1998

Conduct disorder questionnaire

Dwayne L. Milam

CONDUCT DISORDER QUESTIONNAIRE

BY

DWAYNE L. MILAM

A THESIS SUBMITTED IN PARTIAL FULLFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF ARTS

IN

PAYCHOLOGY

DIAGNOSIS AND INTERVENTION

MARSHALL UNIVERSITY GRADUATE COLLEGE
1998

MASTER OF ARTS THESIS
OF
DWAYNE L. MILAM

APPROVED:

Thesis Committee
Major Professor: _____
Roger Mooney Ed.D.

_____
Debra Lilly Ph.D

_____
Stephen O'Keefe Ph.D.
Program Director/Psychology

_____
Mike Sullivan

MARSHALL UNIVERSITY GRADUATE COLLEGE

1998

Running head: CONDUCT DISORDER QUESTIONNAIRE

The Conduct Disorder Questionnaire

Dwayne L. Milam

Marshall University Graduate College

Abstract

Conduct disorder is characterized by a pattern of rule violation in which the rights of those associated with the individual and society are violated. Frequently there are many problems at home, school, and within the community. Without early diagnosis and treatment these problems escalate. Many different techniques and assessment tools have been used to identify these individuals. Most rely on collateral informants, such as parents and teachers. Others are time consuming or not developed to specifically identify conduct disorder. The Conduct Disorder Questionnaire was developed by the author to address these issues. The questionnaire is a brief, easily scored self-report measure to identify individuals with a conduct disorder diagnosis. Two samples of adolescents were used to evaluate the questionnaire. Two hundred and eighty-three individuals with no mental health diagnosis comprised the non-diagnosed group and 47 individuals with a conduct disorder diagnosis comprised the diagnostic group. The questionnaire had good split-half internal reliability (Alpha .91). Content validity was established by deriving the items from the DSM-IV for conduct disorder. Concurrent validity was established by correlating diagnostic group membership with scores on the Conduct Disorder Questionnaire. The analysis yielded a moderate significant correlation of .47. Limitations of the study and suggestions for future research are addressed.

Acknowledgements

I would like to express my sincere thanks and appreciation to all the professors who have assisted me in the development of my thesis. Dr. Roger Mooney, Dr. Debra Lilly, Dr. Stephen O'Keefe and Mike Sullivan. I would like to extend my special thanks to Dr. Roger Mooney and Dr. Debra Lilly for all the guidance and knowledge I have gained through them over the last several years.

I am very fortunate to have the support of my parents, Donald and Mary Ann. Over the years my parents have always encouraged, and supported me through all my academic endeavors. At times this has been very difficult financially for my parents, but their sacrifices made everything possible. I hope to repay them for their support someday.

I would like to acknowledge all the fellow graduate students with whom I've grown to know over the last several years. Without our mutual support and stimulating conversations, this degree would have been much more difficult to obtain. I hope our paths cross again.

To Jennifer, keep trying, in a few months you will be writing this.

Table of Contents

CONDUCT DISORDER QUESTIONNAIRE

Conduct disorder is characterized by a pervasive pattern of maladaptive behavior, violence, and violation of societal norms. Children and teens with the diagnosis often use both verbal and physical assaults to intimidate others. The rage characteristically seen may lead to cruelty to animals (Meyer, 1993), rape or homicide (Lock & Strauss, 1994; Adam, Kashani & Schulte, 1991). Other maladaptive behaviors include theft, frequent lying, property destruction, and fire setting (Schachar & Wachsmuth, 1990; Zoccolillo & Rogers, 1991). Impulsivity often leads to problems at home and school, and typically results in encounters with the legal system (American Psychiatric Association, 1994).

Individuals with the diagnosis of conduct disorder have little empathy or concern for the feelings and wishes of others (Short & Shapiro, 1993). According to Short and Shapiro, in ambiguous situations these individuals generally misperceive the intentions of others as hostile and respond aggressively. The individuals are often described as irritable and reckless, and as having a low tolerance to frustration. This irritability and recklessness, combined with a lack of age appropriate guilt and remorse, creates a great deal of turmoil in the home and community. When confronted these individuals often display feelings of sorrow and guilt in an attempt to avoid punishment (APA, 1994). The diagnosis of conduct disorder has been associated with early sexual behavior, excessive drinking, smoking, and drug abuse (Holcomb & Kashani, 1991; Lock & Strauss, 1994).

In both childhood and adulthood the diagnosis of conduct disorder has been associated with depressive symptomatology (Ketterlinus & Lamb, 1994). The depressive episodes often are substantial and result in significant social impairment. Ketterlinus and Lamb (1994) suggests that conduct problems give rise to environmentally mediated

psychosocial risks. Suicide attempts are relatively common, due to the impulsivity and the depressive episodes (Reid, Balis, Wicoff & Tomasovic, 1989).

The onset of conduct disorder generally occurs in late childhood or early adolescence. Children, however, as young as five may be diagnosed with the disorder. The diagnosis of conduct disorder is more common in males than in females. Male rates range from 6% to 16%, while female rates range from 2% to 9% (APA, 1994). Short and Shapiro (1993) contend that among youth the diagnosis of conduct disorder is one of the most frequently cited reasons for the seeking of mental health services. It is estimated that between 30% to 70% of adolescents who are hospitalized for psychiatric care are diagnosed with conduct disorder (Lock & Strauss, 1994). Early onset of the disorder is associated with a poor prognosis and an increased risk for the diagnoses of antisocial personality disorder or, substance-related disorders or both (Loeber, Green, Keenan & Lahey, 1995). Robins (1991) suggests that onset of the disorder is less frequent in mid to late adolescence which is, however, associated with a more positive prognosis.

The home environments are characterized by conflict and turmoil (Rutter, 1994). Parental interaction is often negative and the child's disruptive behavior is likely to be contributing to turmoil in the home (Short & Shapiro, 1993). As teens they often refuse to obey their parents. They may steal items from the home, stay out all night, and refuse to attend school. Parents often begin to fear the children and describe him or her as being out of control. Conflicts at school and with the legal system tend to aggravate the problems in the home (Holcomb & Kashani, 1991).

At school, the child is often disruptive in class and involved in fights with other children (Rutter, 1994). These children tend to disobey the rules at school which frequently leads to expulsion. They may engage in property destruction, stealing, drinking, or abuse drugs which create additional problems for the child (Short & Shapiro,

1993). The combination of these factors typically leads to encounters with the legal system and the child protective agencies.

Research suggests that 21% to 45% of children and 44% to 50% of adolescents with ADHD also meet the diagnostic criteria for conduct disorder (Abikoff & Klein, 1992). According to the authors, this may be due to the impulsive, disruptive behavior which is a characteristic of both disorders. It is, on the other hand, less common for ADHD children to violate age-appropriate societal norms (APA, 1994). Abikoff and Klein (1992) found that ratings by teachers of behaviors related to ADHD were accurate, but were greatly inflated for individuals with the diagnosis of conduct disorder.

Measures commonly used to identify children with conduct disorder include clinical interviews (e.g., Diagnostic Interview Schedule for Children) or parent/teacher rating scales (e.g., Conners Rating Scales, Child Behavior Checklist, and Revised Behavior Problem Checklist). Research indicates that parent reports and child reports on symptoms of conduct disorder rarely agree (Andrews, Garrison, Jackson, Addy & McKeown, 1993). Adam et al. (1991) found that the reliability of child report increases with age, whereas, the reliability of parental report decreases as the child matures.

Conduct disorder is a relatively common diagnosis for children and adolescents. Mental health professionals should become familiar with the diagnostic criteria for this diagnosis to aid in the identification of these individuals. Currently clinicians have few assessment instruments which are brief, easily scored or rely on self report. The Conduct Disorder Questionnaire was developed to address these needs.

In a pilot study (Appendix B) the author developed a 38 question questionnaire to assist in the identification of conduct disordered individuals. Group one subjects consisted of residents from a residential treatment facility with the diagnosis of conduct disorder. Group two individuals came from a rural high school in southern West Virginia. Results of the pilot study were used to refine the questionnaire. Questions two and 21

were eliminated from the current version of the questionnaire because previous results suggest that both groups endorsed these items uniformly. The study was then replicated on a group of subjects diagnosed with conduct disorder, and a group of individuals without this diagnosis.

