



The Roots of Violence:
*Evidence from the literature with emphasis on child
and youth mental health disorder*

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EXECUTIVE SUMMARY

This report provides an overview of youth violence from the perspective of the co-morbidity of mental health disorder with the perpetration of violence. While it is difficult to estimate the overlap in percentage terms regarding those youth who commit violence who also possess a diagnosable mental health disorder, it is evident from this literature that a large percentage of youth who are at risk for perpetrating violence also possess some form of diagnosable behavioural and/or emotional disorder.

Rate of youth violence in Ontario. With the caution related to how youth violence data is reported and defined in the context of changing legislation and definitions of what constitutes violence, this review, drawing on evidence from Statistics Canada, suggests:

1. That over the past ten years, the trend for overall youth crime has been steady if not slightly downward.
2. Compared to twenty-five years ago, the youth crime rate – violence in particular – has increased marginally.
3. That the rate of youth violence tends to peak with males in their teenage years and decrease thereafter with time and age.

However, while the *rate* of violence may not be escalating as dramatically as many would assume, the *lethality* of the violence for both adults and youth has been increasing with minor assaults no longer as evident, but serious violent crime resulting in the loss of life actually increasing.

General correlates of youth violence. As a context in which to appreciate the overlap of violence and youth with mental health disorder, this review begins with a general presentation of the factors that are linked to youth violence. This presentation is provided in the context of when in the development of a child or youth risk factors occur. In general, these risk factors can include any of the following: pregnancy and delivery complications, emotion-related disorders, hyperactivity, concentration problems, restlessness, risk taking, aggressiveness, early initiation into violent behaviour and beliefs and attitudes supportive to violent behaviour. What can increase our accuracy of prediction for youth violence is an appreciation of the systemic factors that interact with these individual risk factors. These can be factors within the family including: early family conditions related to poverty, abuse, a generally poor relationship between child





and parent and parental criminality. Peers also play a role in rewarding behaviour and attitudes supportive of youth violence. In certain cases where youth become socialized within a gang culture that permeates attitudes favourable towards violence, it is suggested that affiliation within gangs meets an individual youth's needs for power, affiliation, self-esteem, socialization, and, what can only be characterized as, creating a 'feeling of family' and a sense of belonging. Such conditions can be particularly resistant to successful intervention.

School has become a particularly important context in which considerable violence is experienced by many youth. Schools for adolescents are the primary means of socialization, yet data suggests that for many, school is not a safe place within which to learn. Frequent physical and verbal harassment can result in some youth showing increased aggressive behaviours, the formation of antisocial peer associations, and numerous mental health disorders such as alcohol use, and psychological distress reflected in low self-esteem, insecurity, depression, anxiety and suicide.

This review highlighted that some youth are particularly vulnerable to the exposure of violence in music, videos and interactive video games as a function of their previous experience with violence and the presence of a mental health disorder. Of note in this literature were the factors related to the age of the viewer, gender, and identification with the violent character being depicted as well as the mental health characteristics of children and youth. Separately or together, these factors can influence a child/youth's susceptibility to the violence being watched.

Finally, in relation to systemic influences, the literature related to rural and urban advantage in relation to youth violence is highlighted. The links to youth violence in this context rest on the youth's perception on the degree of safety, social stability and social cohesion that exists within the immediate community. Transient communities, communities where there is a high level of openly expressed violence and communities where there is not a shared appreciation for academic or vocational attainment are perceived as less stable and more threatening. Locating where a youth lives can influence the extent to which they experience both mental health and violent outcomes.

Mental health correlates with youth violence. As reflected in the *Ontario Child Health Study*, there is an estimate that one in five Ontario youth will experience a mental health disorder.





Research suggests that this is a stable estimate across numerous cultures. Prospective studies show that estimating the rate of youth who will experience both a mental health disorder and display violent tendencies is more difficult. One exemplary study reports that overall, “[youth] with mental disorders account for a considerable amount of violence in the community”.

Childhood and adolescent factors linked to mental health and future violence include:

- a variety of behavioral concerns including the early identification of aggression, attention problems, motor restlessness and attention seeking
- emotional concerns consistent with depression which include withdrawal, anxiety, self-deprecation and social alienation
- family characteristics such as a variety of negative parenting strategies including coerciveness, authoritarian behaviours, lack of child supervision, and family structure such as witnessing violence, interparental conflict and poor communication.

Retrospective studies based on youth who have been charged with a violence-related offense report an overlap between violence and the presence of a mental health disorder such that with adolescent males, 60 percent of youth arrested for a violent offense were identified as having a mental health disorder. For females the estimate increased to 65 percent.

Substance use and youth violence. Research suggests that the use of illegal substances for children and adolescents is embedded in a series of early life circumstances. These typically include, coercive family processes, social stress, poverty, poor academic outcomes and social disengagement. Again, it is difficult to disentangle the effects of substance use and violence, as many of the predictors of youth violence overlap with the predictors of substance use. These include; inconsistent parental discipline and harsh, punitive parental practices, low parental monitoring of a child/youth’s behaviour and whereabouts, deviant peer associations, depression, low self esteem and poor academic achievement. What is inescapable is the strong link between substance use, alcohol consumption and involvement in violence.

Gender. Unique to the studies on comorbidity with violence and risk with boys, girls who behave aggressively report higher levels of depression and suicidal ideation. Indeed, a review of this literature indicates that girls with higher scores on aggression reported elevations on depression at a rate close to 40 percent. In addition, girls relative to boys who are aggressive report higher





rates of diagnoses of ADHD, involvement in substance abuse and suicide risk. More than for boys, when girls behave violently, it is important to assess for the presence of an underlying mental health disorder.

Cycle of violence in children and youth. Children who experience either maltreatment or exposure to violence in their families of origin are nearly twice as likely to report clinically significant elevations for emotional and behavioural disorder compared to children and youth who do not report maltreatment. The legacy of child maltreatment is enduring in the context of ongoing violence. It is not only the impact of being maltreated that for certain children and youth sets the stage for the development of serious emotional disorder; for many, it also translates into their own perpetration of violence.

Cognitive and developmental correlates of youth violence. An overview is provided of the conditions in which youth with a developmental impairment or formal diagnosis of fetal alcohol spectrum disorder are represented in the youth violence literature. While limited, this literature reflects that these youth who display poor impulse control, a lack of social skills and an inability to deploy conflict avoidance or resolution strategies are at higher than usual risk to become aggressive. Similar to the review on the cycle of violence, these youth are also highly represented in the data as being victims of violence, which also contributes to their high rate of representation in the youth perpetration violence data.

Best and promising practice interventions in youth violence and mental health disorder.

This discussion is focused on the point of intervention for youth, from primary to tertiary intervention practices. As a general statement, there is considerable literature on services that have demonstrated their effectiveness in reducing risk in youth who have a mental health disorder and display some level of aggression. These best practices can be offered at any number of points along the continuum of primary, secondary and tertiary care. Although by no means exhaustive, a number of programs are cited for their reporting on evidence that reflects their success. Some of the guiding principles that characterize effective services are: they are targeted, empirically based, reflect the multiple pathways that link mental health disorder and youth violence, are gender-informed, developmentally appropriate, and are mindful of the challenges of service implementation.





Future directions in the research on youth violence

A number of areas are identified that provide a basis for future research in the area of youth violence and mental health disorder. These include:

1. Research initiatives that promote a developmental understanding related to risk, mental health disorder and youth violence. Such efforts would inform interventions targeting specific factors at critical developmental points for children and youth related to the development of mental health disorders and increased violence potential in certain youth.
2. A focus on promoting an understanding of resilience and protective factors for youth who reside in high-risk families or communities. While this review highlighted the relevance of certain systemic factors increasing the likelihood of youth violence, not all youth are similarly influenced despite their being exposed to the same risk indicators. There may be certain protective factors as yet unknown that service providers could draw on to decrease the vulnerability within certain high-risk youth.
3. The research is quite limited in relation to understanding the risk related to youth with developmental difficulties and fetal alcohol spectrum disorder and violence. This is particularly the case in relation to services that can be effective in reducing the violence potential with this group.
4. There is now an increasing appreciation for the relevance of understanding violence in the context of gender. For numerous reasons, girls are at greater risk for mental health concern in the context of their acting out aggressively. As gender-informed programs are now being promoted to focus on girls' violence, it will be critically important for research to focus on their effectiveness.
5. Particularly in the context of gang intervention, effective services need to be intensively delivered across a number of service sectors. Yet, the coordination of such community-wide efforts have, in many respects, struggled due to numerous barriers to deliver highly coordinated, effective services. Research efforts need to focus on how best to coordinate services that are cross-sectoral – often requiring the collaboration of education, police,





social services, public health, housing, employment and recreational services – yet do not lose sight of the target of service being the youth and the community.

6. While there is a very supportive literature in relation to understanding the components of effective programs to reduce violence in youth, most of these studies represent intensively delivered and evaluated practices provided on a *pilot* basis. There is considerably less emphasis in the literature on understanding the conditions that promote the translation or generalizeability of effective, albeit pilot-run, programs to other communities and populations. Research that is focused on the *portability* of best practices would be of great significance in promoting the application of evidence-based treatment services across jurisdictions.

As an extension of the above recommendation for future research, there is a need to develop more effective means of disseminating the existing information regarding current best-practice research in youth violence. While this review reflects the extensive knowledge base that now exists with respect to youth violence and mental health disorder, there remains the considerable challenge of disseminating this knowledge to service providers who will be charged with its implementation. The first step to implementation is dissemination. There is, as of yet, no evaluated best practice of sharing knowledge to promote the generalization of understanding with respect to risk, program utility and implementation. Various models such as ‘train the trainer’, centrally accessible internet-based knowledge exchanges, and expert-driven consultation models are all variously employed, yet are not evaluated. This is a critical level of understanding to achieve in order to ensure that the knowledge that currently exists is reflected in the programs that are offered in youth violence and mental health disorder.





OVERVIEW

The request for a literature review to address the correlates of violence and child and youth mental health was directed to Dr. Ian Manion, executive director at the Provincial Centre of Excellence for Child and Youth Mental Health at CHEO. The key research questions as outlined in the Terms of Reference in this request reflected a need for information in the following areas:

1. Proportion of youth with mental illness who commit violence
2. Literature-based review of the links between mental health and youth violence
3. Specific literatures that relate the following to youth violence
 - a. overall risk and protective factors
 - b. addictions
 - c. fetal alcohol spectrum disorder
 - d. developmental disabilities
 - e. over-representation of certain youth cohorts in violence-related data as perpetrators including gender, socio-economic marginalization, rural/urbanization
4. Examples of best practices for prevention and intervention
5. Future directions in the literature on youth violence

There is a substantial literature in most all of the above areas. This review will represent only the primary findings that relate to youth violence in the context of each section. Adequate references are provided for readers wishing to pursue the primary sources.

