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Résumé

Une intervention destinée à améliorer la santé et la capacité d'adaptation des jeunes sans-abri

Miriam Stewart, Linda Reutter, Nicole Letourneau et Edward Makwarimba

La vulnérabilité des jeunes sans-abri est souvent grande, en raison de la solitude et des ressources limitées à leur disposition. La présence des pairs peut s'avérer un soutien social précieux. Une intervention pilote destinée à cette population, conçue dans le but d'optimiser l'influence des pairs, a été mise à l'essai. On a d'abord procédé à une évaluation des besoins et des préférences après avoir consulté 36 jeunes sans-abri et 27 fournisseurs de services. Sur cette base, on a conçu un projet pilote de 20 semaines, qui comprenait quatre groupes d'entraide, soutien individuel facultatif, activités de loisir en groupe et repas. Ces activités étaient encadrées par des professionnels et des pairs mentors, dont d'anciens sans-abri. En tout, 56 jeunes sans-abri âgés de 16 à 24 ans ont pris part au projet; des mesures quantitatives et des entrevues qualitatives ont eu lieu avant, pendant et après. Malgré certains défis dus pour une large part à l'attrition, les jeunes ont rapporté avoir constaté des améliorations sur plusieurs plans : comportements liés à la santé, bien-être mental, solitude, réseau social, habiletés d'adaptation, consommation de drogues et d'alcool. Ce modèle pourrait être reproduit sur d'autres sites et avec un échantillon plus vaste dans le cadre de recherches ultérieures.

Mots clés : jeunes sans-abri, soutien social, intervention pilote, pairs mentors

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A Support Intervention to Promote Health and Coping Among Homeless Youths

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Homeless youths are often vulnerable to limited support resources and loneliness. Peers are a potent source of social support. A support intervention for homeless youths was designed to optimize peer influence and was pilot tested. The intervention was based on an initial assessment of support needs and intervention preferences from the perspective of 36 homeless youths and 27 service providers. Based on the results, a 20-week pilot intervention program was designed, consisting of 4 support groups, optional one-on-one support, group recreational activities, and meals. Support was provided by professional and peer mentors, including formerly homeless youths. A total of 56 homeless youths aged 16 to 24 took part. Participants completed pre-, mid-, and post-test quantitative measures and qualitative interviews. In spite of challenges due primarily to attrition, the youths reported enhanced health behaviours, improved mental well-being, decreased loneliness, expanded social network, increased coping skills, enhanced self-efficacy, and diminished use of drugs and alcohol. Further research could focus on replication at other sites with a larger sample.

Keywords: homeless youths, community involvement, social support, pilot intervention, peer mentors

The estimated number of Canadian youths experiencing homelessness is 150,000, representing a third of Canada's homeless population (Public Health Agency of Canada [PHAC], 2006). Youth homelessness is caused by systemic and individual factors such as a shortage of affordable housing, reduced government support, poverty, poor physical or mental health, parental neglect, and violence or abuse in the home (Laird, 2007). Moreover, the street lifestyle exposes youths to high-risk behaviours that contribute to ill health (PHAC, 2006). One Canadian team of nurse researchers has investigated the plight of homeless adolescents. They report significant health challenges linked to sexual abuse, use of alcohol and other drugs, and suicidal behaviours (Reid, Berman, & Forchuk, 2005) and describe major barriers to health-related services connected to policies, insensitivity, and stigma (Haldenby, Berman, & Forchuk, 2007).

Many homeless youths experience depleted and deficient social support networks, often due to poor relationships with family members

and schoolmates, the volatility of street-life relationships, aversion to authority (Johnson, Whitbeck, & Hoyt, 2005), and challenges coping with stresses linked to homelessness. Social support interventions, including support groups, can help youths build new social ties, extend their networks, expand their coping repertoire, reduce isolation and loneliness, and meet basic needs (Rew, 2000). However, few empirically based support interventions for homeless youths have been tested (Hwang, Tolomiczenko, Kouyoumdjian, & Garner, 2005). The purpose of this study was to pilot test a comprehensive support intervention for homeless youths that is intended to optimize peer influence, reduce loneliness and isolation, and enhance coping skills.

Support Resources and Coping Skills of Homeless Youths

One Canadian report indicates that over 70% of homeless youths retain some contact with their parents and between 65% and 70% have a social worker (PHAC, 2006). The social networks of homeless youths are generally smaller than those of other youths, leading to a reduced sense of belonging and self-esteem and increased isolation and loneliness (Harpaz-Rotem, Rosenheck, & Desai, 2006). Where family ties are lacking or tenuous, peers become homeless youths' proxy family, in an attempt to fill their need to belong (PHAC, 2006). Street friendships, while providing a sense of support, are often associated with increased substance use and violence (Johnson et al., 2005).

Most homeless youths lack the resources to engage in healthy practices or to access appropriate health services (Feldman & Middleman, 2003; Johnson et al., 2005). Often, street youths engage in survival sex to meet basic needs such as food and shelter and to attempt to fill nurturing needs (Feldman & Middleman, 2003). The views of female homeless youths regarding the consequences of high-risk sexual behaviour are often skewed due to past sexual abuse (Johnson et al., 2005). HIV infection, pregnancy, and parenthood are potential outcomes. Homeless youths tend to cope with stressful life circumstances by shunning stress management and self-medicating with alcohol and other mind-altering substances (PHAC, 2006).

