was reported. Demographically, CU traits were more prevalent among youth who grew up in an urban area versus a rural one.

Kahn, Byrd, and Pardini (2012) also investigated the relationship between CU traits and committal of future antisocial acts in a young adult sample. Their sample was derived from an existing longitudinal study sample (Pittsburgh Youth Study) and included 417 young adults with a mean age of 25 years. The participants were administered the self-report Inventory of Callous-Unemotional Traits (ICU; Frick, 2004) at an earlier adulthood follow up assessment and the coefficient alpha for the measure’s three subscales was calculated. The coefficient alphas were .70, .84, and .55, respectively, for the callousness, uncaring, and unemotional subscales (p.4). The internal consistency for the entire measure was .80. The follow up assessment averaged three and a half years from the early adulthood assessment. After controlling for variables that may affect offending (e.g., substance abuse, education), the results indicated that participants with higher CU traits had more arrests and committed more criminal offences. Furthermore, participants with high CU attributes were more likely to commit serious offences. The evidence suggests that CU traits are predictive from childhood to middle adulthood.

CU Traits and Age of Onset Subgroups

Moffitt et al. (2008) state that one area of research needed concerning CU traits is the relationship between CU attributes and the age of onset of conduct disorder. Most youth with CU traits are representative of the childhood onset subtype; however, this assumption has not been evaluated. Moffitt et al. mention that it should be determined whether youth with CU traits are the same individuals diagnosed with the CD childhood onset subtype.

CU Traits and Comorbid CD/ADHD among Female Youth

Many studies involving CU traits have relied heavily on a male population. It has not been established whether CU traits encapsulate the same concept it does in females as it does in males. A study conducted by Pardini, Stepp, Hipwell, Stouthamer-Loeber, and Loeber (2012) investigated the clinical application of the CU specifier in a sample of girls aged 5 to 8 years. The study examined whether the girls with CD and CU traits displayed more antisocial behaviour and less internalizing difficulties (e.g., anxiety and depression) compared to girls without conduct disorder. The study also endeavoured to determine the existence of a subtype for CD and CU attributes in girls. One thousand eight hundred and sixty-two girls from Pittsburgh, Pennsylvania households were selected for the study and the ASPD was used to measure CU traits. The APSD was administered to parents and teachers on two occasions: at the first assessment and at a follow up session 6 years later. CD, ADHD, Oppositional Defiant Disorder (ODD), depression, anxiety, bullying, relational aggression, academic achievement, and global impairment were also assessed at both assessment phases. The girls were divided into four...
groups based on assessment measures: CD/CU, CD alone, CU alone, and no CD/CU (no diagnosis).

The CD/CU group displayed more antisocial traits, fewer internalizing symptoms, and more academic difficulties compared to other groups (Pardini et al., 2012). Further comparisons revealed that the CD group was more prone to anxiety than the CU group, and the CU group was rated higher on ODD and ADHD symptomatology than the no diagnosis group. The findings suggest that a subtype for girls with CD and CU characteristics is evident. Pardini et al. proposed that a CU specifier in the DSM-V could help complement the childhood onset subtype.

Barry, Frick, DeShazo, McCoy, Ellis, and Loney (2000) conducted a study that examined whether CU traits could be used to generate a subgroup of male and female youth aged 6 to 13 with disruptive behaviour disorders (e.g., ADHD, ODD, and CD). Frick and Hare’s Psychopathy Screening Device was used by teachers to determine CU attributes in children. Results revealed that CU traits were most prevalent for the ADHD and ODD/CD group (57%), compared to the ADHD only group (37%), and control group (9%). This suggests that further research is needed investigating the prevalence of CU traits in children and youth diagnosed with ADHD without co-occurring conduct disorder. In particular, a CU and ADHD relationship should be examined in a female young offender population.