This review provides a context within which to appreciate the roots of violence in the context of children and youth who experience a variety of emotional and behavioural challenges that are linked to their perpetration of violence. The first section sets out this context regarding the incidence and prevalence rates of youth violence. This is followed by an overview of the major overall predictors of risk for youth committing violent acts followed by a specific discussion of factors relating mental health disorder and violence in the context of the overall correlates. Gender is an extremely relevant context within which to appreciate differential predictors of risk related to mental health and violence. Since youth violence takes place within a variety of systemic contexts, a review is provided of the influence of family, peers, school and media in influencing the prediction of risk for youth violence. There is also a summary of living





arrangements in rural- or urban-based communities that may be related violence potential. Subsequent to this section, a discussion is provided on cognitive deficits as risk factors reflected in youth with fetal alcohol spectrum disorder in the context of youth violence. An overview is provided regarding best and promising practices in the prevention and intervention in the lives of youth involved as perpetrators of violence. Finally, suggestions for a future research agenda in youth violence and mental health disorder are provided.

OVERALL INCIDENCE AND PREVALENCE RATES OF YOUTH VIOLENCE

Statistics, particularly in the context of youthful offending and violence, are often misrepresented or misinterpreted. Depending on when the rate of youth violence is compared, the trend is either decreasing, if the benchmark of 10 years ago is used, or increasing if the comparison is from 20 years ago. In the context of youth violence, an additional caveat is that, what is defined as 'violent' can change over time and hence be characterized differently in the statistics. The most common definition of youth violence used by Statistics Canada is, "any intentional physical, sexual or psychological assault on another person (or persons) by one or more young people aged 12 to 19 years of age."¹ Canada's Public Health Agency reports that 19 percent of all youth charged under the *Youth Criminal Justice Act (YCJA)* are involved in a violent offense².

Changes in legislation can also influence how crime data is reported. This has been the particular case in the youth justice system where, over the past 10 years, amendments to the *Young Offenders Act* and the proclamation of the *YCJA* have affected the way in which youth crime rates are presented. Three general trends however can be acknowledged:

1. Over the past 10 years, the trend for overall youth crime has been steady if not slightly downward.
2. Compared to 25 years ago, the youth crime rate – violence in particular – has increased marginally.
3. The rate of youth violence tends to peak with males in their teenage years and decrease thereafter with time and age.

¹ Public Health Agency of Canada. (2007). *Youth and violence*. Ottawa ON.

² Public Health Agency of Canada. (2007). *Youth and violence*. Ottawa. ON.





The fact that youth violence has been steady if not trending slightly downward in certain provinces over the past 10 years may seem somewhat surprising. There is a general perception that crime generally – and youth violent crime in particular – has been dramatically increasing. In part, researchers studying the public's perception of crime and violence, most notably Dr. Anthony Doob of the University of Toronto's *Centre of Criminology*, suggest this disconnect between the public's perception and reality can be in part accounted for by the media's coverage of crime³. When questioned about crime, data suggest that the public overestimates the actual rate of crime. A study from California illustrates this point. Seven of 10 local TV news stations featured news stories on violence and youth, accounting for 68 percent of stories related to violence when data showed over the same period that young people accounted for only 14 percent of violent arrests, again during the same period⁴.

HAS THE YOUTH VIOLENT CRIME RATE CHANGED IN RECENT TIME?

While data from Statistics Canada overall for youth and adults suggests that violent crime has *declined*, the lethality of violence has actually *increased*. That is, minor assaults are no longer as evident, but serious violent crime resulting in the loss of life has actually increased.

Has the data related to youth violence in particular followed this same general pattern? Data from the year 2003 indicates a small but consistent increase of five percent for all youth crime, with a three percent increase in violent crime since 1999. These data may be somewhat misleading as they reflect crime recordings during the advent of the *YCJA*, which changed the nature, and definitions of certain offenses.

³ Doob, A., Marinos V., & Varma, K. (1995). *Youth crime and the youth justice system in Canada: A research perspective*. Ottawa ON: Department of Justice Canada.

⁴ Dorfman, L. & Woodruff, K. (1998). The role of local news stories on youth and violence. *Journal of Popular Film and Television*, 33, 65-85.





Statistics Canada reports the following:

1. The crime rate among young people aged 12 to 17 years, as measured by the total number accused by police, increased five percent in the year 2002. It was the third gain in the last four years.
2. The rate of youths formally charged declined 15 percent. There was a 30 percent increase in the rate of youths cleared of their charges otherwise. In 2003, some of the increase in youths cleared may be a result of increased reporting by police under the new provisions of the YCJA and use of the extrajudicial measures provisions of the YCJA.
3. Violent crime among youth was up three percent, also the third increase in four years. Increases were reported in the rate of youths accused of homicide, attempted murder and assault. Declines were reported for sexual assault and robbery.
4. Again relative to 2002, youth crime generally and violent crime in particular appears to have largely stabilized when considered over the period 2002-2003. Within this timeframe, general crime for youth in Ontario declined 5.4 percent with a marginal increase in violent crime of 0.2 percent.

The comparison of Ontario's rate for violent youth crime is favourable when compared against the rest of the country. That is, Ontario's youth crime rate showed a decrease of 0.7 percent, with violent crime increasing 3.7 percent. This decrease in Ontario's youth crime rate is similar to trends in the provinces of Alberta, British Columbia and Quebec.

More meaningful is an understanding of the rate per population of the committal of youth violence. For youths, the rate in the committal of violence is almost twice that for adults per 100,000 population. For youths, this rate is 788.2 committals of violent offenses compared to the adult rate of 469.3 per 100,000. As well, with all crime, and consistent with the general literature on youth violence, is the conclusion that the committal of violent offenses peaks during the adolescent years and slowly diminishes with time and age⁵.

However, not all of the violence committed by children and youth is reflected in the data reported by Statistics Canada. Many forms of violence such as dating violence, school-based

⁵ Statistics Canada. (2005). CANSIM: Ottawa, ON.





bullying and peer-on-peer violence does not result in a charge and oftentimes goes unreported. The Canadian Health Network, drawing on data from Canada's *National Longitudinal Study on Children and Youth* reports, "approximately 55 percent of boys and 27 percent of girls reported being in a fight resulting in harm to another."⁶ Again, the vast majority of these violent incidents would not necessarily appear in official reports.

As a context within which to appreciate the extent of unreported youth violence with respect to bullying in Canada, students in Grades 6, 8, and 10 are represented in the top quartile when compared to students in 36 other countries for bullying other students, and in the top one-third for being victimized⁷ (Craig & Pepler, 2003)⁸. The same survey showed that Canadian rates for frequent victimization, consisting of at least two bullying incidents in the last five days, fell in the top quartile. This places Canada 9th out of 39 countries (Craig & Pepler, 2003). There is also evidence to suggest that school-based violence victimization rates are escalating. In 1998, the Canadian Public Health Agency found that 17 percent of Grade 9 students and 11 percent of Grade 10 students "rarely" or "never" felt safe in school, suggesting that a substantial number of youth in high school perceive themselves as being at risk for violence while they are at school (*Trends in the Health of Canadian Youth; Health Behaviours of School-Aged Children*, 2002)⁹. Reginald Bibby (2001)¹⁰, a noted sociologist from the University of Lethbridge, reports that youth who perceived violence in schools as a very serious problem increased from 36 percent in 1992 to 50 percent in 2000. Professor Debra Pepler of York University recently reported that the extent of school-based violence is such that it should be more accurately characterized as a public health issue.

⁶ Canadian Health Network. (2003). *How common is youth violence?* Ottawa ON.

⁷ This section of the report is drawn from a summary provided to the Ontario Chief Coroner's Office: *An overview of youth violence: The extent and changes in rates of youth violence in Ontario, predictors of youth violence and an overview of effective prevention and intervention strategies*. Prepared for the Inquest Regarding the Death of Jeffrey Reodica

⁸ Craig, W.M. & Pepler, D.J. (2003). Identifying and targeting risk for involvement in bullying and victimization. *The Canadian Journal of Psychiatry*, 48, 577-582.

⁹ "Trends in the Health of Canadian Youth; Health Behaviours of School-Aged Children: Chapter 2, The School Experience". (2002). Retrieved on May 7, 2006 from: http://www.phac-aspc.gc.ca/dca-dea/publications/hbsc_02_e.html

¹⁰ Bibby, R.W. (2001). *Canada's teens, today, yesterday and tomorrow*. Toronto: Stoddart.





WHO ARE THE YOUNG PEOPLE WHO COMMIT VIOLENCE?

This section will provide a summary of the general correlates of youth violence as a context within which to appreciate the crossover of youth with mental health disorder who commit violence.

As an introduction, the study of youth violence has shifted over the past 15 years away from reporting on the general personality characteristics associated with youth violence towards a more risk-based focus in examining specific factors that empirically relate to the commission of a violent act. This *evidence-based* approach is an improvement in identifying not only specific correlates of violence, but more specifically, the developmental aspects of which correlates at which age for children and youth serve to increase or decrease the likelihood that a youth will commit a violent act¹¹. Three factors in predicting risk for youth violence are important to appreciate. The first is that risk factors vary in their predictive power depending on when in the course of a child or adolescent's development they occur. Second, as children move from early childhood into adolescence, risk factors play a differentially powerful role in predicting behaviour¹². Finally, with respect to risk prediction, no single risk factor or combination of factors can predict violence with unerring accuracy. For example, most youth exposed to one risk factor will not behave violently, and even youth exposed to multiple risk factors will not display aggressive behaviour. What we do know is that risk factors do not operate in isolation. Rather, they interact in many ways with other life conditions such as school, poverty and neighbourhoods to affect the probability of a violent act occurring. However, what research does tell us is that the more factors that a youth is exposed to, the greater the likelihood of a violent outcome.

The first part of this section will summarize the general correlates of youth violence, while the second will summarize the literature specifically related to mental health disorder with children and youth and their relation to violence.

¹¹ Leschied, A.W., Chiodo, D., Rodger, S. & Nowicki, E. (2007). Childhood Predictors of Adult Criminality: A meta-analysis drawn from the prospective longitudinal literature. *Canadian Journal of Criminology and Criminal Justice*. (In press).