Purpose of the Study

The purpose of this study was to evaluate the validity and reliability of the Conduct Disorder Questionnaire (Appendix C) in the identification of individuals with a diagnosis of conduct disorder. The Conduct Disorder Questionnaire is a brief screening instrument that is easily scored.

Method

Subjects

Three hundred and thirty children from Southern West Virginia. Two hundred and eighty-three students were in the no diagnosis group ($\bar{X}$=15.22). One hundred and seventy-nine students were female, while 104 were male in the group. These students were drawn from the Summers County middle school and high school students in rural southern West Virginia. All enrolled students were given the opportunity to participate in the study. Conduct disordered subjects consisted of residents of a rural treatment facility for adolescents (N=47) who were diagnosed with conduct disorder by a licensed psychologist employed by treatment center. They ranged in age from 12 to 17 ($\bar{x}$=15.23). Nineteen residents were female and 28 were male. All the residents of the treatment facility were given the opportunity to participate in the study.

Procedures

All students received a parental permission slip (Appendix D) which had to be signed, dated, and returned to their homeroom teacher in order to participate in the study. When this slip was returned, the subjects were given a 10 question survey which was used to collect demographic information (Appendix E) and information regarding any history of

psychiatric treatment (Appendix F). After completing the initial questionnaire the subjects were administered the 36 question Conduct Disorder Questionnaire. Due to concerns regarding confidentiality issues, students were instructed by their homeroom teacher to read each question carefully and to choose only one response for each item which best describes how they have felt within the past year. No names or other identifying information were placed on the questionnaire. When the tests were completed the homeroom teacher placed the tests in the principles office. The test information was collected by the author.

Conduct disorder subjects had information collected regarding their diagnoses, psychiatric treatment history, legal history, and demographic information from the case file. The Conduct Disorder Questionnaire was administered by the author. The subjects were instructed to read each question carefully and to mark the one response which best describes how they have generally felt within the past year. The subjects were given a no. 2 pencil with a good eraser and were instructed to begin. The completed tests were then collected and scored.

If the respondent marked two or more responses on the Conduct Disorder Questionnaire or if a question was left blank, the mean of the remaining variables was substituted for the variable score to compute questionnaire total. Information that was left blank on the demographic questionnaire was coded as missing data.

Instrument

The Conduct Disorder Questionnaire (Appendix C) is a brief, self-report instrument developed by the author to identify children with the diagnosis of conduct disorder. The questionnaire contains 36 statements that the examinee is to rate in terms of how often applies to him or her. Four responses were possible: never, sometimes, quite often, or almost always. Values were assigned to the items based on social desirability. Scores ranged from zero to three. High scores inferred conduct difficulties.

The questionnaire was based upon the criteria found in the DSM-IV. The 36 questions were drawn from four broad categories: aggressive conduct, nonaggressive conduct, deceitfulness or theft, and serious violation of rules. Questions one, eight, 12,14,16,18, 19, 26, 30, 32, 34 and 36 were drawn from the aggressive conduct category. Items seven, 17, 25 and 35 were drawn from the nonaggressive conduct questions. Questions two, nine, 11, 13, 15, 20, 27, 29, 31 and 33 were drawn from the deceitfulness or theft category. The questions that represent a serious violation of rules were; three, four, five, six, 10, 21, 22, 23, 24 and 28.

Scoring

The examinee marks one response for each question which is scored (from left to right) as zero, one, two or three for questions one, two, four, five, eight, 10, 12, 14, 16, 17, 18, 21, 23, 24, 25, 26, 27, 28, 31, 33, 35, and 36. For questions three, five, six, seven, nine, 11, 13, 15, 19, 20, 22, 29, 30, 32, and 34 the responses are scored (from right to left) as three, two, one, or zero. To simplify the scoring process a scoring template was developed (Appendix G). The template is placed over the test sheet, the value for the responses recorded, and the results are added together to obtain the test score.

Time Requirements

There was no time limit to complete the Conduct Disorder Questionnaire. Most examinees completed this test in approximately seven minutes. If an examinee did not complete the questionnaire in 15 minutes, the examiner assisted the individual in completing the questionnaire. The Conduct Disorder Questionnaire can be scored in less than five minutes with the use of the scoring template. The test, however, may be scored without the template, but this requires approximately 10 minutes.

RESULTS

Analysis of Demographic Data

Two hundred and eighty-three students participated in this study for the no diagnosis group. Twenty students were in the sixth grade, 25 in the seventh, 45 in grade eight, 55 in ninth, 41 in tenth, 65 were in grade 11 and 32 were twelfth graders. Forty-seven individuals comprised the conduct disorder group. One student was in grade six, two in grade seven, eight were eighth graders, 20 were in the ninth, 11 were in grade ten, four in grade 11, and one individual was a twelfth grader. One hundred and eighty students were Caucasian, 37 were Native Americans, 23 were African Americans, four were Hispanic, 35 were classified as other, and two students did not respond to this question for non diagnosed individuals. However, it is unlikely that 37 students were Native Americans. For the conduct-disordered group, 30 children were Caucasian, seven were Native Americans, and five were African Americans. One hundred and ninety-three non-diagnosed students reported the families primary source of income was from the father's employment, 57 were dependent on the mother's employment, and 14 recorded no response. Sixty-six students reported the mother's job as a secondary source of income, and 210 students reported no response on the item. In contrast, diagnosed youth reported the primary source of family income was the father's employment for 16 subjects, 14 children failed to respond to this question, and nine group members indicated the mother was the primary source of income. As a secondary income source, 10 participants indicated the mother was also employed, while 32 individuals did not respond to the question.

Two hundred and eight non-diagnosed students reported the parents were currently married, 55 were divorced, 12 were separated, one was widowed, and seven students recorded no response. Of the 47 members of the conduct disorder group, 13 were

married, 16 came from divorced families, eight were separated, two were widows, and eight individuals failed to respond to the question. Interestingly, Chi Square analysis of the relationship between parent marital status and the diagnosis of conduct disorder was significant (x^2=37.56, p<.0001).

On the Conduct Disorder Questionnaire, individuals without the diagnosis of conduct disorder obtained a mean score of 31.05 and a standard deviation of 14.44. Children diagnosed with conduct disorder obtained a mean score of 49.89 and a standard deviation of 15.96. The independent t-test analysis between the two groups "conduct disordered and non-diagnosed" suggests a significant difference on the Conduct Disorder Questionnaire "t=-7.59, p<.001".

Reliability

The Spearman Brown correlation coefficient was .86 and the Alpha Coefficient was .91. These measures suggest the Conduct Disorder Questionnaire has good internal reliability.

Validity

The Conduct Disorder Questionnaire has content validity in that its items were derived from the criteria for diagnosing conduct disorder from the DSM-IV. Concurrent validity was assessed by correlating the scores on the Conduct Disorder Questionnaire with the subject type (conduct disordered subjects vs. non-diagnosed subjects). The results of the analysis yield a score of .47 (p<.0001). This suggests there is a moderate significant relationship between the Conduct Disorder Questionnaire scores and the diagnosis of conduct disorder.

Criteria for Establishing A Conduct Disorder Diagnosis

In a pilot study (Appendix B) conducted by the author, a cut-off score of 33 was used to identify individuals with a conduct disorder diagnosis. In the present study this score would result in 83% of the conduct disorder group being properly identified (hits) with

this diagnosis, and 17% would not be identified (false negative). For non-diagnosed

Conduct Disorder Questionnaire

individuals, this score would result in 61.3% of the sample not being identified (hits) and 39.7% being improperly identified as having conduct disorder (false positive). The number of false positives using a cut-off score of 33 was unacceptable and was not used to identify conduct disordered subjects for this study.

DISCUSSION

The results of the study suggests that the Conduct Disorder Questionnaire has good internal reliability and adequate validity. The questionnaire addresses several weaknesses of other instruments for assessing the presence of conduct disorder. It has relatively brief administration and scoring times when compared to other measures (e.g., MMPI-A, Conners, etc.). Many tests such as the MMPI-A require the individual to remain at task for one and one-half to two hours and require much more time to score. Instruments such as parent/teacher rating scales also require more time to score and may be delayed by the examiner distributing, and then waiting for the scoring sheets to be returned.

