11 Substance Use & Mental Health Problems among Street-involved Youth: The Need for a Harm Reduction Approach

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Introduction

A growing body of research has documented a highly disadvantaged health and social profile among street-involved and homeless youth compared to non-homeless youth. In Canada, studies have shown that life on the street for youth is associated with poor nutrition, victimization, substance use and abuse, and limited access to healthcare and other services, which all impose harmful effects on health (Adlaf & Zdanowicz, 1999; Boivin et al., 2005; Kirst et al., 2009; Kirst et al., 2011; Roy et al., 2004). As a result, street-involved and homeless youth experience more health problems than non-homeless youth, and particularly high rates of addiction and mental health problems (Adlaf & Zdanowicz, 1999; Boivin et al., 2005; Kirst et al., 2009; Kirst et al., 2011). In many urban centers, a variety of services are available to support street-involved youth, such as shelters, drop-ins, meal programs, literacy improvement, and counseling programs (Karabanow & Clement, 2004). However, other important resources including long-term housing solutions, harm reduction services, substance use treatment and mental health services are limited, uncoordinated and/or unattractive to youth (Haley & Roy, 1999; Slesnick & Prestopnik, 2005). In particular, use of available substance use and mental health services tends to be low among street-

involved youth (Carlson et al., 2006; DeRosa et al., 1999; Haley & Roy, 1999; Kort-Butler et al., 2012; Unger et al., 1997). Such a lack of service availability and accessibility for street-involved youth may worsen their already poor health and contribute to chronic homelessness (Ferguson et al., 2011).

This chapter reviews current research on the health and social profile of street-involved youth, and more specifically draws on research findings regarding prevalence (frequency within the population) and contributing factors to co-use of multiple substances and co-occurring mental health problems within a sample of 150 street-involved youth in Toronto, Canada (Kirst et al., 2011; Kirst et al., 2009). Such analyses are important because street-involved youth are a highly vulnerable population with complex social service and treatment needs. The chapter then discusses use of various services among the youth, and explores the implications of findings on the current health service system and the need to expand harm reduction alternatives for this vulnerable population.

The Health and Social Profile of Street-involved Youth

Studies have consistently found that homeless youth report high rates of alcohol and drug use compared to youth in the general population, and that substance use is a common feature of life on the street (Adlaf et al., 1996; Adlaf & Zdanowicz, 1999; Boivin et al., 2005; Johnson et al., 2005; Kirst et al. 2009; Kirst et al., 2011; Roy et al., 2004; Slesnick & Prestopnik, 2005; Whitbeck et al., 2004). Previous research has shown that 40-71% of street-involved youth abuse alcohol and/or other drugs (Adlaf et al. 1996; Johnson et al., 2005; Kipke et al. 1997). One study observed drug abuse rates 10 times higher for homeless young males and 17 times higher among homeless young females than found in a national sample of non-homeless youth (Whitbeck et al., 2004). Rates of tobacco use are also high among street-involved youth, with one study finding that 97% of street involved youth had used tobacco in their lifetime and 27% were addicted to nicotine (Slesnick & Prestopnik, 2005).

Among street youth, substances may be used for various reasons: to become a member of a social network, for recreation and pleasure, or as a mechanism for coping with the hardship and struggle for survival related to life on the street. Substance use may worsen other problems by increasing the risks of infectious disease, addiction, mental health problems, sexual exploitation, drug overdose, criminal behaviour and violence related to the drug trade (Baron, 1999; Kerr et al., 2009; Roy et al., 2004; Strike et al., 2001).

The greater the number of substances consumed by the youth, the greater the risk for drug-related harms, including co-occurring or simultaneous mental health

problems (Johnston et al., 2005; Kipke et al., 1997). Rates of mental health problems are at least twice as high among street youth as among comparable groups of non-homeless youth (Schweitzer & Hier, 1993; Yates et al., 1993), and street youth also appear to have elevated rates of co-morbidity (i.e. having two or more co-existing mental health conditions). Studies with street-involved and homeless youth have found that 34-60% of youth have met diagnostic criteria for both substance use and mental health problems (Adlaf & Zdanowicz, 1999; Whitbeck et al., 2004; Slesnick & Prestopnik, 2005). Factors such as family dysfunction, substance use as a coping mechanism, victimization, criminality and sexual risk behaviours have been found to predict co-occurring substance use and mental health problems among homeless and street-involved youth (Adlaf & Zdanowicz 1999; Merscham et al., 2009; Slesnick & Prestopnik, 2005; Whitbeck et al., 2004).

