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Racial Disparity in the Diagnosis of Conduct Disorder

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ABSTRACT

African American youth are exposed to considerably more risk factors than their Caucasian counterparts, yet they are being diagnosed at comparably lower rates for Conduct Disorder (CD) in epidemiological studies. Empirical data supports the claim that African Americans are at greater risk of developing CD. However, the internal dysfunction benchmark of the Diagnostic Statistic Manual (DSM) discourages clinicians from diagnosing youth who display environmentally caused CD. The racial disparity in the diagnosis of CD is problematic for two reasons. First, African American youth who display antisocial personality are more likely to be referred to the justice system than to therapeutic intervention. Second, both untreated CD and incarceration elevate antisocial behavior and extend it into adulthood. Factors exist at the societal, cultural and clinical levels that cause this disparity. (Word Count: 128)

Key terms: Conduct Disorder, delinquency, help seeking process, cross-cultural variations, mental health literacy

Racial Disparity in the Diagnosis of Conduct Disorder

The guiding theory of the cross-cultural psychological perspective is that there are both cultural and biological variations in human psychopathology. There exists much debate and conflicting evidence about whether mainstream diagnostic practices within the American psychological community are properly accounting for these variations. This paper posits that these variations exist, are overlooked to the detriment of ethnic groups within the United States and result in mental health disparities. Differences in the diagnosis of Conduct Disorder (CD) between Caucasian and African American youth, the focus of this article, exemplify the larger phenomenon in question.

The research regarding the prevalence of CD is conflicting. Both the 1985 Epidemiological Catchment Area Study and the 2006 National Comorbidity Survey found Caucasian Americans to have a slightly higher prevalence of CD than Blacks (Robins & Regier, 1991; Nock, Kazdin, Hiripi, & Kessler, 2006). Yet, other empirical studies found African American youth to have a significantly higher prevalence of CD (Bird et al., 2001; Lahey et al., 1995). However, the youth in these two studies are either incarcerated and/or hospitalized and therefore do not represent the general population.

The research compiled in this literature review substantiates the claim that African American youth do indeed have a significantly higher prevalence of CD than Caucasian Americans within the general population. Further, mainstream diagnostic practices do not accurately capture the full magnitude of CD within the African American community.

Two premises support the theory of higher rates of CD within the African American community. The first premise is the relationship between low SES and CD. Lahey, Loeber,

Burke, & Applegate (2005) found a strong positive correlation between SES background and DSM-III-R criteria for CD. The National Center for Children in Poverty estimates that 62% of African Americans 18 years of age and younger live in low income households (Chau, Thampi, & Wight, 2010). It can be safely concluded from these findings that African American youth are at an elevated risk of developing CD as a result of the high proportion of the community living in poverty.

Lahey et al. (2005) findings are buttressed by research regarding the relationship between a youth's environment and mental health. Stiffman, Hadley-Ives, Elze, Johnson, & Dorè (1999) found that subjective environment and exposure to violence directly affects adolescent mental health; resulting particularly in externalizing problems. As African Americans predominantly reside in communities of poor quality there is an increased risk of CD within the community.

The second premise is the relationship between delinquency and CD. In a study to determine which factors in childhood predicted a repeated diagnosis of CD in adolescence, delinquency was found to be the most significant predictor (Burke, Loeber, Mutchka, & Lahey, 2002). Delinquency can be considered the criminological index of antisocial behavior. That is, delinquency is the result of unlawful antisocial behavior. Multiple studies have found that rates of anti-social personality behavior in prisons far exceed rates within the general population (Hare, Hart, & Harpur, 1991; Youman, Drapalski, Stuewig, Bagley, & Tangney, 2010). Although only 12.5% (see 2010 Census brief on Race) of the U.S. population, African Americans represent a plurality of incarcerated offenders (see Prison Inmates at Mid-year 2009 and Juvenile Arrest Rate Trends), therefore African American youth are at increased risk for developing CD.

CD is a persistent pattern of behavior in which the basic rights of others and/or societal norms are violated. The four major criteria for CD are: aggression towards people and animals, destruction of property, deceitfulness/theft and serious rule violations. At least three of the criteria must be present within a 12 month period. Only an individual 17 years of age or younger can be diagnosed with CD (APA, 1994).

Racial disparity in the diagnosis of CD has three implications within the psychological community. The first implication is the cultural insensitivity of current diagnostic practices. Secondly, it calls into question multi-cultural training within graduate clinical programs. Thirdly, the findings introduce the cross-cultural prospective into the area of disruptive disorders.