An additional strength of this questionnaire is the behaviors of interest are reported by the individual, as opposed to collateral informants. The accuracy of parental report has been shown to decrease as the child matures. This is possibly due to the individual spending more time with peers, and less time with family members. Other concerns related to collateral informants focus on different levels of tolerance to the problem behavior, and various situational factors that may also be related to the behavior. Parents and teachers may potentially be biased regarding the individual, or may be experiencing their own mental health problems. Conduct disorder has been associated with family turmoil, poor parenting skills and antisocial personality traits. The present research results found parental status had a significant relationship in predicting conduct disorder. Children from single parent families were more likely to receive the diagnosis of conduct

disorder than were children of intact families.

At present a cut-off score to adequately differentiate the conduct disordered from the non-conduct disordered could not be established. Content validity was established by deriving items from DSM-IV criteria for the diagnosis of conduct disorder. The concurrent validity coefficient ($r=.47$) reflected a positive moderate significant relationship between diagnosis and scores on the questionnaire. These findings could have occurred due to some individuals in the diagnostic group having minimal symptoms of conduct disorder or some individuals in the non-diagnosed group having significant conduct disordered symptoms who have not presented to professionals for labeling. It would seem that future research on the questionnaire employ independent raters to reliably establish the diagnosis or absence of diagnosis in subjects.

In conclusion, the results provide encouraging results for the usefulness of the Conduct Disorder Questionnaire as a screening instrument. Future research should attempt to use subjects on whom a reliable diagnosis of conduct disorder has been established. Also, specific cut off scores need to be addressed to establish the diagnosis and degree of the symptoms present. Due to the brief nature of the Conduct Disorder Questionnaire, it would be appropriate to use with other assessment tools in children's test batteries, or to be used with other self-report instruments that rely on collateral informants to assist in the diagnosis of conduct disorder.

References

Abikoff, H., & Klein, R. G. (1992). Attention-deficit hyperactivity and conduct disorder: Comorbidity and implications for treatment. Journal of Consulting and Clinical Psychology, 60 (6), 881-892.

Adam, B. S., Kashani, J. H., & Schulte, E. J. (1991). The classification of conduct disorders. Child Psychiatry and Human Development, 22 (1), 3-16.

American Psychiatric Association. (1994). Diagnostic and statistical manual of mental disorders (4th ed.). Washington, DC: Author.

Andrews, V. C., Garrison, C. Z., Jackson, A. B., Addy, C. L., & McKeown, R. E. (1993). Mother-adolescent agreement on the symptoms and diagnoses of adolescent depression and conduct disorders. Journal of the American Academy of Child and Adolescent Psychiatry, 32 (4), 731-738.

Holcomb, W. R., & Kashani, J. H. (1991). Personality characteristics of a community sample of adolescents with conduct disorders. Adolescence, 26 (103), 579-588.

Ketterlinus, R. D., & Lamb, M. E. (1994). Adolescent problem behaviors: Issues and research. Hillsdale, NJ: Lawrence Erlbaum Associates.

Lock, J., & Strauss, G. D. (1994). Psychiatric hospitalization of adolescents for conduct disorder. Hospital and Community Psychiatry, 45 (9), 925-928.

Loeber, R., Green, S. M., Keenan, K., & Lahey, B. B. (1995). Which boys will fare worse? Early predictors of the onset of conduct disorder in a six-year longitudinal study. Journal of the American Academy of Child and Adolescent Psychiatry, 34 (4), 499-509.

Meyer, R. G. (1993). The clinicians handbook: Integrated diagnostics, assessment, and intervention in adult and adolescent psychopathology (3rd ed.). Needham Heights, MA: Allyn & Bacon.

Reid, W. H., Balis, G. U., Wicoff, J. S., & Tomasovic, J. J. (1989). The treatment of psychiatric disorders (Rev. ed.). New York, NY: Brunner & Mazel.

Robins, L. N. (1991). Conduct disorder. Journal of Child Psychology and Psychiatry, 32 (1), 193-212.

Rutter, M. (1994). Family discord and conduct disorder: Cause, consequence, or correlate? Journal of Family Psychology, 8 (2), 170-186.

Schachar, R., & Wachsmuth, R. (1990). Oppositional disorder in children: A validation study comparing conduct disorder, oppositional disorder and normal children. Journal of Child Psychology and Psychiatry, 31 (7), 1089-1103.

Short, R. J., & Shapiro, S. K. (1993). Conduct disorders: A framework for understanding and intervention in schools and communities. School Psychology Review, 22 (3), 362-375.

Zoccolillo, M., & Rogers, K. (1991). Characteristics and outcome of hospitalized adolescent girls with conduct disorder. Journal of the American Academy of Child and Adolescent Psychiatry, 30 (6), 973-981.

Appendix A

Literature Review

Conduct disorder significantly impacts the individual, family, school, community, and society. An individual may be diagnosed with this disorder in the early childhood years, or as a teenager, beyond this period a diagnosis of antisocial personality disorder may be more appropriate. Frequently there is a pervasive pattern of violating the rights of others, and serious rule violation. Generally, individuals with a diagnosis of conduct disorder have poor insight into their behaviors, frequently lie, and exhibit a lack of empathy for those around them. As an individual matures this may result in severe disruptions in many areas of the person's life. Often there are severe problems encountered in the home and in the school. This frequently leads to arguments, physical violence, and expulsion from school, or the home. The individuals may severely impact the community in which they reside by engaging in vandalism, theft, robbery, or rape. Substance abuse-dependence may also occur which further impacts society. As a result of these behaviors there may be frequent encounters with the legal system and possible incarceration. Due to the wide ranging problems exhibited by someone diagnosed with conduct disorder, it is necessary to identify and treat individuals as soon as possible to reduce the many negative effects that may result from a poor diagnosis or the inability to receive appropriate treatment. This may create problems for the mental health practitioner in the areas of assessment and diagnosis. Although there are a variety of assessment tools available for clinicians, most rely on parental or teacher report to obtain information relevant to the diagnosis of conduct disorder. Concerns with these methods include the reliance on collateral informants which may be potentially biased or experiencing their own mental health problems to gain information, as opposed to an individual focus which allows the individual to report the various problems they may be encountering. The review of literature will focus on the diagnosis of conduct disorder, the impact of the family and the influence of gender on the diagnosis of conduct disorder, and the methods

of assessment to identify conduct disorder.

The Diagnosis of Conduct Disorder

According to the DSM-IV (1994), conduct disorder is classified on Axis I and is generally diagnosed in infancy, childhood or adolescence, although the diagnosis may persist beyond the teenage years. There is a persistent pattern of behavior in which the individual violates the rights of others and disregards age-appropriate societal norms. The behaviors are divided into four broad categories: (a) aggression or cruelty to people and animals, (b) property destruction, (c) deceitfulness or theft, and (d) serious violation of rules. In order for individuals to be diagnosed with conduct disorder, three or more of the 15 criterion measures (APA, 1994) must be present during the last year, and at least one symptom must be present within the last six months. These problem behaviors must result in a significant impairment of social, academic, or occupational functioning. Additional diagnostic specifiers include childhood or adolescent onset, and severity levels of mild, moderate, or severe (Flannigan & Flannigan, 1998). Individuals who exhibit the symptoms of conduct disorder tend to exhibit a persistent pattern of social maladjustment (Rutter, Harrington, Pickles, Quinton & Pickles, 1994). The effects of the delinquent behaviors associated with conduct disorder constitute a major societal problem, and are frequent reasons for mental health referrals (Flannigan & Flannigan, 1998). Although minors represent only about 14% of the population of the United States, they account for at least 34% of violent and other serious crimes (Holcomb & Kashani, 1991). Court records indicate that approximately 50% to 70% of youth who are arrested in childhood or adolescence will later be arrested for various crimes in adulthood, and one or two conduct disorder symptoms in childhood tend to be more predictive of negative adult outcomes (Lahey et al., 1994). An early onset of conduct disorder symptoms is predictive of the persistence of symptoms over time, and is found to be one

of the best predictors in identifying those individuals who will be chronic offenders (Loeber, Green, Keenan & Lahey, 1995).

