

## Factors Precipitating Suicidality among Homeless Youth : A Quantitative Follow-Up

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# *FACTORS PRECIPITATING SUICIDALITY AMONG HOMELESS YOUTH A Quantitative Follow-Up*

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*Homeless youth are a population at a high risk for suicidal behavior. A previous exploratory study emphasized the importance of feeling trapped or helpless, which appeared to mediate the impact of other risk variables. Confirmatory work was needed to test this inductively derived model. Two hundred eight homeless youths completed surveys on the streets and in agencies in New York City and Toronto. Structural equation modeling was used to test a theoretical model developed from exploratory work, and regression analyses were used to examine the influence of home and street contextual variables. The centrality of the trapped experience in a model incorporating drug use and dependence, abusive family history, loneliness, low self-esteem, and suicidality was confirmed. Other findings included a marked reduction in reported suicidal behavior following participants' leaving home, with family violence, being thrown out of the home, neglect, poor physical health, and having suicidal friends showing strong relationships with suicidality.*

**Keywords:** *homeless; street youth; runaway; suicide; trapped; helplessness*

## Life on the Streets

Backed into a corner,  
wishing away pain.  
Satanic whispers in your ear,

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driving you insane.  
 Frustrations get the best of you,  
 all you'll do is scream.  
 You'll realize you'll never win,  
 because demons never dream.

—17-year-old homeless girl, Toronto, March 2004

Homeless and street-involved youth are a source of much concern and controversy in numerous forums as various social agents struggle to reduce the number of young people ending up on the streets, to improve the lives of those already there, and to facilitate movement away from street life. The intervention approaches taken and their attendant perspectives range from those context focused, employing harm reduction and strength-oriented strategies (Barry, Ensign, & Lippek, 2002; Rew & Horner, 2003) to an emphasis on legal ramifications and reliance on the criminal justice system to impose penalties as a deterrent (e.g., New York General City Law, 2003; New York Penal Law, 2003; Statutes of Ontario, 1999). Regardless of the perspective taken, the level of urgency for the development of interventions appears to be increasing as indicated by rising numbers of academic publications examining various facets of the lives of these youth (Kidd & Taub, 2004) and recent changes in legislation pertinent to street youth (see above statutes), likely driven in part by a general trend of increasing numbers of young people on the streets (Kidd & Scrimenti, 2004).

Research and popular accounts of the lives of homeless and street-involved young people describe extensive past and current victimization (Whitbeck, Hoyt, & Yoder, 1999) and risk behaviors expressed as both harm to self (Yoder, Hoyt, & Whitbeck, 1998) and harm to the property and persons of others (Baron, 2003). Suicidality has been a major focus within this body of work, drawing primarily from assessment of suicide attempt histories. Attempt-rate findings generally range from 20% to 40% (Feitel, Margetson, Chamas, & Lipman, 1992; Greene & Ringwalt, 1996; Molnar, Shade, Kral, Booth, & Watters, 1998; Ringwalt, Greene, & Robertson, 1998; Rotheram-Borus, 1993; Stiffman, 1989; Yoder, 1999), with some subgroups reporting exceedingly high numbers (e.g., sex-trade-involved youth at 76%; Kidd & Kral, 2002). These rates are markedly higher than those

of youth who are not street involved, among whom attempt rates generally fall in the 8% range (Centers for Disease Control, 2000). Similar findings have been made with regard to suicidal ideation (Yoder, 1999) and deliberate self-harm (Tyler, Whitbeck, Hoyt, & Johnson, 2003), with completed suicides having been found as the leading cause of death among homeless youth (Roy et al., 2004). The suicidality of many of these young people is a cause for alarm not only because of the attendant loss of life but also because of the spectrum of related risks, including health problems (Ensign, 1998), addictions (Greene & Ringwalt, 1996), victimization (Yoder et al., 1998), and criminal involvement (Baron, 2003).