¹² Leschied, A.W., Chiodo, D., Nowicki, E. & Rodger, S. (2006). *Better to build a child than fix an adult: A report to the National Crime Prevention Council on the predictors of risk for youth who proceed to the adult justice system and the programs that work to reduce that likelihood*. National Crime Prevention Council. Ottawa ON. Available at www.thefourth.ca





THE GENERAL CORRELATES OF YOUTH VIOLENCE

Violence in the general society remains a relatively rare event. It is a *low base rate phenomenon*, which is to say that it simply does not happen very often. Hence, the prediction of such relatively rare events is a challenge for researchers in either overestimating the relationship between a predictor and the committal of violence, referred to as false positive predictions, or underestimate the relative strength of a predictor, referred to as false negative predictions. In other words, research is drawn from the *general* case and caution is always expressed for translating the significance of such findings to *specific* instances. In addition, predicting a violent incident, even knowing the risk within the young person, will still require a precipitating event that will trigger the violent act. Hence what is also necessary in order to increase the likelihood of an accurate prediction is an understanding of the contexts or *circumstances* that can increase the likelihood of violence. There are both direct and indirect circumstances that relate to the likelihood of the committal of a violent act by a young person. The direct contextual variables can include any one of the following¹³:

1. A preoccupation with violence
2. Access to means (i.e. weapons)
3. Psychological vulnerability
4. History of violence within the family of origin
5. A pattern of glorifying violence

Indirect indicators or circumstances that can influence violence potential include:

1. Being emotionally closed
2. Unshared anger and grief
3. A history of antisocial behaviour that has been non-violent in the past
4. Chemical abuse
5. Self-injurious behaviour
6. Signs of cumulative stress

¹³ Gilgan, J.F. (1999). *Detecting the potential for violence*. Minneapolis MN: Minnesota Center Against Violence and Abuse and the University of Minnesota.





With these facts in mind, this section will summarize the general correlates of child and youth violence. It will be organized around those factors that are considered within the individual and those that are related to the systems that surround children and youth, namely families, peers, school and the media.

INDIVIDUAL FACTORS

Numerous studies have now reported on a number of individual risk factors that have been identified linking individual characteristics within the youth to the committal of violence. Risk for violence occurs at all developmental points in the life of the child or youth. Hawkins, Herronkohl et. al, (2000)¹⁴ have provided among the most useful summaries of these risk factors for violence in the context of when in the life course of the young person they occur. These can include any number of the following: pregnancy and delivery complications, emotional disorders, hyperactivity, concentration problems, restlessness, risk taking, aggressiveness, early initiation into violent behaviour and beliefs and attitudes favourable to violent behaviour. What is missing from this review is the differential strength of each predictor. In addition, while these risk factors have been shown to predict violence, many of them also predict general criminogenic behaviour as well. What can increase the accuracy of violence prediction however, is an appreciation of the context or systemic variables that can increase the accuracy of the prediction. The following sections review the major systemic predictors of risk for youth violence.

SYSTEMIC FACTORS

Family

Families play a differentially powerful role in shaping the behaviour and values of their children. Within a developmental framework, and in the context of appreciating the influence of families on aggressive and violent behaviour in their children and adolescents, the most meaningful way to characterize this influence is again, within a developmental perspective. That is, what family influences at what ages and stages of their children are predictive of future violent behaviour?

¹⁴ Hawkins, J.D., Herrenkohl, T.I., Farrington, D.P., Brewer, D., Catalano, R.F., Harachi, T.W. & Cothorn, L. *Predictors of youth violence*. Washington DC: Office of Juvenile Justice and Delinquency Prevention.





Lipsey and Derzon (1998)¹⁵ have offered a useful summary of the family – related predictors of youth violence, separating those predictors that are relevant in the lives of children age six to 11 and those relevant to an older age group, 12 to 14 years. For the younger age group, the strongest predictors include family socioeconomic status and antisocial orientation of the parents. Weaker predictors, yet still significant, were related to parent-child relations, coming from a 'broken' home, and having abusive parents. For the older age group, some of the same predictors were in evidence: parent-child relations, having parents who themselves were antisocial and coming from a 'broken' home, family socioeconomic status and having abusive parents. It would therefore appear that early family conditions related to poverty, abuse, and a generally poor relationship between child and parent are related to later violence. However, these conditions within the family do not operate in isolation. In the absence of strong family ties that reinforce prosocial and non-violent ways of coping, young people will seek out associations with peers who will, in some respects, fill a vacuum of belongingness through the types of associations that are established.

Peers

There is an extensive literature related to the importance of peer associates in promoting youth antisocial and violent behaviour. From a developmental perspective, the value of peers influencing individual adolescent behaviour has been identified as one of the strongest risk factors for adolescents, second only to personal values and beliefs supportive of violence. It would appear that it is not only the association with negative peers that legitimizes and reinforces antisocial beliefs and values around violence. The isolation from adolescents who represent more prosocial non-violent beliefs is what lies at the basis of the strength of this factor. This is particularly the case when viewed from the perspective of youth who are immersed within a gang culture where the values related to supporting violence are pervasive. Youth gang members, as opposed to youth who hold preference for the association with antisocial peers but who are not organized within a gang culture, hold particularly strong negative peer associates. These are young persons who have met with limited success socially

¹⁵ Lipsey, M. W. & Derzon, J.H. (1998). Predictors of violent or serious delinquency in adolescence and early adulthood. In R. Loeber & D. P. Farrington (eds.) *Serous and violent juvenile offenders: Risk factors and successful interventions*. London EN: Sage Publ.





and academically and have difficulty finding meaningful ways to organize their time. As summarized in a previous report for the Ontario Ministry of Children and Youth Services¹⁶,

“Affiliation within gangs meet an individual youth’s needs for power, affiliation, self-esteem, socialization, and, what can only be characterized as, creating a ‘feeling of family’ and a sense of belonging. There is some belief that as youth may continue to feel marginalized and disconnected from the mainstream with family structures changing and school/work becoming increasingly challenging for certain segments of the province’s youth, the formation of gangs may continue to be an attractive option.”

Peers can form the basis for much of a marginalized adolescent’s values that can influence the perceived rewards attached to behaving violently. The challenge of providing effective community-based intervention for gang violence is a significant one. A recent review of the literature produced for both Ontario’s Ministry of Children and Youth Services¹⁷ and by the First Nations University of Canada along with the University of Saskatchewan¹⁸ will be of more than passing relevance for appreciating effective evidence-based practice for gang-related interventions.

School

Schools offer one of the most significant socialization contexts for youth and hence hold significant potential to affect a child’s life course (Ladd et al., 2002)¹⁹. Unsafe, cliquish environments in schools can contribute to a difficult school experience for some students, especially for a subgroup who experience frequent physical and verbal harassment (Rusby et al., 2005)²⁰. This subgroup is more likely to exhibit problems in high school reflected in aggressive behaviours, antisocial peer associates, and numerous mental health disorders such as alcohol use, and psychological distress reflected in low self-esteem, insecurity, depression,

¹⁶ Leschied, A.W. (2007). *Effective Programming in Ontario Youth Justice: The Challenge Posed by Gangs, Reintegration from Custody to Community and Short Terms Stays in Custody*. Toronto ON: Ministry of Children and Youth Services.

¹⁷ See above reference, Leschied, A.W. (2007).

¹⁸ Lafontaine, T., Ferguson, M. & Wormith, J.S. (2005). *Street gangs: a review of the empirical literature on community and corrections-based prevention, intervention and suppression strategies*.

¹⁹ Ladd, G.W., Buhs, E.S., & Troop, W. (2002). Children’s interpersonal skills and relationships in school settings: Adaptive significance and implications for school-based prevention and intervention programs. In P.K. Smith & C.H. Hart (Eds.), *Blackwell Handbook of Childhood Social Development* (pp. 394-215). UK: Blackwell Publishers Ltd.

²⁰ Rusby, J.C., Forrester, K.K., Biglan, A., & Metzler, C.W. (2005). Relationships between peer harassment and adolescent problem behaviours. *Journal of Early Adolescence*, 25, 453-477.





anxiety and suicide (Rusby et al., 2005; MacKay & Sutherland, 2006²¹; Reynolds, 2003²²; Rigby, 2003²³).

Heng, Leschied and Killip (2007)²⁴ indicate that perceiving the school as unsafe due to the threat of violence is linked to anxiety and phobic responses, harm to students' mental and physical health, and ultimately to the avoidance of school altogether. Reynolds (2003)²⁵ suggests that if students fear for their safety, they may avoid areas of their life in which this safety is threatened. When the setting being avoided is school, students' learning and their pursuit of an education is also compromised. The National Center for Education Statistics (2005)²⁶ noted that victims of bullying were more likely than non-victims to report receiving failing grades. Hence what has emerged is the study of the major predictors for school-based violence, the impact of violence occurring within the school context, and what constitutes more versus less safe schools that can promote violence-free learning environments that also address student mental health concerns²⁷.

Culture: The influence of media

"... taken as a whole, the past 50 years of research on human aggression suggests that habitual aggressive behavior in young humans is to a great extent learned from the child's early interactions with the environment²⁸."

To this point, family, peers and school have been highlighted as important systemic factors that aid in the understanding of risk as it relates to the perpetration of youth violence. In the context of mental health disorder, the literature thus far indicates that certain factors can both create the conditions for children and youth such that they are more likely to experience mental health disorder and are also linked in ways that increase the likelihood that certain youth will act in aggressive or violent ways. In other words, it is how individuals – children and youth – interact

²¹ MacKay, A.W. & Sutherland, L.C. (2006). *Teachers and the Law*. Emond Montgomery Publications Limited: Toronto.

²³ Rigby, K. (2003). Consequences of bullying in schools. *The Canadian Journal of Psychiatry*, 48, 583-590.

²⁴ Heng, C.L., Leschied, A.W. & Killip, S. (2007). *Violence in Schools: Examining the Differential Impact of School Climate on Student's Coping Ability*. Submitted manuscript.

²⁵ Reynolds, W. (2003). *Reynolds Bully Victimization Scales For Schools – Manual*. PsychCorp: Texas.

²⁶ National Center for Educational Statistics (2005). *Indicators of School Crime and Safety: 2005*. USA: The author.

²⁷ Warner, B.S., Weist, M.D. & Krulak, A. (1999). Risk factors for school violence. *Urban Education*, 34, 52-68.

²⁸ Huesmann, L.R., MOise, J.F. & Podolski, C.L. (1997). The effects of media violence on the development of antisocial behavior. In D.M. Stoff, J. Breiling & J.D. Maser (eds.) *Handbook of antisocial behavior*. Chichester EN: John Wiley and Sons.





with their surroundings in the context of having a mental health disorder that aids in both the prediction as well as the understanding of the link between mental health and youth violence. An additional systemic context in which to appreciate youth violence and mental health disorder is reflected in the influence of violent media on child and youth violence, attitudes and behaviour.