Mental health practitioners find that comorbidity is relatively common in cases of conduct disorder (Flannigan & Flannigan, 1998). Some estimates suggest that conduct disorder and attention-deficit hyperactivity disorder (ADHD) exist in 45% to 70% of diagnosed cases. In the clinic referred population, 84% to 96% of youth also satisfy the diagnostic criteria for oppositional defiant disorder. The diagnosis of conduct disorder takes precedence over an oppositional defiant diagnosis. Substance abuse and dependence are frequently comorbid with conduct disorder. Children who are diagnosed with conduct disorder are more likely to abuse various illegal substances, and to later suffer from alcoholism (Short & Shapiro, 1993). Some estimates of depression and conduct disorder indicate that 15% to 35% of children meet the criteria for both disorders. Additionally, over 15% of children with anxiety disorders may meet the diagnostic criteria for conduct disorder. Sorting-out possible comorbid conditions may be time consuming, but leads to accurate diagnosis and effective treatment planning (Flannigan & Flannigan, 1998).

When treating comorbid cases, clients may be exacerbating the various conduct disorder symptoms. This is due to the belief that conduct disorder is a condition that is difficult to treat, especially in an outpatient setting. Frequently, significant improvements of conduct disorder symptoms occur after treatment is received for depression, ADHD, or substance abuse/dependence symptoms (Flannigan & Flannigan, 1998).

The distinction between oppositional defiant disorder and conduct disorder are potentially confusing distinctions for the mental health practitioner. Both are related to lower economic status and poor parenting skills. Antisocial behavior is often exhibited by the parents (Flannigan & Flannigan, 1998), especially in the area of parental substance

abuse (Loeber et al., 1995), however, conduct disorder is more strongly related to these correlates when compared to oppositional defiant disorder. Some clinicians believe that oppositional defiant disorder should not be considered a separate diagnostic category at all, but represents a less severe form of conduct disorder (Flannigan & Flannigan, 1998). Many youth who meet the criteria for conduct disorder prior to puberty also meet the criteria for oppositional defiant disorder at the age of four to six (Lahey et al., 1994; Rutter, Harrington, Quinton & Pickles, 1994). Some research suggests that many children and adolescents who are diagnosed as being oppositional defiant do not develop conduct disorder at a later point in their lives, and some individuals have no history of oppositional defiant or conduct disorder until adolescence (Lahey et al., 1994).

Like many other psychological disorders, conduct disorder can be surprisingly difficult to diagnose if a particular individual seems to meet the diagnostic criteria for the disorder. Clients who engage in behaviors associated with delinquency are frequently deceitful (Flannigan & Flannigan, 1998). They describe themselves as being very critical, harsh, and disrespectful to those around them. The youth tend to seek-out unpredictable situations, and consider themselves to be moody and pessimistic. There is a lack of confidence in school and a feeling of dissatisfaction with their family environment. Often children with the disorder have problems in the area of language abilities, and score lower on intelligence tests when compared to their peers. Additionally the youth tend to be less fearful or anxious in threatening situations, and generally have a poor understanding of their behavior and the resulting consequences (Holcomb & Kashani, 1991). Aggressive children seem to process social information in a biased manner. Often relevant social cues are perceived as hostile and the individual tends to have poor problem solving strategies. As a result these behaviors tend to elicit negative responses from those who interact with the child (Rutter, Harrington, Quinton & Pickles, 1994).

This creates problems for the mental health professional in obtaining relevant information, since the individual often lies and minimizes or denies engaging in various forms of inappropriate behavior. In many instances these individuals become very good at lying and manipulating others. Conduct disordered clients frequently have difficulty accepting responsibility for their actions, and often blame others for various social, legal, or academic difficulties (Flannigan & Flannigan, 1998).

Due to the difficulty in obtaining accurate information from the individual, the mental health professional must rely on collateral informants (Flannigan & Flannigan, 1998). Frequently, parents and teachers may be uninformed, or misinformed regarding the nature and extent of the youth's problem behavior due to strained relationships, which is a characteristic of the disorder. Research has shown that parents and teachers often demonstrate poor interrater reliability when identifying various problem behaviors. The DSM-IV cautions the diagnostician to be aware that the informant's knowledge regarding the individual's behavioral problems may be limited due to poor supervision, or secretiveness on the child's part (Flannigan & Flannigan, 1998).

Mental health practitioners must also be aware of the strong personal, or emotional reactions that may occur when treating children and teens with conduct disorder (Flannigan & Flannigan, 1998). The clinician must be aware of transference and countertransference when assessing and treating individuals with conduct disorder due to the frequency of emotionally charged encounters. Clients who have engaged in aggressive behaviors may induce retaliatory feelings or impulses on behalf of the mental health practitioner. Clinicians may impulsively label a client with conduct disorder when a less severe diagnosis may be more appropriate. In some instances the reverse may be true where the diagnostician may underestimate or minimize the client's behavioral problems.

Parents and children rarely agree on the nature or severity of the psychological problems (Weissman, Wickramaratne, Warner, Prusoff, Merikangas & Gammon, 1987). These findings are reported in a variety of treatment settings, and are consistently found with a variety of symptom scales and diagnostic interviews, such as the Diagnostic Interview for Children and Adolescents and the Diagnostic Interview Schedule for Children (Andrews, Garrison, Jackson, Addy & McKeeown, 1993). Generally, agreement between the mother and the child's psychological disorders are poor as to the degree and severity of the problems (Weissman et al., 1987). Children often report a greater number of symptoms than the parents, while adolescents report more socialized aggressive episodes than the mothers observe. According to Andrews, et al. (1993) this may be partially due to the adolescent spending more time away from the home, and increasing the amount of time they spend with their friends.

The Impact of the Family

Research indicates that misconduct increases in response to the degree of family conflict and poor social conditions (Flannigan & Flannigan, 1998). In some cases it may be inappropriate to diagnose individuals with conduct disorder due to various cultural or situational factors which may be maintaining or exacerbating the behavioral patterns associated with the misconduct.

Individuals diagnosed with conduct disorder often experience a myriad of negative family interactions and environmental influences. Often there is a great deal of family stress, conflict, harsh or inconsistent discipline, physical or sexual abuse, drug use, and poor child supervision (Flannigan & Flannigan, 1998). Incidents of physical aggression, resistance to parental discipline, or inconsistent discipline has been associated with the development of conduct disorder (Loeber et al., 1995). A turmoiltous family atmosphere may directly lead to various forms of adjustment disorders with conduct

disorder symptomology, while societal factors may maintain and perpetuate the negative behavioral patterns according to Flannigan and Flannigan. As a result, mental health professionals must examine the family dynamics that may be contributing to conduct disorder symptoms as well as any cultural factors that could further contribute to behavioral problems.

Stressful life experiences increase the likelihood of conduct problems and are predictive of increased problems over a two-year period. The families' financial situation affect children as well, especially if there is a loss of income (Flannigan & Flannigan, 1998). Conduct disorder is found to be more common in children from lower social economical status families (Lahey et al., 1995). This may be due to changes in parental mood, parental conflict, or a decrease in parenting quality. Divorce is often accompanied by severe disruptions in family routines, and has been found to increase conduct problems in boys. Parental legal problems can result in inconsistent parenting, and produce a negative role model for children (Flannigan & Flannigan, 1998). Individuals who are diagnosed with conduct disorder are more likely to have a parent who has committed a criminal offense, been in prison, or who is diagnosed with antisocial personality disorder (Lahey et al., 1995). This may foster behaviors and values which contribute to adolescent behavioral problems (Flannigan & Flannigan, 1998). Conduct disordered youth generally express a great deal of concern about the lack of support and poor nurturance within the family (Holcomb & Kashani, 1991). Parents of children with conduct disorder are often highly inconsistent and are very punitive when compared to parents of children who do not have the diagnosis (Short & Shapiro, 1993). Effective parenting by at least one family member tends to moderate the behavior of individuals who are considered at risk (Gest, Neeman, Hubbard, Masten & Tellegen, 1993).

The Influence of Gender

Regarding gender differences, girls who display conduct disorder symptoms are more likely to do so in a nonconfrontational manner, as opposed to boys who are more confrontational (Flannigan & Flannigan, 1998) and exhibit more instances of physical aggression (Loeber et al., 1995). Among girls with a conduct disorder diagnosis, it is relatively common to find higher rates of depression and anxiety disorders when compared to other groups (Zoccolillo & Rogers, 1991). Females tend to lie more, run away, use illegal substances, engage in prostitution, and be truant when compared to males (Flannigan & Flannigan, 1998). Late onset is somewhat more common in girls, and is often accompanied by precocious sexual behavior and drug use (Robins, 1991). Approximately 46% of minority female adolescents who attempted suicide also met the diagnostic criteria for conduct disorder. These findings suggest there is a strong internalizing component to conduct disorder in females (Flannigan & Flannigan, 1998).