A number of factors have been identified as indicators of heightened suicide risk within this group. Suicidal ideation and attempts have been associated with histories of physical and/or sexual abuse (Molnar et al., 1998; Yoder, 1999), familial substance abuse (Greene & Ringwalt, 1996), and familial psychopathology (Stiffman, 1989; Yoder, 1999). Street-related factors that have been associated with increased risk include sexual victimization, having a friend who attempted suicide (Yoder, 1999; Yoder et al., 1998), and substance use (Greene & Ringwalt, 1996; Sibthorpe, Drinkwater, Gardner, & Bammer, 1995). Assessment of the relationship between mental health and suicidality have highlighted the importance of depression (Rotheram-Borus, 1993; Yoder, 1999) and self-esteem (Yoder, 1999; Yoder et al., 1998).

One group of researchers has recently been making an effort to conceptually link the range of risk factors and suicidality of these youth, who previously had been characterized in a primarily descriptive manner (Whitbeck et al., 1999; Whitbeck, Hoyt, & Bao, 2000; Yoder, 1999; Yoder et al., 1998). These authors posit that homeless youth experience and engage in a range of risk trajectories. For higher-risk youth, these trajectories begin with abusive and otherwise dysfunctional home experiences, with their tending to fall into more negative street experiences, including victimization and association with other youth experiencing substantial challenges (e.g., other suicide attempters), increasing the likelihood of depressive symptoms and suicidality.

To date, homeless youth research has been largely confirmatory with hypotheses derived from research with nonhomeless popula-

tions. Street youth could be conceptualized as a group in the “borderlands” of mainstream culture (Muggleton, 2000; Rosaldo, 1989), having had a set of life experiences that are substantially different from more mainstream youth. Among such groups, there is a need for exploratory work to inform hypothesis development and for a critical perspective when applying theory, questions, and methods derived from nonhomeless populations. Two studies were conceived to undertake an exploratory examination of street youth suicidality. In both of these studies, the suicide narratives of homeless youth were examined, with the first, focusing on sex trade workers (Kidd & Kral, 2002), acting as a pilot for the second, larger study, accessing the more general street youth population (Kidd, 2004). Through qualitative analysis, a model was derived from the narratives of the participants. It was found that the most central and pivotal aspect of suicidality was an experience of feeling or being trapped (similar to the construct of helplessness, the participants favored the use of the term *trapped*), with hopelessness, to a lesser extent, tied to this theme. Feeding into the trapped experience were a number of interrelated themes, including feelings of worthlessness and loneliness, negative memories stemming from abusive pasts, and drug use and addiction. Seeking a reduction or release from this trapped experience, these youth engage in high-risk behavior and in suicidal behavior ranging in lethality, with many describing “giving up” as a passive form of suicide. Giving up was framed as a very self-destructive lack of action in a dangerous environment. The central construct of feeling trapped and helpless, other than being accessed in a single or small number of items as a part of a depression inventory, had not been commented on previously in the street youth literature and had received minimal attention in the general adolescent literature.

These previous exploratory studies, although useful in the development of an understanding of the process of suicide grounded in the life experiences of homeless youth, had several limitations, including questions regarding the strength of relationships among variables, mediating effects, and the transferability (generalizability) of the themes to other street youth. The present study, accessing a larger number and range of homeless youth than the previous qualitative studies, was conceived to confirm and evaluate the transferability of the core model of suicidality, with the trapped experience as a key

mediator, and to investigate variables highlighted in the larger body of literature.

The following analyses were conducted: First, the suicidality of the participants in this study was overviewed in a descriptive profile. Suicide attempt history and suicidality before and after coming to the streets, current level of suicidal ideation, risk behavior, and self-injury were explored. Given Rohde, Noell, Ochs, and Seeley's (2001) finding that youth reported a decrease in depressive symptoms after going to the streets, it was anticipated that there would be a reduction in suicidality. It was also anticipated that the core model of suicidality inductively derived from previous qualitative work (Kidd, 2004) would be confirmed in the present study.