Support Interventions for Homeless Youths

Social support is a protective resource and may help moderate the negative effects of homelessness, increase feelings of belonging, diminish isolation, and enhance social integration and satisfaction with support received (cf. Badr, Acitelli, Duck, & Carl, 2001). Individual therapy and counselling for homeless youths, typically delivered by professionals through shelters, mobile teams, crisis centres, and medical clinics, can

reduce the incidence of sexually transmitted disease and substance use but may have an insufficient long-term impact (Karabanow & Clement, 2004). Some short-term crisis interventions have enhanced acquisition of housing and employment, increased self-esteem and perceptions of support, and decreased distress and psychiatric symptoms (Gardner, 1993; Karabanow & Clement, 2004). Support groups and group therapy programs for homeless youths are rarely reported, but a few reported group therapy interventions have increased the ability of homeless youths to share and control their emotions, increased their self-esteem, and helped them to develop friendships (Gardner, 1993). Support in the form of mentoring may help to improve academic performance, sense of worth, and relations with parents and to decrease substance use, violence, and absenteeism (Grossman & Garry, 1997). However, data on mentoring programs in Canada are limited and mostly pertain not to homeless youths but to children and young people in school and at risk of delinquency or domiciled youths involved in crime and violence.

The support needs of homeless youths are difficult to address because of limited support networks (Johnson et al., 2005) and individual, familial, and systemic barriers (Feldman & Middleman, 2003). Although school-based interventions have some potential, they are few in number (Nabors et al., 2004); furthermore, homeless youths are unlikely to be enrolled at a school. Thus there is an acute need for support interventions designed for homeless youths (Harpaz-Rotem et al., 2006). Such programs that do exist tend not to utilize the skills and experiential knowledge of formerly homeless youths. Homeless youths are rarely included in research aimed at improving their lives. Haldenby et al. (2007) cite the potential of peer-led support groups. Our study engaged homeless youths using participatory and empowering strategies, and it designed and pilot tested a peer-led support group for homeless youths.

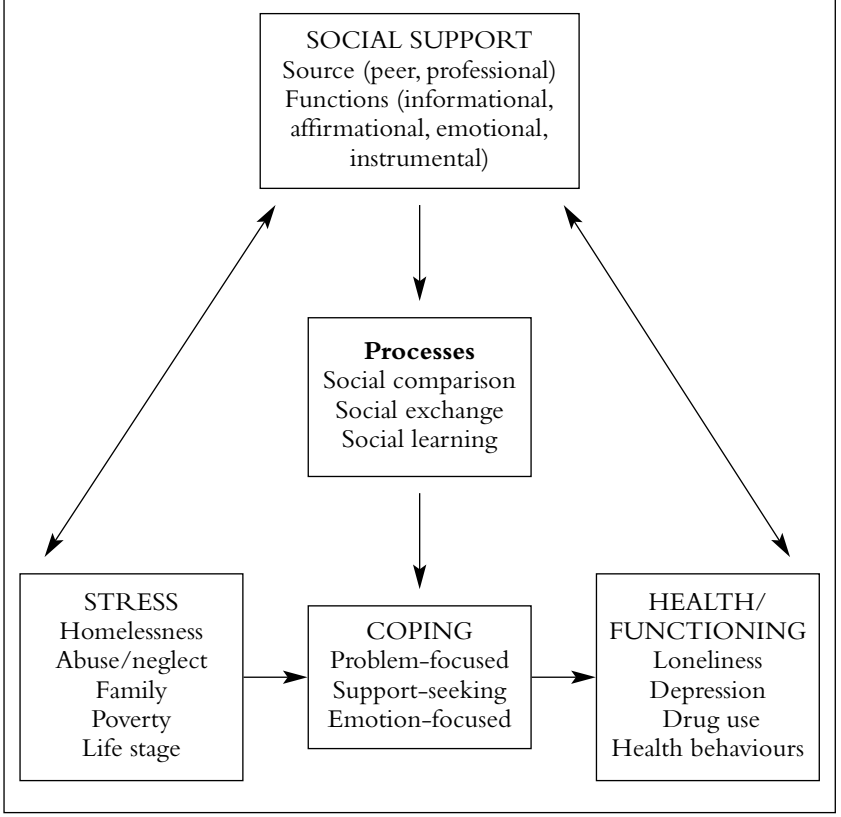
Conceptual Foundation

Social support was conceptualized in this study as interactions with peers and professionals that can improve coping, moderate stress, and alleviate loneliness and isolation (Gottlieb, 1998). Social support influences mental and physical health and health behaviours. It is a coping resource or source of assistance for coping with *stresses* associated with homelessness (e.g., abuse, neglect, poverty). *Coping* with homelessness can entail managing distress (emotion-focused) and completing instrumental tasks (problem-focused) (Unger, Kipke, Simon, Montgomery, & Johnson, 1997). Support seeking is a coping strategy that influences satisfaction with social support. In this study, a network of peers and professionals was formed to enhance and supplement the depleted resources of homeless

youths by providing emotional, affirmational, instrumental, and informational support. Supplementary support through the building of new ties is appropriate when the existing network is impoverished, drained, or in conflict or when it reinforces undesirable behaviours (Gottlieb, 2000) — common situations among homeless youths.

Social support can moderate the impact of stressful situations like homelessness on outcomes related to mental health, including loneliness. Loneliness is emotional distress generated when people feel estranged from, misunderstood by, or rejected by others and when they lack partners necessary for social integration (Rook, 1987; Sorkin, Rook, & Lu, 2002). Peer and professional supporters can influence the health behaviour of homeless youths by providing information, encouragement, or advice and acting as role models, which can constrain youths from engaging in inappropriate or risky behaviour (see Figure 1).