The Assessment of Conduct Disorder

In assessing conduct disorder, the mental health professional must be aware clients may skillfully misrepresent their situation, parents and teachers may be unaware of the extent of the individuals problems, transference or countertransference are potential concerns, and comorbidity may complicate diagnostic issues. To systematically address the issues it is often beneficial to adhere to certain assessment principles (Flannigan & Flannigan, 1998).

One must not only be familiar with the various DSM-IV criteria for conduct disorder, but also the many other disorders as well. In some instances it may be useful to develop a checklist based on the diagnostic criteria for use during the interview process (Flannigan & Flannigan, 1998). Accurate assessment requires multiple methods, often by different raters in a number of settings, but not in others. The symptoms of conduct

disorder may be secondary to a more treatable diagnosis. The mental health practitioner must be aware of other disorders associated with, or similar to conduct disorder; such as adjustment disorder, ADHD, depression, oppositional defiant disorder, substance abuse/dependence, and post-traumatic stress disorder. Additionally, as an individual matures a diagnosis of antisocial personality disorder may be more appropriate. Approximately 40% of boys and 35% of girls who meet the diagnostic criteria for conduct disorder as youth later meet the criteria for antisocial personality disorder as adults (Lahey et al., 1995). A diagnosis of conduct disorder is generally predictive of a poor treatment outcome regardless of the presence of other psychological disorders (Zoccolillo & Rogers, 1991).

The diagnostician needs to obtain an accurate history of the client and the current problems (Flannigan & Flannigan, 1998). Often these individuals have an extensive history of delinquent behavior in which the mental health professional may not be aware or the client may choose to minimize the severity of the problems. Initially, some clients may openly appear defiant and argumentative due to the perception of hostile intent from others. Therefore, a single clinical interview may not be sufficient to obtain adequate personal or historical information to render an accurate conduct disorder diagnosis. It is important, according to the author, to gather potentially relevant information from the school system, parents, probation officers, or other informants.

The Methods and Procedures to Identify Conduct Disorder

There are many methods and assessment procedures that clinicians use to identify and evaluate conduct disorder symptoms. Structured interviewing techniques are rigorous and designed exclusively to determine the presence, or absence of DSM-IV criteria. Despite the specific guidelines used in the techniques, however, reliability is often found to be low, the length of time required may also be prohibitive, and there are problems

related to counselor freedom during the interview which may make it difficult to establish an appropriate level of rapport during the assessment. Some of the more common structured interviews used are the Diagnostic Interview Schedule for Children (DISC-R), and the Child Assessment Schedule (CAS) (Flannigan & Flannigan, 1998). The interviews are designed to cover the specific diagnostic criteria in the DSM-IV. The interviews specify the wording of all questions, but allow for the probing of ambiguous responses. According to Robins (1991), there is some question, however, as to how well an informant a young child may be.

The assessment of child psychopathology has increasingly relied on multiple sources of information, such as the mother, father, teachers, and the child to obtain an accurate measure of the individuals functional level (Tarullo, Richardson, Yarrow & Martinez, 1995). According to the authors, the reliance on parental reporting has been criticized due to problems related to validity. Parental psychiatric problems and other misperceptions of the mother or father significantly effect the validity of the assessment. When discrepancies between parent-child or mother-father report arise, it is imperative to examine the possible reasons for these differences. Individual perspectives are likely to vary due to differences in the tolerance to the behavior, and there are tendencies for the parent to report the symptoms which are most troublesome.

According to Tarullo, Richardson, Yarrow and Martinez (1995) there is a tendency for the mental health practitioner to primarily rely on the mother's report during the assessment process. This may be particularly problematic if the parent has mental health problems. Mothers who are depressed have a tendency to distort, or have exaggerated perceptions of the child's behavior. Children of depressed mothers also have higher rates of problems when compared to mothers who have no psychological diagnosis. Parents tend to be more likely to report their child's behavioral problems as opposed to the child

who has a tendency to report various fears, anxieties, psychotic symptoms, or covert antisocial behaviors. Generally, parents are more aware of the children when they are younger, and both parents have similar perceptions of various childhood concerns prior to adolescence. The findings suggest that child report increases with age (Tarullo et al., 1995), as opposed to parental report which decreases as the child matures. According to Tarullo et al. (1995) adolescents have an increased tendency to socialize and confide in their peers, and therefore, parents have a decreased opportunity.

Flannigan and Flannigan (1998) stated that nondirective interviewing techniques are used by counselors to obtain information about the individual's behavior by relying on a variety of sources for information. Before the interview process begins, the clinician obtains information from parents, teachers, and possibly the court system to assist in determining the extent of the client's problem behavior. There is the potential for the clinician to become biased before the interview has been completed.

Attachment-oriented interviewing, on the other hand, involves assessing the client's attachment to various caretakers, both current and to gain potentially relevant information about the individual's opportunity, ability to form, and the ability to maintain significant attachments. According to Flannigan and Flannigan (1998) conduct disordered individuals lack the opportunity to form a significant relationship to a secure, predictable caregiver. Individuals with the diagnosis have a tendency to interact with authority figures in a disrespectful manner, which is suggestive of a lack of empathy (Flannigan & Flannigan, 1998).

Interview techniques which are more directive in approach often make it difficult to obtain relevant information regarding the individuals morality and values (Flannigan & Flannigan, 1998). Youth that are conduct disordered are likely to present themselves as morally upstanding individuals who have been mistreated by various adults in their lives.

According to the authors in some instances this may be true, however, sophisticated individuals use the techniques to avoid punishment, and often perceive mistreatment when treated fairly.

Feigning naiveté on the part of the mental health professional during the interview process allows the clinician to directly observe how the individual will intentionally misrepresent, or lie about relevant clinical information (Flannigan & Flannigan, 1998). Youth often will deceive various individuals through minimization, denial, or untruthfulness. According to the authors, clients who are skillful in story telling will frequently lie when telling the truth would be easier. Clients who exhibit the more severe forms of conduct disorder will often completely deny, or respond with indignation when confronted regarding the discrepancies. Flannigan and Flannigan state that feigning naiveté allows the interviewer to determine the degree and style of the lies, which may prove useful when the deceit is confronted by the clinician.

A variety of self-report questionnaires are available to the clinician to assess conduct disorder (Flannigan & Flannigan, 1998). Some of the more common self-report questionnaires are the Minnesota Multiphasic Personality Inventory, Adolescent Form (MMPI-A), Adolescent Antisocial Behavioral Checklist, the Child Behavior Checklist (CBCL) and the Behavior Assessment Scales for Children (BASC).

The Minnesota Multiphasic Personality Inventory-Adolescent (MMPI-A) is a revision of the MMPI, which is designed to assess adolescents ranging in age from age 14 to 18 on various patterns of personality and emotional disorders (Claiborn & Lanyon, 1995). The test consists of 478 items, which include 16 Basic Scales, 10 Clinical Scales, 28 Harris-Lingo Subscales, 3 Si Subscales, 15 Adolescent Content Scales, and six Supplementary Scales. The clinical sample of subjects were largely drawn from various alcohol and drug treatment centers in the Minneapolis area. The normative sample of

participants were obtained through various schools from eight states on the east coast of the United States. Criticisms of the MMPI-A focus on the basic clinical scales that are designed to measure various psychopathological constructs using an empirical criterion method. These scales vary widely in internal consistency. Of the 40 alpha coefficients, five range from .35 to .53, 18 range from .55 to .68 and 17 range from .75 to .91. Intercorrelations among the clinical scale of the normative sample vary widely, with scores ranging from .00 to .85, which indicates a considerable overlap in what the scales measure. The normative sample is also somewhat skewed in the direction of students from both a higher educational and occupational background. Other concerns regarding the MMPI-A relate to the somewhat archaic labels of the clinical scales, such a Psychopathic Deviate, or interpretive problems related to the Masculinity-Femininity Scale and how the scores contribute to the understanding of the individuals personality. Additionally the length of the test may be problematic for some individuals.

