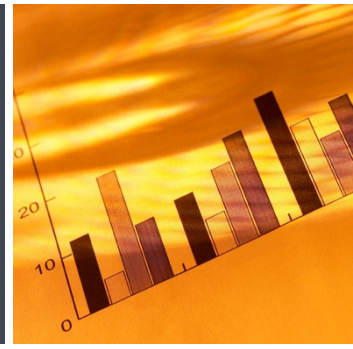


RESEARCH HIGHLIGHTS

Crime Prevention Youth Mental Health, Mental Illness & Crime



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BUILDING A SAFE AND RESILIENT CANADA

BACKGROUND

Mental and emotional health and well-being of youth is a serious health issue in Canada that has several implications in the field of youth crime prevention as well as for the juvenile justice system. The Mental Health Commission of Canada (MHCC) reports that as much as 70% of people suffering from mental health illnesses have their onset during the years of childhood and adolescence (MHCC, 2015), and that the early onset of mental health problems and illnesses have lifelong consequences. Compelling evidence for this latter statement can be seen in Canada's National Longitudinal Survey of Children and Youth, conducted between 1994 and 2008, which found that children who self-report emotional difficulties at ages four to eight were four times more likely to report depression eight years later (Canadian Institute for Health Information (CIHI), 2015). These statistics are also in line with the results of the Canadian Community Health Survey—Mental Health¹ which found that the likelihood of youth (age 15-24) coming into contact with police because of a mental or substance use disorder is significantly higher than for those aged 45 and above (Boyce, 2015).

According to the most recent reports of the MHCC (2017), in 2016, more than 7.5 million people in Canada were likely facing one of the common mental illness: major depression, bipolar disorder, alcohol use disorders, social phobia and depression (Ratnasingham et al., 2012 in MHCC, 2017b). The same report also reveals that more than 900,000 adolescents ages 13 to 19 lived with a mental health problem or illness in Canada (MHCC, 2017a). For this group of population, substance use is the most frequent problem (9.9%), followed by anxiety (9%), mood disorders (5.2%), Attention Deficit Hyperactivity Disorder (ADHD) (3.9%), Oppositional Defiant Disorder (ODD) (1.9%) and conduct disorders (1.9%) (MHCC, 2017b).

These statistics show the need to better understand the links between mental illness and youth crime and the practices currently being used to serve the youth suffering from mental health disorders. As such, the purpose of this report is to examine the Canadian knowledge concerning youth suffering from mental health disorders and their involvement in crime, with particular interest in the age group 12-24, to highlight the important correlations between mental health and some specific crime issues and to identify the knowledge gaps.

DEFINITIONS

Given that the term mental illness is derived from, and therefore so closely associated with, mental health disorders, the terms “mental illness” and “mental health disorders” are used interchangeably in the literature, and this is no exception to the literature analyzed for this report. The following definitions provide clarification between the mental health concepts used in this report:

Mental Health

“A state of well-being in which the individual realized his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community” (WHO, 2016).²



Mental Illness

“Health conditions that are characterized by alterations in thinking, mood, or behaviour associated with distress and/or impaired functioning” (Public Health Agency of Canada (PHAC), 2015).

Mental Health Disorder

“A syndrome characterized by clinically significant disturbance in an individual's cognition, emotion regulation, or behavior that reflects a dysfunction in the psychological, biological, or developmental processes underlying mental functioning. Mental disorders are usually associated with significant distress in social, occupational, or other important activities. An expectable or culturally approved response to a common stressor or loss, such as the death of a loved one, is not a mental disorder. Socially deviant behavior (e.g., political, religious, or sexual) and conflicts that are primarily between the individual and society are not mental disorders unless the deviance or conflict results from a dysfunction in the individual, as described above.” (Diagnostic and Statistical Manual of Mental Disorders (DSM–V) (American Psychiatric Association (APA), 2013). See Appendix A for certain key mental health disorders.

An important distinction to make is the difference between “mental health” and “mental illness”. Though these terms are at times confounded, they do not have the same meaning, as mental health is an integral part of well-being and realization, whereas mental illnesses are defined as alterations causing distress or impaired functioning, and do not encompass a person’s overall state of mind. For example, if a person is pessimistic and feeling sad, it does not mean they are suffering from a depressive disorder (unless these feelings significantly affect one’s capacity to function). Positive mental health, however, can increase certain protective factors of individuals (e.g. resiliency and self-esteem) which can mitigate the harms of mental illness; this makes mental health promotion important when considering mental illness (MHCC, 2015; Canadian Centre on Substance Abuse (CCSA), 2013). According to the WHO, sentiments such as cheerfulness, satisfaction, resilience, balance, and optimism are regarded as factors promoting positive mental health, whereas determinants such as poverty, social exclusion, stress, and discrimination lead to poor mental health (World Health Organization (WHO), 2016; Centers for Disease Control and Prevention (CDC), 2017; Canadian Mental Health Association (CMHA), 2014).

PREVALENCE IN CANADA

Mental Health and Children & Youth

- According to the 2012 Canadian Community Health Survey—Mental Health (CCHS—MH), mental health and substance use disorders are highest among younger Canadians: 18.5% of the Canadian youth age 15-24 reported having a disorder in the 12 months prior to the survey. They also reported having a substance abuse disorder (9.3%) and both a mental and substance use disorder (2.8%) at a higher rate than any other age group in Canada (Boyce, 2015).
- In 2014, it was estimated that there were approximately 2 million Canadian children and youth (0-24 years old) affected by mental health illness, and of these, 1.5 million were not receiving access to the appropriate treatment or support (CMHA, 2014).
- Between 2006-07 and 2013-14, the rates of youth and children visiting emergency departments or needing inpatient hospitalization for mental disorders have increased 45% and 37% respectively (CIHI, 2015).