Figure 1 ***Conceptual Foundation***



Preliminary Assessment

To guide the design of a relevant and acceptable support intervention, we launched a preliminary assessment. We also created a Community Advisory Committee comprising representatives of community agencies serving homeless youths and influencers of municipal and federal policy, to ensure the relevance and acceptability of the intervention. Semi-structured qualitative interviews were conducted with 36 homeless youths (19 in individual interviews and 17 in group interviews) and 27 service providers (18 in individual interviews and nine in a group interview) to assess the support needs and support-intervention preferences of this vulnerable population. The interviews revealed that the youths faced daunting challenges, including low self-worth, social isolation, inadequate and inappropriate support services, and poor coping strategies developed to manage the physical, social, and mental deprivations that characterize life on the street. This preliminary assessment confirmed the existence of major support needs and key barriers to accessibility of services for homeless youths, such as lack of information about the few resources/services available, rigid or unrealistic support structures, difficult or invasive procedures for accessing resources, and lack of understanding on the part of service providers. Participants provided guidance in the development of a support intervention to meet the needs of these youths and overcome barriers to their obtaining support. The findings from this assessment (reported elsewhere) informed the design of the follow-up pilot study, which is the focus of this article.

Research Questions and Hypotheses for the Pilot Intervention Study

The study was guided by seven research questions: What are the effects of the pilot support intervention on homeless youths with respect to (1) quality, composition, and size of social network; (2) satisfaction with support received; (3) loneliness and isolation; (4) support-seeking coping; (5) self-efficacy; (6) mental health; and (7) health-related behaviours? Based on our conceptual framework (Figure 1), our assessment study with homeless youths, and our previous social-support study with vulnerable groups — including people living on low incomes — it was hypothesized that, following the pilot intervention, participants would report (1) an expanded social network; (2) increased satisfaction with support received; (3) decreased loneliness and social isolation; (4) increased support-seeking coping; (5) increased self-efficacy; 6) improved mental health; and (7) more positive health behaviours.

Methods

We employed a one-group, within-subjects design for this multi-method study (Stewart, Makwarimba, Barnfather, Letourneau, & Neufeld, 2008) examining the effects of the pilot intervention over time. We did not choose a randomized controlled design because the intervention needed to be thoroughly piloted prior to implementation of a full trial, and our community partners were less interested in controlling exposure to intervention than in examining the effect of the intervention in a real-world setting. This approach is consistent with current thinking — that pilot intervention studies do not need to be overly controlled to be externally valid (Glasgow et al., 2006). Participants' perceptions of impacts and satisfaction with the intervention were determined through qualitative interviews with the homeless youths, as intervention study participants are rarely invited to identify valued outcomes and perceptions of interventions (Stewart et al., 2008). Quantitative data were elicited through standardized instruments for measuring intervention outcomes. Participants were assured of confidentiality, voluntary participation, and freedom to withdraw at any time without consequences. The study was approved by the university research ethics board.

Support Intervention

To facilitate the development of positive interactions and to help compensate for the limited social networks of homeless youths, a network of peers and professionals was formed to provide various types of support functions, including emotional, informational, and affirmational support.

The intervention consisted of four support groups that met once a week for 3 to 4 hours over the course of approximately 5 months in the western Canadian city of Edmonton, Alberta. This support intervention for homeless youths encompassed group and dyad (one-on-one) support. This mode was selected given homeless youths' reported preference for face-to-face support. Space for the program was provided in kind by two partner agencies serving homeless and at-risk youths and one community centre. The support groups were facilitated by professional mentors and included opportunities for one-on-one support delivered by both peer and professional mentors. *Professional mentors* (e.g., social workers, psychologists, therapists) were professionally trained, experienced in working with youths, and recruited from agencies that supported the program. They guided and supported both the peer mentors and the homeless youths by providing resource information, crisis intervention, and supervision. *Peer mentors* were youths who had experienced homelessness themselves and who would be appropriate role models for homeless youths.

Each session included a recreational activity as well as a free meal. Recreational activities were chosen by youths in each support group, with professional mentors facilitating the selection process. The research team was responsible for organizing the event with community recreational outlets/facilities. The most well-attended activities were swimming, picnics in the park, visit to a science centre, bowling, indoor wall climbing, paintball, and professional hockey games. Transportation to the support sessions was provided via bus tickets and transportation to the recreational sites was arranged. The youths could approach any of the mentors for support, and many took advantage of this offer, seeking help with such things as homework and information on job and educational opportunities.