Several variables were assessed that were either not clearly developed and defined in the exploratory studies or had been previously highlighted as being important. A number of family-related factors were examined. It is a consistent finding that among the families of street youth, there are high incidences of parental substance abuse, legal problems, and dysfunctional family relationships (Dadds, Braddock, Cuers, Elliott, & Kelly, 1993; Maclean, Embry, & Cauce, 1999; Ringwalt et al., 1998), with family member substance abuse being linked to suicidality (Greene & Ringwalt, 1996; Sibthorpe et al., 1995). Additionally, it has been reported that youth who were kicked out of their homes (throwaways) experience poorer mental health than youth who chose to leave (runaways) (Adams, Gullotta, & Clancy, 1985; Ringwalt et al., 1998). Given these findings, it was hypothesized that parental criminality, substance abuse, incidence of violent family arguments, and runaway-versus-throwaway status would be related to both the trapped construct and suicidality. Neglect was also examined in this analysis. Neglect is common in the backgrounds of these youth (Whitbeck, Hoyt, & Ackley, 1997) and has yet to be examined as an influence on suicidality, though neglect is linked to adolescent suicidality among the general adolescent population (Wagner, 1997). In the present study, it was hypothesized that neglect would significantly affect levels of trapped experience and suicidality, along with the more common findings of physical and sexual abuse.

Several other street context factors, previously highlighted as contributors to suicidality, were hypothesized to affect both trapped and suicidal constructs in the present work. These variables include sex

trade involvement, which has been previously linked to suicidality, (Greene, Ennett, & Ringwalt, 1999; Kidd & Kral, 2002; Yates, Mackenzie, Pennbridge, & Swofford, 1991), as have street victimization (Yoder et al., 1998), suicidal friends (Yoder, 1999), number of drug overdoses (Kidd, 2004), and poor physical health, which may be a part of a spectrum of risk behaviors (Ensign, 1998).

## METHOD

### SAMPLE

Criteria for participation were as follows: (a) participants had to be 24 years of age or younger and (b) they must have spent a substantial amount of time (more than a few days) with no fixed address or living in a shelter in the past year. Although the upper age limit is higher than those employed in some studies, it is felt both in this work and others (e.g., Baron, 2003) that this age criterion reflects the street context where youth in this age range tend to group together, perceive one another, and be perceived by others as street youth.

Two hundred and eight youths participated in this study, which took place in agencies and on the streets of New York City and Toronto between the summer of 2003 and the spring of 2004. This number of participants was used to meet the generally agreed upon minimum requirement of  $N = 200$  for the use of structural equation modeling analyses (Tabachnick & Fidell, 1996). In the streets of both cities, interviews were done in a range of locations where homeless youths congregated and/or panhandled, including the sidewalks of streets with heavy pedestrian traffic, public parks, and other miscellaneous locations (e.g., coffee shops). The youth agency in New York provided ranging services for disadvantaged youth, a proportion of whom were homeless, and the two agencies in Toronto provide a similar range of drop-in services targeting homeless youth, one of which focused on providing services for sex trade workers. A total of 100 youths were interviewed in New York (39 at the agency, 61 on the street) and 108 in Toronto (31 at each agency, 46 on the street). Participants were reimbursed with \$20 in restaurant coupons. Overall, 97% of those approached agreed to participate. The data used in the present

study were derived from the quantitative survey component of an interview, including both qualitative and quantitative elements.