Street-involved and homeless youth also experience high rates of suicidal contemplation (i.e. thoughts of suicide) and suicide. The rates of suicide attempts among homeless youth far exceed those of housed youth in Canada, with between 27% and 46% having attempted suicide (Frederick et al., 2011; Kidd, 2004; Kirst et al., 2011; McCarthy & Hagan, 1992). Histories of child abuse, recent victimization, depression, and substance abuse have been found to place street-involved youth at heightened risk of suicide (Frederick et al., 2012; Go, 2007; Kidd, 2006; Roy et al., 2004; Yoder et al., 1998).

With respect to all of these health conditions and patterns, there is little understanding of differences between males and females and of the implications of co-occurring mental health and substance use issues for the service needs of street-involved and homeless youth. This chapter addresses these gaps in knowledge by drawing together the research findings on substance use and co-occurring mental health problems, and also examines health and social service use among street-involved youth in the Youth Pathways Project.

Methods

The Youth Pathways Project (YPP) was conducted by an inter-disciplinary team of researchers from the Centre for Addiction and Mental Health and the University of Toronto, and community partners from the Children's Aid Society in Toronto, Canada. The purpose of the study was to examine and compare pathways to either independent living or continued unstable housing situations among high-risk young women and men over time. The YPP study also sought to explore the links between physical and mental health, drug use, victimization, criminal activity, pregnancy, and service use and housing status among vulnerable youth. The study used a longitudinal design in which youth aged 16-21 accessing services for street-involved youth in Toronto were recruited to participate in four interviews over the

course of 12 months. After screening, youth participated in a private face-to-face interview, and were paid $20 for their participation. Data collection took place from January 2005 to June 2006. In the first study wave, a total of 150 participants were recruited through social and health service agencies and interviewed (for a complete discussion of study methods see Kirst et al., 2009; Kirst et al., 2011).

Characteristics of Street Youth

Seventy-three percent of participants were between 19-21 years of age, and 27% were between the ages of 16-18 (see Table 1). Many reported poor physical and mental health, and had experiences of abuse and victimization. With respect to housing, participants had stayed in various locations, with 44% having stayed on the street in the last four months. Overall, youth were highly transient and had an average of 9 moves in the last four months. Thirty-five percent were currently staying with friends or with a partner. Significantly more females reported currently staying with a partner or friends than did male participants (49% vs. 20%). Experience with the Children's Aid Society (CAS) was evenly distributed among male and female respondents, with 43% reporting having been apprehended and in the care of a child welfare agency at least once in their lifetime. Seventy percent of participants had been arrested at least once in their lives, with more males having been arrested than females (80% vs. 61%).

Thirty-three percent of participants rated their overall health as fair or poor. Thirty-nine percent of the participants had been physically assaulted in the last 12 months, and males reported higher rates of physical assault than females (51% vs. 27%). Thirty-nine percent had experienced physical abuse and 23% had experienced sexual abuse in their lifetime, with significantly more females experiencing sexual abuse than males (31% vs. 15%).

Table 1

Sample Characteristics, by Gender			
	Total (N=150) # (%)	Females (N=75) # (%)	Males (N=75) # (%)
Age**			
16-18 years old	41 (27%)	28 (37%)	13 (17%)
19-21 years old	109 (73%)	47 (63%)	62 (83%)
Education			
High school incomplete	126 (84%)	65 (87%)	61 (81%)
High school complete	24 (16%)	10 (13%)	14 (19%)
Stayed on street in last 4 months	65 (44%)	30 (40%)	35 (47%)
Lives with partner or friends***	52 (35%)	37 (49%)	15 (20%)
Number of moves in last 4 months – Mean (SD)[a]	9.4 (21.4)	9.4 (21.4)	9.5 (21.5)
Experience with Children's Aid Society	64 (43%)	32 (43%)	32 (43%)
Ever been arrested*	104 (70%)	46 (61%)	58 (80%)
Self-rated health			
Excellent/very good/good	101 (67%)	47 (63%)	54 (72%)
Fair/poor	49 (33%)	28 (37%)	21 (28%)
Physically assaulted in last 12 months**	58 (39%)	20 (27%)	38 (51%)
Experienced physical abuse in lifetime	58 (39%)	28 (37%)	30 (40%)
Experienced sexual abuse in lifetime*	34 (23%)	23 (31%)	11 (15%)