This disparity is of vast importance to American society. It has already been established that African Americans are disproportionately represented within the juvenile and adult prison populations. Because African American symptomatology may not meet DSM-IV criteria for CD, they are referred to the juvenile justice system disproportionately. The development of culturally sophisticated diagnostic techniques and the addition of culturally competent clinicians may result in the diagnosis and treatment of many more African American youth which may relieve pressure from the American justice system and improve conditions within the African American community.

The next section will provide greater depth into the population of interest. The various psycho-social factors that result in the disparity will follow. Structural deficits within the psychological community as well as theoretical perspectives implicated in the disparity will be discerned. Future directions for the study of this phenomenon will then be provided.

African American Youth and CD

Racial disparity in the diagnosis of CD has a significant effect on the African American community. Cohen, Parmelee, Irwin, & Weisz (1990) found that race was the only determinative variable that predicted site placement, correctional or psychiatric, of Black and White youth. Untreated CD can lead to delinquency which results in stress within the family, hampers the education of the child, affects the safety of the community and places a financial burden on society. Untreated CD can also lead to persistent conduct problems into adulthood (Lahey et al., 2005).

Although disparities may exist for other racial/ethnic groups, African Americans serve as a gateway to understanding cross-cultural variations in CD and other disruptive behaviors for America's various racial/ethnic groups. The gateway status of African Americans comes from their complete enculturation into American society. As a result, the process of their incorporation into diagnostic practices may be the most achievable and serve as a basis for the inclusion of other racial/ethnic groups.

Secondary Populations Impacted by Findings

Some of the findings presented in the following sections may apply more broadly to individuals with low SES, regardless of race/ethnicity. Lahey et al. (1995) found a significant correlation between low SES and CD. It is possible that as a result of their propensity to be of low SES, African Americans may be at greater risk of developing CD. However, it may also be that low SES is an artifact of the association between African Americans and CD.

The research compiled regarding African Americans may apply more closely to Hispanic Americans than any other racial/ethnic group. Hispanics share much of the same socio-cultural

background as African Americans such as: low SES, disproportionate representation within the correctional system, low quality neighborhoods and family structure.

As already established, CD is a disorder that only applies to individuals 17 years of age and younger. However, CD is a prerequisite for an adult being diagnosed with Antisocial Personality Disorder (APA, 1994). The psycho-social factors and theories associated with African Americans and the development of CD can be applied to adults with APD.

Environmental Factors contributing to the Racial Disparity in the Diagnosis of CD

There are several types of environmental factors that contribute to the disparity. Some are a result of the status of African Americans in society. Cultural practices, attitudes and beliefs are also implicated. Further, disparities will always occur when a dominant race/ethnicity attempts to incorporate various races/ethnicities into its belief system. This is unavoidable weakness of standardization (e.g. DSM).

DSM-IV, CD and Environmental Context

The DSM-IV is the primary cause of the racial disparities in the diagnosis and treatment of African American youth with antisocial personality behavior.

> Consistent with the DSM-IV definition of mental disorder, the CD diagnosis should be applied only when the behavior in question is symptomatic of an underlying condition within the individual and not simply a reaction to the immediate social context (APA, 1994).

The APA's attempt to consistently define a mental disorder as symptomatic of an underlying condition negatively effects African American youth who are exposed to more

negative environmental risk factors than their Caucasian counterparts (Stiffman, Hadley-Ives, Elze, Johnson, & Dorè, 1999; Brody et al., 2003; Conger, 2002; Jones, Forehand, Brody, & Armistead, 2002). CD is no ordinary mental disorder. The internal dysfunction benchmark is problematic for two reasons.

First, diagnostically, how is disordered (e.g. genetic, personality or temperamental) and environmentally caused behavior to be differentiated? Waldman et al. (2010) twin study found that the three personality traits most associated with CD to be both moderately heritable and environmental. Therefore, it would be very difficult for a clinician to determine whether or not conduct issues would persist in a different environment.

Secondly, are there any noticeable differences between the effects of disordered (internal dysfunction) and non-disordered (environmental) conduct issues? Richters & Cicchetti (1993) provide various studies to support the claim that persistent antisocial behavior causes several developmental impairments including neuropsychological, behavioral, cognitive and social functioning. According to the DSM-IV, non-disordered youth would not be worthy of psychological intervention and would most likely be referred to the correctional system to their detriment.

The DSM's affect on the racial disparity of CD is most discernible in vignette studies. Clinicians were significantly more likely to make the diagnosis of CD if they received an internal dysfunction and symptom-only vignette than if they were presented with an environmental reaction vignette (Pottick, Kirk, Hsieh, & Tian, 2007; Hsieh & Kirk, 2003). Further, the closer the clinician's profession adhered to the DSM-IV; the less

likely that clinician was to make a positive diagnosis when presented with the environmental reaction vignette (Pottick et al., 2007).