Of the 208 participants, 122 (59%) were male, 84 (40%) were female, and 2 (1%) were transgendered (male to female). In terms of ethnicity, 56% were White, 12% Black, 12% Hispanic, 5% Native, 14% of mixed ethnicity, and the remainder varied. The ages of participants ranged from 14 to 24, with a median age of 20 ( $M = 20.2$ ). The average age of the youth's first experience of leaving or being thrown out of home was 15, with 33% reporting that it was their own choice to leave, 24% that they were told or persuaded to leave, and 42% that both have happened. Mean level of education was 10.6 years. A substantial proportion (57%) reported having been homeless for more than 2 years, with 33% reporting continuous homelessness and 40% having had conventional housing 25% of the time period in which they were homeless. Most youth resided in street and/or squat locations (47%), with 26% "couch surfing" (temporarily residing in the homes of others), and 14% lived in shelters. Most youth reported some combination of income sources, with panhandling (45%), dealing drugs (23%), a job (23%), and sex trade involvement (15%) appearing with the most frequency. In general, the participants were primarily chronically homeless youth, with the majority being "visible" street youth, often seen panhandling and congregating in public areas.

#### MEASURES

*Dysfunctional past.* Physical abuse by family members was measured by seven items derived from the Conflict Tactics Scale (Straus & Gelles, 1990) that were combined with three items derived from Whitbeck & Simons (1990) measuring contact and noncontact sexual abuse to form one index of abuse ( $\alpha = .88$ ). Response categories for these items ranged from 1 (*never*) to 4 (*many times*). Neglect was measured by a single item inquiring whether the participant had ever felt neglected by his or her parents or guardians, specifying physical, emotional, or a combination of physical and emotional neglect. Response categories ranged from 1 (*never*) to 4 (*all of the time*). Other family-related variables assessed categorically were parental or familial substance abuse ("Was anyone in the home where you grew up a drug/alcohol abuser?"); parental criminal activity, categorizing par-



ents with major, minor, or no criminal involvement; and violent arguments among family members, with possible responses being *never*, *sometimes*, or *all of the time*. Runaway or throwaway status was categorized as the youth reporting "It was my own choice to leave," "I was told/persuaded to leave," or that both of these circumstances have occurred.

*Street context.* Sex trade involvement was measured by a single item, similar to those used previously (Greene et al., 1999; Simons & Whitbeck, 1991), asking if the youth "had ever had sex or done sexual acts with someone to get money, food, drugs, a place to stay, or something else [they] wanted," with responses ranging from 1 (*never*) to 4 (*11 or more times*). Victimization, measured using a similar measure to Whitbeck et al. (1997), was composed of a five-question scale (1 = *never* through 4 = *many times*) indicating whether they had ever been beaten up, robbed, threatened with a weapon, assaulted with a weapon, or sexually assaulted or raped while on the streets ( $\alpha = .72$ ).

*Physical health.* Subjective health status was measured with an item from the Short-Form General Health Survey (Stewart et al., 1989): "Compared with others your own age how would you rate your health overall?" (1 = *poor* through 4 = *excellent*). Responses to this question have been shown to be well correlated with other subjective and objective health measures (Schultz et al., 1994).

*Drug-related factors.* Total drug and alcohol use was assessed by totaling responses to questions regarding how often (1 = *never*, 5 = *everyday*), at their current level of drug usage, they used alcohol, marijuana, cocaine, tranquilizers, psychedelics and ecstasy, amphetamines, and heroin or narcotics ( $\alpha = .69$ ). This is a commonly used approach to assess overall use of substances (e.g., Baron, 1999). Drug dependence was measured using the Severity of Dependence Scale (Gossop et al., 1995), a scale composed of five items concerned with the psychological components of dependence (e.g., "I think my use of drugs/alcohol is out of control"; 1 = *never*, 4 = *always*;  $\alpha = .86$ ). In addition to measures of drug use and dependence, participants were asked the number of times that they had to be hospitalized because of a drug or alcohol overdose.