Mental Health and Indigenous Populations

- Aboriginals have an overall higher rate of mental or substance abuse disorders than non-Aboriginals (15.2% vs 11.2%) (Boyce, 2015).
- When looking at substance use disorders only, a significantly higher proportion of Aboriginal persons had a substance use disorder than non-Aboriginal persons (6.3% and 3.9%, respectively). While mental disorders were slightly higher among the Aboriginal population (7.1%) in comparison with the non-Aboriginal population (5.9%), these differences were not found to be significant.
- Based on a self-assessment of mental health, risk factors such as poor mental health and drug abuse appear to explain the higher rates of victimization suffered by the Aboriginal population (28% vs 18% for non – Aboriginal) (Boyce, 2016).
- The high prevalence of mental health and substance abuse disorders among the Aboriginal population may also partially explain the higher prevalence of suicidal thoughts suffered by this population (Aboriginal 21.9% vs 11.1% for non-Aboriginal)³ (Kumar, 2016).

Mental Health and Contact with Police

Using the 2012 Canadian Community Health Survey – Mental Health⁴, Statistics Canada compiled mental health contact with the Canadian police in an effort to examine the frequency of contact that those with and without disorders have with police (Boyce, 2015). The data gathered was collected from people 15 years or older, and focused on specific reasons for police contact⁵. The findings of this survey demonstrate that (Boyce, 2015):

- Of the 5 million people who came into contact with police in 2011-12, approximately one in five (18.8%) met the criteria for a mental or substance use disorder. One in three Canadians with a mental health disorder reported having contact with police for at least one reason studied (34.4%). This doubled the proportion of those without a disorder having contact with police (16.7%).
- Canadians with a disorder were more likely to be in contact with police due to an arrest than those without a disorder; Canadians suffering from a mental disorder were almost four times more likely to report being arrested (12.5% compared to 2.8% without a disorder).
- The presence of a mental or substance use disorder was associated with coming in contact with police, even after controlling for related demographic and socioeconomic factors.
- In 2013, police suspected that almost one in five (19.1%) persons accused of homicide had a mental or developmental disorder⁶.

Snapshot on Mental Health and Gender Differences

- In 2012, 5.3% of males and 9% of females age 15 to 25 reported having experienced a major depressive episode in the past 12 months. The reporting percentages reached 8.6% for males and 12.8% for females when asked if they had ever experienced a major depressive episode in their lifetime (Statistics Canada - a).
- Males age 15 to 24 reported a much higher level of substance abuse disorders than females of the same age group (12.8% vs 5.5%) (Boyce, 2015).
- Males are more likely to be hospitalized for schizophrenic, psychotic, and substance abuse disorders, whereas females are most likely to be hospitalized for mood or anxiety disorders (CIHI, 2015). These statistics are also consistent with previous research, which found higher rates of mental health disorders for females and higher rates of substance use disorders for males. (Boyce, 2015)

Mental Health and the Correctional Service of Canada

There is very limited information on the statistics of youth suffering from mental health disorders within the Correctional Service of Canada. However, the information is less limited in terms of adults within the correctional system. According to the Correctional Service of Canada and the Office of the Correctional Investigator, research on adult mental health statistics in Canadian penitentiaries indicates that:

- Mental illness and drug dependence are some of the most prevailing health problems for Canadian offenders (Sapers & Zinger, 2015). In 2014-15, the Correctional Service of Canada reported that 27.6% of the offenders had mental health needs⁷ (Sapers & Zinger, 2016).
- Women presented a higher rate of mental health needs than men in the correctional setting (51% vs 26%) (Sapers & Zinger, 2016).
- The most prevalent mental health disorders among incoming male offenders in 2015 were alcohol or substance use disorders (49.6%) and antisocial personality disorder (44.1%) (Beaudette et al., 2015).

RISK AND PROTECTIVE FACTORS

According to the Canadian Centre on Substance Abuse, there are risk and protective factors linked to the development of mental illnesses (CCSA, 2013). Risk factors can be defined as characteristics or experiences faced by an individual that increases the likelihood that a mental health problem will develop (CCSA, 2013). Similar with the risk factors associated with a criminal trajectory, there is no single known risk factor for mental illness. Risk factors for future mental illnesses are thought to be the result of a complex interaction between biological (genetics), economical (e.g. lower-income family), social (e.g. victimization), and psychological (e.g. emotional difficulties) factors. These factors will vary amongst individuals and across various stages of life. However, these risk factors can be mitigated by protective factors, which are seen as characteristics or experiences that reduce the likelihood a mental health problem will occur (CCSA, 2013); examples of protective factors can range from strong family relationships to the youth having high self-esteem. No research study has been identified specifying and comparing the weight of risk and protective factors towards mental illness and how they interact to create an exponential effect.

It is worth noting that the risk and protective factors related to mental illness significantly overlap with those related to general antisocial behaviours, covering community, school, family, peer, and individual factors (CCSA, 2013; Day & Wanklyn, 2012). The similarities of the risk factors between crime and mental illness create the idea that the two social issues may be related; an important statement that will be covered in the next section. It should be noted that the research provided in the following section does not pertain solely to youth, but is generalized for adults and youth. When data is specific to youth, it is noted.