Sample Selection, Recruitment, and Attrition

Recruitment was facilitated by partner agencies, including an employment program and drop-in centres, and by the Community Advisory Committee. Service providers at the agencies handed out cards with contact information inviting youths to get in touch with the researchers. Interviewers also regularly visited the agencies to facilitate recruitment, and they "hung out" to enhance accessibility. A total of 70 eligible youths were recruited and administered pre-tests. These youths were between 16 and 24 years of age and were either currently homeless or in transition from homelessness. Youths were considered homeless if they (1) had no home at all and were living on the streets (absolutely homeless); (2) were living in a place that was not intended as housing or was unsuitable for long-term residence; or (3) were at risk of becoming homeless through loss of their home, discharge from an institution/facility with nowhere to go, or loss of income. Of the 70 youths who were pre-tested, 56 participated in the intervention to some degree. Initial power analysis suggested that a sample size of 70 was necessary to support the findings. In spite of extensive effort, however, only 56 youths participated in the intervention after pre-testing. Given the pilot nature of the study, this number was deemed sufficient to examine trends associated with the intervention. This initial attrition reflects the transient and unpredictable nature of the lives of homeless youths. Moreover, attendance at the support sessions varied considerably: 17 youths participated in 10 or more sessions, 28 in six to nine sessions, and 18 in fewer than three sessions. Of the 29 youths who participated in both the pre-test interview and the mid-point interview (halfway through the intervention), 17 (59%) took part regularly in at least 10 support sessions. The dose of the intervention, therefore, was unevenly distributed, with further variation in attendance by site. The research team engaged in continuous recruitment efforts to boost attendance at weekly support groups.

Data Collection

Interviews were conducted pre-, mid-, and post-intervention. The interviewers were similar in age to the youths, experienced in working with at-risk youths, and trained by the investigators. The interviews were conducted face-to-face on the premises of the collaborating community agencies. These numbered 70 pre-test, 29 mid-point (approximately 12 weeks after the first session), and 14 post-test (at the end of the 20-week intervention). The interviews were audiotaped and transcribed verbatim. Following each interview, the youth was given a token of appreciation consisting of $20 in food vouchers, movie passes, and bus tickets.

Four standardized measures were administered pre-test, along with questions about demographics, living arrangements, size and characteristics of social network, satisfaction with support, high-risk behaviours, health promoting behaviours, and perceived health. The Social Provisions Scale was used to assess global perceptions of support (Cutrona & Russell, 1987). This scale incorporates six support functions: guidance, reliable alliance, reassurance of worth, attachment, social integration, and nurturance. The Revised UCLA Loneliness Scale assesses loneliness, social isolation, and satisfaction and dissatisfaction with social relationships (Russell, 1996). The Center for Epidemiological Studies Depression Scale (CES-D) is a screening instrument for depressive symptoms, including low mood, feelings of guilt, hopelessness, psychomotor retardation, loss of appetite, and sleep disturbances (Radloff, 1977). The Proactive Coping Inventory evaluates proactive cognition and behaviour as a positive facet of coping (Greenglass, Schwarzer, Jacubiec, Fiksenbaum, & Taubert, 1999); only the Proactive Coping Scale, the Instrumental Support Seeking Scale, and the Emotional Support Seeking Scale were included in the interview. These measures and their psychometric testing are summarized in Table 1.

Due to reported respondent burden for these vulnerable youths, several changes were made in data-collection protocols at the mid-intervention and post-test interviews. The CES-D and the Proactive Coping Inventory instruments, viewed as particularly difficult to answer by the youths, were replaced with semi-structured questions that elicited responses on the same outcomes of depression and coping. Quantitative questions on health behaviours were replaced with qualitative questions. *Qualitative questions on perceived impacts* focused on general "impact/outcomes," behavioural changes, personal outcomes, and social networks. Specific questions are given in Table 1. Questions related to demographics and health behaviours were adapted from those employed in the Community University Partnership study, Capacity Building as Crime Prevention: A Formative Analysis of Processes and Outcomes in an Employment-Based Social Development Program (Schnirer et al., 2007).

Table 1 *Quantitative and Qualitative Questions About Impacts of the Intervention*

	Quantitative				Qualitative
Construct/ Variable	**Measures**	**Content and Items**	**Scoring**	**Psychometric Properties**	**Questions**
Social support/ social networks	Social Provisions Scale	Global perceptions of support (24 items)	Four-point scale. Summative score *range* = 24–96. Higher scores indicate higher levels of global support. Normative sample *mean* = 82 (*SD* = 10).	Internal consistency alphas ranged from .65 to .76 for the Provisions Subscales and .92 for Global Support.	Do you think the program has affected your relationships with people outside of the group? What other supports or positive influences do you have in your life? At present, how many friends (i.e., peers, people you spend time with) do you have? Who is currently in your life that you could go to if you needed help or support?
Loneliness	Revised UCLA Loneliness Scale	Loneliness, social isolation, satisfaction/ dissatisfaction with relationships (20 items)	Participants indicate if they often, sometimes, rarely, or never feel as described in statements. Higher scores indicate a higher degree of loneliness, social isolation, and dissatisfaction with social relationships (norm score = 40; maximum score = 80).	Concurrent validity was confirmed by associations between scores on the Revised UCLA Loneliness Scale and other indicators of loneliness, social relationships, and affective states (e.g., Beck Depression Inventory, alpha r = .62). In studies using samples of college students, high internal consistency coefficients were obtained (r = .94–.96).	