*Intrapsychic variables.* Self-esteem was assessed using the total score from five Rosenberg (1989) items, with responses ranging from 0 to 5 ( $\alpha = .83$ ). Loneliness was measured using four items from the University of California, Los Angeles, Loneliness Scale. These items were found to have the highest loadings on the general loneliness factor in a factor analytic study of this scale (Russell, 1996). Participants responded using a 4-point scale, and items were totaled ( $\alpha = .87$ ). Hopelessness was measured using the participants' total scores on three items from Beck's Hopelessness Scale (Beck, Weissman, Lester, & Trexler, 1974). These three items were found to have the highest correlations with the general hopelessness factor (Aish & Wasserman, 2001). For the sake of survey consistency, responses were scaled the same as the loneliness items ( $\alpha = .79$ ). Items assessing the participants' experience of being and feeling trapped were derived from two sources. First, three items were derived from participants' descriptions in the qualitative work from which the present model was derived (Kidd, 2004). These items were "I feel trapped," "I feel like I don't have any real choices," and "I feel like I don't have anywhere else to turn." Two items assessing the helpless component of the trapped experience were derived from the brief form of Lester's Helplessness Scale (Lester, 2001). These five items, again utilizing the same scale as the above variables, were totaled to obtain an overall indication of the participants' trapped experience ( $\alpha = .88$ ).

*Suicidality.* Current suicidal ideation was assessed through a total score from four items derived from those commonly used in studies of nonhomeless youth (Lewinsohn, Rohde, & Seeley, 1996): "I thought about killing myself," "I thought about death/dying," "I felt that everyone would be better off if I was dead," and "I thought about plans to kill myself," were answered on a 4-point scale (1 = *never*; and 4 = *all of the time*;  $\alpha = .87$ ). Giving up, a construct closely identified with suicide in the exploratory work (Kidd, 2004), was assessed using two items derived from that study: "I feel like giving up" and "I feel like I don't really care about anything anymore." This was measured using the same 4-point scale as the intrapsychic variables ( $\alpha = .67$ ). Suicide attempt history was divided between the periods at home or with guardians and on the streets. The question was framed, "Have you ever tried to kill yourself with the intention to die? i.e. in other words

did it in a way that you expected to die and were surprised at having survived." The number and methods of these attempts were gathered. Additionally, suicidal ideation on the streets and while on their own was assessed with an item that followed the suicidal ideation measure: "How often have you been suicidal in your life (thinking the above thoughts)?" General risk behavior while at home and on the street was assessed with the item, "Have you ever done risky things, not caring if you lived or died? (e.g., risky drug use, put self in dangerous situations)," answered on a 3-point scale of *never*, *sometimes* and *often*. Self-injury before and on the street was assessed using the item, "Have you ever hurt yourself for reasons other than dying?" answered on the same scale as the risk behavior item. Finally, friend suicidality was assessed using an item asking participants to indicate the number of their friends who had attempted or committed suicide.

## RESULTS

### DESCRIPTIVE PROFILE OF RISK: IN THE HOME AND ON THE STREETS

A total of 46% of the participants reported making at least one suicide attempt in home or street environments, with 78% of attempters reporting that they had made more than one attempt. Differentiated by gender, 55% of females and 40% of males reported at least one attempt ( $t = 2.07, p < .05$ ). Methods of suicide attempts were overdosing (42%), cutting with a sharp object (32%), hanging (15%), and jumping from a height (7%), with miscellaneous remainders. Although low sample sizes of non-White ethnicities prevent meaningful statistical comparison, casual examination does not suggest extreme discrepancies. Attempt rate separated by ethnicity were as follows: White ( $n = 117, 49%$ ), mixed ethnicity ( $n = 28, 39%$ ), Black ( $n = 25, 36%$ ), Hispanic ( $n = 24, 50%$ ), and Native ( $n = 11, 46%$ ).