LINKS TO CRIME

In the international research for both youth and adults analyzed for this report, findings suggest that certain mental health disorders, such as substance use disorder, conduct disorder, and antisocial personality disorder were shown to have a significant correlation to offending and re-offending (Hoeve, McReynolds, & Wasserman, 2013; Murphy & Fonagy, 2012; Fazel et al. 2009; Heslop et al. 2011; Fridell et al. 2008; Maghsoodloo et al. 2012). Other disorders, such as Attention Deficit/Hyperactivity Disorder (ADHD), were also linked with future criminal involvement (Fletcher & Wolfe, 2009), however one of the studies showed that the link between ADHD and criminal involvement was not as strong as the link between its risk factors or correlated indicators (such as physical aggression and family adversity) and crime (Pingault et al. 2013). However, another study shows that of all crimes committed by people with a serious mental disorder⁸ in the US, only 7.5% of them were directly related to the disorder itself, implying that the connection between crime and mental illness should be expanded beyond the

psychiatric symptoms to the risk factors of both criminality and mental illness, such as poverty and unemployment (Peterson et al. 2014). Before any firm conclusions can be made on the association of all mental disorders and crime, more standardized research considering multiple risk factors should be conducted.

In terms of the association between crime and comorbidity, a term used to describe multiple disorders present in one person simultaneously or sequentially (National Institute on Drug Abuse, 2011), there is also limited research, making it difficult to make formal conclusions about their relationship. Studies have demonstrated that comorbidity does increase the odds of offending and violence (Coker et al. 2014; Fazel et al. 2009), and in these cases, substance use disorders were disproportionately represented⁹. In the Fazel study, it was found that the excess risk created by a schizophrenic disorder was mediated by the risks imposed by the substance abuse disorder, and that the risks associated with comorbidity closely resembled the risks of the population with only a substance abuse disorder (Fazel et al. 2009). A similar finding was identified in the Coker study, as the majority of associations between psychiatric diagnoses and arrest-related crime became non-significant after conduct disorder diagnoses were removed from the sample (Coker et al. 2014). Further research is needed to make a formal conclusion on whether comorbidity increases the chances of offending for those suffering from disorders already heavily associated with crime, such as conduct or substance abuse disorders.

Mental Illness and Violent Offending

- In terms of mental illness and violent offending, findings are different. Some research findings demonstrate an association between mental illness and violent crime (Coker et al. 2014; Van Dorn et al. 2012; Swanson et al. 1990), while others claim there is no statistically significant relationship between violent behaviour and mental disorders alone (CMHA, 2011; Stuart & Arboleda Florez, 2001; Elbogen & Johnson, 2009).
- Research has found that certain demographics (such as ethnicity and gender) and criminogenic risk factors contribute more to violence than mental illnesses alone (Van Dorn et al. 2012; Swanson et al. 1990; Corrigan & Watson, 2005).
- Finally, one study suggests a relationship between violence and mental health disorders: violent victimization increases the odds of the youth forming a mental health disorder, which in turn increases the risk of violent behaviour (Leschied, 2008).

Mental Illness and Victimization

- Research demonstrates that those suffering from severe mental illnesses¹⁰ are considerably more likely to be victimized by crimes and violence than the general population (Teplin et al. 2005; Pettitt et al. 2013; Khalifeh et al. 2015).
- After taking other risk factors into account (including, but not limited to homelessness and the use of drugs), those who reported a mental or psychological disability or self-assessed their mental health as being poor or fair reported a risk of victimization about two times higher than those who rated their mental health as very good (Perreault, 2015).
- One American study found that people suffering from mental health disorders are in fact more likely to be the victim of a crime than the perpetrator (Desmarais et al. 2014). The disorders studied were schizophrenia, bipolar disorder, major depression and substance use disorder. Victimization was highest among those suffering from substance use disorders and lowest among those suffering from schizophrenia.
- The results from one study revealed a higher level of victimization for those with substance and psychotic disorders, and said victimization may actually increase the rates of alcohol and drug use (Vaughn et al. 2010). Certain risk factors associated with crime and mental illnesses, such as poverty and a family history of antisocial conduct, were also found to significantly increase the likelihood of victimization (Vaughn et al. 2010).

Mental Illness and Youth Gangs

- Research has shown that gang membership is associated with higher rates of mental health disorders. Gang members were more likely to suffer from antisocial personality disorder (57x), alcohol and drug dependence (6x and 13x respectively), psychosis (4x), and anxiety disorder (2x) compared to non-gang members (Coid et al. 2013). They also suffer more from depressed mood and suicidal ideation (McDaniel, 2012) compared to non-gang individuals. Violent ruminative thinking, violent victimization, and fear of further victimization accounted for the high levels of psychosis and anxiety disorders in gang members (Coid et al. 2013).
- Youth involved in gangs suffer mental health disorders, such as anxiety and post-traumatic stress disorder (PTSD), at a higher rate than youth delinquents not associated in gangs (Laurier et al. 2015; Corcoran et al. 2005). This higher rate of mental health disorders is thought to be related to increased risk factors associated with gang-life, such as lived traumatic experiences (Laurier et al., 2015).
- A study demonstrated that youth who joined gangs reported to have both poorer health and mental health (anxiety and depression) than the general population later in life (late 20s to early 30s). These individuals were also almost 3 times more likely to meet the criteria for drug abuse or drug dependence in the preceding year of the study (Gilman et al. 2014).
- Not only can youth with poorer mental wellbeing be drawn to gang-affiliation (for reasons such as isolation and lack of family support), but said affiliation can negatively impact mental health and often times worsen current mental illnesses suffered by the youth (Hughes et al. 2015).