**Psychopathy and the CU Specifier**

Forth, Kosson, and Hare (2003) suggest that a majority of young offenders meet the criteria for Conduct Disorder as per DSM-IV guidelines. For example, in Loving and Russell’s (2000) study, 98% of the male youth offenders met DSM-IV criteria for CD, while in Bauer’s (1999) study, 85% of the female young offender sample met CD criteria. There are also moderate to high correlations from .38 to .75 between psychopathy scores and conduct disorder based on studies utilizing the PCL: YV (Epstein, Douglas, Poythress, Spain, & Falkenbach, 2002; Forth, 1995; & Kosson, Cyterski, Steuerwald, Neumann, & Walker-Matthews, 2002).

An item response theory study was conducted between the Antisocial Process Screening Device (APSD; Frick & Hare, 2002) and the Psychopathy Checklist Youth Version (PCL: YV; Forth, Kosson, & Hare, 2003) to establish how well each measure differentiates the psychopathy construct (Dillard, Salekin, Barker, and Grimes, 2012). A total of 307 male and 144 female youth aged 9 to 19 participated in the study. The APSD and PCL: YV were administered to the youth along with an assortment of other psychometric assessment measures. Interviews were conducted following completion of the psychometric instruments and the APSD and PCL: YV were scored accordingly. The results determined that the PCL: YV was more successful than the APSD in identifying psychopathy traits on the affective and interpersonal facets of the measure. Callous and unemotional traits are categorized by four items under the affective domain and include: lack of remorse, shallow effect, callous/lack of empathy, and failure to accept responsibility (Forth, Kosson, & Hare 2003). The PCL: YV is the most practical measure to use in determining the presence of CU traits based on psychometric properties and available file information. The APSD was not used in any retroactive files.

**Summary**

Determining the prevalence of CU traits in a sample of conduct disordered young offenders can help justify the inclusion of a specifier in the diagnosis of CD in a population, where the disorder is likely to be prevalent. In addition, assessing the prevalence of CU qualities within a conduct disordered young offender sample may determine the effect that the age of
onset has in the manifestation of the traits and the extent of callous and unemotional characteristics.

Examining the prevalence of CU traits with regards to gender can help determine if a subgroup representing both sexes exists in an offender population. It is important to determine if the CU specifier has similar psychometric properties in males and females.

Research shows that CU traits are moderately predictive of future antisocial behaviour. In a young offender population, assessing CU traits can aid in providing beneficial information to clinicians regarding the probability of clients engaging in future criminal activity.

The thesis is designed to investigate several areas where research is needed concerning CU traits. There is insufficient research on CU traits in a young offender sample and specifically, a sample of female participants. The thesis intends to provide prevalence information concerning CU attributes in conduct disordered females, which may further support the clinical utility of the CU subtype for females, and offer additional information related to young offenders.

There is a lack of research regarding the impact that the age of onset of CD has on the development of CU traits. Moffitt et al. (2008) suggest that more research is required into understanding the relationship between CU traits and CD subtypes as this would help clarify whether CU traits should be included in the DSM criteria for Conduct Disorder, or whether the traits should be used as a guide for subtyping individuals (p. 10).

Furthermore, little research has attempted to investigate the association between ADHD and CD, and this is significant, because ADHD is a common psychiatric disorder that is frequently comorbid with CD. The thesis will attempt to provide information on the frequency of the current CD subtypes and ADHD in relation to a CU presentation.