Gender differences: *p<0.05; **p<0.01; ***p<0.001[1]
[a] high standard deviations indicate a wide range of values reported

Substance Use among Street-involved Youth

High rates of substance use were observed among the youth (see Table 2). Seventy-one percent had used alcohol in the last 30 days, 91% were current cigarette smokers, and 73% had used marijuana in the last 30 days. Thirty-four percent of the youth had used hallucinogens (mainly ecstasy), 16% amphetamines, 24% cocaine, 11% crack and 5% heroin in the last month. Significantly more males than females reported using alcohol (80% vs. 63%) and marijuana (82% vs. 64%) in the last 30 days, and were also more involved in drug dealing in the last 12 months

1. P-values or significance levels reflect the probability that an apparent difference between groups, suggesting a relationship between two factors (e.g., gender and arrests), occurred simply by chance (Utts & Heckard, 2007).

(51% vs. 35%). The mean number of substances used in the last 30 days was 2.3. Among female participants, the strongest predictors of multiple substance use were living with friends and having been involved in drug dealing in the last 12 months. For the males, having fair or poor health and involvement in drug dealing in the last 12 months were moderate predictors of multiple substance use.

Table 2

Substance Use Behaviours and Mental Health, by Gender			
	Total (N=150) # (%)	Females (N=75) # (%)	Males (N=75) # (%)
Substance Use in Last 30 Days			
Tobacco	136 (91%)	68 (91%)	68 (91%)
Alcohol*	106 (71%)	47 (63%)	59 (80%)
Marijuana*	109 (73%)	48 (64%)	61 (82%)
Hallucinogens	50 (34%)	25 (34%)	25 (34%)
Amphetamines	24 (16%)	10 (13%)	14 (19%)
Cocaine	35 (24%)	18 (24%)	17 (23%)
Crack	16 (11%)	6 (8%)	10 (145)
Heroin	7 (5%)	4 (5%)	3 (4%)
Number of Drugs Used in Last 30 Days – Mean (SD)	2.3 (1.6)	2.1 (1.5)	2.5 (1.5)
Drug dealing in last 12 months*	64 (43%)	26 (35%)	38 (51%)
Ever received a mental health diagnosis	63 (42%)	32 (44%)	31 (41%)
Concurrent mental health and substance use problems	36 (24%)	21 (28%)	15 (20%)
Ever self-harmed**	64 (45%)	40 (56%)	25 (34%)
Suicidal ideation in last 12 months	41 (27%)	28 (37%)	13 (17%)
Suicide attempts in last 12 months*	23 (15%)	19 (25%)	4 (5%)

Gender differences: *p<0.05; **p<0.01; ***p<0.001

Co-occurring Substance Use and Mental Health Problems

In addition to the above-mentioned high rates of substance use, mental health problems were common among the street-involved youth (see Table 2). Forty-two percent reported having received a mental health diagnosis in their lifetime. Participants also reported high rates of suicidal contemplation, with 27% indicating thoughts of suicide and 15% reporting suicide attempts within the last 12 months. Forty-five percent reported self-harming behaviour, such as cutting or hurting oneself without the intent to kill oneself, in the last year. Significantly more females than males had engaged in

self-harming behaviour (56% vs. 34%), and had attempted suicide (25% vs. 17%). Twenty-four percent of participants could be described as having co-occurring mental health and substance use problems, reporting both a mental health diagnosis and symptoms of alcohol and/or illicit drug dependence.