Mental Illness and Cyberbullying

- The General Social Survey on Canadians' Safety (Victimization) in 2014 revealed that the combined effects of cyberstalking and cyberbullying raised the risk of experiencing an emotional, psychological or mental health condition¹¹. For example, 26% of individuals who were cyberstalked said they had an emotional, psychological or mental health condition compared to 13% of individuals who were not cyberstalked. That probability rose to 33% for those who were cyberbullied and 41% for those who experienced both cyberbullying and cyberstalking (Hango, 2016).
- Research demonstrates that there are clear associations between cybervictimization, depression, and anxiety (Rose & Tynes, 2015; Elgar et al. 2014; National Academies of Sciences, Engineering, and Medicine, 2016), and that the severity of the depression is correlated to the severity of the cyberbullying (National Academies of Sciences, Engineering, and Medicine, 2016). One study also adds credibility to the notion that depression and cybervictimization have a reciprocal relationship. Cybervictimization can increase levels of depression, which in turn can create a greater likelihood for re-victimization (Rose & Tynes, 2015).
- A 2008 Finnish study using questionnaires among adolescents found that being a cyberbully was associated with difficulties with emotions, concentration, and behaviour; conduct problems; hyperactivity; and substance use. The findings also show a general trend indicating that the higher the level of difficulties or symptoms from these psychosocial risk factors, the stronger the association to being a cyberbully (Sourander et al. 2010).
- In terms of general peer victimization¹², a meta-analysis demonstrates that a history of peer victimization is associated with internalizing mental health problems (such as anxiety, withdrawal, greater emotional symptoms, and increased risk of psychotic experiences (e.g. paranoia)) and externalizing mental health problems (such as increased risk of conduct problems, aggression, suicidal ideation, and attempted suicide) (McDougall & Vaillancourt, 2015). This same study also posits that the outcomes from peer victimization are potentially mediated by risk and protective factors (McDougall & Vaillancourt, 2015).

Mental Illness and Substance Use

- Research has demonstrated a clear association between substance use disorders and other mental health disorders, as individuals with a substance use disorder or a mental health disorder are at a much higher risk of the other, compared to a person without either a substance use or mental health disorder (Reiger et al., 1990 in Skinner & Centre for Addiction and Mental Health, 2011; Conway et al. 2006).
- The high rate of comorbidity for people suffering from both a substance use disorder and another mental health disorder has been analyzed in different ways. Of note, probable explanations for this comorbidity are the commonality between risk factors for both mental and substance use disorders (such as exposure to stress, trauma, genetic vulnerabilities), and that one disorder may actually act as a trigger for the other; youth may cope with mental health symptoms by using (and later abusing) drugs and alcohol, and substance abuse can lead to serious and prolonged distress that can contribute to the onset of a mental health disorder (National Institute on Drug Abuse, 2011; CCSA, 2013).
- Studies have shown that offenders suffering from a substance use disorder as well as another comorbid mental health disorder have positive associations with re-offending (Schubert et al. 2011; Grann et al. 2008) as well as violent behaviour (Grann et al. 2008). However, the outcomes of these studies suggest that the consideration of criminogenic risk factors is still essential for criminal prediction (Schubert et al. 2011; Grann et al. 2008).

Mental Illness and Other Important Social Issues

Given that certain social issues have an impact on mental health and crime, we should consider the following social issues:

- **Stigmatisation:** A 2010 Canadian survey showed that over one third (38.5%) of people treated for mental illness report being treated unfairly because of a current or past mental health or emotional problem (Stuart et al. 2014). Stigma has been identified as a factor keeping people with mental health problems from seeking the services they often need (Barney et al. 2006; Bharadwaj et al. 2015).
- **Homelessness:** Research has shown that people suffering from mental illness are at a greater risk of becoming homeless (Costello et al. 2013; Canadian Population Health Initiative of the Canadian Institute for Health Information, 2009). There are also findings suggesting that homelessness can worsen mental health (Canadian Population Health Initiative of the Canadian Institute for Health Information, 2009; Canadian Observatory on Homelessness, 2016). The first pan-Canadian study on youth homelessness, Without a Home: The National Youth Homelessness Survey (2016)¹³, shows that: “85.4% of homeless youth were experiencing a mental health crisis, 42% reported at least one suicide attempt, and 35.2% reported at least one drug overdose requiring hospitalization. Indigenous, LGBTQ2S, and female homeless youth are at the highest risk of experiencing a mental health crisis, along with youth who become homeless before the age of 16” (Schwan et al., 2017). The same report reveals that suicide and drug overdose are the leading causes of death for Canadian homeless youth (Schwan et al., 2017).
- **Suicide:** Suicide is among the leading causes of death in 15-24 year old Canadians, second only to accidents (Statistics Canada - b). Research shows that people suffering from mental health disorders have substantially increased rates of suicide mortality compared with the general population (Chesney et al. 2014; Nock et al. 2008). Suicide mortality rates are particularly high in people suffering from borderline personality disorder (45 times higher than the general population), depression (20x), bipolar disorder (17x), opioid use (14x) and schizophrenia (13x), as well as anorexia nervosa (31x) and alcohol use disorder in women (16x) (Chesney et al. 2014). In 2014-15, suicide attempts among females age 15-19 was alarming: young women had the highest rate

of hospitalizations for self-inflicted injuries which is three-and-a-half times higher compared to young men in the same age group (Skinner et al., 2016 in MHCC, 2017a).