(continued)

Construct/ Variable	Measures	Content and Items	Scoring	Psychometric Properties	Questions
Mental health	Center for Epidemiological Studies Depression Scale	Depressive symptoms in preceding 7 days (20 items)	Four response choices create a range of scores from 0 to 60. Clinically significant levels of depressive symptoms are indicated by a score of 16 or higher (Radloff, 1977).	Spearman-Brown halves of .85 (for general population) and .90 (for patient samples). Test-retest reliability: .45 to .70 (Radloff, 1977). Correlates well with other valid depression scales.	Do you think this program has had an effect on you or your life? In what way? What has changed in your life because of the program?
Coping	Proactive Coping Inventory	Assessment of cognitive and behavioural coping strategies. Subscales: Coping Overview (14 items), Instrumental Support Seeking (9 items), Emotional Support Seeking (5 items)	Scale of 1 (not at all true) to 4 (completely true) on all items. A higher score generally indicates enhanced coping. Some items are reverse scored.	Coping Overview Scale: Reliability α = .80 and .85; validity α = .22 to .73. Instrumental Support Seeking Scale: reliability α = .84 and .85; validity α =.17 to .65. Emotional Support Seeking Scale: reliability α = .73 and .64; validity α = -.17 to .60 (Greenglass et al., 1999).	Since you started coming to the group, have you looked for any other sources of support (e.g., programs, agencies, people)? Does this group help you cope with other things that are going on in your life? What kinds of things does it help you with? How does it help you cope with these things? What would be something that would help you cope with other things going on in your life? Does this group help you cope with other things that are going on in your life?

Health behaviours	Investigator-prepared Health Behaviour Questionnaire	Assessment of high-risk behaviours (violent/criminal behaviour, tobacco use, marijuana use, alcohol use, illicit drug use, attempted suicide, high-risk sexual behaviour), self-perceived health, chronic illness, and health promoting behaviour (leisure activities, exercise, nutrition, sleep, counselling) (15 items)	Compilation of questions derived from multiple sources with varied response choices.	N/A	Do you think you are more or less involved in "drug use, crime and high-risk activities" — we talked about at the beginning of the program — since you started the program, or is it about the same? Do you think you are doing more or less healthy things since you started attending this group, or is there no difference? Since starting the program, have you made a personal change (achieved a personal goal)?

Data Analysis

Quantitative data were analyzed with measures of central tendency and parametric statistics, including paired *t* tests and repeated measures analysis of variance (ANOVA). Nonparametric statistics were also used as appropriate. Repeated measures ANOVA was conducted with participants who completed all of the pre-, mid-, and post-test interviews using Statistical Package for the Social Sciences. Assumptions (i.e., normality, skewness, kurtosis, homogeneity of variance) were assessed prior to parametric testing. The tests utilized are robust to violations of assumptions; nonetheless, when assumptions were violated (as occurred often due to the small sample size), the nonparametric equivalent tests were performed. Only statistically significant findings are reported. Qualitative data from the interview questions (Table 1) were analyzed using a qualitative descriptive approach (Sandelowski, 2000). A coding framework was developed inductively from data in the initial interviews and revised as analysis proceeded.

Findings

Profile of Participants (Pre-test N = *70)*

At pre-test, the mean age was 19 years (n = 10; SD = 2.5 years), with ages ranging from 16 to 24 years. Slightly more males (54%; n = 38) than females (46%; n = 32) were recruited. Of the sample, 60% were Aboriginal, reflecting the high rate of homelessness among Aboriginals living in this city, where, in 2002, 43% of all homeless people were Aboriginal (Edmonton Joint Planning Committee on Housing, 2002). Only 27% were Caucasian (n = 19), followed by 13% (n = 9) visible minority. Of the youths, 15% (n = 11) were parents, of whom most had one child (11%; n = 8) and a few had two children (4%; n = 3). Only four youths lived with their children. The mean level of education was Grade 10 (n = 70; SD = 1.3). Levels of education spanned Grade 5 to high school, with only 19% (n = 13) having completed high school. Of the sample, 14% (n = 10) were still in school (an alternative outreach school based at a drop-in centre), 42% (n = 29) had dropped out, and 16% had been expelled. Of the youths, 30% were employed and 27% claimed employment as their main source of income. Parents were a main source of income for 23% of participants. Some youths (6%) reported illegal activity as a source of income.

Close to half of the sample lived at times with a mother, father, or relatives. Almost 20% were living with friends or partners. The next-largest category was the absolute homeless (14%). Fewer youths lived in shelters (4%), in semi-independent or independent living arrangements (4%), or with "homeless" roommates (1%). Nearly half (45%) reported that they

were continuously moving or transient. About one third (36%) had been in their current living arrangement for less than 6 months. The transitory nature of their housing arrangements is reflected in the fact that 20% had been at their current location for less than 1 month, 11% for 1 or 2 weeks, and 4% for less than 1 week; 9% had been living at their current location for 6 to 12 months and 10% for over 1 year.

The majority of these young people described their peers as not attending school (64%) or not working (71%). Most youths reported that their peers had been arrested (77%), had been incarcerated (57%), and used alcohol (63%) and/or drugs (69%). Almost half indicated that their peers made money illegally (40%) or got into fights (40%). Most of the youths at pre-test (59%; $n = 41$) felt that they were *somewhat healthy,* while only 29% ($n = 20$) reported that they were *very healthy.* Half of the sample (51%; $n = 36$) reported having chronic psychological (30%) and physical (41%) health problems.

Change in Size and Composition of Social Network (Research Question/Hypothesis 1)

The youths were asked how many friends they had (including peers and people they "hang out with") at pre-, mid-, and post-test. At pre-test ($n = 70$), they had an average of 25 people in their support networks. Paired *t* tests revealed a mean increase of 11 persons from pre- to mid-test for the 29 youths interviewed at mid-point. The mean network size at mid-point was 46. For those youths completing the post-test ($n = 14$), a mean increase of 19 was reported from pre-test to post-test. However, repeated measures ANOVA revealed no statistically significant difference across time points ($n = 14$). Given attrition, it is useful to compare pre-test and mid-point using the available data. This also provides evidence for the necessity/utility of delivering a shorter intervention to homeless youths, as discussed in the final section of this article.