The Child Behavior Checklist (CBCL) is designed to assess the social competencies and behavior problems of children ranging in age from four to 16 (Mooney, Achenbach & Edelbrock, 1984). Information related to the child's behavior is collected from the parents, or other individuals who know the child well. There are two sections that measure the amount, and quality of the child's involvement in various activities such as sports, friendships, family involvement, and school. The behavior problem section lists 118 problem areas, and the rater then marks how often the behavior has occurred in the past six months on a three-point scale. Additional space is provided for the rater to list various problems, and the frequency of their occurrence for areas that are not included in the CBCL. All responses require a considerable amount of judgment on the part of the raters, and some areas such as unusually loud may be quite subjective. The CBCL is designed to provide an overview of the child's competencies in a variety of areas, and is

not intended to supplant a thorough case history or analysis. While easy to administer and score, the CBCL requires some familiarity with statistics and high scores on either the social competence or behavior problems section do not necessarily correspond to a diagnostic label. Although the CBCL has excellent interparent reliability (.985 to .978), there are some concerns if a child's behavior can be accurately reported on a three-point scale. There is also some question as to the accuracy of whether the parental report is reflective of the child's behavior, or problems that the parent may be experiencing. The mental health practitioner is cautioned that the CBCL is designed to identify pathology, and some children may be in a broad band of healthy functioning. The CBCL focuses on the individuals' pathology and may neglect important family dynamics that contribute to, or exacerbate the child's problems.

The Behavior Assessment System for Children (BASC) is a multimethod, multinformant, and multidimensional instrument which is used to assess adaptive and maladaptive behavior patterns in children who range in age from four to 18 years of age (Sandoval, Witt & Jones, 1998). The BASC includes separate teacher rating scale (TRS), parent rating scales (PRS), a developmental history section (SDH) and an observation protocol portion (SRS). By combining information from a variety of sources, the BASC attempts to provide a multidimensional understanding of the individual. The criticisms of the instrument concern the ratings reported by both the child and the parent. Parents tend to produce only moderate correlations with median values of .46 for preschool groups, .57 for child groups and .67 for adolescents. Children's self-reports also tend to disagree with parents, teachers, and other child self-report scales according to the authors. The forced-choice format may also present problems because behavior varies across settings, and may reflect the informant's standards or tolerance to the behavior. The reading and vocabulary level may present problems for younger children, or individuals with

limitations in this area. No norms are provided for the SDH and SOS portions of the BASC, but rely on the users' professional training for interpretation. Minority children are over represented at younger ages, and white males tend to be over represented in the clinic norm group. Impara and Plake stated that although there are some concerns regarding the BASC, it is one of the first assessments to rely on multiple informants, and addresses both adaptive as well as maladaptive behavior.

A large number of parent-teacher rating scales are also available to assess possible conduct disordered youth (Flannigan & Flannigan, 1998). The Conner's Parent/Teacher Rating Scale and the Eyberg Child Behavior Inventory (ECBI) are among the most common.

According to Martens and Stinnett (1992) the Conner's Rating Scales are a widely used assessment tool which is designed to measure a child's behavior in both the home and school. The parent and teacher of the child complete a separate scoring sheet that requires the rater to respond to a variety of questions on a four-point scale. The scores are then used to assist in the determination of various behavioral, or attentional problems such as, conduct disorder or attention deficit hyperactivity disorder. Several versions of the test are available to the clinician, and differ in the number of questions available to the rater. According to the author, a concern regarding this instrument focus on the norms developed for the various forms of the Conner's Rating Scales. Minority groups are poorly represented, in some instances as few as 11 individuals are used to base norms and many of the norms are based on Canadian subjects. Interrater reliability between parents and teachers range from .23 to .94, with lower values being obtained from parent-teacher comparisons. Other concerns focus on the test manual, and the combining of different versions of different scales to support the psychometric properties of the Conner's Scales. Appropriate uses for the instrument include use as a screening tool, or as an aid to be

used with other assessments to render a diagnosis.

The Eyberg Child Behavior Inventory (ECBI) is a 36 item questionnaire which is used to rate both conduct problems, and acting out behavior in children ranging in age from two to 16 (Reed, 1985). Each question is rated on two scales by parental report. The Intensity Scale rates the occurrence of conduct problems with scores ranging from one (never occurs) to seven (always occurs), while the Problem Scale is used to identify various behaviors by recording a yes (1) or no (0) response. Reliability estimates were derived from 512 children ranging in age from two to 12 who were referred to a pediatric clinic. Correlations were calculated for both individual and scale totals which ranged from .31 to .73 for the Intensity Scale and .35 to .69 for the Problem Scale. Test-retest reliabilities were calculated on a small sample of 17 children three weeks later, and scores ranged from .49 to .90. Validity scores are based on two samples. A group of children ranging in age from two to seven identified as having conduct problems (n=43), clinic control (n=20) and nonclinic children (n=22) were found to exhibit significant differences in scale means. For the pediatric group, who ranged in age from two to 12, the correlation between the Intensity and Problem Scales were found to be .75 ($p<.001$) while item intercorrelations averaged .31 for the intensity ratings and .29 for the problem ratings. According to the author, criticisms of the ECBI focus on the small sample size of both test-retest participants and validity groups. The generalizability of benchmark scores may also be limited due to data collected from minority and low-income families. Reliability and validity data for individuals older than age 12 are currently unavailable. Reed (1985) states the ECBI is to be used as a descriptive measure of children with conduct disorder, but not as a screening instrument or to evaluate children who have problems in multiple areas. Projective assessment techniques provide counselors with supplemental information which may potentially prove relevant to diagnosing conduct

disorder (Flannigan & Flannigan, 1998). Although the approaches may be useful, the results may be difficult to interpret and require specialized training. Projective instruments are considered to have questionable reliability and validity.

Current assessment techniques for conduct disorder focus on collateral informants to gather information on the individual. There are a variety of problems related to the techniques. Parents may over or under report the individual's problem behavior, and the parent may be experiencing their own mental health issues. Teachers also represent a potential problem area due to preconceived biases and poor interrater reliability. The Conduct Disorder Questionnaire will examine this diagnosis from the perspective of the individual to correct the various problems related to the reliance upon collateral informants to gather information.

References

Abikoff, H. & Klein, R. G. (1992). Attention-deficit hyperactivity and conduct disorder: Comorbidity and implications for treatment. Journal of Consulting and Clinical Psychology, 60 (6) 881-892.

Adam, B. S., Kashani, J. H., & Schulte, E. J. (1991). The classification of conduct disorders. Child Psychiatry and Human Development, 22 (1) 3-16.

American Psychiatric Association. (1994). Diagnostic and statistical manual of mental disorders (4th ed.). Washington, DC: Author.

Andrews, V. C., Garrison, C. Z., Jackson, K. L., Addy, C. L., & McKeown, R. E. (1993). Mother-adolescent agreement on the symptoms and diagnosis of adolescent depression and conduct disorders. Journal of the American Academy of Child and Adolescent Psychiatry, 32 (4) 731-738.

Claiborn, C. D. & Lanyon, R. I. (1995). Review of the minnesota multiphasic personality inventory-adolescent. In Conley, J. C. Impara, J. C. & Murphy, L. L. (Eds.), Twelfth Mental Measurements Yearbook (pp. 625-629). Lincoln, NE: University of Nebraska.

Flanagan, J. S., & Flanagan, R. S. (1998). Assessment and diagnosis of conduct disorder. Journal of Counseling & Development, 76 (2) 189-197.

Gest, S. D., Neemann, J., Hubbard, J. J., Masten, A. S., & Tellegen, A. (1993). Parenting quality, adversity, and conduct problems in adolescence: Testing process-oriented models of resilience. Development and Psychopathology, 5 (4) 663-682.

Holcomb, W. R., & Kashani, J. H. (1991). Personality characteristics of a community sample of adolescents with conduct disorders. Adolescence, 26 (103) 579-586.

Ketterlinus, R. D. & Lamb, M. E. (1994). Adolescent problem behaviors: Issues and research. Hillsdale, N. J.: Lawrence Erlbaum Associates.

Lahey, B. B., Applegate, B., Barkley, R. A., Garfinkel, B., McBurnett, K., Kerdyk, L., Greenhill, L., Hynd, G. W., Frick, P. J., Newcorn, J., Biederman, J., Ollendick, T., Hart, E. L., Perez, D., Waldman, I., & Shaffer, D. (1994). DSM-IV field trials for oppositional defiant disorder in children and adolescents. American Journal of Psychiatry, 151 (8) 1163-1171.