COST CONSIDERATIONS

There are few studies that analyze the economic impacts of mental health problems, and techniques used to provide the cost estimations vary within these studies. For example, over the past decade, four major Canadian studies have analyzed the costs of mental health problems and their implications on the economy on a national basis. Each study has used different cost components and methods (health economists distinguish between three types of costs: direct expenditures; indirect or spillover costs; and intangible costs). Indirect costs were measured differently between studies, and expenditures in the justice system due to mental health problems and illnesses were not calculated (MHCC, 2017b). These limitations considered, the following findings can help illustrate the relationship between mental health problems, illnesses, and the economy:

- In 2016, the Mental Health Commission of Canada estimates that the total cost to Canada's economy incurred by mental health problems and illnesses is currently well over \$50 billion annually, or nearly \$1,400 for every person living in Canada (MHCC, 2017a-b).
- The Conference Board of Canada, in 2012, showed that mental illness costs Canada \$20.7 billion annually due to lost labour force participation stemming from the six most common conditions afflicting the working-age population (depression, dysthymia, bipolar disorder, social phobia, panic disorder, and agoraphobia). This figure does not include the costs of patient care, insurance for employers, services in communities, and the many intangible costs for the individuals affected and their families (The Conference Board of Canada, 2012). The same analysis showed almost 452,000 more Canadians would be participating in the labour market if they weren't affected by mental illness.
- In Canada, the estimated \$15.8 billion spent by the public and private sectors in 2015 on non-dementia-related mental health care represented approximately 7.2% of Canada's total health spending (\$219.1 billion) (MHCC, 2017b).
- The Office of the Correctional Investigator reported that in 2012-2013, the mental health care costs of the Correctional Service of Canada were \$66.37 million, over 30% of the total health services expenditure (Sapers & Zinger, 2014).

PREVENTION AND INTERVENTION

While the National Crime Prevention Strategy through its funding programs has supported the implementation of crime prevention programs helping populations, including youth suffering from mental health disorders, these programs are primarily meant for crime prevention purposes, and outcomes of these programs are not structured to measure indicators in the mental health domain. However, because of the similarity between risk factors associated to crime and mental health disorders, it remains essential to promote prevention and early intervention for at-risk youth and their families.

The potential cost savings of prevention programs can become extremely important in helping reduce the immense costs of mental health problems and mental illness. Because many of these issues begin in childhood or adolescence, investing in mental health promotion, prevention and early intervention are identified as key areas (Knapp et al. 2011; CIHI, 2015; Lesage, 2017 in MHCC, 2017a), both from a crime prevention and public health perspective.

Of the utmost importance, access to the proper mental health services (e.g. early problem identification, treatment, aftercare) and medication is the first step to help prevent criminal activity, especially violence, among those

suffering from mental illness (Coker et al. 2014; Peterson et al. 2014; Kopel & Cramer, 2014; CMHA, 2011). In 2012, an estimated 1.6 million Canadians reported through the Community Health Survey that their need for mental health care was only partially met or not met at all; needs for medications were most likely to have been met, while counselling needs were the least likely to have been met; 36% reported that their need for counselling was not met at all or was only partially met” (Sunderland, 2013 in MHCC, 2017a).

Using standardized tools¹⁴ to screen and assess for mental health problems or risk factors affecting youth is also essential in order to tailor the appropriate treatment and identify their needs for services (Addiction and Mental Health Collaborative Project Steering Committee, 2015; BC Ministry of Health Living and Sport, 2009). According to the CCSA, prevention initiatives that address the appropriate risk and protective factors can be effective at reducing substance abuse and mental health problems, and can even produce cost savings (CCSA, 2013; Leschied, 2008).

Core Intervention Strategies for Youth Suffering from Mental Illness

For this section, the core strategies identified by Leschied (2008) are directed at youth suffering from mental health disorders at-risk of offending, whereas other core examples are for youth suffering from mental health disorders. Although these other examples have been effective in the field of crime prevention, the literature did not acknowledge their relation to prevention programs for youth who are suffering from a mental health disorder and are at-risk of crime:

- **Culturally Appropriate Services:** When implementing a prevention strategy, taking into account the cultural and ethnic background is important in order to better tailor the initiative to the needs of the population served (BC Ministry of Health Living and Sport, 2009).
- **Developmentally Age Appropriate Services:** It is important that the services provided are appropriate for the age and context of the targeted children and youth. For example, a program serving children with risk factors such as child maltreatment should be managed in a different way than those with risk factors such as violent or aggressive behaviours (Leschied, 2008).
- **Empirically Based Services:** Best practice intervention and prevention strategies should be guided by evaluated outcomes of prior successful interventions (Leschied, 2008).
- **Gender-Informed Services:** As the statistics have demonstrated, there is a difference in how mental illness impacts boys and girls, and prevention programs must ensure that services are tailored to the specific gender differences (Leschied, 2008; BC Ministry of Health Living and Sport, 2009).
- **Risk Factor Based Services:** The literature has made note of the multiple causes and factors impacting the relationship between mental illness and crime. Prevention programs must incorporate program elements for the risk factors potentially affecting youth suffering from mental illness (Leschied, 2008).
- **Scope-Appropriate Services:** Successful prevention strategies help their clientele by using the appropriate scope on the continuum of intervention. This includes programs focusing on primary, secondary and tertiary prevention¹⁵ (Leschied, 2008).
- **Targeted Services:** Programs must use the knowledge-base on specific disorders and their relationship to antisocial behaviour to help target the specific causes of youth mental illness and crime (Leschied, 2008).