As a result of the various negative environmental factors that dominate the life of the average African American youth, clinicians are refraining from diagnosing them with CD (Pottick et al., 2007). Although there is no established clinical mechanism for isolating genetic and environmentally caused childhood antisocial behavior and with the harmful developmental prospects of an antisocial child documented, it appears African American youth are subject to unwarranted bias.

Cultural Variations in the Expression of CD

Cultural variations in psychopathology have long been an established phenomenon. The most prominent areas being: depressive features (Kleinman, 1977), schizophrenic themes (Whaley & Hall, 2009), anxiety types (Himle, Baser, Taylor, Campbell, & Jackson, 2009).) and personality traits (Church et al., 2008). The DSM-IV even devotes an entire appendix to specific culture bound syndromes (APA, 1994). However, acknowledgement does not translate into effective diagnostic practices. Further, research into the cross-cultural symptomatology of disruptive behaviors is lacking.

A glimpse of these cross-cultural differences can be obtained from research into the cross-cultural efficacy of behavioral diagnostic checklists. Lambert, Rowan, Lyubansky, & Russ, 2002) collected the parent reported behaviors (PRB) of 1,605 African American youth clinical records and compared them to the Child Behavior Checklist (CBCL).They then coded the PRBs to the 118 items on the CBCL and found a respectable overlap of 70%. They then further incorporated, as much as possible, the remaining 30% of PRBs into the 8 syndrome scales of the

CBCL. Their study concluded that more than 20 behaviors reported by the parents of these African American youth were not being captured by the CBCL. A study investigating the Behavior Problem Index (BPI) had similar findings (Spencer, Fitch, Grogan-Kaylor, & McBeath, 2005). These studies demonstrate both the uniqueness of the presentation of antisocial behavior in African American youth and the failure of widely used measurement tools to capture these variations. The supplemental measurement tools clinicians use to diagnose CD contribute to the disparity.

Treatment Seeking Disparities

Perceptions of personal health can affect the utilization of mental health care services. African Americans have higher self-rated mental health status (SRMH) than Caucasian Americans (Zuvekas & Fleishman, 2008). Individuals that view themselves as having good mental health are less likely to utilize mental health services. In regards to CD, a youth disorder, it would be the perceptions of parents whether their children have good mental health that would be important. Therefore disparities in CD may be the result of the underutilization of services of African Americans rather than the overutilization by Caucasians.

The underutilization of mental health services by African Americans may also be understood from their perceived status within society. Burgess, Ding, Hargreaves, van Ryn, & Phelan (2008) found perceived discrimination in everyday life to be a significant predictor in underutilization; greater than perceived discrimination from health care settings. It appears that individuals who experience discrimination on a daily basis incorporate the mental health industry into their feelings about larger society. “Groups such as African Americans…who have a greater historical consciousness or racism and who have repeatedly experienced prejudice and

discrimination, may be more likely to generalize across experiences of discrimination relative to their White counterparts" (Burgess et al., 2008, p. 907).

An unrealistic SRMH may be related to health literacy. African Americans tend to have poorer health literacy than Caucasian Americans (Sentell & Halpin, 2006). As the mental health industry has even less of an impact on the lives of Americans than the medical industry, it is to be expected that the racial disparity in mental health literacy is just as if not more severe. Poor mental health literacy on the part of African American caregivers may result in ignorance about CD, misinterpretation of symptoms on their part and subsequent failure to seek treatment for their children.

Cultural variations in addressing mental health issues may also contribute to treatment seeking disparities. In a study to determine the mental health preferences among low income women, African Americans were significantly more likely than Caucasian Americans to endorse faith and family-based treatment than three clinical treatments: medication and individual and group counseling (Nadeem, Lange, & Miranda, 2008). African American adults appear to have a strong disinclination to seek professional mental health treatment. This undoubtedly affects their approach to their child's mental health.

Discussion of treatment seeking disparities would not be complete without consideration of differences in access to mental health services. African Americans are uninsured at higher rates than Caucasian Americans (DeNavas-Walt, Proctor, & Mills, 2004). Lack of insurance could result in parents avoiding seeking treatment for children who display antisocial personality behavior.

African Americans also suffer from a lack of mental health professionals in their communities. Data from a 1996 U.S. Bureau of Health Professions report reveals that child and adolescent psychiatrists were significantly more likely to be located in counties in which there were a low percentage of children in poverty. The SES disparity persisted in both urban and rural counties; most likely the result of the ability of individuals of high SES to have generous health insurance and therefore afford psychological intervention (Thomas & Holzer, 1999). Further, people of higher SES can afford higher rates of service; a preferred alternative to Medicare reimbursement rates for mental health professionals. Mental health professionals may also be fearful for their safety or concerned about their business prospects when considering working in a fractured community. Whatever the case, the African American community is greatly disadvantaged.