Some youths commented that their expanded social network contained new people who cared, which resulted in increased interest and trust in others. Youths were asked to describe the composition of their support network. The majority named friends as their main source of social support at pre-test (61%), mid-point (76%), and post-test (78%). The second-largest reported source was mothers at pre-test (57%), mid-point (66%), and post-test (43%). The third-largest source was siblings and aunts/uncles at pre-test (46% and 41%, respectively). Interestingly, this last source changed at mid-point, with 48% of responses indicating peer and professional mentors as key supporters, surpassing aunts/uncles at 41%. At post-test, 42% cited mentors as supporters (the third most frequently reported source of support).

Despite the reported increase in social network size, the results of the Social Provisions Scale did not reveal statistically significant differences in means over time: pre-test, 74 (n = 60); mid-point, 75 (n = 25); post-test, 75 (n = 14). A repeated measures ANOVA used to analyze pre-, mid-, and post-test means (for only n = 14) (pre-test, 76; mid-point, 75; post-test, 75) indicated that the means did not fluctuate and stayed below the normative mean of 82. The repeated measures model was not statistically significant.

Increased Satisfaction With Support Received (Research Question/Hypothesis 2)

During the pre-test (n = 69), mid-point (n = 29), and post-test (n = 14) interviews, participants were asked to rate their satisfaction with support over the preceding 2 months on a Likert scale, with 1 representing *not at all satisfied* and 5 *very satisfied*. The percentage of youths *not at all satisfied* decreased at mid-point from 10% (n = 7) to 3% (n = 17), with no youths reporting *not at all satisfied* at post-test. The percentage of youths *very satisfied* increased from 17% (n = 12) at pre-test to 29% (n = 4) at post-test. However, the Friedman test to examine differences over time (pre-, mid-, post-test; n = 14) was not significant, indicating that levels of satisfaction did not significantly change. Some youths indicated that the intervention affected relationships external to the support group, as new friends eliminated the need to spend time with the "wrong crowd." Still others noted decreased conflict with friends or family due to the intervention. However, some youths stated that the intervention did not affect their external relationships. Some youths observed differences in their friends' behaviours within the intervention versus outside of it; their friends discussed new topics and acted differently in the support group. Thus the intervention seemed to influence the nature of their friendships. Youths added that it was good to see their friends being active instead of just "hanging out." Those with low expectations of other participating youths were surprised that they had made friends and had changed. Consistent with research pointing to the importance of both increasing positive relationships and decreasing negative interactions and relationships (Newsom, Rook, Nishishiba, Sorkin, & Mahan, 2005), these youths removed themselves from detrimental relationships:

> *I don't really hang out with anybody down here and stuff like that; I stopped. This whole group thing has given me ideas, like you don't need to go out and you don't need to do drugs and crime to have fun and stuff, so I've kind of dropped everybody that I used to hang out with and everything.* (19-year-old)

> *My personality has changed, like, dramatically. I'm more open, more funnier, I do more funnier stuff. I've got new friends and stuff.* (23-year-old)

Decreased Loneliness (Research Question/Hypothesis 3)

A repeated measures model revealed a significant decrease in loneliness over time ($F = 4.6$ [2, 26]; $p = .04$). The means ranged from 43 at pre-test (just above the norm of 40) to 41 at mid-point and 39 at post-test ($n = 14$). Qualitative data reinforced participants' perceptions of decreased loneliness following the support intervention. According to these youths, interacting with peers in the group improved their mood, increased mutual respect, diminished sense of isolation, and decreased loneliness:

> *I guess you could say I got to know more people, so, like, there's always someone I could, like, see that I know. Not feel so lonely, I guess.* (16-year-old)

Increased Support-Seeking Coping (Research Question/Hypothesis 4)

At pre-test, the mean for the Proactive Coping subscale of the Proactive Coping Inventory was 42 ($n = 64$; $SD = 4.4$), very close to the normative mean of 43. Similarly, the Emotional Support Seeking Scale (subscale) mean of 15 ($n = 68$; $SD = 3$) was almost identical to the normative mean of 16. The Instrumental/Practical Support Seeking subscale produced a less optimistic picture, with a mean of 23 ($n = 68$; $SD = 4$), well below the normative score of 31. Due to respondent burden, this instrument was not used beyond the pre-test. At the mid-point and post-test interviews, participants were asked about changes in their support-seeking behaviours (see Table 1). At mid-point ($n = 29$), over one third of participants (35%; $n = 10$) reported seeking more support. At post-test ($n = 14$), 57% ($n = 8$) reported increased support seeking. Additional sources of support sought included community agencies, teachers, dentists, and counsellors.