The role of media is a legitimate area of concern in a review of violence and mental health given its predominance in the lives of children and youth. There is also a substantial body of knowledge that has examined its impact on the conditions under which certain youth act in violent ways, which is linked to their consumption of violence in the media.

Some of the hallmark studies, which addressed the importance of observational learning and aggression, occurred almost 50 years ago. Since that time, there has been a refinement in examining the nature of how violence in the media impacts children and adolescents. And while most of the knowledge base in this area remains correlational, the convergence of findings from different studies along with the strength of associations reported, suggest there is now an acceptance that certain young people will be more adversely affected (i.e. demonstrate more aggression) with greater exposure to violent media. In the prestigious journal *Psychological Science in the Public Interest*, distinguished researchers including Leonard Berkowitz and Rowell Huesmann summarized their review of the evidence regarding the impact and role of violence in the media,

“Research on violent television and films, video games, and music reveals unequivocal evidence that media violence increases the likelihood of aggressive and violent behavior in both immediate and long-term contexts²⁹.”

In a review of both correlational and experimental studies, this review identified not only the impact of witnessing violence that is promoted as entertainment, but also the characteristics within the observation of violence in music, films, television and interactive games that influence children and youth to act out violently. This review suggests that it is a combination of imitation

²⁹ Anderson, C.A., Berkowitz, L., Donnerstein, E., Huesmann, L.R., Johnson, J.D., Linz, D., Malamuth, N.M. & Wartella, E. (2003). The influence of media violence on youth. *Psychological Science in the Public Interest*, 4, 81-110.





learning, the 'priming' of aggressive cognitive schemas that make more readily accessible violent images and actions, arousal and excitation and emotional desensitization.

It is also germane to a review of childhood and youth mental health disorders and violence to acknowledge that there is a differential impact of viewing media violence. Simply, certain observers are more susceptible to the influence of watching such violent content compared to others. For example, age of the viewer, gender, and identification with the violent character being depicted are all factors that will influence media's impact on youthful viewers. There is also research reporting on the interaction of media violence with certain psychological characteristics of the viewer. Huesmann, Moeski and Podolski (1997), noted that the mental health characteristics of children and youth affected their susceptibility to the impact of the violence being watched. Specifically, youth who were characterized as more aggressive prior to consuming violent media acted out their violent tendencies to a greater extent. This was particularly the case for boys, where emotional disorder characterized by youth who were more aggressive relative to a group of young males who were within normal limits on scales assessing psychological adjustment, reacted more violently following the observation of violent media content³⁰.

COMMUNITY FACTORS THAT MEDIATE THE EXTENT AND NATURE OF YOUTH VIOLENCE

Generally speaking, social disadvantage will be a predominate predictor in appreciating a youth's risk for either or both mental health disorder and violence³¹. These predictors will rest on the youth's perception as to the degree of safety, social stability and social cohesion that exists within the immediate community. Hence transient communities, communities where there is a high level of openly expressed violence and communities where there is not a shared appreciation for academic or vocational attainment will be perceived as less stable and more threatening. Locating where a youth lives can influence the extent to which they experience either mental health or violent outcomes. Further, there are a limited number of reports comparing the levels of distress and violence for youth in urban and rural communities.

³⁰ Huesmann, L.R., Moise, J.F. & Podolski, C.L. (1997). The effects of media violence on the development of antisocial behavior. In D.M. Stoff, J. Breiling & J.D. Maser (eds.) *Handbook of antisocial behavior*. Chichester EN: John Wiley and Sons.

³¹ Aneshenel, C.S. & Sucoff, C.A. (1996). The neighborhood context of adolescent mental health. *Journal of Health and Social Behavior*, 37, 293-310.





Given the above findings with respect to the perception of social stability, it may be a surprise to note the findings from one large scale study suggesting that male youths coming from rural communities present more significant problems in the context of experiencing higher unemployment rates, lower educational attainment levels and greater use of illegal substances and per capita higher arrest rates for violence. However this is not to suggest that urban-based youth perceive their communities as being risk-free. Rather it may be that the risks for urban-based youth related to mental health and violence are unique relative to rural-based youth. Urban-based risk factors for youth violence include, extreme poverty, community disorganization, high rates of transitions, criminal subculture, availability of drugs and weapons³².

MENTAL HEALTH CORRELATES OF YOUTH VIOLENCE

“... no matter how many social and demographic factors are statistically taken into account, there appears to be a greater-than-chance relationship between mental disorder and violent behavior. Mental disorder [is] a statistically significant risk factor for the occurrence of violence.”³³

Dating back to the early 1980's, Dr. Dan Offord and his associates at McMaster University reported in the *Ontario Child Health Study* estimates of 1 in 5 of Ontario's children and adolescents will experience a mental health or behavioural disorder sufficient in degree to require some form of outside intervention³⁴. This estimate has been replicated in other countries suggesting a relatively stable cross-cultural rate of mental health disorder in the child and youth population of 20 percent for children and youth ages zero to 16 years. The most common disorders identified include depression and conduct disorder. The question in the context of this review, relates to the literature reporting on the cross over of children and youth who experience a mental health disorder and who also display violent or aggressive tendencies.

³² Swenson, C.C., Henggeler, S. W., Taylor, I.S. & Addison, O.W. (2005). *Multisystemic therapy and neighborhood partnerships: Reducing adolescent violence and substance abuse*. New York NY: The Guildford Press.

³³ Monohan, J. (2000). Major mental disorders and violence to others. In D.M. Stoff, J. Breiling & J.D. Maser (eds.) *Handbook of antisocial behavior*. Chichester EN: John Wiley and Sons.

³⁴ Offord, D., Boyle, M.H., Fleming, J.E., Blum, M., Rae-Grant, N.I., (1989). Ontario child health study: Summary of selected results. *Canadian Journal of Psychiatry*, 34, 483-491.





While the rate of 20 percent of the child and youth population who experience some form of mental health disorder is a stable cross-cultural estimate, there is variability within this estimate as to the severity of the disorder(s). Typically, mental disorder with significant impairment is reflected in 11 percent of the overall 1 in 5, with extreme disorder reflected in five percent³⁵. So the question then is, within this group of children and youth who experience more extreme impairments due to mental health disorder, who are those youth who have a tendency to act violently. There are several methodologies that have been used to address this issue. The first is the group of studies that examine prospectively what the estimate of mental health disorder in children and youth is, and the percentage of this group who are subsequently involved in the commission of violence. The second methodology is the retrospective study of youths who have committed a violent act, arrested and then, through psychological testing and detailed history taking, are described as those youth who have had or currently experience a mental health disorder.

PROSPECTIVE STUDIES RELATED TO MENTAL HEALTH DISORDER AND VIOLENCE

Prospective studies are more generalizable to other populations relative to retrospective studies, since they begin from a more inclusive understanding of the population under study. Generally then, findings from such studies tend to be relevant for readers wishing a more general appreciation of the prevalence of youth violence and mental health disorder. One study is representative of findings that relate prospectively to the prevalence of violence and mental health disorder in a birth cohort, this one occurring in England³⁶. In a sample of slightly less than 1,000 children, participants were tracked to their 21st birthday to record the incidence of violent behaviours. Several noteworthy findings emerged from this study. First, approximately two percent of the original sample met diagnostic criteria on the DSM-III-R (the sample was originally assessed in 1973). In descending order, the most prevalent mental health disorders were alcohol dependence, marijuana dependence and schizophrenia. Participants who met the diagnostic criteria for child and youth mental health disorder reflected 20 percent of the sample who committed at least one violent act. However, taken together they accounted for over half of

³⁵ Osenblatt, A. (2001). *An overview of mental health and children*. San Francisco CA: The University of California, San Francisco.

³⁶ Arseneault, L., Moffitt, T.E., Caspi, A., Taylor, P.J. & Silva, P.A. (2000). Mental disorders and violence in a total birth cohort. *Archives of General Psychiatry*, 57, 979-986.





all of the violent crimes reported. And, of the differential diagnostic categories, the groups accounting for the greatest extent of violence in descending order were marijuana dependence – 3.8 percent; schizophrenia – 2.5 percent and alcohol dependence – 1.9 percent. The conclusions of these authors:

“In the age group committing the most violent incidents, individuals with mental disorders account for a considerable amount of violence in the community. Different mental disorders are linked to violence via different core explanations.”

As previously stated, there is a significant overlap in the conditions that account for violence with those that also account for mental health disorder. For example – and a more complete summary of this issue will occur in a later section of this report under the heading *the cycle of violence* - exposure to violence within a child or youth’s family of origin has both the impact of modeling violence as well as being a risk factor in promoting emotional disorder such as depression. Durant, Barkin et al, (2007)³⁷ noted that while adolescents who are exposed to violence have a greater likelihood of resorting to violence to resolve interpersonal conflicts, acquire possessions and achieve goals, such exposure is also associated with higher scores on depression and increases in the consumption of illegal substances.

In addition, a recent meta analysis by the author along with colleagues at the University of Western Ontario and the Centre for Addiction and Mental Health provides a review of prospective studies in the prediction of later youthful offending including violence³⁸. Two important outcomes were identified in this review. The first was that within the set of predictors, childhood and adolescent factors that rated most highly included: a variety of behavioral concerns including the early identification of aggression, attention problems, motor restlessness and attention seeking; emotional concerns consistent with depression reflected in withdrawal, anxiety, self-deprecation and social alienation; family characteristics such as a variety of negative parenting strategies including coerciveness, authoritarian behaviours, lack of child supervision, and family structure such as witnessing violence, interparental conflict and poor communication. The second major finding was that as the negative life circumstance occurred

³⁷ Durant, R.H., Barkin, S., S.R. Kreiter & D.P. Krowchuc. (1999). Exposure to violence and victimization, depression, and substance use and the committal of violence in young adolescents. *Adolescent Medicine*, 45, 4-13.

³⁸ Leschied, A.W., Chiodo, D., Nowicki, E. & Rodger, S. (2007). Childhood predictors of adult criminality: A meta-analysis drawn from the prospective longitudinal literature. *Canadian Journal of Criminology and Criminal Justice*. (In press)





later for the adolescent, the predictor was more accurate for future antisocial and violent behaviour, extending into adulthood.