Lahey, B. B., Loeber, R., Hart, E. L., Frick, P. J., Applegate, B., Zhang, Q., Green, S. M., & Russo, M. F. (1995). Four-year longitudinal study of conduct disorder in boys: Patterns and predictors of persistence. Journal of Abnormal Psychology, 104 (1) 83-93.

Lock, J. & Strauss, G. D. (1994). Psychiatric hospitalization of adolescents for conduct disorders. Hospital and Community Psychiatry, 45 (9) 925-928.

Loeber, R., Green, S. M., Keenan, K., & Lahey, B. B. (1995). Which boys will fare worse? Early predictors of the onset of conduct disorder in a six-year longitudinal study. Journal of the American Acacemy of Child and Adolescent Psychiatry, 34 (4) 499-509.

Martens, B. K. & Stinnett, J. O. (1992). Review of the conners' rating scales. In Krammer, J. J. & Conley, J. C. (Eds.), Eleventh Mental Measurements Yearbook (pp. 231-241). Lincoln, NE: University of Nebraska.

Mooney, K. C., Achenbach, T. M. & Edelbrock, C. (1984). Child behavior checklist. In Keyser, D. & Sweetland, M. (Eds.), Test Critiques: Vol. 1 (pp. 168-184). Kansas City, MO: Test Corporation of America.

Meyer, R. G. (1993). The clinicians handbook: Integrated diagnostics, assessment, and intervention in adult and adolescent psychopathology (3rd ed.). Needham Heights, MA: Allyn & Bacon.

Reed, M. L. (1985). Review of eyberg child behavior inventory. In Mitchell, J. V. (Ed.), Ninth Mental Measurements Yearbook (pp. 567-569). Lincoln, NE: University of Nebraska.

Reid, W. H., Balis, G. U., Wicoff, J. S. & Tomasovic, J. J. (1989). The treatment of psychiatric disorders (Rev. ed.). New York, NY: Brunner & Mazel.

Robins, L. N. (1991). Conduct disorder. Journal of Child Psychology and Psychiatry, 32 (1) 193-212.

Rutter, M. (1994). Family discord and conduct disorder: Cause, consequence, or correlate? Journal of Family Psychology, 8 (2) 170-186.

Rutter, M., Harrington, R., Quinton, D., & Pickles, A. (1994). Adult outcome of conduct disorder in childhood: Implications for concepts and definitions of patterns of psychopathology. Adolescent Problem Behaviors; Issues and Research. Lawrence Erlbaum Associates, Inc.: Hillsdale, NJ.

Sandoval, J., Witt, J. C. & Jones, K. M. (1998). Review of the behavioral assessment system for children. In Impara, J. C. & Plake, B. S. (Eds.), Thirteenth Mental Measurements Yearbook (1998). Lincoln, NE: University of Nebraska.

Schachar, R. & Wachsmuth, R. (1990). Oppositional disorder in children: A validation study comparing conduct disorder, oppositional disorder and normal children. Journal of Child Psychology and Psychiatry, 31 (7) 1089-1103.

Short, R. J., & Shapiro, S. K. (1993). Conduct disorders: A framework for understanding and intervention in schools and communities. School Psychology Review, 22 (3) 362-375.

Tarullo, L. B., Richardson, D. T., Yarrow, M. R., & Martinez, P. E. (1995). Multiple sources in child diagnosis: Parent-child concordance in affectively ill and well families. Journal of Clinical Child Psychology, 24 (2) 173-183.

Appendix B

Appropriate Populations

The Conduct Disorder Questionnaire is designed to measure behaviors that are related to the DSM-IV (1994) criteria for Conduct Disorder. The test may be used on male and female adolescents who range from 12 years to 17 years of age that possess a fifth grade reading ability.

Requirements for Administration

The Conduct Disorder Questionnaire may be administered by individuals with limited training in psychological testing. This may include undergraduate course work in psychology, or graduate level classes related to testing. It is recommended that the results of this test be interpreted by individuals who have training in the use of the DSM-IV (1994), and in differential diagnosis. As with all psychological testing the policies specified by the American Psychological Association should be followed closely.

Time Requirements

There is no limit in the amount of time in which an examinee must complete the Conduct Disorder Questionnaire, however most examinees will complete this test in approximately seven minutes. If an examinee does not complete this test in 15 minutes, then the person may have difficulty reading, are confused about the test directions, or they may have a defensive attitude toward psychological testing. If this occurs the examiner should assist the individual in completing the test, however if the person has reading problems, or if they are very defensive then the test results may be invalid.

Generally, the Conduct Disorder Questionnaire can be scored in less than five minutes with the use of the scoring templates. The test may be scored without the use of this device, but this will require more time.

Test Materials

The test must be scored by hand, and the examinee may record their responses with either a pencil or pen (a pencil is preferred).

Administration

The Conduct Disorder Questionnaire may be administered either individually, or in group form to individuals who are 12 to 17 years of age. The testing environment should be quite, and free from distracting stimuli. Desks or tables with a smooth writing surface are necessary, and sharpened pencils (or pens) with erasers should be provided.

A brief period of rapport should be established to decrease any anxiety that the examinees may be experiencing. The test may then be distributed, and the directions located at the top of the test sheet should be read to the examinees. At this time the examiner may respond to any questions put forth by the test respondents. If someone inquires about this test, the examiner should indicate that the test is used to learn about some of the things that the examinee has been experiencing within the last year.

Test Scoring

The Conduct Disorder Questionnaire consists of 38 questions with four possible responses for each question. The examinee then marks one responses for each test item which is then scored (from left to right) as zero, one, two or three for questions one, three, five, nine, 11, 13, 15, 17, 18, 19, 21, 23,25 26, 27, 28, 29, 30, 33, 35, 37 and 38. For questions two, four, six, seven, eight, 10, 12, 14, 16, 20, 22, 24,31, 32, 34 and 36 the responses are scored (from right to left) a three, two, one or zero. To simplify the scoring process three scoring templates are provided. Template one is used to score the questions that receive one point, template two for the two point responses, and template three for the three point items. No template is provided for zero point responses since these items do not contribute to the overall test score. Each template is then placed over the test sheet, the value for the responses recorded, and the results for each template are added together to obtain the test score.

Test Questions

The items for the Conduct Disorder Questionnaire are based on the diagnostic criteria found in the DSM-IV (1994). These questions may be placed into four broad categories: aggressive conduct, nonaggressive conduct, deceitfulness or theft, and serious violation of rules. Questions one, two, nine, 13, 15, 17, 19, 20, 21, 28, 32, 34, 36 and 38 are in the aggressive conduct category. Items eight, 18, 27 and 37 are the nonaggressive conduct questions. The deceitfulness or theft items are; three, 10, 12, 14, 16, 22, 29, 31, 33 and 35. The questions that are considered to represent a serious violation of rules are; four, five, six seven, 11, 23, 24, 25, 26 and 30.

Profile Interpretation

If an adolescents score is equal to, or greater than 33 it is likely that the child will meet the criteria for a Conduct Disorder diagnosis. As a child's score increases beyond this level, it is likely that the person will be exhibiting more symptoms of this disorder. Many adolescents obtain a test score of 24 (+ or - 6 points), therefore a score that falls within this range should be considered normal.

Validity

The Conduct Disorder Questionnaire has been evaluated in terms of concurrent validity (Appendix A). A bi-serial correlation coefficient was also calculated which yields a .62 correlation for the test in identifying individuals that are diagnosed with Conduct Disorder. With the criterion score set at 33, the test correctly identified 12 (hits) individuals with the Conduct Disorder diagnosis and 17 individuals without this diagnosis (hits). One individual was improperly diagnosed (false positive or miss), and four adolescents who have been diagnosed with Conduct Disorder were not identified (false negative or miss). This yields an overall hit rate of 85%.

Reliability

The reliability of the Conduct Disorder questionnaire has been evaluated statistically by the Pearson r method which yields a correlation coefficient of .90. To correct for the reduced reliability which is a characteristic of the split-half design, the Spearman-Brown formula has been used to correct for this deficiency, and yields a correlation coefficient of .95.