Theoretical Perspectives of Value

Behavioral-Cognitive Approach v. the Developmental-Contextual Perspective

The behavioral-cognitive approach (BCA) is standardized in the DSM, via the internal dysfunction standard, and therefore dominates clinical understanding of mental disorders. The disadvantage of the BCA approach is its narrowness; it focuses only the behaviors and cognitions that the patient exhibits. With the exception of culturally bound syndromes, the DSM-IV seeks cultural neutrality in psychopathology. However, culture greatly influences emotions, behaviors and cognitions. Therefore, an approach that recognizes the cultural factors that contribute to psychopathology is necessary.

The Developmental-Contextual Perspective (DCP) is anchored in the broader biopsychosocial approach of human development. The biopsychosocial approach recognizes the

influence of genetics, cognition and culture on human behavior. The biopsychosocial approach does not dictate that the three factors are equally responsible for all behavior; it only stipulates their potential to affect behavior. The DCP seeks to define culture's role in psychopathology (Serafica & Vargas, 2006).

Serafica & Vargas (2006) establish five main questions of the DCP. First, are there cultural variations in the expression of psychopathology? The authors provide a wealth of empirical evidence to support this claim. Secondly, what are the aspects within a culture that result in varying prevalence rates of disorders? Bronfenbrenner's Ecological Model (Darling, 2007) resembles their findings. For instance, body weight norms and expectations within cultures would lead to differential prevalence rates of eating disorders (Henrickson, Crowther, & Harrington, 2010). Next, the aspects of a given culture that are mediators and/or moderate the influences of risk and protective factors must then be discerned. The same variables outlined by Bronfenbrenner apply to this question as well. The last question seeks to determine the mental health beliefs and attitudes of a given culture. The impact of these attitudes and beliefs on prevention, help seeking behavior, diagnosis and treatment can then be surmised.

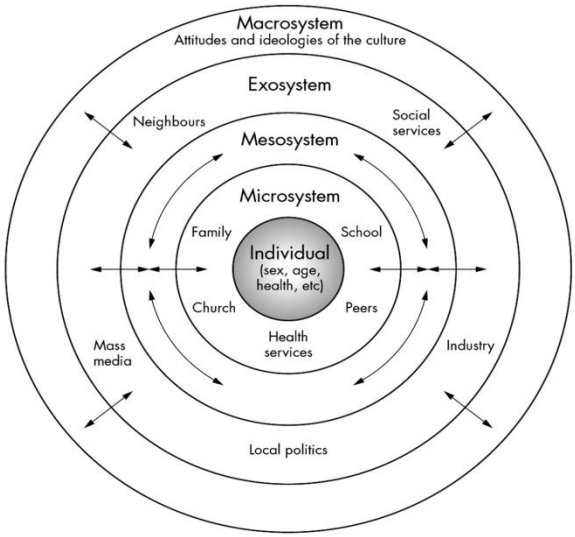


Figure1. Bronfrenbrenner's Ecological Model.

The APA's resolve to apply the internal dysfunction standard to all disorders in the DSM-IV is contradictory to prevalent research. The standard is particularly problematic for CD, as conduct is considerably correlated to environmental factors (Boden, Fergusson, & Horwood,

2010). A harmful dysfunction standard may be more appropriate for some disorders (Wakefield, 2006) and should, therefore, be sanctioned by the APA.

Cultural Bias Hypothesis and the Cultural Relativity Hypothesis

The DSM-IV is not a monolithic diagnostic tool. A survey of over 600 clinicians and graduating residents found that the majority do not completely rely on the DSM when making diagnoses (Jampala, Sierles, & Taylor, 1988). However, the DSM has a consistent presence within graduate programs so this could be the result of the clinicians having a high level of confidence in memorizing DSM criteria. Behavior checklists, projective tests and other measurement tools are often used by clinicians as supplements during semi-structured interviews. The cultural relevance of the diagnostic tools was discussed in the previous section; the clinician perspective must now be analyzed.

Two competing hypotheses are offered to explain the clinician's part in the differential diagnoses of disorders at the racial/ethnic level. The first is the Clinician Bias Hypothesis (CB) which proposes that symptomatology is similar between races, however they are judged to be different disorders by clinicians. The DCP does lend some credence to this hypothesis. Price & Cuellar (1981) found that Mexican Americans diagnosed with schizophrenia expressed more symptoms of pathology during Spanish language interviews than English language interviews. Therefore, verbal fluency and acculturation of ethnic clientele may affect clinical judgment.

