

Misdiagnosing the Problem: Mental Health Profiles of Incarcerated Juveniles

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ABSTRACT

Aggression, antisocial and delinquent behavior frequently result in the incarceration of a large number of young people, but these problems pale in comparison to the mental health challenges faced by many of these youth. Recent studies show a high prevalence of mental disorders among adolescents within the justice system. These findings have led researchers, clinicians and policy-makers to re-evaluate the assessment and treatment options that are available for youth within correctional facilities. This article provides a concise review of the most recent research related to mental health disorders among incarcerated juveniles within Canada and the United States. Rates of some of the most common mental health disorders among juveniles, including depression, anxiety, attention deficit hyperactivity and substance use are summarized. Throughout the review, issues related to co-morbidity and gender differences are highlighted. The implications of mental health disorders for juvenile justice policy and practice are discussed.

Key Words: mental disorder, juvenile offenders, incarceration, psychiatric comorbidity

RÉSUMÉ

Les comportements agressifs, antisociaux et délinquants conduisent fréquemment à l'emprisonnement de bon nombre d'adolescents. Pour beaucoup, ces comportements cachent d'autres problèmes comment plus sérieux. Des études récentes démontrent un haut taux de prévalence d'affections psychiatriques chez ces jeunes. Chercheurs, cliniciens et administrateurs réévaluent actuellement les façons de faire dans les institutions carcérales. Cet article résume brièvement les études épidémiologiques récentes sur la nature des pathologies que l'on retrouve chez ces jeunes au Canada et aux États-Unis. Parmi les pathologies les plus fréquentes nous retrouvons la dépression, l'anxiété, le déficit d'attention avec hyperactivité et l'abus de substances. Il sera également question de comorbidité et des différences entre garçons et filles. Nous discuterons finalement des implications de ces études.

Mots-clefs: maladie mentale, jeunes contrevenants, emprisonnement, comorbidité psychiatrique

INTRODUCTION

On any given day over 120,000 adolescents and children are held within juvenile justice facilities across North America (Statistics Canada, 2004; Sickmund, 2004). Violent, aggressive and antisocial behaviors have led to the incarceration of a sizeable proportion of these youth. Indeed, an estimated 70% of girls and 60% of boys meet criteria for conduct disorder (Otto, Greenstein, Johnson, & Freidman, 2002). However, there is growing evidence that aggression and violence are not the only problems, and perhaps not the most serious, in this population. A convincing body of research shows that the majority of children and youth within correctional settings suffer from one or more mental disorders (Abram, Teplin, McClelland & Dulcan, 2003; Andre, Pease, Kendall & Boulton, 1994; Uzlen & Hamilton, 1998). Not surprisingly, the mental health prognoses for many of these youth is poor and urgent calls are being made to respond to the treatment and rehabilitation needs of youth within these settings (Grisso, 2004).

This article provides a concise review of the research related to the prevalence of mental health disorders among incarcerated juveniles within Canada and the United States, noting rates of depression, anxiety, attention deficit hyperactivity and substance use. In order to identify research related to the prevalence or mental disorder within juvenile justice settings we conducted a search using PsycINFO for the period of 1980 to 2004. The following terms and combinations of terms were used in the

search: adolescence/juvenile/youth, mental health diagnoses (including specific search terms, such as, depression, anxiety), and corrections/incarceration. A second search was conducted in order to identify large scale epidemiological studies of mental disorder among North American children and youth for comparative purposes. Due to the sparse body of research available on Canadian incarcerated youth and the tremendous amount of variability with respect to diagnostic criteria across studies, meta-analytic approaches were not a viable summary option. Instead, rates of mental disorder among Canadian incarcerated youth from available studies are contrasted with estimates from large scale epidemiological research based on normative populations in the US and Canada, as well as in relation to epidemiological studies of incarcerated youth in the US. Issues related to co-morbidity and gender differences are highlighted and implications of mental disorder for juvenile justice policy and practice are discussed.