Table 3

Substance Use and Co-occurring Mental Health Problems		
	Homeless Youth with Co-occurring Problems (N=36) – # (%)	Homeless Youth without Co-occurring Problems (N=114) – # (%)
Aged 19-21 (vs. aged 16-18)	27 (75%)	82 (72%)
Female (vs. male)	21 (58%)	54 (47%)
Sexual minority	15 (42%)	32 (28%)
Involved in street economy	13 (36%)	23 (20%)
Lives with partner/friends	12 (33%)	40 (35%)
Stayed on the street in last 4 months	20 (56%)	45 (40%)
Number of moves in the last 4 months – Mean (SD)**	15.3 (31.8)	7.6 (16.7)
Self-rated fair/poor physical health	16 (44%)	33 (29%)
Tobacco dependence	23 (64%)	63 (57%)
Involvement with child welfare system	17 (47%)	47 (41%)
Experienced physical child maltreatment*	19 (53%)	39 (34%)
Experienced sexual child maltreatment	12 (33%)	22 (19%)
Street victimization in last 12 months**	22 (61%)	36 (32%)
Suicidal ideation in last 12 months	16 (59%)	25 (40%)
Previous arrest*	23 (64%)	51 (45%)

*p<0.05; **p<0.01; ***p<0.001

We found a number of significant differences between youth who could be described as having co-occurring substance use and mental health problems and those without co-occurring problems (see Table 3). Street-involved youth with co-occurring problems were more transient, with a greater average number of moves in the last four months (15.3) than youth without co-occurring problems (7.6). Youth with co-occurring problems were more likely than others to have experienced victimization, with more having experienced physical abuse as children (53% vs. 34%) and victimization in the

last 12 months (61% vs. 32%). Furthermore, more youth with co-occurring problems had a history of arrest than those without co-occurring problems (64% vs. 34%). We also examined factors predicting co-occurring substance use and mental health problems among the youth. Victimization in the last 12 months emerged as the strongest predictor of co-occurring problems.

These findings suggest that among an already marginalized population, street-involved youth with co-occurring mental health and substance use problems are experiencing added vulnerabilities with respect to health and social functioning. These results highlight and confirm the need for targeted services for street-involved youth that address multiple, complex physical and mental health conditions (Slesnick & Prestopnik, 2005).

Health and Social Service Utilization

Not surprisingly, given the poor health experienced by the study participants, 64% had visited a doctor for medical care in the last four months, and 30% had sought services in an emergency room (see Table 4). While use of services for physical health problems appears relatively high, only 24% had accessed therapeutic services for mental health issues and 16% had accessed substance use-related services in the last four months, despite the high prevalence of mental health diagnoses and substance use among the youth.

With respect to social service use, 33% of participants had accessed a service to help them get welfare, disability or other benefits in the last four months. Forty-one percent were involved with an employment service, and 36% were involved with an education program or service. Fifty-three percent had stayed in a shelter in the last seven days, 57% had accessed housing services for assistance with finding housing, and 38% had accessed legal services in the last four months. No significant differences in help-seeking between males and females were observed, except that significantly more females had accessed a doctor for medical care than males (73% vs. 52%).

Overall, use of physical health services among the youth was high, while use of mental health and substance use-related services and some social services (e.g., social assistance and education) was relatively low. This is similar to findings in other studies of street-involved and homeless youth (Carlson et al., 2006; DeRosa et al., 1999; Kort-Butler,et al., 2012; Unger et al., 1997). These findings raise an important issue: how can we increase help-seeking and use of mental health and addictions services among street involved youth at earlier, rather than later, stages? Greater availability of more "user-friendly" services geared specifically to the complex needs, stage of development and marginalization of street-involved

youth is needed to prevent worsening of their health conditions and continued homelessness (Carlson et al., 2006; DeRosa et al., 1999; Karabanow & Clement, 2004; Kort-Butler et al., 2012; Unger et al., 1997).