Using the PCL: YV as an assessment measure and, specifically, basing classification of CU traits on the measure’s affective domain to determine CU traits in a young offender sample, is the most effective method to determine which participants meet the criteria for the proposed CU specifier. The PCL: YV will be used in conjunction with a variety of other file information.
Chapter III: Methodology

Subjects
Archival file material was obtained for 25 male and 25 female clients of the Family Court Clinic (FCC). Clients were between 12 and 18 years of age at the time the file material was collected. All clients had been criminally charged under the Youth Criminal Justice Act (YCJA, 2003) or Criminal Code of Canada (C.C.C., 1985), and had undergone either court-mandated or client-requested assessments to determine their risk of continued criminal behaviour. As a part of the assessment procedure, a Registered Psychologist determined subjects’ diagnosis of conduct disorder based on file information, psychometric measures, and multiple-sourced interviews. Male subjects’ files were randomly selected. Due to the smaller number of female subjects’ files, it was necessary to select files in temporal order to achieve equal numbers relative to the male sample. The total sample of participants had a mean age of 15.3 and was ethnically represented by Caucasian (92%), African American (2%), and Aboriginal (6%).

Informed consent for the use of clinical information for research is routinely obtained from clients prior to the provision of psychological services (see Appendix B). Only files containing a signed consent form were accessed for the study.

Design
The research design is a two-factor between-subjects design. The independent variables are gender, and the presence or absence of diagnosed conduct disorder. The dependent variable is binary, as one classifies a participant as meeting CU specifier criteria, and the other is the number of callous-unemotional traits present. Participants were assigned to groups based on gender, and the presence or absence of a diagnosis of Conduct Disorder. The presence of CU traits was determined based on clinical judgment and the Psychopathy Checklist: Youth Version (PCL-YV; Forth, Kosson, & Hare, 2003) completed by a Registered Psychologist. For three of the traits that correspond to items on the PCL-YV, the traits were scored as present if the subject was assigned a maximum score on the PCL-YV on file. These traits were lack of remorse or guilt, callous-lack of empathy, and shallow or deficient affect. Participants were deemed to portray the “unconcerned about performance” trait based on judgments from file information.

Measures
Forth (2005) discusses that the Psychopathy Checklist: Youth Version (PCL:YV; Forth, Kosson, & Hare, 2003) is an assessment instrument used to measure psychopathy traits in male and female youth aged 12 to 18 years (p. 324). The measure was modified from the Hare Psychopathy Checklist (PCL-R; Hare, 2003). The PCL: YV is a four-faceted measure (interpersonal, affective, antisocial, and behavioural) and contains 20 items that assess the features associated with psychopathy. The items are rated 0, 1, or 2, and this indicates respectively, whether the trait is not present, somewhat present, or is present. The scores are added together for each domain and a total score ranging from 0 to 40 is calculated. Forth mentions that file information from a wide variety of sources must be reviewed to effectively score the measure. This includes an interview with the individual him or herself, review of police and social work reports, interviews with other collateral sources, and review of school records. In addition, the PCL: YV should only be administered and scored by individuals who possess a graduate level degree, and have attained suitable professional designations. The research indicates that the PCL: YV’s inter-rater reliability is fairly high with intraclass correlations from
.90 to .96 (Forth, Kosson, & Hare, 2003). Furthermore, Forth states that the PCL: YV has good internal consistency with alpha coefficient scores of .85 to .94 (p. 328).

**Procedure**

The study entailed a file review of archival client files and a database was created using statistical software (SPSS ©). The database included thesis-related variables like gender, ethnicity, age, diagnosis of CD, number of CU traits (as per PCL: YV or file information), and age of CD onset. Some additional database variables included comorbid disorders, scores of assessment measures, IQ, family history (e.g., substance abuse and mental health), and offence history. File information reviewed included psychological/psychiatric reports, psychometric assessment measures, semi-structured interview reports with client and parent/guardian, pre-sentence reports, school records (e.g., grades, Individual Education Plans), police records, and social work reports.
Chapter IV: Results

Table 1 displays an identical distribution of the presence or absence of the CU specifier across gender. There was no attempt to equalize the distribution across groups; this unusual result may have been a chance result of the non-random sampling procedure applied to the females. Given the obvious lack of gender differences, it is legitimate to discuss the subject group as a single sample.