RETROSPECTIVE STUDIES RELATED TO MENTAL HEALTH DISORDER AND VIOLENCE

Retrospective studies use as their starting point an already defined group, in the present case youth who have committed or been arrested for committing a violence related offense. The information generated from these studies provides important clues related to this subgroup of youth. However, there is a tendency in such retrospective analysis to overestimate the prevalence of mental health and violence in youth. Hence caution should always be used in appreciating the significance of such data. Notwithstanding this caution, it will come as little surprise to learn that the cross-over of mental health disorder with youth who have been arrested for violence-related offenses is high relative to those who are arrested and do not meet a diagnostic criteria for the presence of such a disorder. Teplin, Abram et. al. (2002)³⁹ reported the following with their youth detention-based sample:

“60 percent of males and more than two thirds of females met diagnostic criteria and had a diagnosis-specific impairment for one or more psychiatric disorders. Half of the males and almost half of the females had a substance use disorder, and more than 40 percent of males and females met criteria for disruptive behaviour disorders. Affective disorders were also prevalent, especially among females; more than 20 percent of females met criteria for a major depressive episode. Rates of many disorders were higher among females.”

The significance of gender reflected in such data will be further explored in a subsequent section in this report detailing gender as an important factor in understanding the link between mental health disorder and youth violence. Relevant to the above findings here however is the representation of the extent of mental health disorder in youth who appear in the youth justice

³⁹ Teplin, L.A., Abram, K.M., McClelland, G.M., Dulcan, M.K. & Mericle, A.A. (2002). Psychiatric disorders in youth in juvenile detention. *Archives of General Psychiatry*, 59, 1133- 1143.





system as a result of the commission of a violent offense. Further, MacKinnon, Kaufman and Frabutt (2002)⁴⁰ suggest,

“Youth involved with the juvenile justice system frequently have more than one co-occurring mental and substance use disorder.”

Several considerations bear attention in this context. Youth come into the youth justice system for many reasons. Obviously youth appear because they have, in the context of this review, been arrested for the committal of violence-related offense(s). Their offense drives their appearance in court and subsequent placement within the range of dispositional alternatives open to the court. However it may also be that youth are ‘managed’ in the justice system because of the lack of resources in other aspects of the children’s service delivery system either through the children’s mental health or child welfare systems. A full discussion regarding how the children’s service delivery system manages the mental health needs of youth is beyond the scope of this review and interested readers can refer to the more detailed study in Judy Findlay’s *Crossover Kids* authored through the Ontario Office of the Child Advocate⁴¹. Suffice at this point to appreciate that the representation of the extent of youth with mental health disorders who appear in the youth justice system as the result of violence related offenses can also be a caveat not only of the cross over of challenges that certain youths present – violence and mental health disorder – but also how the systems identify and are organized to meet the needs of these youth.

In addition, the literature relating risk factors for mental health disorder and youth violence and general antisocial behaviour reflects a high degree of overlap. In one epidemiologic study of risk factors associated with youth psychiatric disorder included the following list of factors: sociodemographic factors including parental income and family structure; parental management practices reflected in the use of physical discipline; the quality of the family environment related to parental discord and marital quarreling; negative life events that result in extreme stress; and a history of psychiatric disorder in parents⁴². Mapped against this list of risk factors for mental

⁴⁰ MacKinnon, - Lewis, C., Kaufman, M.C. & Frabutt, J.M. (2002). Juvenile justice and mental health: Youth and families in the middle. *Aggression and Violent Behavior*, 7, 353-363.

⁴¹ Findlay, J. (2002). *Cross-over kids*. Toronto ON: Ontario Office of the Child Advocate.

⁴² Goodman, S.H., Hoven, C.W., Narrow, W.E., Cohen, P., Fielding, B., Alegria, M., Leaf, P.J., Kandel, D., Horwitz, S.M., Bravo, M., Moore, R. & Dulcan, M.K. (1998). Measurement of risk for mental disorders and competence in a psychiatric epidemiologic





health disorder in youth, is the following list of risk factors for violence in youth: early identified nervousness, anxiety and worry; early signs of aggressiveness; early initiation into violence and general delinquency; parental criminality reflected in a high tolerance within the family for violence in general; child maltreatment; poor family management reflected in inconsistent discipline or the use of physical child management practices; negative parent-child involvement and interaction; poor family bonding; high levels of family conflict and marital discord; stressful family events; low academic attainment and truancy; peer and sibling delinquency; availability of drugs; neighbourhood adults involved in crime and violence; exposure to racial prejudice; and poor community organization and low neighbourhood attachment⁴³.

The conclusion drawn from the review of the comorbidity regarding mental health disorder and violence suggests there is considerable overlap in the conditions under which some children and youth who develop a mental health disorder also display some form of violent behaviour. Still, while the overlap of these conditions is significant, most children and youth who experience a mental health disorder do not proceed to develop beliefs favorable in the use of violence. In certain cases, such as reflected in children and youth who are the victims of violence themselves, the emergent violence displayed can be readily understood within the context of the cycle of violence. Other violent outcomes related to a child's mental health status would seem not to be as clear, and for this, it is important to consider the circumstances that the child interacts with as reflected in their family status, peer associates and school belongingness and achievement that together may help explain violent outcomes. This is an obvious area for future research in appreciating those children who are not only at risk for mental health disorder but also for violence as well.

community survey: The National Institute of Mental Health Methods for the Epidemiology of Child and Adolescent Mental Health Disorders (MECA) study. *Society of Psychiatry and Psychiatric Epidemiology*, 33, 162-173.

⁴³ Hawkins, J.D., Herronkohl, T. Farrington, D.P., Brewer, D, Catalano, R.F. & Harachi, T.W. (1998). A review of the predictors of youth violence. In R. Loeber & D.P. Farrington (eds.) *Serious and Violent Juvenile Offenders: Risk factors and successful interventions*. London EN: Sage Publications.





SUBSTANCE USE AND YOUTH VIOLENCE

A number of studies cited already have identified the relevance of substance use with violence. It will therefore come as no surprise that there is a strong link between the use of illegal substances and alcohol and antisocial/violent behaviour among young people. Indeed an early study examining this relationship suggested that the link created a 'clear pathway' between substance use and violence.⁴⁴ Yet, not all young people who consume illegal drugs or use alcohol behave in antisocial or violent and aggressive ways. A recent study on substance abuse in Canada indicates "... some teens may be self-medicating to cope with toxic environments, untreated trauma, and underlying psychological conditions⁴⁵." The result could be that certain at-risk youth with mental health disorder who resort to heavy drug use may be exacerbating their condition that in part could appear as a heightened risk for violence. Information such as this suggests that the relationship between drug and alcohol consumption and adolescent violence is more complex than what first might appear. Indeed, when we look at this literature, we find that the consumption of certain drugs/alcohol under specified conditions will influence not only the likelihood of the committal of a violent act, but is also revealing of the link to specific violent acts, such as dating violence and sexual assault.

THE LINK BETWEEN SUBSTANCE USE AND YOUTH VIOLENCE

First, as previously stated, the stable estimate of mental health disorder in the child and youth population is consistently reported as 20 percent. Within this percentage the representation of disorders is:

Anxiety disorders	13 percent
Disruptive disorders	10.3 percent
Mood disorders	6.2 percent
Substance use disorders	2 percent

⁴⁴ Huizinga, D.H., Menard, S. & Elliott, D.S. (1989). Delinquency and drug use: Temporal and developmental patterns. *Justice Quarterly*, 6, 419-455.

⁴⁵ Canadian Centre on Substance Abuse. *Substance abuse in Canada: Youth in focus*. Ottawa ON.





Hence, substance use is the fourth leading mental health disorder identified within the child and youth population⁴⁶. Second, research suggests that the use of illegal substances is embedded in a series of early life circumstances for children and adolescents. These typically include, coercive family processes, social stress, poverty, poor academic outcomes and social disadvantage⁴⁷. When referencing substance use, distinction is made between experimental, occasional and heavier more constant users. Those youth more closely aligned with heavier, constant drug use are more likely to be involved in antisocial and violent behaviour.

Again it is difficult to disentangle the effects of substance use and violence, as many of the predictors of youth violence are also characteristic of substance users. These include, inconsistent parental discipline and harsh, punitive parental practices, low parental monitoring of their child/youth's behaviour and whereabouts, deviant peer associations, depression, low self esteem and poor academic achievement⁴⁸. In addition, the illegal use of substances and committal of violence is also embedded within the youth's social and academic context. For example, in one large study in Washington State, researchers identified that not only is substance use linked to youth violence but it is also part of an array of other later risk factors such as poor academic performance, likelihood for school dropout and poverty⁴⁹. The implications of findings such as these speak to the need for interventions that are multifaceted and include all aspects of the youth's community. As summarized in the Washington State analysis of findings, "If schools and communities are concerned about improving achievement, they must address both attitudes and behaviours related to substance use and violence."

THE LINK BETWEEN SUBSTANCE USE AND SPECIFIC FORMS OF VIOLENCE

There is also research linking the use of substances and alcohol use to specific forms and contexts for youth violence. Here, the literature focuses on dating violence and sexual assault.

⁴⁶ The prevalence of mental and addictive disorders.

⁴⁷ Patterson, G.R., Reid, J.B. & Dishion, T.J. (1992). *Antisocial boys*. Eugene OR: Castalia.

⁴⁸ Dishion, T.J., Capaldi, D.M. & Yoerger, K. (1999). Middle childhood antecedents to progression in male adolescent substance use : An ecological analysis of risk and protection. *Journal of Adolescent Research*, 14, 175-207.

⁴⁹ Mandell, D.J., Hill, S.L., Carter, L. & Brandon, R.N. (2002). The impact of substance use and violence on academic achievement for groups of middle and high school students in Washington. Seattle WA: Kids Count Human Services Policy Centre.





It is estimated that approximately 20 percent of young women to the age of 18 years will be either physically and/or sexually assaulted within the context of a dating relationship⁵⁰. Further, compared to males who may be victimized, females report higher levels of severe violence and more severe physical and emotional reactions to that violence⁵¹. Of relevance in this section relating substance and alcohol abuse to adolescent violence is the consistent finding that the relationship of dating violence and unwanted sexual involvement is highly related to drug and alcohol consumption. In numerous studies, drugs and alcohol have been shown to increase risk in both college-age and high school-age youth and has been identified as the main reason for unwanted sexual activity for both male and female victimization⁵².

GENDER

Similar to other countries reporting data related to gender and violence, Canada too shares an increasing violent crime rate for adolescent girls. Recent evidence from Statistics Canada suggests that the violent crime rate for girls has doubled over the past ten years, currently reflecting approximately eight percent of the officially reported total adolescent violent crime rate⁵³. In the United States, the general crime rate for adolescent girls has increased to a similar extent and is increasing at a much higher rate than for any other segment of the population⁵⁴ (Henington, Hughes, Cavell and Thompson, 1998) with the percentage of girls involved in violent crime increasing by 103 percent during the period 1984-1993. However, it should be remembered that adolescent boys continue to commit the vast majority of violent crime with a prevalence ratio compared to adolescent girls of from 3:1 to 12:1 depending on the exact type of violent offense reported⁵⁵ (Borduin & Schaeffer, 1998). Why is the issue of gender salient in a review of mental health and violence?