Table 4

Health and Social Service Use	
Service Use in the Last Four Months	**(N=150) – # (%)**
Accessed a doctor for medical care	119 (64%)
Sought services at an emergency room	45 (30%)
Accessed therapeutic services for mental health issues	37 (25%)
Accessed substance use related services	24 (16%)
Accessed a service to help get welfare, disability or other benefits	49 (33%)
Accessed an educational service or program	67 (36%)
Accessed employment services	75 (41%)
Accessed housing services	105 (57%)
Stayed in a shelter in the last 7 days	80 (53%)
Accessed legal services	57 (38%)

Discussion: The Importance of Harm Reduction

Given the complex service and treatment needs of homeless populations, harm reduction is an important service approach to addressing the health issues of this population (Barnaby et al., 2010). Harm reduction services promote and facilitate the safe use of substances in order to reduce substance use-related harm, rather than seeking to eliminate use itself (Erickson, 1997). However, as this approach is viewed by some as promoting or condoning drug use, and given that the desired societal goal is that young people not use drugs, it has been challenging to introduce harm reduction based-services and education for youth (Erickson, 1997). In the late 1990s, when an innovative harm reduction program in Toronto created a video aimed at encouraging safer drug use practices among street youth (Poland et al., 2002; Tupker et al., 1997), it created quite a stir in the media and attracted a great deal of negative criticism for accepting that these young people did, indeed, use drugs, rather than trying to get them to stop using. Yet more recent research indicates that there is a sizeable group of street youth who are injecting drugs, using crack, and can be classified as multiple drug users, and are potentially at considerable risk of harm from these practices (Barnaby et al., 2010; Kerr et al., 2009; Kirst et al., 2009). The usual assumption is that harm reduction programs such as safe injection sites, needle and syringe exchanges, opiate maintenance or even heroin assisted treatment programs involving the prescription of heroin to opiate users as part of a medically controlled intervention, might be a last resort for drug-addicted

adults with long histories of poor addiction treatment outcomes, and for this reason age limits often are used to exclude youth from programs. The reality that street youth use more drugs, more frequently, and with more harmful consequences than housed youth, is difficult to reconcile with the goal of abstinence. The data reported from the YPP study also indicate that given the extent of substance use and substance use problems in this group, few youth seek addiction treatment.

In addition, due to the generally compromised health, both mental and physical, of street-involved youth, it is important to consider whether health and social services not directed specifically at substance use treatment might draw in youth and refer them to effective interventions for substance use problems at a later stage. This is one of the main lessons from the experience of the supervised injection site InSite in Vancouver (McNeil, 2011). It can also be argued that compared to adults, youth are just as much, or more, at risk of overdose and infections from unsanitary or reused drug equipment, and that it is discriminatory to deny them access to needle and syringe exchange programs, opiate maintenance and even safe consumption rooms, where drug users can go to use drugs in a safe, clean environment. As a result, more research on the effectiveness of these types of services for street-involved youth is needed.

Furthermore, as our and other studies have shown, street-involved youth are using a variety of substances, commonly including alcohol, tobacco and cannabis (Adlaf et al. 2006; Johnson et al. 2005; Slesnick & Prestopnik, 2005). Services for street-involved youth that address multiple substance use from a harm reduction approach are needed. In particular, street-involved youth have high rates of tobacco use compared to housed youth (Wenzel et al., 2010) and experience complex health issues and disadvantaged social environments which may make quitting tobacco use a challenge (Greaves & Jategaokar, 2006). Thus, services focused on reducing the harms related to tobacco use should be made more available in order to help these vulnerable youth to reduce the risk of future tobacco-related illness and death.

Certainly, when drug using youth themselves are asked about their own preferences, they express a wish for access to a broad range of services that are non-judgmental, readily available and would empower them to act to protect their health (Barnaby et al., 2010). Public perceptions tend to view street youth as a visible community "problem" linked with drug use and criminal activities, leading to stigma. This stigma, in addition to the general controversy about providing harm reduction services to youth, interferes with assessment and delivery of services that can and should be delivered to all citizens according to their needs (Gaetz, 2004).

Some discussion has occurred in the harm reduction literature about the im-

portance of engaging youth fully in program design, planning and implementation, from the earliest stages, in order to maximize their empowerment and sense of responsibility (Paterson & Panessa, 2008). There is some early indication that such an approach will be more successful in attracting and keeping youth in programs, and will produce better treatment outcomes. However, it has been cautioned that more research needs to be done on the varied and unique needs of youth who arrive on the street from many different social and cultural contexts. Specific needs related to gender and its relationship with poverty, trauma, mental illness, lack of skills and early pregnancy and parenting must also be considered. Nevertheless, if street-involved youth are seen not only as 'at-risk,' but also as highly resilient (Kolar, 2011), innovative harm reduction approaches that recognize their right to choice may help reinforce these resilient qualities. Despite the lack of family and social support leading to their homelessness and early transition into adulthood, positive outcomes may be possible when appropriate alternatives are available (Benoit et al., 2008).