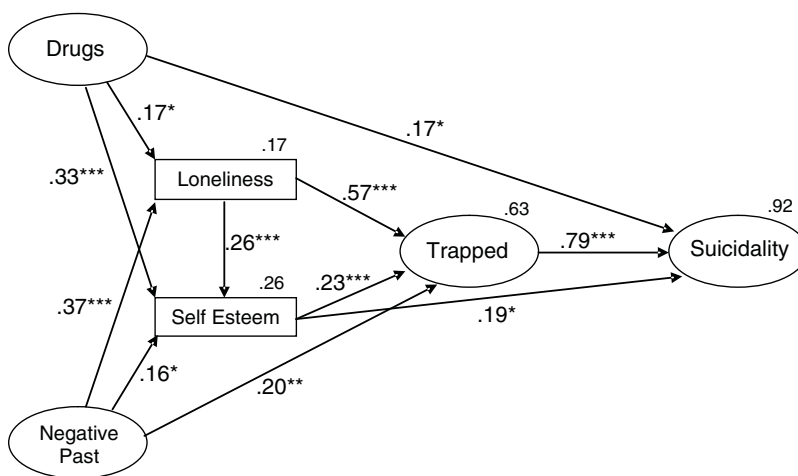
Comparisons were conducted to examine differences in reported risk level between the period when the youth was with a guardian and when he or she was on the streets. Mean number of suicide attempts while at home was significantly higher than attempts on the streets ( $t = 4.79, p < .001$ ). A similar trend was found with level of suicidal

ideation ( $t = 5.50, p < .001$ ) and self-harm ( $t = 2.66, p < 0.01$ ), though there was no significant change in level of risk behavior. These findings were replicated for both males and females, with the one exception being that male reports of self-harm did not significantly decline from the home to the streets.

#### CONFIRMATORY ANALYSIS OF A MODEL OF STREET YOUTH SUICIDALITY

Structural equation modeling was used, via AMOS (Version 4.0; Arbuckle & Wothke, 1999), to test the model derived from previous work (Kidd, 2004). Maximum-likelihood parameter estimation was used. As described in the introduction, this model (see Figure 1) proposed that the trapped construct is the core variable that mediates relationships between other variables and the suicide construct. Latent variables were negative past (composed of neglect and abuse observed variables), trapped (trapped and hopeless), suicide (suicidal ideation and giving up), and drugs (drug dependence and total drug use). The remaining two variables in the model, self-esteem and loneliness, were observed. With one exception, all observed and latent variables fulfilled assumptions of normality. Suicidal ideation, which was positively skewed, was logarithmically transformed to achieve normality. Nonsignificant relationships between negative past and loneliness with suicide were removed, as was the nonsignificant relationship between the latent variables drugs and trapped. Removal of nonsignificant estimates did not alter model fit and is a standard procedure (Byrne, 2001). One relationship was added that was not initially specified, derived from modification indices. This was the significant direct relationship between total drug use and hopelessness, which was incorporated into the revised model, given similar previous empirical findings and theoretical soundness of these relationships, as is recommended when considering model modification (McDonald & Ho, 2002).

The final model was identified with 55 distinct sample moments and 30 distinct parameters to be estimated, leaving 25 degrees of freedom. Model fit could not be rejected, with chi-square = 31.92,  $p = .16$ ,  $df = 25$ . The model appeared to fit the data well, with a Global Fit Index of .97 and a Comparative Fit Index of .99, which, as the scale rec-



**FIGURE 1: Structural Equation Model of Factors Associated With Suicidality Among Homeless Youth**

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

ommended by Byrne (2001), exceeds the suggested cutoff value of .95 (Hu & Bentler, 1999). The parsimony-adjusted Comparative Fit Index was .55. Although moderate, potential concerns regarding model parsimony are ameliorated by the following considerations: (a) the theoretical soundness of the model as derived from the exploratory study and consistency with previous findings and (b) noting that only one unhypothesized relationship was added post hoc (between total drug use and hopelessness), indicating that model overfitting is likely not a consideration (Mulaik et al., 1989; Raykov & Marcoulides, 1999).