⁵⁰ Silverman, J.G., Raj, A., Mucci, L.A. & Hathaway, J.E. (2001). Dating violence against adolescent girls and associated substance use, unhealthy weight control, sexual risk behavior, pregnancy, and suicide. *Journal of the American Medical Association*, 286, 572-579.

⁵¹ Molidor, C. & Tolman, R.M. (1998). Gender and contextual factors in adolescent dating violence. *Violence Against Women*, 4, 180-194.

⁵² Gover, A.R. (2004). Risky lifestyles and dating violence: A theoretical test of violent victimization. *Journal of Criminal Justice*, 32, 171-180.

⁵³ Statistics Canada. (2004).

⁵⁴ Henington, C., Hughes, J. N., Cavell, T. A., & Thompson, B. (1998). The role of relational aggression in identifying aggressive boys and girls. *Journal of School Psychology*, 36, 457-477.

⁵⁵ Borduin, C. M., & Schaeffer, C. M. (1998). Violent offending in adolescence: Epidemiology, correlates, outcomes and treatment. In T. P. Gulotta, G. R. Adams & R. Montemayor (Eds.), *Delinquent violent youth: Theory and interventions*. Thousand Oaks, CA: Sage Publications.





While males are involved in the majority of incidents of *physical* aggression, the increase of female violence reflects a broadening of the definition of what constitutes violence. And, as the definition of what constitutes violence is broadened, the data begins to reflect something quite different in terms of the representation of girls in violence categories. Everett and Price⁵⁶ (1995) suggest that while girls are lower in rates of school violence when compared to boys when violence is defined as overt aggression, girls are proportionally more likely to appear in the data when verbal threats and intimidation are included. Crick⁵⁷ (1995) suggests that “. . . the degree of aggressiveness exhibited by girls has been underestimated in prior studies, largely because forms of aggression relevant to girls’ peer groups have not been assessed” (p. 719). And, as recent studies have suggested, the presence of indirect forms of female aggression is related to the expression of physical forms of violence as well⁵⁸.

Bjorkqvist and his colleagues in Finland contributed significantly to the understanding of girls’ aggression within this broader definition. These researchers suggest that violence reflects not only an act, but also an intention. The focus on *physical* aggression reflects a male perspective; female *indirect* aggressive tendencies focus on the disruption of relationships. In this context, “. . . instigators who manipulate others to attack the victim or, by other means, make use of social structures in order to harm another person,” are seen as acting in aggressive ways⁵⁹ (Bjorkqvist & Niemela, 1992; Bjorkqvist, Osterman, & Kaukiainen, 1992⁶⁰).

There are unique contributors in appreciating gender in the context of adolescent violence within a mental health perspective. In a review provided to the Solicitor General of Canada, the author along with a research team from the Universities of Western Ontario and Toronto reviewed the literature comparing risk factors for adolescent female versus male violence⁶¹. Unique to the studies on comorbidity with violence and risk with boys, girls who behave aggressively report

⁵⁶ Everett, S. A., & Price, J. H. (1995). Students’ perceptions of violence in the public schools: The metlife survey. *Journal of Adolescent Health*, 17, 345-352.

⁵⁷ Crick, N. R. (1996). The role of overt aggression, relational aggression, and prosocial behavior in the prediction of children’s future social adjustment. *Child Development*, 67, 2317-2327.

⁵⁸ Cummings, A. and Leschied, W. (Eds.) (Fall 2002). *Violence in the Lives of Adolescent Girls: Implications for Educators and Counsellors*. Cummings, A. and Leschied, W. (Eds.) (Fall 2002). New York, NY.: Edwin Mellen Press

⁵⁹ Bjorkqvist, K., Osterman, K., & Kaukiainen, A. (1992). The development of direct and indirect aggressive strategies in males and females. (pp. 51-64). In K. Bjorkqvist & P. Niemela (Eds.), *Of Mice and Women: Aspects of Female Aggression*. San Diego: Academic Press Inc.

⁶⁰ Bjorkqvist, K., Osterman, K., & Kaukiainen, A. (1992). The development of direct and indirect aggressive strategies in males and females (pp. 51-64). In K. Bjorkqvist & P. Niemela (Eds.), *Of Mice and Women: Aspects of Female Aggression*. San Diego: Academic Press Inc.

⁶¹ Leschied, A.W., Cummings, A., Van Brunschot, M., Cunningham, A. and Saunders, A. (2000). Female adolescent aggression: A review of the literature and correlates. Solicitor General of Canada, User Report Number 9914-UNI-587- Queen’s Printer. Ottawa, Ontario.





higher levels of depression and suicidal ideation. In the studies reported in this review, girls with higher scores on aggression reported elevations on depression at a rate close to 40 percent. More than for boys, when girls behave violently, it is important to assess for the presence of underlying mental health disorder that may be coinciding with a higher violence potential. In addition, this review also identified rates in girls relative to boys who are aggressive as significantly higher reflected in diagnoses of ADHD, substance abuse and suicide risk⁶².

Why might this be the case for girls experiencing higher rates of mental health disorder who express violence? One suggestion is that girls are at a much higher risk for being victimized physically or sexually in both their families of origin as well as through stranger contact; a fact that relates prior victimization with the perpetration of violence. Both Langhinrichsen-Rohling & Neidig (1995)⁶³ and Watts & Ellis (1993)⁶⁴ noted the association of a history of victimization with girls with higher scores on measures of violence and mental health indicators. Cunningham and Leschied⁶⁵ (1998) reported the high incidence of victimization of women who subsequently came into contact with the adult justice system in part as a result of their past victimization histories. This cycle of victimization leading to aggression with adolescent girls is an obvious area for further study. Sybil Artz⁶⁶ (1998) of the University of Victoria suggests that in part, aggression for girls may be viewed as a means of avoiding subsequent revictimization.

CYCLE OF VIOLENCE

An appreciation of the literature related to the cycle of violence and mental health disorder in children and youth is warranted. This reflects the data indicating that child victims of maltreatment – be it physical or sexual maltreatment, neglect or exposure to interparental violence – is linked to later violent offending by children and youth. Two factors are of importance in this discussion. The first relates to the incidence of mental health disorder in children and youth who emerge from early family conditions where they are exposed to, or are

⁶² Leschied, A.W., Cummings, A.L., Van Brunschot, M., Cunningham, A. and Saunders, A. (2001). A review of the literature on aggression in adolescent girls: Implications for policy, prevention and treatment. *Canadian Psychology*, 42, 200-215.

⁶³ Langhinrichsen-Rohling, J., & Neidig, P. (1995). Violent backgrounds of economically disadvantaged youth: Risk factors for perpetrating violence? *Journal of Family Violence*, 10, 379-397.

⁶⁴ Watts, D. W. & Ellis, A. M. (1993). Sexual abuse and drinking and drug use: Implications for prevention. *Journal of Drug Education*, 23, 183-200.

⁶⁵ Cunningham, A., & Leschied, A. W. (1998). *Thinking about choices: Program recommendations for women in conflict with the law with histories of abuse victimization*. Hamilton, ON: Elizabeth Fry Society of Hamilton-Wentworth and Correctional Services Canada.

⁶⁶ Artz, S. (1998). Where have all the school girls gone? Violent girls in the school yard. *Journal of Child and Youth Care*, 11, 17-37





the victims of violence. Second, the introduction to violence at an early age for many children is itself a risk factor for later violent offending.

Children who experience maltreatment are nearly twice as likely to report clinically significant elevations for emotional and behavioural disorder on the Child Behavior Checklist compared to children and youth who do not report maltreatment⁶⁷. And, as previously indicated in relation to gender, girls are more likely to be victimized through maltreatment, particularly through sexual maltreatment, with evidence suggesting that these young women will experience such sequelae from victimization as depression, self-injurious behaviour and suicide to a greater extent relative to males who are maltreated⁶⁸. Widom and Maxfield (2001) also have noted that such victimization increases the prevalence of violent offending in particular for female victims⁶⁹.

Numerous studies have reported on the link between early experiences with violence in a child's family of origin and later aggression. In one sample of maltreated adolescents, 39 percent of youth self reported as incurring at least one violent offense by late adolescence, with that percentage 'slipping' to 29 percent by early adulthood⁷⁰. Clearly the legacy of child maltreatment is enduring in the context of on-going violence. In addition, it is not only the impact of being maltreated that for certain children and youth translates into their own perpetration of violence, but it is also the vicarious trauma experienced by children and youth in being exposed to interparental violence that influences that likelihood. Widom (1997) reported witnessing verbal hostility and physical violence for children and adolescents was associated with higher levels of both internalizing and externalizing disorders, concluding that children who experience such exposure "... [some children] developed post-traumatic stress disorder whereas others became angry and violent⁷¹."

⁶⁷ Burns, B., Phillips, S.D., Wagner, H.R., Barth, R., Kolko, D., Campbell, Y. & Landsverk, J. (2004). Mental health need and access to mental health services by youths involved with child welfare: A national survey. *Journal of the American Academy of Child and Adolescent Psychiatry*, 43, 960-970.

⁶⁸ Leschied, A.W., Cummings, A., Van Brunschot, M., Cunningham, A. and Saunders, A. (2000). *Female adolescent aggression: A review of the literature and correlates*. Solicitor General of Canada, User Report Number 9914-UNI-587- Queen's Printer. Ottawa, Ontario.

⁶⁹ Widom, C. & Maxfield, *An update on the cycle of violence*. Washington DC: National Institute of Justice.

⁷⁰ Smith, C.A., Ireland, T.O. & Thornberry, T.P. (2005). Adolescent maltreatment and its impact on young adult antisocial behavior. *Child Abuse and Neglect*, 29, 1099-1119.

⁷¹ Widom, C. (1997). Child abuse, neglect, and witnessing violence. In D.M, Stoff, J. Brieling & J.D.Maser (eds.) *Handbook of antisocial behavior*. Chichester EN: Johan Wiley and Sons.





COGNITIVE AND DEVELOPMENTAL ANOMOLIES AS CORRELATES OF YOUTH VIOLENCE

This review was asked to speak to the literature relating the potential for violence in the context of cognitive and developmental anomalies.