RATES OF MENTAL DISORDER

Research consistently shows that rates of mental disorder are higher among youth within juvenile justice versus normative settings (for a review see Otto et al., 1992; Vermeiren, 2003). Although prevalence rates vary depending on sampling methods and settings, the most recent estimates from a large epidemiological study of detained juveniles in the United States (N = 1,829) indicate that as many as two thirds of males and three quarters of females meet criteria for one or more psychiatric disorders

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(Teplin, Abram, McClelland, Dulcan & Mericle, 2002).¹ In fact, the general consensus across studies is that the vast majority of incarcerated youth meet formal criteria for at least one DSM-IV disorder (estimates typically range from 70-100%); with approximately 20% of youth meeting diagnostic criteria for a *serious mental health disorder* – defined as serious emotional disturbance resulting in functional impairment (Cocozza & Skowrya, 2000). Comparatively, the prevalence rate of *any disorder* among normative populations in the US is estimated to be approximately 36.7% (Costello, Mustillo, Erkanli, Keeler & Angold, 2003) with 1 in 10 youth meeting criteria for a *serious emotional disturbance* (U.S. Department of Health and Human Services, 2000). In Canada, a recent review of estimates from large scale epidemiological studies indicates that approximately 14% of youth meet criteria for *any disorder* (Waddell, Offord, Shepherd, Hua & McEwan, in review), unfortunately, there are no epidemiological studies available of mental disorder among incarcerated Canadian youth to report. While these overall estimates provide a general picture of the differences in prevalence rates across normative and incarcerated populations, definitional and measurement ambiguity makes it difficult to gauge the accuracy of these comparisons. With these limitations in mind, the following section contrasts rates of specific disorders found among youth within Canadian correctional facilities with estimates from epidemiological studies of children and youth in the US and Canada.

Depression

Several studies have documented high rates of depression among incarcerated youth. Ulzen and Hamilton (1998) have conducted one of the few Canadian studies of prevalence rates of mental disorder among incarcerated youth using a structured diagnostic interview. Results from this study indicated that 30.4% of the incarcerated youth met criteria for current depression (N=49) as compared to 4.1% of their community sample (N=49). More recently, Beve and colleagues (2003) have reported that 17.3% of incarcerated young male offenders in the Toronto area met criteria for depression or bipolar disorder based on structured diagnostic interviews (N = 248). In the US, Teplin et al. (2002) have reported that 13.0% of detained boys versus 21.6% of detained girls met criteria for a Major Depressive Episode within the past 6 months. When compared to normative data, estimates from the Ontario Child Health Study community survey (Fleming, Offord & Boyle, 1993) indicate that approximately 2.7 to 7.8% of children and youth in the general population met criteria for major depressive syndrome using the criteria of “medium” diagnostic certainty. While in the US, the prevalence rate of major depression is estimated to be between 5% and 8% (Shaffer et al., 1996; U.S. Department of Health and Human Services, 2000).

Anxiety

Again, Ulzen and Hamilton documented higher rates of anxiety disorders among an incarcerated versus a community

sample of Canadian youth: with rates of separation anxiety reaching 30% among incarcerated versus 4.1% among community youth. In the US, Teplin and colleagues (2002) reported that 21.3% of incarcerated boys versus 30.8% of girls met criteria for any Anxiety Disorder. Separation Anxiety was the most common anxiety disorder, with 12.9% of boys and 18.5% of girls having the diagnosis. Slightly lower estimates of anxiety disorders were reported by Wasserman, Ko and McReynolds (2004) who relied on a *self administered* computerized version of the DISC. In this study, 18.9% of incarcerated youth met criteria for *any* Anxiety Disorder within the past month. Estimated prevalence rates of any anxiety disorders within normative populations range from 6.4%, based on calculations from 6 large scale Canadian samples (Waddell et al., in review) to a 1 year prevalence of 13% in the US (U.S. Department of Health and Human Services, 2000)

Post Traumatic Stress Disorder (PTSD)

High rates of childhood abuse and exposure to violence among incarcerated youth have been well documented (Snyder & Sickmund, 1999). Thus, it is no surprise PTSD symptoms are also relatively high among detained youth. The review conducted by Vermeiren (2003) estimates the prevalence of PTSD symptoms between 16% and 32% in boys and 49% to 55% among girls. In a large US study of incarcerated youth, while virtually every youth (90%) endorsed being exposed to at least one traumatic event, only 12% of the sample met diagnostic criteria for PTSD (Abram et al., 2003). Similar estimates were obtained in Canada, where Ulzen and Hamilton (1998) reported that 14.3% in incarcerated youth met diagnostic criteria for PTSD, with no youth in the matched community sample meeting criteria.² Significantly higher estimates were obtained by Cauffman, Feldman, Waterman and Steiner (1998) who reported that 48.9% of girls and 32.3% of boys met criteria for PTSD based on PTSD module of the Revised Psychiatric Diagnostic Interview, with an additional 11.8% of girls and 19.5% of boys reporting some symptoms.