Youths reported that emotional and informational support from mentors created a safe place to discuss problems and offered a different perspective. This in turn helped them to cope with relationship challenges and life situations. Moreover, youths reported acquisition of general knowledge (e.g., housing, personal life goals) and learning opportunities provided by mentors:

> *It really helped me… to cope with the fact that my mom and dad don't want me around… It's given me people to hang around with…it was just basically, it was able to help me cope with it, actually having people there…*

> *I'm basically erasing the memories of…old and…really bad experiences with my family and replacing them with better ones.* (23-year-old)

> *…conversations with people, or just, like, talking and venting to people about a situation I'll be in and then ways to overcome that situation without having more issues to overcome.* (16-year-old)

Youths described an increased ability to cope with their lives, as the intervention provided a drug/alcohol-free option, which helped them to avoid negative influences, remain off the streets, and manage boredom in alternative contexts. They also stated that they could cope better because the intervention supported their personal goals, such as continuing with school:

> *In some ways, [professional mentor] helping me with my homework, it's helping me finish my school.* (16-year-old)

Some youths indicated they had improved their social and support-seeking skills. Interacting with mentors helped them to develop their social skills, which boosted their self-esteem and self-confidence. They reported becoming more social and engaging in conversation. They were less shy, which in turn affected those around them. Enhanced social skills affected the youths' relationships outside of the intervention. At post-test, participants reported being more positive in their relationships. They explained that their new peers within the intervention context caused them to increase their social and interpersonal skills:

> *More open, more outgoing with other people… I'm not the one that's quiet, sitting there…I'm actually in the conversation, talking along with them, something like that.* (23-year-old)

> *I'm a bit more outgoing and, like, I'll go do more things now. I'm not so shy. I used to be really shy.* (19-year-old)

Increased Self-Confidence and Efficacy (Research Question/Hypothesis 5)
The support intervention helped youths to try new activities and succeed, increasing their perceived self-efficacy. Although no quantitative measure was administered, relevant qualitative data were elicited by questions about personal success and goals. The intervention helped youths to achieve personal goals, including college acceptance, completion of courses, and improved parenting. Housing was considered a way to achieve success. At mid-point and post test, some youths reported that they had a place to stay because of information received from group mentors:

> *I'm trying more. I want to try more to get off the streets. And the program helps me there. And…[mentor] told me if I get a job and all that stuff, I*

can do this with my own money. Go actually out and do laser tag and all that stuff and have fun myself. (23-year-old)

Some participants experienced a personal change during the intervention, such as a desire to return to school or complete studies that were already underway. Some youths attributed their increased confidence and self-esteem to participation in the intervention. They reported having grown stronger and more assertive.

Improved Mental Health (Research Question/Hypothesis 6)

When the CES-D was applied, participants at pre-test had a high mean score of 23 (n = 68; SD = 11). Scores above 16 may be indicative of clinical depression. At pre-test, many youths anticipated that their mental and emotional well-being would improve with the intervention. Participants were asked about their future personal goals and how they would measure success. One of the measures of success they gave was mental and emotional well-being, which included achieving a goal, having positive feelings, identifying direction in life, and doing something positive. When asked about barriers to success, they spoke of psychological challenges, such as depression, anxiety, and negative emotions. In general, the qualitative data revealed that the participants experienced overall enhanced mood and relaxation and stress relief in the positive environment created by the mentors, which was a welcome respite from street life. At post-test, some participants said that their goal of controlling anger and "de-stressing" was supported by the intervention. Some youths reported that the intervention gave them an opportunity to relax, forget about problems and worries, and dwell on good memories:

I feel more energetic. I have a lot more energy. (19-year-old)

[I'm starting to] look at the good side of my life instead of the bad side. (18-year-old)

At mid-point and post-test, some youths reported increased happiness and improved attitudes, enhanced personal strength, more assertiveness, and "open-mindedness." At post-test, youths described how their goal of controlling anger was supported through the intervention. In the words of one youth: "More of a belief in myself, that I can keep something going."

Improved Health Behaviours (Research Question/Hypothesis 7)

At pre-test, 14% of youths reported sexual encounters with three to 10 partners in the preceding 2 months. Just over half had used a condom in their last sexual encounter. Many youths (69%) received counselling for various personal issues, but only 34% received counselling for

drug/alcohol addiction. Most participants used tobacco either daily (43%) or almost daily (40%); 53% had attempted tobacco cessation in the previous 12 months. Of the sample, 80% reported using marijuana and about one third used alcohol once or twice in the preceding 2 months.

In terms of health promoting behaviours or activities, the majority of the youths reported that they exercised regularly (69%; $n = 48$), played sports (44%; $n = 31$), watched movies or television (75%; $n = 53$), used reading and writing skills (72%; $n = 50$), or spent time with friends (69%; $n = 49$). However, most youths reported no involvement in team sports (62%; $n = 43$), video/computer games (48%; $n = 34$), or musical instruments (66%; $n = 46$). Only about a quarter ate three meals a day (26%; $n = 16$) or had breakfast daily (24%; $n = 17$). The majority (86%; $n = 61$) ate "junk food." Only 3% ($n = 2$) had no food almost every day, while about half of the sample (51%; $n = 36$) did not eat on some days. Close to half of the sample (46%; $n = 25$) reported going hungry on a daily basis. Many youths (41%; $n = 29$) reported difficulty getting enough sleep.

At mid-point and post-test, participants were asked about changes in health behaviours since starting the program (see Table 1). Many participants (55% [$n = 16$] at mid-point [$n = 29$]; 29% [$n = 4$] at post-test [$n = 14$]) reported decreased use of drugs and alcohol or complete cessation of both. Being substance free was considered a measure of success by the participants. Youths reported that the intervention supported their personal goals of decreasing substance use or abstaining from drugs/alcohol or that it "removed" them from access to these substances. A favourite element of the program was the decreased need for drugs/alcohol because of the alternatives provided (e.g., somewhere fun to go).