Examples of Evidence-Based Interventions and Programs Addressing Mental Health Issues

Several meta-analyses and reviews identified by the American Psychological Association (APA) Task Force on evidence-based practice with children and adolescents have shown that prevention programs for youth can reduce rates of later behavioural, social, academic, and psychological problems in the participants (APA, 2008). Within

these programs and other social development initiatives¹⁶, there have been evidence-based interventions for mental disorders that have been effective in preventing and treating affected youth.

For the purpose of this report, only a few examples of evidence-based interventions¹⁷ followed by pre-packaged programs are presented. Depending on the severity and the disorders that need to be prevented and/or treated, different psychosocial prevention or treatment interventions can be applied:

- **Cognitive Behavioural Therapy (CBT):** Psychotherapy directed toward solving problems and teaching skills to modify dysfunctional thinking and behaviour (Waddell et al. 2014; Canadian Psychological Association (CPA), 2012). For instance, CBT has been effective to prevent and treat anxiety and major depressive disorders as well as to treat substance use disorders (Waddell et al. 2014).
- **Parent training programs and family support programs:** Programs designed to improve parenting styles and improve parent-child relationships (Dretzke et al. 2009; Lundahl et al. 2006). For instance, parenting programs are an effective treatment for children with conduct problems (Dretzke et al. 2009; Waddell et al. 2014) and they had small to moderate positive effects immediately after treatment, with small effects persisting for up to 1 year to modify disruptive child behaviour (Lundahl et al. 2006).
- **Social and Emotional Learning (SEL):** Programs that help youth manage emotions, appreciate others' perspectives, make responsible decisions, and better manage interpersonal situations (Greenberg et al. 2003, Knapp et al. 2011). For instance, SEL programs have been used to prevent conduct problems in childhood and international evidence shows that SEL participants demonstrate significantly improved social and emotional skills, attitudes, behaviour, and academic performance (Knapp et al. 2011).

Below are some examples of effective programs that have demonstrated positive results on improving mental health disorders as well as certain crime issues. Due to a lack of outcome evaluations of these programs within the Canadian context, findings from these programs are from outcome evaluations that were conducted in the United-States¹⁸:

- **Nurse- Family Partnership (NFP)¹⁹ (Age group: 0-2):** The NFP program consists of nurse home visits for first-time, low income, pregnant mothers focusing on caregiving, healthy behaviours, and life-course development. The research on the NFP program demonstrates reductions in substance use and the likeliness of reporting an internalized mental health disorder among children from the intervention group (Kitzman et al. 2010).
- **Promoting Alternative Thinking Strategies (PATHS)²⁰ (Age group: 5-11):** The PATHS program is a school-based intervention initiative focused on social and emotional learning, and is focused on reducing aggression and behavioural problems in children. Participant outcomes have shown reductions in conduct problems, ADHD symptoms, delinquency, and depression (Malti et al. 2012; Seifert et al, 2004; Crean & Johnson, 2013).
- **SNAP - Stop Now and Plan (Age group: 6-11)²¹:** SNAP is an evidence- based, gender-specific, manualized program for children with disruptive behaviours, and their parents. The program teaches how to stop and think before acting, enabling participants to make better choices. Based on a randomized controlled trial with boys (n=252) with aggressive, rulebreaking, or antisocial behaviour in excess of clinical criterion levels, youth who participated in the SNAP program showed significantly greater reduction in aggression, conduct problems, and overall externalizing behaviour, as well as counts of oppositional defiant disorder and attention deficit hyperactivity disorder symptoms. Additional benefits for SNAP were observed on measures of depression and anxiety (Burke & Loeber, 2015). At the 1 year follow-up, treatment benefits for SNAP were maintained on some outcome measures (aggression, ADHD and ODD, depression and anxiety) (Burke & Loeber, 2015).
- **Multidimensional Family Therapy (MDFT)²² (Age group: 11-18):** This family based treatment consists of therapy based on the adolescent at-risk, family, parents, and community, and is meant to motivate behavioural

and interactional change. Research has demonstrated that participants in the MDFT program have shown reductions in substance use, conduct problems, and delinquency, as well as other mental health problems such as depression and anxiety (Liddle, 2010).

While delivering evidence-based interventions by appropriately trained staff is seen as a best practice, there are other interventions that have shown promising results in preventing and treating children and youth suffering from mental health disorders. An example of that is the **mentoring** for children with emotional and behavioural disorders²³. This mentoring intervention was designed to provide positive role models and supportive relationships that facilitate educational, social, and personal growth. Results suggest that mentoring services for children with emotional and behavioural disorders may decrease externalizing and internalizing behaviour problems beyond the contribution of other mental health services (Jent & Niec, 2006). In addition, maternal caregivers of mentored children reported higher levels of perceived parenting social support when compared to maternal caregivers of wait-listed children (Jent & Niec, 2006).

To conclude this section on prevention and intervention, it is important to mention the literature and programs oriented towards mental health promotion in children and youth. Literature on effective prevention and mental health promotion programs have emphasized the following areas of focus: resiliency and protective factors, creating supportive environments, reducing stigma, addressing the social determinants of health, social inclusion, connectedness, and social and emotional learning (Murphy et al., n.d.). As such, increasing social connectedness, positive parenting style, physical health, and mental health literacy are just some examples of key domains where promotion programs, both from a public health as well as crime perspectives, can intervene positively.