Table 1
*Frequency of Participants Meeting CU Specifier Criteria*

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<td>40%</td>
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</tbody>
</table>

Figure one displays the prevalence of Conduct Disorder and its subtypes. CD was present in 86% of the entire sample. The childhood onset and adolescent onset subtypes encompassed, respectively, 62% and 24% of conduct disordered individuals.

Figure 1. Prevalence of Conduct Disorder & Subtypes in the Entire Sample

The frequency of the CD subtypes and their relation to presentation of CU traits was examined. Participants with childhood onset CD that met the CU specifier were 83.3% compared to 16.6% of individuals with adolescent onset CD (Figure 2).
The prevalence of comorbid CD and ADHD with a CU presentation was also investigated. Of the participants with conduct disorder, 83.7% had a comorbid diagnosis of ADHD. Comorbid CD/ADHD participants that met CU specifier criteria were 90% (Figure 3).

The frequency of callous-unemotional traits varied differently depending on the individual. Table 2 identifies the frequency of CU traits based on presentation, diagnosis of CD, gender, and meeting CU specifier criteria. The most common trait present was “unconcerned about performance,” and a combination of three traits present was most prevalent for the entire sample at 28% (Figure 4).
Table 2

Dispersion of CU Traits in Participants

<table>
<thead>
<tr>
<th>Trait present</th>
<th>Trait not present</th>
<th>CD</th>
<th>No CD</th>
<th>Male</th>
<th>Female</th>
<th>Meets Specifier</th>
<th>Does Not Meet Specifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of remorse/guilt</td>
<td>28</td>
<td>22</td>
<td>28</td>
<td>0</td>
<td>14</td>
<td>14</td>
<td>28</td>
</tr>
<tr>
<td>Callous-Lack of empathy</td>
<td>25</td>
<td>25</td>
<td>24</td>
<td>1</td>
<td>13</td>
<td>12</td>
<td>24</td>
</tr>
<tr>
<td>Unconcerned about performance</td>
<td>39</td>
<td>11</td>
<td>36</td>
<td>3</td>
<td>20</td>
<td>19</td>
<td>26</td>
</tr>
<tr>
<td>Shallow or deficient affect</td>
<td>8</td>
<td>42</td>
<td>7</td>
<td>1</td>
<td>5</td>
<td>3</td>
<td>7</td>
</tr>
</tbody>
</table>

Figure 4. Percentage of CU Traits Present

The means and standard deviations of CU trait frequencies are presented in Table 3. The frequency of CU traits was subject to a two-way analysis of variance (ANOVA) having two levels of Conduct Disorder (yes, no) and two levels of gender (male, female). There was a significant main effect for diagnosis of Conduct Disorder, $F(1, 46) = 10.72, p = .002$. There was a non-significant main effect for gender, $F(1, 46) = .859$, and non-significant interaction effect between gender and conduct disorder, $F(1, 46) = .258$. Figure 5 displays the marginal means of CU traits present.
Table 3

Mean Scores of CU Traits Based on Gender and Diagnosis of Conduct Disorder

<table>
<thead>
<tr>
<th></th>
<th>Conduct Disorder</th>
<th>No Conduct Disorder</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>M</td>
</tr>
<tr>
<td>Male</td>
<td>21</td>
<td>2.29</td>
</tr>
<tr>
<td>Female</td>
<td>22</td>
<td>2.09</td>
</tr>
<tr>
<td>Total</td>
<td>43</td>
<td>2.19</td>
</tr>
</tbody>
</table>

Note. Total refers to the scores of the entire sample.