The competing hypothesis to CB is the Cultural Relativity Hypothesis (CR). This hypothesis stipulates that there are indeed differences in psychopathology among races/ ethnicities and that clinicians are blind to these differences. Whaley's (1997) findings supported CR when the two were compared.

The two hypotheses are not mutually exclusive. Research supporting both is ample. There may indeed be circumstances in which the verbal expression of symptoms alters the clinician's judgment in favor of an incorrect diagnosis. The clinician may also hold unconscious prejudices or sentient impressions regarding particular ethnicities that would affect his judgment. Yet, there may also be instances in which the clinician is unaccustomed to cultural variations in symptomatology resulting in incorrect diagnoses.

Help Seeking Behavior Process and Culture

The process by which a disorder is first recognized to the point that it is treated has some bearing on the topic. Various models have been created seeking to explain an individual's health seeking process. The author of this literature review is particularly impressed with the model composed by Zwaanswijk, Van der Ende, Verhaak, Bensing, & Verhulst (2005) for three reasons: it was created analyzing various existing models, it can be applied generally and it is relevant to the topic as it follows the child psychopathological pathway.

Comparison of the Zwaanswijk model (see Appendix) to the treatment seeking patterns of African Americans discussed in the previous section reveals possible deviations, especially when applied to CD. Factors within African American culture that would affect their help seeking process include: mental health literacy, insurance status, delinquency, community characters consulted and the health care professionals' involved.

Future Directions

There are various directions to undertake in future research that will enhance understanding of why African American youth are not being diagnosed with CD at a rate consistent with the ample risk factors they are exposed to. One direction is alluded to in the

previous section; racial/ethnic differences in the communication of symptoms. A comparison between mono-lingual racial/ethnic groups such as African American and Caucasian youth is of particular interest. Differences in diction, tone, non-verbal communication and the clarity the youth display when describing symptomatology would be variables of importance. If notable differences are found, what is their effect on diagnosis?

Another avenue of future research is the help seeking process of African Americans. Based on the comparably low rates of mental health literacy, health insurance and utilization of mental health services there is reason to believe that the help seeking process of African Americans varies drastically from that of Caucasian Americans. The next step would be determining if the personal help seeking process differs from the help seeking process parents undergo for their children. The initial step of the health seeking process is of much interest; how parents reach the point of realization that their child is suffering from a condition that is beyond their traditional and/or communal remedy.

Childhood antisocial behavior has limited stature within the psychological community as a result of its modest debilitating nature. Therefore, the public may not be properly educated in regard to the subject. Research into the familiarity of CD and other disruptive behaviors within the African American community, compared to that of Caucasians, is necessary. Social actors of importance are: parents, family and child service agencies, school officials, law enforcement and the juvenile justice community.

Treatment results for disordered and non-disordered youth is of interest. The ideal experiment would have various treatment options and have two types of participants: youth determined by clinicians to have antisocial behavior caused by an internal dysfunction and youth

whose environment is found to be the primary cause of their behavior. If non-disordered youth are unresponsive to treatment at a significant level, then the DSM internal dysfunction benchmark for mental disorders may be pertinent. Their non-responsiveness could be indicative of criminality. However, if treatment results are comparable, then a harmful dysfunction benchmark may be more appropriate for CD.

A need exists to expand the pool of participants used in empirical studies regarding CD. Most of the studies regarding CD have used committed, incarcerated, clinically referred youth or combination of the three. Schools are an untapped resource for research into CD. Comparisons between the prevalence rates of CD found in schools and the typical pool of participants is of interest. Schools also provide a site for multi-cultural training. Children that have yet to fully develop CD may be a promising avenue of research into prevention, diagnosis and treatment.

Conclusion

African American youth are exposed to considerably more risk factors than their Caucasian counterparts, yet they are being diagnosed at lower rates for Conduct Disorder (CD) in epidemiological studies. Empirical data, referenced in this article, supports the claim African Americans are at greater risk of developing CD. Therefore, a disparity exists between current diagnostic practices and the actual prevalence of CD within the African American community.

The racial disparity in the diagnosis of CD is problematic for two reasons. First, African American youth who display antisocial personality are more likely to be referred to the justice system than therapeutic intervention; this is an immense burden to families, communities and taxpayers. Furthermore, untreated CD and teenage incarceration elevate antisocial behavior and extends it into adulthood (Walters & Knight, 2010; Lahey et al., 1995; Burke et al., 2002).