Descriptive Statistics

The test sample was composed of two adolescent groups who range in age from 12 to 17 years. Group one children (N=16) have been diagnosed with Conduct Disorder (Appendix B), while Group Two children have no diagnosis (Appendix C). Group One children have a mean age of 15.5 years (median age 15 years), a mean score of 39.6 (median score 39.5), a standard deviation of 13.6, and is composed of 62.5% males (37.5% females). Group Two children have a mean age of 13.9 years (median age 13 years), an mean score of 23.6 (median score 24.5), a standard deviation of 6.38, and is composed of 83.3% females (16.6% male).

Discussion

The Conduct Disorder Questionnaire was administered to a small (N=16) group of institutionalized adolescents who are primarily (62.5%) male. Although these individuals come from a variety of backgrounds it is likely hat this sample is relatively homogeneous. The standard deviation of the males in this group is 11.7, while the small sample of females (N=16) obtained a standard deviation of 16. The source of this wide variability in the Conduct Disorder group may be due to different levels of severity of this diagnosis, a small sample size or carelessness in responding to the test items.

The group of adolescents who have no diagnosis is small (N=18), and is primarily composed of females (83.3%). The mean age of this group is 13.9, as opposed to the Conduct Disorder group whose mean age is 15.5. This difference in age and gender

composition may make comparisons between the scores of these two groups difficult, or impossible. The standard deviation of this group is 6.38. This may be due to the absence of a Conduct Disorder diagnosis, carefully responding to the test items, a homogeneous sample group, age or gender differences.

The validity of the Conduct Disorder Questionnaire has been assessed in terms of concurrent validity. When the criterion score is set at 33 the result will be an 85% hit rate for the diagnosis of Conduct Disorder. A bi-serial correlation coefficient of .62 was obtained which suggests the Conduct Disorder Questionnaire is moderately successful in identifying individuals who may be placed in this category. This correlation may be increased if the number of questions, or the sample size is larger.

The Conduct Disorder Questionnaire has good internal reliability. The two separate halves of the test have a .90 correlation (Pearson r), and when this result is corrected by the Spearman-Brown formula the correlation increases to .95. This suggests that each half of the test is very similar, and should result in a similar range of responses.

It is relatively common for individuals with this diagnosis to have other psychiatric disorders. Attention-deficit hyperactivity disorder, psychoses, learning disorders and drug abuse is sometimes seen in these individuals. If the person has more than one diagnosis, treatment becomes more difficult. Careful history taking during the intake interview regarding the development of conduct disorder can lead to different intervention strategies, especially if the person has more than one diagnosis (Reid, 1989).

After the intake interview the clinician should investigate any sources of information regarding how the person behaves at home, school and within the community. These efforts will aid the clinician in determining the proper diagnosis, and will provide insight into where the problem behaviors most frequently occur. These efforts will also aid the mental health services provider to develop a treatment plan that will best meet the needs of the individual.

Interventions which focus on parent training, and in the school such as time-out procedures, contracting and reinforcement structuring are also beneficial (Meyer, 1993).

References

American Psychiatric Association. (1994). Diagnostic and statistical manual of mental disorders. (4th ed.). Washington DC: Author.

Barlow, D. H., & Durand, V. M. (1995). Abnormal psychology. Pacific Grove, CA: Brooks/Cole.

Meyer, R. G. (1993). The clinicians handbook. (3rd ed.). Needham Heights, MA: Allyn & Bacon.

Reid, W. H. (1989). The treatment of psychiatric disorders. New York: Brunner/Mazel.

Appendix C

Please read the following questions carefully and mark the box that indicates how you have generally felt within the past year. Mark only one box and answer each question.

	Never	Sometimes	Quite Often	Almost Always
I am mean to others				
I lie				
I obey the rules at school				
I break the law				
I get along with the police				
I get home by curfew even if I'm having a good time				
If I saw someone lose their wallet I would try to give it back to them				
I get into fights				
I would feel bad if I cheated in school				
I get "high"				
I feel bad if I do something illegal				
I tease animals				
Others treat me fairly				
If someone does me wrong, I try to get even with them				
My parents trust me				
I get mad easy				
If I get mad I take it out on something				
People do things to make me mad				
I am nice to people				
I tell the truth				
I get in trouble at school				
I obey the law				
The police treat me unfairly				
If I'm having fun, I'll stay out all night				
If I had the chance to steal something I liked I would do it				
Others try to get me to fight				
It's all right to cheat in school				
I use drugs				
I worry if I break the law				
I am kind to animals				
People are unfair to me				
If someone makes me mad, I usually get over it				
I feel like people don't trust me				
It takes a lot to get me upset				
I break things when I get mad				
I make people angry				

Appendix D

Dear Parent:

I am currently a student at West Virginia Graduate College, and as part of my course requirements I am required to conduct research on a given topic. I have chosen the area of adolescence, and in order to study this area I have developed a brief questionnaire which I would like your child to complete. The information your child reports will be kept strictly confidential, and will in no way effect your child. The questions will take approximately seven minutes to complete, and your child is not required to participate in this study.

Thank you,
Dwayne Milam

I give my consent for my child to participate in this study.

_____
Signature of parent

_____
Date

Please return this completed form to your school on Monday, May 13.

Appendix E

Please complete the following questions.

1. What is your age ____?

2. What grade are you in ____?

3. What is your fathers occupation _____?

4. What is your mothers occupation _____?

5. If you have any brothers or sisters, please indicate their age:

_____ brother	_____ sister
_____ brother	_____ sister
_____ brother	_____ sister
_____ brother	_____ sister
_____ brother	_____ sister
_____ brother	_____ sister

Please circle the one response that best describes you, or your family.

6. Are you a male (M) or a female (F) ?

7. Are your parents married (M), separated (S) or divorced (D) ?

8. What is your families primary source of income: father's job (F), mother's job (M), social security disability (S), SSI (SI), worker's compensation (WC), department of health and human services (D), or other (O) ?

9. Have you ever received psychiatric treatment: yes (Y) or no (N) ?

10. What ethnic background best describes you: Native American (N), Hispanic (H), African American (A), Caucasian (C), or Other not listed (O) ?

Appendix F

Please include the following information about the client.

Age _____

Weight _____

Height _____

Is there a history of previous psychiatric treatment: yes (Y) or no (N) _____?

Is there a history of legal problems: yes (Y) or no (N) _____?

Please indicate the clients current DSM-IV diagnosis.

Axis I_____
_____
_____

Axis II_____
_____
_____

Axis III_____
_____

Axis IV_____

Axis V_____

Appendix G

Please read the following questions carefully and mark the box that indicates how you have generally felt within the past year. Mark only one box and answer each question.

	Never	Sometimes	Quite Often	Almost Always
I am mean to others	0	1	2	3
I lie	0	1	2	3
I obey the rules at school	3	2	1	0
I break the law	0	1	2	3
I get along with the police	3	2	1	0
I get home by curfew even if I'm having a good time	3	2	1	0
If I saw someone lose their wallet I would try to give it back to them	3	2	1	0
I get into fights	0	1	2	3
I would feel bad if I cheated in school	3	2	1	0
I get "high"	0	1	2	3
I feel bad if I do something illegal	3	2	1	0
I tease animals	0	1	2	3
Others treat me fairly	3	2	1	0
If someone does me wrong, I try to get even with them	0	1	2	3
My parents trust me	3	2	1	0
I get mad easy	0	1	2	3
If I get mad I take it out on something	0	1	2	3
People do things to make me mad	0	1	2	3
I am nice to people	3	2	1	0
I tell the truth	3	2	1	0
I get in trouble at school	0	1	2	3
I obey the law	3	2	1	0
The police treat me unfairly	0	1	2	3
If I'm having fun, I'll stay out all night	0	1	2	3
If I had the chance to steal something I liked I would do it	0	1	2	3
Others try to get me to fight	0	1	2	3
It's all right to cheat in school	0	1	2	3
I use drugs	0	1	2	3
I worry if I break the law	3	2	1	0
I am kind to animals	3	2	1	0
People are unfair to me	0	1	2	3
If someone makes me mad, I usually get over it	3	2	1	0
I feel like people don't trust me	0	1	2	3
It takes a lot to get me upset	3	2	1	0
I break things when I get mad	0	1	2	3
I make people angry	0	1	2	3