Figure 5. Estimated Marginal Means of CU Traits Present
Chapter V: Discussion

Summary

In the current sample, a substantial subset of both male and female young offenders met the criteria for the proposed CU specifier. Furthermore, participants diagnosed with CD displayed significantly more CU traits than participants without CD. An equal number of male and female young offenders both met and did not meet the CU subtype as per specifier guidelines. The two-way analysis of variance demonstrated a significant effect between diagnosis of conduct disorder and frequency of CU traits. The mean frequency of traits present for males and females was 2.29 (SD=1.15) and 2.09 (SD=1.15) respectively. The results also showed that participants with childhood onset CD displayed more CU traits than participants with adolescent onset CD. In addition, more participants diagnosed with comorbid CD/ADHD met the CU specifier subtype than participants without a comorbid diagnosis. Finally, males and females did not differ in terms of the frequency and distribution of CU traits. Within the limitations of the present study, there was no evidence that the CU specifier encapsulates different concepts based on gender. Overall, the thesis results provide support for the inclusion of a specifier in the diagnosis of Conduct Disorder in the DSM-V; however, strengths and limitations need to be discussed.

Strengths and Limitations

The major strength to the study is that identification of CU traits is based on a multi-method approach. Also, a Registered Psychologist determined the presence of three of four CU traits in participants using a valid and reliable assessment measure (PCL: YV) for a majority of the sample. Moreover, a multitude of other file information was available to determine the presence of the traits in absence of the PCL: YV.

One limitation reflects the external validity of the study. It is not known if the proposed results will generalize to other young offender populations. Threats to the external validity of the results include the use of a sample of convenience, and the lack of a measure of inter-rater reliability. Furthermore, some client files did not contain the quantity and quality of information beneficial for research purposes. For example, three participants who met CU specifier criteria did not have a completed PCL: YV on file. Determination of traits present for these cases relied on other file information and student clinical judgment. The “unconcerned about performance” trait was the most prevalent out of the four and could have been overestimated. The limitation is that this trait was more subjective in determining its presence than the other traits, and this could be the reason for its high frequency among participants.

Contribution to the Behavioural Psychology Field

The practical application of this thesis to the Behavioural Psychology field is that it provides more evidence for a CU subtype in the diagnosis of Conduct Disorder. The addition of a specifier to the new DSM-V has potential benefits for future treatment outcomes. Scheepers, Buitelaar, and Matthys (2011) discuss that a crucial step in designing plans for intervention is to define the target group. Furthermore, empirically-based treatments for conduct disorder include “parent management training, functional family treatment, or multiple system therapy focus on parents and social networks” (p. 91). Characteristics in the environment have an influential effect in Conduct Disordered youth without CU traits, and the interventions mentioned above may offer success to this group. However, Scheepers et al. suggest that environmental variables are less
influential in Conduct Disordered youth with CU traits. The development of new treatment methods may assist youth offenders who present the CU specifier subtype. Kahn, Frick, Youngstrom, Findling, and Kogos Youngstrom (2012) explain that interventions that are modified to suit the needs of youth with CU attributes can effectively decrease the antisocial behaviour displayed by the Conduct Disorder subgroup.

**Recommendations for Future Research**

One recommendation for future research is to examine the prevalence of CU traits among a larger, truly random sample of male and female young offenders, and the assessment of interrater reliability. The sample size of the current study was relatively small and yielded some interesting statistical results. A larger sample size could offer a better indication on the prevalence of CU traits in either incarcerated or community-based samples of adolescents, and potentially provide greater statistically significant results.

A second recommendation is that the inclusion of a broader and more sensitive range of assessment measures would give more certainty in determining if high CU males and females do in fact differ in the way the CU trait cluster is manifested.

A third recommendation is that the prevalence of CU traits should be investigated in a young offender population with respect to an ADHD diagnosis. This would help determine if ADHD has a contributing effect, or correlation with CU characteristics among young offenders independent of Conduct Disorder.