The factors that contribute to the disparity are at the societal, cultural and clinical level. While there is not much that can be done at the societal and cultural levels, improvement can be made in the clinical community. Consideration of the harmful dysfunction standard should be sanctioned by the APA. Further, an extensive, formal examination into cross-cultural variations into psychopathology is necessary. The findings could produce cross-cultural efficacy into diagnostic practices. Graduate psychology programs must enhance multi-cultural training; a developmental-contextual perspective to psychopathology is recommended. Lastly, treatment seeking disparities of low SES individual should be addressed. Mental health literacy initiatives are needed and access, quality and a lack of intensity of clinical services in low SES communities must be confronted.

References

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

Bird, H. R., Canino, G. J., Davies, M., Zhang, H., Ramirez, R., & Lahey, B. B. (2001). Prevalence and correlates of antisocial behaviors among three ethnic groups. *Journal of Abnormal Child Psychology: An official publication of the International Society for Research in Child and Adolescent Psychopathology*, *29*(6), 465-478. doi:10.1023/A:1012279707372

Boden, J. M., Fergusson, D. M., & Horwood, L. (2010). Risk factors for conduct disorder and oppositional/defiant disorder: Evidence from a New Zealand birth cohort. *Journal of the American Academy of Child & Adolescent Psychiatry*, *49*(11), 1125-1133. doi:10.1016/j.jaac.2010.08.005

Brody, G. H., Ge, X., Kim, S., Murry, V., Simons, R. L., Gibbons, F. X., & ... Conger, R. D. (2003). Neighborhood disadvantage moderates associations of parenting and older sibling problem attitudes and behavior with conduct disorders in African American children. *Journal of Consulting and Clinical Psychology*, *71*(2), 211-222. doi:10.1037/0022-006X.71.2.211

Burgess, D. J., Ding, Y., Hargreaves, M., van Ryn, M., & Phelan, S. (2008). The association between perceived discrimination and underutilization of needed medical and mental health care in a multi-ethnic community sample. *Journal of Health Care for the Poor and Underserved*, *19*(3), 894-911. doi:10.1353/hpu.0.0063

Burke, J. D., Loeber, R., Mutchka, J. S., & Lahey, B. B. (2002). A question for DSM-V: Which better predicts persistent conduct disorder--delinquent acts or conduct symptoms? *Criminal Behaviour and Mental Health*, *12*(1), 37-52. doi:10.1002/cbm.485

Chau, M., Thampi, K., & Wight, V. R. (2010). *Basic facts about low-income children, 2009: children under age 18*. Mailman School of Public Health, Columbia University, New York, New York. Retrieved from http://www.nccp.org/publications/pdf/text_975.pdf

Church, A., Anderson-Harumi, C. A., del Prado, A. M., Curtis, G. J., Tanaka-Matsumi, J., Valdez Medina, J. L., & ... Katigbak, M. S. (2008). Culture, cross-role consistency, and adjustment: Testing trait and cultural psychology perspectives. *Journal of Personality and Social Psychology*, *95*(3), 739-755. doi:10.1037/0022-3514.95.3.739

Cohen, R., Parmelee, D. X., Irwin, L., & Weisz, J. R. (1990). Characteristics of children and adolescents in a psychiatric hospital and a corrections facility. *Journal of the American Academy of Child & Adolescent Psychiatry*, *29*(6), 909-913. doi:10.1097/00004583-199011000-00012

Conger, R. D., Wallace, L., Sun, Y., Simons, R. L., McLoyd, V. C., & Brody, G. H. (2002). Economic pressure in African American families: A replication and extension of the family stress model. *Developmental Psychology*, *38*(2), 179-193. doi:10.1037/0012-1649.38.2.179

Darling, N. (2007). Ecological systems theory: The person in the center of the circles. *Research in Human Development*, *4*(3-4), 203-217. doi: 10.1080/15427600701663023

DeNavas-Walt, C., Proctor, B. D., & Mills, R. J. U.S. Commerce Department, Census Bureau. (2004). *Income, poverty and insurance coverage in the united states: 2003* (P60-226). Washington, DC: Retrieved from www.census.gov/prod/2004pubs/p60-226.pdf

Hare, R. D., Hart, S. D., & Harpur, T. J. (1991). Psychopathy and the DSM-IV criteria for antisocial personality disorder. *Journal of Abnormal Psychology*, *100*(3), 391-398. doi:10.1037/0021-843X.100.3.391

Henrickson, H. C., Crowther, J. H., & Harrington, E. F. (2010). Ethnic identity and maladaptive eating: Expectancies about eating and thinness in African American women. *Cultural Diversity and Ethnic Minority Psychology*, *16*(1), 87-93. doi:10.1037/a0013455