Attention Deficit Hyperactivity Disorder

Accurately assessing ADHD can often be difficult with incarcerated populations, given that the diagnosis requires at least partial symptom onset before the age of 7 (APA, 1994). Since researchers and clinicians working in forensic settings often rely on self report mechanisms to gauge symptom onset, inaccurate time lines of symptomatology are likely. Again, relying on structured clinical assessments, Ulzen and Hamilton reported an ADHD prevalence rate of 26.5% for incarcerated Canadian youth versus 2.0% for the matched community sample. Similarly in the US, Teplin and colleagues (2002) have reported 6 month prevalence rates of 17% and 21% for males and females, respectively. Authorities in Oregon (Oregon Youth Authority, 2002) have documented similar rates among sentenced juveniles (26%). Thus, it appears as though the overall prevalence rates for ADHD are likely over 20% but under 30% for juveniles in correctional settings. Within normative US

¹Rates of identified disorders remain high when CD is excluded with 70% of girls and 60% of boys continuing to meet criteria for a psychiatric disorder.

²While there were very few females in this sample (N=11) 54.5% of the females versus 15.8% of the males met criteria for PTSD in this study.

samples, the cumulative prevalence rate of ADHD is estimated to be 4.1% by 16 years of age (Costello et al., 2003): with an estimate of 4.8% being reported based on a summary of large scale Canadian samples (Waddell et al, in review).

Substance Use Disorders (SUDs)

Substance use has demonstrated a strong association with general offending (Elliot, Huizinga & Menard, 2002) and SUDs are typically co-morbid with other psychiatric disorders. For example, Abram and colleagues (2003) reported that nearly 30% of females and 20% of males with any substance use disorder also had a major mental disorder. Most studies of youth within the juvenile justice system have produced estimates of SUD's approaching 50%. Findings from one of the most comprehensive studies to date indicated that 44% of the youth arrested in a one year period met DSM-IV criteria for substance abuse or dependence (CASA, 2004). This figure is compared to an estimated rate of 7.4 % of non-arrested juveniles who meet criteria for SUDs. This study also implicated drug and alcohol use in 64% of violent offences and 72% of property offences among juveniles (CASA, 2004). With respect to juveniles in the deep end of the system, Teplin and colleagues (2002) report prevalence rates of SUDs of 50.7% for males and 46.8% for females.

Co-morbidity

While figures presented above highlight the serious nature of psychopathology among incarcerated youth, to complicate matters further, research from Canadian and American correctional settings suggests that a significant percentage of *all* incarcerated juveniles (46-83%) meet criteria for two or more DSM-IV disorders (Abram et al., 2003; Otto et al, 1992; Uzlen & Hamilton, 1998). For example, using self report measures, Timmons-Mitchell et al. (1997) found that both males and females in a state institution averaged approximately 5 diagnoses. While Domalanta and colleagues (2003) estimated that 20% of incarcerated youth meet criteria for two DSM-IV disorders, while 18% met criteria for three or more disorders. The most commonly reported forms of psychiatric comorbidity within these populations are a substance abuse disorder with a mood disorder. Estimates from the large epidemiological study of incarcerated youth conducted by Teplin and colleagues (2002) supports the above estimates; here, 56.5% of females and 45.9% of males met diagnostic criteria for 2 or more psychiatric disorders based on structured diagnostic assessments.

Special Populations

The over-represented of minority youth within North American juvenile justice systems is well documented (Bilchik, 1999). Within Canada, aboriginal youth are incarcerated at 6 times the rate of their Caucasian counterparts (Aboriginal Initiatives Branch CSC, 1999) with the highest rates of reported substance use (Corrado et al., 2001) and fetal alcohol syndrome (Verbrugge, 2003). In the US, ethnic minority, particularly Black and Hispanic, youths comprise 32% of the general population and approximately 60% of the youth within detention and secure settings (US Department of Health and Human Services, 2000). Research suggests that African American youth are less likely to have received treatment prior to coming into the system;

and, when identified in the community are more likely than their Caucasian counterparts to be referred to juvenile justice as opposed to mental health settings (Cross, Bazron, Dennis, & Isaacs, 1989).