Developmental disabilities. Hassan and Gordon (2003) suggest that “developmentally disabled people may be more likely than non-developmentally disabled people to exhibit characteristics, or experience social or economic conditions that have been associated with criminality such as low self esteem, poverty and lack of social skills.”⁷² Early studies have also reported that developmentally disabled adult males were five times more likely, and females twenty-five times more likely, to commit a violent act than their non-developmentally disabled counterparts⁷³. There is little data, however, on which to draw to investigate the relationship between developmentally disabled youth and the committal of violence. Most of the research in this area relates to the developmentally disabled being the victim rather than the perpetrator of violence. And typically, this victimization is related to sexualized violence. Only tangentially, the literature related to IQ does suggest that intelligence is a protective factor in crime generally and this holds true for violence as well.

Fetal alcohol spectrum disorder. Fetal alcohol spectrum disorder (FASD) is the current diagnostic classification used to characterize children who have previously been referred to under various categories such as fetal alcohol syndrome (FAS), fetal alcohol effects (FAE) and prenatal exposure to alcohol (PAE). In a summary provided by Henry, Sloane and Black-Pond (2007)⁷⁴, the effects of FASD are described as,

“..prenatal alcohol exposure... impacts two core developmental processes – neurophysiological growth of the brain, nervous system, and endocrine system, along with psychosocial development, including personality formation, social conduct, and capacity for relationships. Developmental domains affected include

⁷² Hassan, S. & Gordon, R.M. (2003). *Developmental disability, crime, and criminal justice: A literature review*. Burnaby BC: Simon Fraser University.

⁷³ Hodgins, Mental disorder, intellectual deficiency, and crime: Evidence form a birth cohort. *Archives of General Psychiatry*, 49, 476-485.

⁷⁴ Henry, J., Sloane, M. & Black-Pond, c. (2007). Neurobiology and neurodevelopmental impact of childhood traumatic stress and prenatal alcohol exposure. *Language, Speech, and Hearing Services in Schools*, 38, 99-108.





language, social cognition and communication, impulse control, memory, attention, and executive functioning.”

Estimates for prevalence rates for FASD range from three to 190 per 1,000, with an estimated rate of nine per 1,000 in Canada⁷⁵. Along with the acknowledgement of severe developmental anomalies for children and youth experiencing FASD, and relevant to the current focus on mental health disorder and violence, is the data indicating the high prevalence of mental health disorder within this group as well. Mills, McLellan and Caza (2006)⁷⁶ noted a rate of between 93 and 96 percent of FASD children to the age of nine years had comorbidity rates with mental health disorder, and as children with FASD age, the prevalence of comorbidity and mental health actually increases. The most common forms of mental health disorder include sleep disorders, abnormal habits, and emotional disorders. The rates for FASD children with mental health disorders is typically twice the rate reported for children with other developmental anomalies such as ADHD⁷⁷. Of relevance to this discussion of violence and FASD is further evidence that these young people are also more likely to be the victims of violence. A recent report noted that,

“... Violence against individuals with FAS/FAE occurred at an alarming rate: 72 percent had experienced physical or sexual abuse or domestic violence. Being a victim of violence was a strong risk factor for [these children and adolescents] committing inappropriate sexual behavior, increasing the odds fourfold⁷⁸.”

The relevance of such data cannot be underscored too greatly. These young people not only possess developmental challenges in most all major cognitive spheres and share much higher representation in mental health categories, but their secondary disabilities related to interpersonal difficulties and consequent victimization also places them at greater risk for perpetrating violence as well. In a recent study on aboriginal youth in western Canada, many of whom were diagnosed with FASD, violent reoffending rates along with sexual offending

⁷⁵ Mills, R.M., McLennan, J.D. & Caza, M.M. (2006). Mental health and other service use by young children with fetal alcohol spectrum disorder. *Journal of Fetal Alcohol Syndrome*, 4, 1-11.

⁷⁶ Mills, R.M., McLennan, J.D. & Caza, M.M. (2006). Mental health and other service use by young children with fetal alcohol spectrum disorder. *Journal of Fetal Alcohol Syndrome*, 4, 1-11.

⁷⁷ Mills, R.M., McLennan, J.D. & Caza, M.M. (2006). Mental health and other service use by young children with fetal alcohol spectrum disorder. *Journal of Fetal Alcohol Syndrome*, 4, 1-11.

⁷⁸ Streissguth, A., Barr, H., Kogan, J. & Bookstein, F. (2002). Primary and secondary disabilities in fetal alcohol syndrome. In A. Streissguth and J. Kanter (eds.) *The challenge of fetal alcohol syndrome: Overcoming secondary disabilities*. Seattle WA: University of Washington Press.





behaviour were much higher than in a comparable group of non-FASD youth. The suggestion is that cognitive deficits set the stage for low impulse control along with difficulties in social development, and along with a history of prior victimization places these young people at greater risk for violence perpetration.

AN OVERVIEW OF BEST AND PROMISING PRACTICE INTERVENTIONS IN YOUTH VIOLENCE

Two general concepts related to intervention follow from this review.

First, the relationship between mental health and youth violence is, for the most part, bi-directional. That is, child and youth violence victimization, be it either as a result of family-based maltreatment or peer-on-peer violence such as through school-based violence, has the effect of increasing the likelihood a child or youth will reflect some form of mental health disorder; and that the presence of a mental health disorder increases the risk that a child or youth will act out violently. Hence as a general statement, interventions that address mental health disorders in children and youth will have the effect of reducing the risk for violence within this population as well.

Second, there are general principles regarding effective interventions for children and youth that translate to the literature on violence prevention and intervention. These general principles can guide the selection and implementation of effective services to reduce youth violence. These intervention strategies include:

Services are targeted. Capitalizing on the knowledge base addressing the links between mental health disorder and youth violence, effective services will target the specific causes of youth violence and mental health.

Services are empirically based. There is now an extensive body of knowledge in regards to effective service such that prevention and intervention strategies should be guided by the literature that has evaluated service outcomes.





Services reflect the multiple pathways that link mental health disorder and youth violence. As can be appreciated from the literature summarizing the links between mental health disorder and youth violence, there are numerous multiple causes that link mental health and violence and many of these are co-occurring. Interventions need to reflect the coincidental occurrence of a variety of risk factors within their intervention.

Services are gender-informed. The links between mental health disorders and violence are unique as a function of gender. In the summary related to risk factors associated with female violence, literature reflects that girls will more likely experience an underlying mental health disorder such as depression and suicidal ideation relative to boys. Interventions need to reflect this understanding.

Services are developmentally appropriate. More recent evidence with respect to effective service delivery in youth violence prevention and intervention indicates that for services to be effective, they need to reflect age-appropriate services that connect meaningfully with the children and youth who are the receivers of that service. In addition, age-appropriate service also reflects appropriately targeted service in the context of when the risk occurs. For example, children victimized through maltreatment who then become violent will benefit from services differentially compared to adolescents who are the victims of maltreatment and show violence⁷⁹.

Service implementation constitutes a 'science' in its own right. It is a necessary but not sufficient condition to select empirically-based services. Services, in order to be effective, need also to be implemented in ways consistent with the principles of effective service delivery⁸⁰.

As aforementioned, there is a well-established empirically based literature reporting on outcomes related to violence prevention and intervention now being reported. As a caveat to

⁷⁹ Two recent publications will be of interest in this context: D. P. Farrington (ed.) *Integrated developmental and life course theories of offending*. London UK: Transaction Publ., and D. P. Farrington & B. Welsh. (2007). *Saving children from a life of crime: Early risk factors and effective interventions*. New York NY: Oxford University Press.

⁸⁰ For a detailed overview of the principles of effective service implementation, a useful source is, Bernfeld, G.A., Farrington, D. & Leschied, A.W. (Eds.) (Spring, 2001). *Offender rehabilitation in practice: Implementing and evaluating effective programs*. London, UK: John Wiley Press.





this summary, the extensive literature on best and promising approaches to the reduction of youth violence tends to follow the above six principles. Hence within a brief overview of this literature summary, only a snapshot of effective service is provided. What it will reflect is the variety of programs being reported, what they target and where they are offered.

Services that focus on primary prevention. Primary prevention programs target the onset of violence. A useful example of this form of intervention focuses on the effects of media violence. While not as extensively evaluated as other forms of violence prevention, strategies that reduce a child or youth's exposure to media violence, such as the introduction of technology to control violence displays through the V-chip and coding for content of video games similar to what is used in movies, are examples of primary prevention. Such technology empowers caregivers to monitor their child's intake of violence from the media, particularly for those children who may be more susceptible to its influence. These susceptibilities will include children and youth who have experienced trauma linked to previous violence exposure or who already demonstrate vulnerability to media violence due to a pre-existing emotional disorder. More direct forms of prevention would also include the Ontario Ministry of Education's promotion of courses on media literacy within the elementary grades⁸¹. There are also findings from the family intervention literature that have shown encouraging outcomes in promoting more effecting parenting and a lowering of risk among children. These would include the Triple 'P' Parenting and COPE programs along with Ontario's Better Beginnings, Better Futures and Best Start programs.

Services that focus on secondary prevention. Secondary prevention programs target the risks and needs of youth who have already developed the risk for violence but who have as yet not displayed aggressive or violent behaviour. This group of interventions will include targeting children and youth who already display such risk factors as a history of maltreatment, or victimization through dating violence. Examples in this category include programs that are directed at abuse survivors, which assist in helping youth victims with post traumatic stress disorder, feelings of vulnerability, depression and suicidality. The work of Leena Augimeri and her colleagues at Toronto's Child Development Institute in delivering the SNAP (Stop Now and

⁸¹ One such example is the Ontario Ministry of Education's *Media literacy resource guide*.





Plan) program falls into this category of effective programs that target children under the age of twelve years⁸².

Services that target tertiary prevention. Tertiary prevention programs are directed at those youth who have already been identified as being at risk and have committed acts of violence. Gang interventions serve as useful examples of this level of intervention. Effective services in this area include: targeting youth's need for: mentoring, focused skill development, the teaching of non-violent conflict resolution skills, substance and alcohol abuse intervention programs, academic and vocationally focused upgrading and recreation programs.

Services that are community-based. Community-based services are, as they refer, programs that occur within the youth's community and require implementation on a community-wide coordinated basis. The work of Scott Henggeler and his colleagues through the Medical University of South Carolina is singular in evaluating and reporting on effective community-wide efforts to reduce adolescent violence⁸³. The components of multi-systemic therapy (MST) service in reducing youth violence are well chronicled in numerous studies and reports. MST is considered as one of the best practice programs as reported by the highly regarded Washington State Institute for Public Policy (WSIPP) and The Centre for the Study and Prevention of Violence at the University of Colorado.