CONCLUSION

As seen from the information reviewed in this report, knowledge on the relationship between mental illness and youth crime is not conclusive. The overrepresentation of mentally ill individuals in the correctional system may have been partially explained, however, the similarity of risk factors between youth with mental health disorders and youth at risk of crime is evidence of the potential weight carried by these experiences or life events when it comes to social perversion. We should also consider the link between mental illnesses and victimization; and that conduct and substance abuse disorders have a clearer association with criminality, but there is not enough information to clearly answer questions related to the relationship between mental illness and crime.

In order to begin answering these questions, there must be more research performed on the links between mental disorders and criminal activity. For example, this report could not make specific conclusions about youth crime and mental illness, as there is a lack of available studies concentrating on the link between mental illness and criminal activity in the context of youth. Therefore, most of the conclusions made in this report needed to be broadened to mental illness and crime, regardless of age (unless otherwise specified). Furthermore, factors such as the standardization of definitions within the paradigm of mental illness; studying symptoms of illnesses and their respective links to criminality; and the acknowledgement of the weight of risk factors of mental illness when linked to crime are also very important issues that need consideration in future research if we truly seek to deepen our understanding of the relationship between mental illness and criminal activity.

Finally, the presence of risk factors for criminal activity within the lives of youth suffering from mental disorders presents an opening for intervention before offending can take place. Combined with the proper services and intervention, crime prevention programs can positively impact the lives of these at-risk youth, giving them a chance to alter their future.

APPENDIX A

Mental health disorders are grouped into categories in the DSM-V based on the similarity of symptoms, effects the disorders have on the person, and treatment response, among other things (APA, 2013). Though there are many disorder categories listed in the DSM-V, not all of them are of interest for this report, as they do not all share behaviours that are regarded as “associated” with crime, such as eating disorders. Certain key mental health disorder categories for this report include:

- **Anxiety Disorders:** Disorders that share features of excessive fear and anxiety and related behavioural disturbances (e.g. Panic disorder).
- **Bipolar and Related Disorders:** Disorders characterized by severe, unpredictable changes in mood and behaviour. These disorders are recognized as a bridge between the diagnostic classes of depressive and psychotic disorders in terms of symptomatology, family history and genetics (e.g. Bipolar).
- **Depressive disorders:** Disorders with the presence of sad, empty, or irritable mood, accompanied by somatic and cognitive changes significantly affecting the individual’s capacity to function (e.g. Major Depressive disorder).
- **Disruptive, Impulse-Control, and Conduct Disorders:** Disorders characterized by problems in the self-control of emotions and behaviours (e.g. Conduct Disorder).
- **Neurodevelopmental Disorders:** A group of disorders that start affecting individuals during their childhood (e.g. Attention Deficit/Hyperactivity Disorder (ADHD)).
- **Personality Disorders:** disorders creating patterns of thought, feelings and behaviours causing a level of dysfunction (e.g. Antisocial personality disorder).
- **Schizophrenia Spectrum and Other Psychotic Disorders:** Disorders with abnormalities in one or more of the following domains: delusions, hallucinations, disorganized thinking (speech), grossly disorganized or abnormal motor behaviour (including catatonia), and negative symptoms (e.g. Schizophrenia).
- **Substance-Related and Addictive Disorders:** Recurrent use of substances causing clinically and functionally significant impairment (e.g. Substance use disorder²⁴).
- **Trauma- and Stressor-Related Disorders:** Disorders in which exposure to a traumatic or stressful event is listed explicitly as a diagnostic criterion (e.g. Posttraumatic Stress Disorder (PTSD)).

(from the Diagnostic and Statistical Manual of Mental Disorders, 2013)

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¹ The 2012 Canadian Community Health Survey—Mental Health (CCHS—MH) survey collected data from people 15 years of age and older, living in the 10 provinces and asked respondents about both mental and substance use disorders. More specifically, the survey measured six disorders: depression, bipolar disorder, generalized anxiety disorder, alcohol abuse or dependence, cannabis abuse or dependence, and other drug abuse or dependence. Respondents were asked a series of questions about symptoms experienced, as well as the types of behaviours they engaged in. Based on their responses, respondents were classified in terms of whether they met the criteria for a specific mental or substance use disorder. All disorders discussed in this article are based on respondents who met the criteria for a disorder in the 12 months prior to the survey. However, some limitations need to be mentioned: this survey did not collect data from persons living on reserves or other Aboriginal settlements, full-time members of the Canadian Forces, the institutionalized population, and from Canadians living in the territories. Further, since this was a household survey, the homeless population was also out of scope. In addition, when referring to mental or substance use disorders, as well as contact with police, it is important to highlight the fact that the rates provided may underestimate the extent of these issues in Canada, since only selected disorders and selected types of contact with police were measured. Furthermore, certain disorders which have been found to be important contributors to people's interaction with police, such as antisocial personality disorder and fetal alcohol syndrome (MacPhail and Verdun-Jones 2013; Stewart and Glowatski 2014), were not captured by this survey. For more information, see Boyce (2015).

² This definition is also referenced by the Centers for Disease Control and Prevention (CDC) in the U.S, and the Canadian Mental Health Association (CMHA).

³ Data are from the 2012 Aboriginal Peoples Survey. In this study, the Aboriginal populations considered were First Nations off reserve, Metis, and Inuit aged 26 to 59. The non-Aboriginal prevalence in this study was surveyed from the provinces only. For more information about the study, see Kumar (2016).

⁴ See endnote 1 for the parameters of the 2012 Canadian Community Health Survey—Mental Health (CCHS—MH).