Himle, J. A., Baser, R. E., Taylor, R., Campbell, R., & Jackson, J. S. (2009). Anxiety disorders among African Americans, Blacks of Caribbean descent, and non-Hispanic Whites in the United States. *Journal of Anxiety Disorders*, *23*(5), 578-590. doi:10.1016/j.janxdis.2009.01.002

Hsieh, D. K., & Kirk, S. A. (2003). The effect of social context on psychiatrists' judgments of adolescent antisocial behavior. *Journal of Child Psychology and Psychiatry*, *44*(6), 877-887. doi:10.1111/1469-7610.00172

Humes, K. R., Jones, N. A., & Ramirez, R. R. U.S. Commerce Department, Census Bureau. (2011). *Overview of race and hispanic origin: 2010 Census Briefs* (C2010BR-02). Washington, DC: Retrieved from www.census.gov/prod/cen2010/briefs/c2010br-02.pdf

Jampala, V.C., Sierles, F. S., & Taylor, M. A. (1988). The use of DSM-III in the United States: A case of not going by the book. *Comprehensive Psychiatry*, *29*(1), 39-47. doi:10.1016/0010-440X(88)90036-3

Jones, D. J., Forehand, R., Brody, G., & Armistead, L. (2002). Psychosocial adjustment of African American children in single-mother families: A test of three risk models. *Journal of Marriage and Family*, *64*(1), 105-115. doi:10.1111/j.1741-3737.2002.00105.x

Kleinman, A. M. (1977). Depression, somatization and the new cross-cultural psychiatry. *Social Science & Medicine*, *11*(1), 3-10. doi:10.1016/0037-7856(77)90138-X

Lahey, B. B., Loeber, R., Burke, J. D., & Applegate, B. (2005). Predicting future antisocial personality disorder in males from a clinical assessment in childhood. *Journal of Consulting and Clinical Psychology*, *73*(3), 389-399. doi:10.1037/0022-006X.73.3.389

Lahey, B. B., Loeber, R., Hart, E. L., Frick, P. J., Applegate, B., Zhang, Q., & ... 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. doi:10.1037/0021-843X.104.1.83

Lambert, M., Rowan, G. T., Lyubansky, M., & Russ, C. M. (2002). Do problems of clinic-referred African-American children overlap with the Child Behavior Checklist?. *Journal of Child and Family Studies*, *11*(3), 271-285. doi:10.1023/A:1016816005732

Nadeem, E., Lange, J. M., & Miranda, J. (2008). Mental health care preferences among low-income and minority women. *Archives of Women's Mental Health*, *11*(2), 93-102. doi:10.1007/s00737-008-0002-0

Nock, M. K., Kazdin, A. E., Hiripi, E., & Kessler, R. C. (2006). Prevalence, subtypes, and correlates of DSM-IV conduct disorder in the National Comorbidity Survey Replication. *Psychological Medicine: A Journal of Research in Psychiatry and the Allied Sciences*, *36*(5), 699-710. doi:10.1017/S0033291706007082

Pottick, K. J., Kirk, S. A., Hsieh, D. K., & Tian, X. (2007). Judging mental disorder in youths: Effects of client, clinician, and contextual differences. *Journal of Consulting and Clinical Psychology*, *75*(1), 1-8. doi:10.1037/0022-006X.75.1.1

Price, C. S., & Cuellar, I. (1981). Effects of language and related variables on the expression of psychopathology in Mexican American psychiatric patients. *Hispanic Journal of Behavioral Sciences*, *3*(2), 145-160. Retrieved from EBSCO*host*.

Richters, J. E., & Cicchetti, D. (1993). Mark Twain meets DSM-III—R: Conduct disorder, development, and the concept of harmful dysfunction. *Development and Psychopathology*, *5*(1-2), 5-29. doi:10.1017/S0954579400004235

Robins, L.N., & Regier, D.A. (Eds.). (1991). Psychiatric disorders in America. New York: Free Press

Sentell, T., & Halpin, H. (2006). Importance of Adult Literacy in Understanding Health Disparities. *Journal of General Internal Medicine*, *21*(8), 862-866. doi:10.1111/j.1525-1497.2006.00538.x

Serafica, F. C., & Vargas, L. A. (2006). Cultural diversity in the development of child psychopathology. In D. Cicchetti, D. J. Cohen, D. Cicchetti, D. J. Cohen (Eds.) ,

Developmental psychopathology, Vol 1: Theory and method (2nd ed.) (pp. 588-626). Hoboken, NJ US: John Wiley & Sons Inc. Retrieved from EBSCO*host*.