Concluding Remarks: Advancing Health Services for Street-involved Youth

Findings from the YPP study have confirmed vulnerability with respect to health and social functioning among street-involved youth, with high rates of substance use, co-occurring mental health problems, histories of abuse and experiences of victimization. We have also noted gender differences in many of these experiences, with more males than females engaging in substance use behaviours, such as monthly alcohol use and marijuana use, and drug dealing. The study also showed high rates of tobacco use, with 91% of participants being current smokers. In particular, there is a need for more research on tobacco use among the street youth population. Few studies have examined the frequency of tobacco use among street involved youth, yet those that do show very high rates of tobacco use, which places youth at increased risk of becoming adult smokers and acquiring tobacco-related illness. Furthermore, a greater understanding of service needs related to tobacco use cessation (i.e. quitting) and harm reduction services for vulnerable youth is needed (Morris, et al., 2011).

In this study, alarming gender differences were also observed in mental health problems, with more females than males reporting self-harm during their lifetime and suicide attempts within the last 12 months. Youth with co-occurring substance use and mental health problems were also at increased risk for self-harm and suicide attempts compared to those without co-occurring problems.

These findings clearly underline the importance and urgency of a new wave of targeted interventions that address the complex needs of street-involved youth,

such as gender-specific, integrated mental health and addiction services (for instance, combined mental health and addictions treatment which addresses young women's experiences of sexual abuse), and harm reduction programs in order to more effectively prevent the worsening of already poor health among this population (Slesnick & Prestopnik, 2005). In particular, harm reduction services that acknowledge and address substance use and co-occurring mental health issues, and do not demand abstinence from substance use or participation in mental health treatment in order to gain access, could attract these vulnerable youth, and then connect them with other health and social services.

Housing is a human right, and while there are a number of housing interventions focused on homeless adults with complex health needs, few options exist for youth. There is a fundamental need for long-term housing solutions (with a focus on preventing the worsening of health conditions associated with chronic homelessness) for street-involved youth to assist them in transitioning off the street and into stable housing (Karabanow & Clement, 2004: Wenzel et al., 2010). Innovative adult intervention models could guide the development of interventions for street-involved youth with complex service needs. Promising findings have emerged from studies on the effectiveness of the 'Housing First' approach. This approach embraces harm reduction principles as adults experiencing homelessness and severe mental health issues are provided with housing without requirements for substance use abstinence or participation in mental health treatment, and are given flexible access to supportive health and social services (Stefancic & Tsemberis, 2007; Tsemberis et al., 2004). These studies have shown that participants in 'Housing First' interventions have remained stably housed, and have better mental health outcomes compared to groups not receiving such interventions (Tsemberis et al. 2011; Tsemberis,et al., 2003). In fact, the effectiveness of the Housing First approach is being examined in Canada through the Mental Health Commission of Canada At Home/Chez Soi study, in which homeless adults (aged 18 and older) with severe mental health issues are being provided housing and support services in five cities – Vancouver, Winnipeg, Toronto, Montreal and Moncton (Goering et al., 2012). Given the distinct, age-related needs of youth, more research is required to examine the possibility of 'Housing First' models and other housing interventions for street-involved youth (Mental Health Commission of Canada, 2012). Research is also needed in the context of these interventions to explore the types of support services youth need to transition off the street and remain stably housed (e.g., greater life skills services and supports for living independently) (Kolar et al., 2012).

Overall, we are seeing increasingly poor health among street-involved youth in Canada, yet there are considerable service and policy gaps in addressing this problem. Due to conflicting social views of youth as innocent beings who

should not be engaging in risk behaviours such as drug use, and the stigmatization of those youth who are, there is a great deal of controversy associated with the provision of harm reduction services to youth. Canada needs to resolve this controversy and invest in a public health approach that will improve the well-being of street-involved youth and prevent worsening health and social outcomes. Public health researchers, service providers and policy makers need to coordinate and work together to address this growing disadvantage and develop innovative solutions to address the complex needs of street-involved youth.

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