As highlighted throughout this review, females also comprise a unique population within juvenile justice settings. In the US, rates of incarceration among females are increasing at a faster rate than for males (Puzzanchera, Stahl, Finnegan, Tierney & Snyder, 2003) and females within these settings are often more likely than boys suffer from a number of disorders, including: depression, anxiety and PTSD. While gender disparities also exist within normative samples, the rates of disorder and co-morbidity appear to increase exponentially for girls within juvenile justice settings; leading some to suggest that a gender paradox exists whereby girls at the most extreme end of the continuum with respect to behavioral and mental health profiles are filtered into correctional settings.

Policy and Treatment Issues in the Juvenile Justice System/Corrections

Rising rates of violent crime in the 1990s served as the catalyst for harsher responses to juvenile crime; including longer periods of imprisonment and higher rates of transfer to adult court. During this time, policy-makers and legislators in both Canada and the United States directed their attention and legal reforms towards protecting society from this new class of "super predators" (Grisso, 2000). Although this problem has only been addressed sparingly in the US, recent legislative changes in Canada, namely the *Youth Criminal Justice Act*, are beginning to counter this trend through acknowledging the need for "intensive rehabilitation" for a small segment of serious and violent young offenders; with the remaining youth being diverted into community placements and treatment settings. As a result, incarceration rates are approaching an all time low within Canada (Statistics Canada, 2004); however, questions still remain as to whether the mental health needs of this population are being met under the new mandate. In order to answer this question, more research is needed regarding the prevalence of mental disorders among young offenders within Canadian juvenile justice facilities. While the mounting body of evidence from large scale US studies is informative, it is unclear whether these results generalize fully to the Canadian context.

Correctional systems in Canada are at least moving toward the recognition that aggression and antisocial behavior is only one of the problems that youth in juvenile justice settings face. Given the complex mental health needs that incarcerated youth present, in terms of both absolute prevalence and co-morbidity, it is unlikely that the current structure of the juvenile justice system will be able to respond to their treatment needs: in order to meet the needs of this population, it will first be necessary to acquire a sufficient body of epidemiological research. With respect to intervention, we have yet to develop developmentally sensitive strategies to intervene early with youth who are en route to the juvenile justice system in order to reduce risk from mental health and behavior problems. Our mental health programming for youth in detention is also lacking in the application of evidence based practice and we have few programs that transition youth

out of detention with the support that their mental health issues warrant. Reconciling our obligation to serve youth and respond to their mental health needs with our obligation to serve justice and protection is challenging but certainly not impossible. The potential benefits of meeting these needs are clear.