> *I use it [the intervention] more just to stay off the drugs, really…it's really hard, 'cause I'm at the point where I'm just about over the wall… I've been doing good, and it gives me something else to think about.* (19-year-old)

> *Basically, Wednesday [when the support intervention took place] did something more than just make me stop doing drugs; it stopped me selling drugs a little bit too, 'cause…most of my dealers wanted me to do it around the clock…so I told [them] that I am stopped dealing now, 'cause I wanted to go into the program and actually have fun.* (23-year-old)

Many participants (45% [$n = 13$] at mid-point [$n = 29$]; 36% [$n = 5$] at post-test [$n = 14$]) stated that they were less involved in risky behaviours (e.g., having unprotected sex). At post-test, two youths attributed their decreased involvement in unprotected sex to intervention activities.

One 22-year-old stated, "Well, since I've joined…I haven't really been doing any high-risk activities."

Youths believed that the intervention fostered positive health behaviours. The opportunities for physical activity helped some of them to sleep better. A few participants commented that they were taking better care of their health. Overall, at post-test the majority reported that they were engaging in more health-promoting behaviours since starting the intervention:

> *…healthy food, yeah…. Actually…the first time I ate broccoli was, like, here. My whole life I thought I didn't like it, 'cause I didn't try it.* (24-year-old)

> *I'm doing a lot more healthier things… I'm playing basketball every now and then…and I go swimming with my kids, brother and sister, play pool.* (19-year-old)

Discussion

The findings of this pilot intervention study with vulnerable youths are important for several reasons, despite irregular attendance and attrition. Qualitative and quantitative data were triangulated to reveal a significant decrease in loneliness over time. The health, emotional, and behavioural problems encountered by the homeless youths who participated in the study point to the need for appropriate support strategies. The potential effects of this support intervention reveal encouraging trends, including expanded social network, improved emotional and mental well-being, decreased loneliness, acquisition of support-seeking coping and social skills, decreased use of drugs and alcohol, and adoption of healthier behaviours.

While interactions with other homeless youths, peer mentors, and professionals facilitated the building of new ties and extended participants' social networks, the youths also developed social skills. Participants reported being more social, engaged, and positive in their relationships and more frequently seeking support from persons outside the intervention. One possible key benefit of peer and professional mentorship is enhanced social skills. The acquisition of social skills supplements the coping repertoire of homeless young people. Some youths described an increased ability to cope with their lives, as the intervention served as a drug/alcohol-free option, which helped them to avoid negative influences, stay off the streets, and manage boredom. For these homeless youths, a program offering support for coping with addictions and other health-related challenges was important. Prior to the intervention, these youths used coping styles widely reported in the literature, such as sub-

stance use, unprotected sex, and violence, to distance themselves from stressors.

The participants reported improved attitude and increased personal strength. Harpaz-Rotem et al. (2006) argue that interventions targeting homeless youths should promote self-esteem and competence. The support offered by mentors may have enhanced self-esteem and self-efficacy through social comparison and social learning. The youths described how their goal of controlling anger through "de-stressing" was supported in the intervention. These findings attest to the beneficial effects of social support in moderating stressful situations. They supplement emerging evidence on the beneficial role of mentoring in decreasing substance use and violence and instilling a sense of self-worth (Badr et al., 2001; Grossman & Garry, 1997).

Several limitations associated with this pilot study have implications for the findings. Attrition over time was a major challenge, leading to a small sample size and differential doses at data-collection points. Moreover, the transient nature of the study population made it impossible to discover reasons for this attrition. Our data at mid-test and post-test reflect different doses of the intervention, in that some participants attended more sessions than others at these time points. We also used different data-collection methods over time to reduce respondent burden based on youth feedback regarding some standardized measures, which may have influenced our findings. In particular, the appropriateness of the quantitative measures used with this population requires further exploration. Nevertheless, our findings suggest that there were positive outcomes for those youths who did participate in the intervention on a regular basis.

For research on homelessness, identification of the needs and priorities of those affected is important and timely (Frankish, Wong, & Quantz, 2005). This intervention study was based on an assessment of the support needs and preferences of homeless youths. It went one step further, with a participatory approach to research (Heenan, 2004). It included formerly homeless youths as peer mentors and service providers from the community as professional mentors, and it engaged a Community Advisory Committee in the development of the intervention. A participatory approach engaging stakeholders serves to empower vulnerable populations, reduce distrust, and extend the application of research knowledge (Heenan, 2004). Youths are rarely consulted about their health needs and priorities, and programs that do consult them are more effective than those that do not. The youths who participated most fully in this support intervention seemed to experience improvements, as indicated by qualitative self-report and most quantitative measures. Qualitative and quan-

titative methods increased the richness of the data by capitalizing on the strengths of each method (Creswell, 2003).

The findings of this study, as well as its identified limitations, point to the need for further research. We believe that a participatory approach and participation by community agencies are necessary and vital elements of any study involving homeless youths. Given the high rate of attrition, a shorter, more concentrated intervention time frame could be explored. To illustrate, a 12-week support intervention, the typical duration tested successfully in our research and recommended by others (e.g., Gottlieb, 2000), or even a shorter program, may be ideal for a vulnerable population such as homeless youths. Our experience with quantitative measures suggests that future research should carefully consider the type and number of measures used, including literacy level and sensitivity to particular needs and situations. In this study, the participants had difficulty with some of the quantitative measures and appeared to be better able to express their views through open-ended questions. However, interviewers reported that some youths had difficulty describing their thoughts and feelings in depth. Finally, further research with larger samples drawn from several cities and using a comparison or control group is needed to confirm the findings of this pilot study conducted in one locale.

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