Spencer, M. S., Fitch, D., Grogan-Kaylor, A., & McBeath, B. (2005). The equivalence of the behavior problem index across U.S. ethnic groups. *Journal of Cross-Cultural Psychology*, *36*(5), 573-589. doi:10.1177/002202210527

Stiffman, A., Hadley-Ives, E., Elze, D., Johnson, S., & Doré, P. (1999). Impact of environment on adolescent mental health and behavior: Structural equation modeling. *American Journal of Orthopsychiatry*, *69*(1), 73-86. doi:10.1037/h0080383

Thomas, C. R., & Holzer, C. (1999). National distribution of child and adolescent psychiatrists. *Journal of the American Academy of Child & Adolescent Psychiatry*, *38*(1), 9-16. doi:10.1097/00004583-199901000-000138543

U.S. Department of Justice, Office of Juvenile Justice and Delinquency Prevention. (2009). *Juvenile arrest rates trends* Washington, DC: Retrieved from http://www.ojjdp.gov/ojstatbb/crime/JAR_Display.asp?ID=qa05260&text=yes

Wakefield, J. C. (2006). Are there relational disorders? A harmful dysfunction perspective: Comment on the special section. *Journal of Family Psychology*, *20*(3), 423-427. doi:10.1037/0893-3200.20.3.423

Waldman, I. D., Tackett, J. L., Van Hulle, C. A., Applegate, B., Pardini, D., Frick, P. J., & Lahey, B. B. (2010). Child and adolescent conduct disorder substantially shares genetic influences with three socioemotional dispositions. *Journal of Abnormal Psychology*, *120*(1), 57-70. doi:10.1037/a0021351

Walters, G. D., & Knight, R. A. (2010). Antisocial personality disorder with and without antecedent childhood conduct disorder: Does it make a difference?. *Journal of Personality Disorders*, *24*(2), 258-271. doi:10.1521/pedi.2010.24.2.258

West, H. C. U.S. Department of Justice, Bureau of Justice Statistics. (2010). *Prison inmates at midyear 2009-statistical tables* (NCJ 230113). Washington, DC: Retrieved from http://bjs.ojp.usdoj.gov/index.cfm?ty=pbdetail&iid=2200

Whaley, A. L., & Hall, B. N. (2009). Cultural themes in the psychotic symptoms of African American psychiatric patients. *Professional Psychology: Research and Practice*, *40*(1), 75-80. doi:10.1037/a0011493

Whaley, A. L. (1997). Ethnicity/race, paranoia, and psychiatric diagnoses: Clinician bias versus sociocultural differences. *Journal of Psychopathology and Behavioral Assessment*, *19*(1), 1-20. doi:10.1007/BF02263226

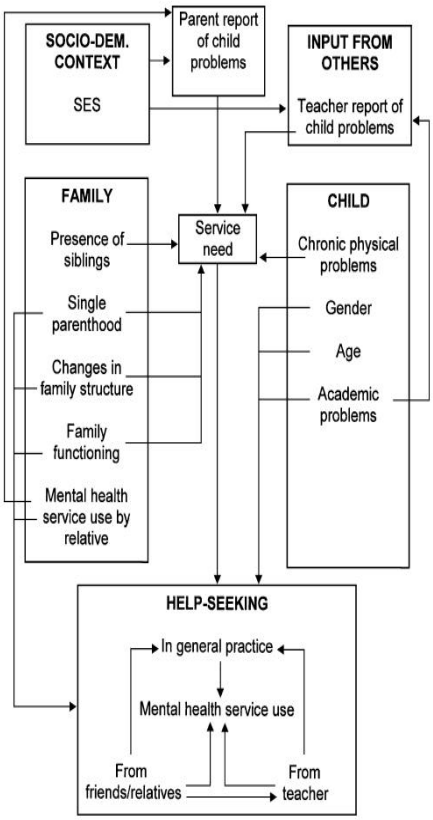
Youman, K., Drapalski, A., Stuewig, J., Bagley, K., & Tangney, J. (2010). Race differences in psychopathology and disparities in treatment seeking: Community and jail-based treatment-seeking patterns. *Psychological Services*, *7*(1), 11-26. doi:10.1037/a0017864

Zuvekas, S. H., & Fleishman, J. A. (2008). Self-rated mental health and racial/ethnic disparities in mental health service use. *Medical Care*, *46*(9), 915-923. doi:10.1097/MLR.0b013e31817919e5

Zwaanswijk, M., Van der Ende, J., Verhaak, P. M., Bensing, J., & Verhulst, F. C. (2005). Help-seeking for child psychopathology: Pathways to informal and professional services in the

Netherlands. *Journal of the American Academy of Child & Adolescent Psychiatry*, *44*(12), 1292-1300. doi:10.1097/01.chi.0000181038.98712.c6

Appendix

Figure 2. Zwaanswijk et al. Child Psychopathology Pathway

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