REFERENCES

- Aboriginal Initiatives Branch. (1999). Aboriginal offender statistics. Retrieved from: www.csc-scc.gc.ca/text/prgrm/correctional/abissues/know/4_e.shtml.
- Abram KM, Teplin LA, McClelland GM, Dulcan MK (2003). Comorbid Psychiatric Disorders in Youth in Juvenile Detention, *Archives of General Psychiatry*, 60, 1097-1108.
- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.
- Andre G, Pease K, Kendall K, Boulton A (1994). Health and Offence Histories of Young Offenders in Saskatoon, Canada. *Criminal Behaviour and Mental Health*, 4, 163-180.
- Beve I, Duchesne T, Rosenthal J, Rossman L, Theodor F, Sowa E (August, 2003). Young offenders diagnoses as predictors of subsequent adult criminal behavior. Annual Convention of the American Psychological Association. Toronto, ON.
- CASA. (2004). Criminal neglect: substance use, juvenile justice and the children left behind. New York, NY: The National Center on Addition and Substance Use at Columbia University.
- Cauffman E, Feldman SS, Waterman J, Steiner H (1998). Posttraumatic stress disorder among female juvenile offenders. *Journal of the American Academy of Child & Adolescent Psychiatry*, 37, 1209-1216.
- Cocozza J, Skowrya K (2000). Youth with mental health disorders: Issues and emerging responses. Washington, DC: Office of Juvenile Justice and Delinquency Prevention.
- Corrado R, Odgers CL, Cohen I (2000). The use of incarceration for female youth: Protection for whom? *Canadian Journal of Criminology*, 42, 189-206.
- Cross T, Bazron B, Dennis K, Isaacs M (1989). Towards a Culturally Competent System of Care: A Monograph on Effective Services for Minority Children Who are Severely Emotionally Disturbed. Georgetown University Child Development Center/CASSP Technical Assistance Center: Washington, DC.
- Dixon A, Howie P, Staling J (2004). Psychopathology in female juvenile offenders. *Journal of Child Psychology and Psychiatry*, 45, 1150-1158.
- Domalanta DD, Risser WL, Roberts RE, Risser JMH (2003). Prevalence of depression and other psychiatric disorders among incarcerated youths. *Journal of the American Academy of Child and Adolescent Psychiatry*, 42, 477-484.
- Ellickson P, Saner H, McGuigan KA (1997). Profiles of violent youth: substance use and other concurrent problems. *American Journal of Public Health*, 87, 985-991.
- Fleming JE, Offord DR, Boyle MH (1989). Prevalence of childhood and adolescent depression in the community: Ontario Child Health Study. *The British Journal of Psychiatry*, 155, 647-654.
- Grisso T (2000). Law & psychiatry: the changing face of juvenile justice. *Psychiatric Services*, 51, 425-438.
- Grisso T (2004). *Double jeopardy: adolescent offenders with mental disorders*. Chicago, IL: University of Chicago Press.
- Oregon Youth Authority. (2002). Mental health and offenders in the custody of the Oregon Youth Authority. Retrieved from: www.oregon.gov/OYA/docs/statewide_mhgap.pdf.
- Otto R, Greenstein J, Johnson M, Freidman R (1992). Prevalence of Mental Disorders Among Youth in the Juvenile Justice System, In Cocozza, J. (ed.) *Responding to the Mental Health Needs of Youth in the Juvenile Justice System*. Seattle, WA: National Coalition for the Mentally Ill in the Criminal Justice System.
- Puzzanchera C, Stahl AL, Finnegan TA, Tierney N, Snyder HN (2003). Juvenile Court Statistics 1998. Washington, DC: Office of Juvenile Justice and Delinquency Prevention.
- Shaffer D, Gould MS, Fisher P, Trautman P, Moreau D, Kleinman M, Flory M (1996). Psychiatric diagnosis in child and adolescent suicide. *Archives of General Psychiatry*, 53, 339-348.
- Sickmund M (2004). Juveniles in corrections. Juvenile offenders and victims national report series. Washington, DC: Office of Juvenile Justice and Delinquency Prevention.
- Snyder HN, Sickmund M (1999). Juvenile offenders and victims: 1999 national report. Washington, DC: Office of Juvenile Justice and Delinquency Prevention.
- Statistics Canada (2004). Youth Court Statistics 2002-2003. Ottawa, ON: Canadian Centre for Justice Statistics.
- Teplin LA, Abram KM, McClelland GM, Dulcan MK, Mericle AA (2002). Psychiatric disorders in youth in juvenile detention. *Archives of general psychiatry*, 59, 1133-1143.
- Timmons-Mitchell J, Brown C, Schulz SC, Webster SE, Underwood LA, Semple WE (1997). Comparing the mental health needs of female and male incarcerated juvenile delinquents. *Behavioral Sciences and the Law*, 15, 195-202.
- Ulzen TPM, Hamilton H (1998). The nature and characteristics of psychiatric comorbidity in incarcerated adolescents. *Canadian Journal of Psychiatry*, 43, 57-63.
- US Department of Health and Human Services. (2000). *Mental Health: A Report of the Surgeon General*. Rockville, MD: U.S. Department of Health and Human Services.
- Verbrugge P (2003). Fetal Alcohol Spectrum Disorder and the Youth Criminal Justice System: A Discussion Paper. Ottawa: ON: Department of Justice Canada.
- Vermeiren R (2003). Psychopathology and delinquency in adolescents: A descriptive and developmental perspective. *Clinical Psychology Review*, 23, 277-318.
- Waddell C, Offord DR, Shepard CA, Hua JM, McEwan K (in review). Child psychiatric epidemiology and Canadian public policy-making: The state of the science and the art of the possible. *Canadian Journal of Psychiatry*.
- Wasserman GA, Ko SJ, Reynolds LS (2004). Assessing the mental health status of youth in juvenile justice settings. *Juvenile Justice Bulletin*, p. 1-7. Retrieved from: www.ojp.usdoj.gov/ojjdp.
- Youth Criminal Justice Act (2002, c. 1).