Services located within schools. School-based violence prevention and intervention programs are widely implemented as part of most every school board's initiatives to reduce not only violence that occurs within the school but also targets the factors that could help generalize to violence reduction within the broader community. A number of programs report on providing successful conflict resolution skills for youth. One notable program that is currently being evaluated is the Fourth 'R' Project offered through the Centre for Prevention Science, Centre for Addiction and Mental Health. This project provides a curriculum-based, teacher-offered program that focuses on the development and building of relationship capacity within the general

⁸² Augimeri, L., Farrington, D.P., Koegl, C. & Day, D. (2006). The under 12 outreach program: Effects of a community – based program for children with conduct problems. *Journal of Child and Family Studies* (On-line publication).

⁸³ Swenson, C.C., Henggeler, S., Taylor, I. S. & Addison, O. W. (2005). *Multisystemic therapy and neighborhood partnerships: Reducing adolescent violence and substance abuse*. New York NY: The Guildford Press.





elementary and secondary school-age populations with the primary outcome being the ability for youth to display non-violent conflict resolution skills ⁸⁴.

GENERAL COMMENTS REGARDING RESEARCH ON YOUTH VIOLENCE

LIMITATIONS IN THE RESEARCH ON YOUTH VIOLENCE

While the literature with respect to youth violence is substantial, it carries with it the caveats of most all applied research in being limited by the research designs and methods employed. Most all of the work reported here is retrospective and correlational in nature, and hence the limitations with respect to causality are always in evidence when it comes to interpretation. Although, within all lines of research that rest on correlational studies, interpretation of outcomes rest on convergence through replication. With respect in particular to the knowledge base in risk predication for youth violence, outcomes from the major longitudinal studies by David Farrington in the United Kingdom and Rolf Loeber in the United States report high levels of agreement with much of the cross-sectional, retrospective findings thereby adding credence to the risk predictors for youth violence that are reported in this review. In addition, some of the findings from Canadian-based longitudinal studies by Richard Tremblay and Marc Leblanc, although not as robust in comparison to Farrington and Loeber, are supportive of the knowledge-base in youth violence and risk.

As well, this review focused on the nature of co-morbidity relating mental health disorders and violence in children and youth. As will be apparent in reading this literature, it is often difficult to disentangle the *what* and *when* of these two factors of risk for children and youth. This was no more apparent then in the review related to child maltreatment and the cycle of violence. Exposure to family violence for children, either through vicarious trauma of witnessing violence or being the victim of maltreatment sets the stage for the development of both higher reported rates of emotional disorder (i.e. depression) and acting out the violence. The 'pathway' leading from the exposure to violence to the child/adolescent acting violently themselves is unclear yet a relevant area of investigation. The literature related to substance use and violence in contrast

⁸⁴ Further information on the Fourth 'R' project can be obtained from Dr. David Wolfe, <http://www.thefourthr.ca/>





has matured to the point where path analyses – predicting the strength and direction of the relationship between these two events and the outcome – are well established. Charting the relationship between mental health status and aggression in children and youth would similarly benefit from investigations of this type.

FUTURE DIRECTIONS FOR RESEARCH

Currently there is unprecedented worldwide interest in research addressing youth violence. And, there is urgency in developing our understanding regarding how we can be more effective in providing services and interventions that can lessen the risk for violence. The World Health Organization reports that world wide, “36.2 percent of global mortality due to interpersonal violence occurred among young adults aged 15-29 years... and for every youth’s death that occurs from interpersonal violence, many more young people are injured and permanently disabled⁸⁵.” The Packard Foundation’s report in the United States, *Children, Youth and Gun Violence* indicates that gun violence in the United States is the second leading cause of death in young people ages 10 to 19, accounting for the deaths of 20,000 children⁸⁶. In Ontario the death of Toronto’s Jane Creba on Boxing Day 2006 and Jordan Manners at C.W. Jefferies Secondary School remind us we are not immune to realizing the effects of youth violence. And, while Ontario’s concern for youth violence may not seem similar in degree or lethality to other parts of the world, Ontario does share a high degree of similarity in interests in worldwide research initiatives to address youth violence. This section will outline those research areas that could best advance our understanding of youth risk and effective services.

Research focusing on understanding youth risk

Promoting a developmental understanding related to risk, mental health disorder and youth violence. A review of the most important contributions in the past several years to understanding both risk and effective interventions has highlighted the area of ‘charting’ the pathway of child and youth experiences that lead to violence. This approach to understanding risk builds on the empirical basis of risk prediction, with the value-added component of casting it within a developmental framework. Leblanc and Loeber’s (1998)⁸⁷ updated contribution to developmental criminology suggests that “...It is important to search for variables that determine

⁸⁵ The World Health Organization. (2007). *Youth violence*.

⁸⁶ Behrman, R. (ed.) (2002). *The Future of Children: Children, youth and violence*. The Packard Foundation: Los Altos CA.

⁸⁷ LeBlanc, M. & Loeber, R. (1998). Developmental criminology updated. *Crime and Justice*, 23, 1998, 115-198.





or mediate the variation of behavior with age [as it relates to violence potential].” Such research contributions would improve our understanding of which services offered in the timeliest ways could reduce risk for youth violence. This line of research would most significantly inform services in the area of secondary prevention. David Farrington’s two recent summaries have helped focus research efforts in intervention in the context of developmental pathways to violence. In Ontario, The work of Christine Wekerle and the Maltreatment Adolescent Pathways (MAP) project reflects this type of research and will provide significant contributions in this area.

Resilience and protective factors for youth who reside in high risk communities. While much is known about risk factors with children and youth that are related to violent offending, considerably less is known about the conditions that influence heretofore higher risk cases becoming lower risk. For example, while there is considerable information related to macro level risk indicators such as poverty and neighbourhood stability, it remains an accepted fact that the majority of children and youth even in these highest of risk communities do not resort to violence. Research that addresses invulnerability within this group of youth would be a very significant contribution in helping communities mobilize naturally occurring conditions that promote resiliency within the community.

Developmental disabilities and FASD services. While children and youth who experience developmental disabilities and FASD are low relative to the frequency they appear within the youth population, they do in themselves represent very high-risk groups in regards to violence. Yet, there is a lack of studies reporting on effective ways of managing their considerable needs. One exception to this is the prevention strategies to reduce alcohol consumption in expectant mothers in reducing the incidence of FASD. However even here, few studies report on the impact of these prevention efforts to reduce FASD. More research is required to understand the needs of these youth and their families in developing strategies that can reduce their violence potential.

Research promoting the understanding of delivering effective services

Gender-informed programming in youth violence. It has only been within the past 10 years that a research agenda in Canada has begun to inform service providers regarding the differential understanding of female violence in relation to male violence. Previously, what was known





regarding the models of violence that youth interventions were built on, reflected our understanding of how males acted violently, not females. As this gender-informed appreciation has developed regarding risk and violence, programs have developed to reflect this orientation, services that are unique and tailored to the individual needs of girls. However, these programs are to a large extent still in their infancy, and service providers are only now integrating gender-informed components into their violence prevention and intervention strategies. Outcome research needs to both focus on how these services are meeting the needs of girls and what kinds of outcomes can be achieved. This is of particular relevance in the context of mental health. This review has identified that girls involved in violence report much higher comorbidity rates of emotional disorder and violence.

Effective coordination of various service sectors in targeting youth violence. All studies that focus on community-wide efforts in reducing youth violence speak to interventions that range from mental health-specific, to academic, vocational and social skills targets within a group of youth. Such coordinated efforts at intervention require the cooperation of a variety of service providers. Yet, these same studies reporting on the need for coordinated service efforts all speak to the difficulties in providing focused, coordinated and timely services such that treatment outcomes can be maximized. Research into service delivery needs to advance our understanding regarding what the most effective means are to provide such cross-sectoral services. This research will be of particular relevance for communities who are examining the delivery of gang-focused services where youth needs are diversified and require coordinated community efforts.

Service delivery issues related to offering best practices in violence prevention and intervention. This review identified that the implementation of effective service should be considered as a science in its own right. That is, while the literature is growing regarding what services are most effective, less is known about how to generalize the delivery of those services such that high levels of replication can report similar positive outcomes across all communities. Questions related to: the required training of those delivering the service, when services should be offered (i.e. daytime, evening, weekends) and how intensive services need to be to achieve positive outcomes, are examples of these questions. One way to address this gap in the literature is to study those programs that have demonstrated positive outcomes in relation to mental health





and violence and examine the conditions under which the programs were successively developed and delivered.

Effective means of disseminating the existing information regarding current best practice research in youth violence. There is a considerable body of evidence that speaks to understanding the needs of children and youth who experience both mental health concerns and who are also at risk for violence. In addition there is a growing research literature on effective services that reduce risk. And, while there still remain numerous gaps in our knowledge, perhaps the largest gap of all is that which exists between the knowledge that exists and the service providers who are charged with implementing the program. The challenge therefore is, how do we disseminate and translate this evidence such that communities and service providers can utilize this knowledge in informing their approaches to meet the needs of youth and their communities. There is little information to inform the best strategies to connect knowledge with its potential users. Evaluating effective strategies to disseminate the existing research knowledge should be considered a high priority.

SUMMARY

This review underscores the extent of the knowledge base for youth with respect to violence and mental health. The importance of focusing efforts to both further our understanding regarding those children and youth who are at risk for being aggressive and those interventions that can lessen that risk is considerable. The most likely victim of youth violence is another youth. Hence, what we know about the cycle of violence and mental health is that once victimized, those children then increase their own likelihood of developing similar disorders that also includes compromising the community's safety with respect to further victimization. Drawing on our knowledge with respect to effective outcomes, from prevention through to tertiary intervention, has a significant payoff in both lessening the traumatic effects on the direct victims as well as the general community. There is also current research efforts focused on accounting for the 'cost' of purchasing community safety; cost as measured both in terms of lessening human misery through reduced victimization rates, as well as in real economic costs





related to 'purchasing' the benefits of delivering effective services to youth at risk⁸⁸. Aos et al., (2004) summarize their considerable findings like this,

“In the last two decades, research on what works and what doesn't has developed and, after considering the comparative economics of these options, this information can now be used to improve public resource allocation [in an effort to reduce youth violence].”

Clearly when we look to research in this area to help guide our efforts, there is much to inform our decisions that provide a payoff that benefits all who are concerned with reducing youth violence and mental health and improving community safety.

⁸⁸ Aos, S., Lieb, R., Mayfield, J., Miller, M. & Pennucci, A. (2004). *Benefits and costs of prevention and early intervention programs for youth*. Olympia WA: Washington State Institute for Public Policy.