⁵ Reasons for contact with police are: “traffic violations; being a victim of a crime; being a witness to a crime; being arrested; personal problems with emotions/mental health/substance use; or a family member's problems with emotions/mental health/substance use.” (Boyce, 2015)

⁶ “Suspected mental or developmental disorders can include disorders such as: schizophrenia, depression, fetal alcohol syndrome, dementia, psychotic and neurotic illnesses, or sociopathic tendencies. Excludes accused persons for which information on suspected mental or developmental disorder was unknown. In 2013, information on suspected mental or development disorder was unknown for 13.3% (or 60 accused) of persons accused of homicide” (Boyce, 2015).

⁷ Mental health needs in this context is defined as “having had at least one mental health treatment-oriented service or stay in a treatment centre during the previous six months” (Sapers & Zinger, 2016).

⁸ The main disorders considered in this study were schizophrenia, bipolar disorder, and depression. In the study, symptoms of bipolar disorder were more closely related to direct crimes compared to symptoms of depression and schizophrenia. For more information, see Peterson et al. (2014).

⁹ In the Coker's study (2014), anxiety disorders, behavioural disorders, eating disorders, mood disorders, and substance abuse disorders were all assessed. The conclusions, however, do not indicate specific disorder combinations and their impact on crime. In this study, it is important to note that conduct disorders and substance use disorders were the most common disorders linked with crime.

¹⁰ Severe or serious mental illnesses (or SMIs) are based on the age of the individual, their functional impairment, duration of the disorder, and the diagnoses. Examples of such disorders include schizophrenia and bipolar disorder.

¹¹ “Respondents stated that they “sometimes,” “often” or “always” have an emotional, psychological or mental health condition that may include anxiety, depression, bipolar disorder, substance abuse, anorexia, etc.” (Hango, 2016).

¹² The original paper does not directly define the term “peer victimization”. Based on several sources, it is possible to broadly define “peer victimization” as the experience of being targeted by physical, social, emotional or psychological harm from a peer. These activities include, but are not limited to, bullying and cyberbullying.

¹³ In October 2016, the Canadian Observatory on Homelessness, in partnership with A Way Home Canada, released Without a Home: The National Youth Homelessness Survey. This study surveyed 1,103 young people experiencing homelessness from 47 different communities across 10 provinces and territories, providing the first national picture of youth homelessness in Canada. For more information, see Schwan et al. (2017).

¹⁴ As an example of resources to help identify an appropriate risk assessment tool, the Ontario Centre of Excellence for Child and Youth Mental Health provides an online directory that profiles measures related to child and youth mental health and program evaluation. For more information, visit the website available at: <http://www.excellenceforchildandyouth.ca/resource-hub/measures-database>. In addition, for practitioners in the crime prevention domain as well as in the juvenile justice system,

Vincent G. et al.'s book provides detailed information on risk assessment tools used in the criminal justice system. For more information see Vincent, G. et al. (2012), available at: <http://modelsforchange.net/publications/346>.

¹⁵ Primary prevention programs focus on the onset of violence/offending for the youth suffering from a mental disorder. An example of a primary prevention program would be reducing the exposure of media violence to vulnerable youth suffering from a pre-existing emotional disorder. Secondary prevention programs target youth who have already developed a risk for violence/offending, but who have yet to participate in antisocial or violent behaviour. An example of a secondary prevention program would be programs directed at abuse survivors, assisting those suffering from PTSD, depression and suicidality. Tertiary prevention programs are focused on the youth who are already at risk of violence and crime, and who have already offended. An example of a tertiary prevention program would be a substance and alcohol abuse intervention program. (Leschied, 2008)

¹⁶ The SAMHSA's National Registry of Evidence-based Programs and Practices (NREPP) (US) is an evidence-based repository and review system designed to provide the public with reliable information on mental health and substance use interventions. For more information, consult the website at: <http://nrepp.samhsa.gov/about.aspx> (English only). Based on our knowledge, there's no similar registry in Canada.

¹⁷ Examples of evidence-based interventions are from the most rigid and high-quality evaluation studies where results are supported by at least one strong randomized-controlled trial (RCT). For instance, in Waddell et al. (2014)'s report, the authors searched for peer-reviewed literature to identify randomized-controlled trial (RCT) evidence for each of the major disorders: anxiety disorders including obsessive-compulsive disorder (OCD); attention-deficit/hyperactivity disorder (ADHD); substance use disorders; conduct disorder; major depressive disorder; autism spectrum disorders; bipolar disorder; eating disorders; and schizophrenia. For more information, see Waddell et al. (2014).

¹⁸ This list consists of examples of mental health promotion/mental disorder prevention programs, and is by no means all-inclusive.

¹⁹ For more information about the Nurse-Family Partnership, consult their website at: <http://www.nursefamilypartnership.org/>

²⁰ For more information about the Promoting Alternative Thinking Strategies, consult their website at:

<http://www.pathstraining.com/main/> and <http://www.channing-bete.com/prevention-programs/paths/paths.html>

²¹ For more information about the Stop Now and Plan Program, consult their website at: <https://childdevelop.ca/snap/home>

²² For more information about the Multidimensional Family Therapy, consult their website at: <http://www.mdft.org/>

²³ This mentoring program included 30 youth (8-12 years old) receiving services in a mentoring program for a mental health population for at least eight weeks and the control group consisted of 30 children registered on a wait-list. Mentors met with the youth once a week for three hours. During that time, mentors engage in developmentally appropriate activities (e.g., playing games, sports) while working on specific goals. (Jent & Niec, 2006).

²⁴ Terms used in this paper such as drug dependence and substance abuse are no longer classified as distinct disorders within the DSM-V. The revised category, substance use disorders, captures the main criteria of these two previous disorders.