If the CU specifier’s addition to the DSM-V comes into fruition, another recommendation would be the development of an assessment measure to reliably identify CU traits. Latzman, Lilienfeld, Latzman, and Clark (2012) explain that the Inventory of Callous-Unemotional Traits (ICU; Frick, 2003) was developed from the CU facet on the Antisocial Process Screening Device to offer a more thorough assessment of CU attributes. The ICU has valid and reliable psychometric properties for identifying lack of remorse/guilt, shallow/deficient affect, and callous attributes. It is recommended that this measure be expanded or a new measure be developed to fully encapsulate all traits proposed for the specifier. As mentioned, the “unconcerned about performance” trait is quite subjective and is not reflected in the ICU. The creation of an “unconcerned about performance” domain could help provide a more objective and focused approach in identifying the traits’ presence in individuals. For example, the domain could specify school and work-related activities as it does in the trait description; however, “other important activities” should be more clearly defined. A reference of time should also be considered for identifying the presence of this trait (e.g., has been unconcerned about performance at school in the last 6 months).

Finally, if the CU specifier is included in the DSM-V, treatment programs targeting youth criminal recidivism should address the responsivity factors accompanying a CU presentation. For example, CU characteristics should be associated with a difficulty in making cognitive judgments of reinforcement and punishment cues.
REFERENCES


Appendix A: Proposed Criteria for the Callous-Unemotional Specifier in the DSM-V

Frick and Moffitt (2010) have recommended the criteria for the inclusion of a CU specifier in the diagnosis of Conduct Disorder in the DSM-V:

1. Meets full criteria for Conduct Disorder

2. Shows 2 or more of the following characteristics persistently over at least 12 months and in more than one relationship or setting. The clinician should consider multiple sources of information to determine the presence of these traits, such as whether the person self-reports them as being characteristic of him or herself and if they are reported by others (e.g., parents, other family members, teachers, peers) who have known the person for significant periods of time.

- Lack of remorse or guilt: Does not feel bad or guilty when he/she does something wrong (except if expressing remorse when caught and/or facing punishment.
- Callous-Lack of Empathy: Disregards and is unconcerned about the feelings of others.
- Unconcerned about Performance: Does not show concern about poor/problematic performance at school, work, or in other important activities.
- Shallow or Deficient Affect: Does not express feelings or show emotions to others, except in ways that seem shallow or superficial (e.g., emotions are not consistent with actions; can turn emotions “on” or “off” quickly) or when they are used for gain (e.g., to manipulate or intimidate others) (p. 3).
Appendix B: Consent Form

Consent to Disclose, Access, and Gather Information

I, ________________________________, have been referred to the Family Court Clinic (FCC) for an assessment by the Youth Courts. It has been explained to me that in the process of conducting an assessment the staff of the FCC will need to collect personal health information from a variety of collateral sources. I have given my consent for FCC to collect information for the purpose of a psychological assessment. I realize that the FCC will contact family members, guardians, and teachers for the purpose of acquiring information for the psychological assessment, and subsequent treatment recommendations, and I am agreeable to this. Further, I have given my permission to the FCC to contact and collect information, such as reports or case summaries from any of the following sources, if applicable, for the purpose of the assessment; schools, social service agencies (e.g., CAS and social workers), mental health professionals (e.g., psychologists and psychiatrists), and criminal justice personnel (e.g., crown attorney, police, and probation).

I understand that any information gathered by the FCC on my behalf will not be disclosed to other parties unless required by law. I am aware that this assessment will become property of the courts and be disclosed to myself or my legal representative and the crown attorney. It may be given to others at the discretion of the court. I recognize, however, that individuals receiving this information may need to share information with colleagues in the normal course of their duties. I have spoken with the psychologist or designate about issues of consent and disclosure and the limits placed on access to my file by outside parties. I have been explained the limits of confidentiality.

It is also understood that the information supplied and provided during the course of the assessment may be utilized for administrative reporting (e.g., Ministry), program evaluation, or similar research purposes. In such events, under no circumstances will my name be released or specifically identified.

The following restrictions have been requested:

_________________________________________________________________

Robert C. Rowe, Ph.D., C.Psych.  Signature  Date

_________________________________________________________________

Client (print)  Signature  Date