Estimated regression weights between latent variables and their indicators were uniformly high.  $R^2$  for neglect and abuse as indicated by the latent variable negative past were .73 and .46, respectively. For the trapped construct indicators  $R^2$  were trapped or helpless (.70) and hopeless (.66); for suicide, the indicators were ideation (.36) and giving up (.56), and for drugs, the indicators  $R^2$  were dependence (.74) and total drug use (.45). The relationship between total drug use and hopelessness, added post hoc, was significant ( $r = .19, p < .001$ ). This association and those between latent variables and their indicators were omitted from the path diagram for the sake of clarity. The interre-

relationships between model variables and those hypothesized from previous exploratory work were confirmed, with a few exceptions. Whereas the trapped construct mediated the relationships between negative past, loneliness, and suicidality, self-esteem continued to have a direct relationship. Second, although drug use predicted suicidality directly, as expected, it did not demonstrate the predicted relationship with the trapped variable. The hypothesized relationships between the drugs variable, loneliness, and self-esteem were confirmed, and hence may mediate the relationship between the drugs and trapped constructs. Finally, the relationship between total drug use and hopelessness, added post hoc, indicates a relationship between some elements of the drugs and trapped constructs that were not adequately represented by the latent variables. Despite some of the model shortcomings, it demonstrated a high degree of predictability for suicidal ideation, explaining 92% of the variance associated with the latent suicide variable.

#### FAMILY CONTEXT VARIABLES

Family context variables were examined using regression analyses to test their degree of association with the dependent variables trapped, suicidal, prestreet suicide attempts and street suicide attempts (Table 1). The trapped dependent variable was composed of participants' scores on the trapped factor, and likewise, suicidal was comprised of scores on the suicidal factor. Factor scores were derived using the regression approach, following principal component analysis of the scales to their respective factors. Trapped and hopelessness were found to load onto a single component (.913) accounting for 83% of the variance of the trapped factor. Giving up and suicidal ideation were found to load onto a single component (.855) accounting for 73% of the variance of the suicidal factor. The variables suicide attempts at home and suicide attempts on the streets were dichotomized to no attempts or one or more attempts, with relationships analyzed using logistic regression. The variables prestreet suicide attempts ( $\beta = .34, p < .001$ ), suicide attempts on the street ( $\beta = .40, p < .001$ ), and trapped ( $\beta = .65, p < .001$ ) were highly predictive of current suicidality as measured by the suicidal factor in simple regression analyses.

TABLE 1  
Summary of Regression Analyses of Family Context Variables

Variable	Trapped			Suicidal			Prestreet Attempt			Street Attempt		
	B	SE B	$\beta$	B	SE B	$\beta$	B	SE B	$\beta$	B	SE B	$\beta$
Parent criminality	.214	.091	.162*	.271	.090	.204**	.038	.038	.038	.038	.038	.038
Parent substance abuse	-.114	.140	-.057	-.016	.141	-.008	.016	.016	.016	.016	.016	.016
Violent arguments	.265	.071	.253***	.237	.071	.226**	.222	.222	.222	.222	.222	.222
Runaway or throwaway	.253	.091	.191**	.209	.091	.158*	.257	.257	.257	.257	.257	.257
Physical abuse	.037	.014	.187**	.046	.014	.230**	.065*	.065*	.065*	.065*	.065*	.065*
Sexual abuse	.070	.028	.173*	.098	.027	.242***	.142*	.142*	.142*	.142*	.142*	.142*
Neglect	.389	.066	.378***	.284	.069	.276***	.579***	.579***	.579***	.579***	.579***	.579***
Family												
Parent criminality	.131	.099	.099	.235	.099	.177*	-.042	-.042	-.042	-.042	-.042	-.042
Parent substance abuse	.147	.153	.073	.280	.152	.139	.193	.193	.193	.193	.193	.193
Violent arguments	.257	.079	.245**	.224	.079	.214**	.273	.273	.273	.273	.273	.273
Abuse and neglect												
Physical abuse	-.003	.015	-.015	.016	.016	.078	.003	.003	.003	.003	.003	.003
Sexual abuse	.034	.028	.085	.066	.029	.163*	.094	.094	.094	.094	.094	.094
Neglect	.374	.076	.363***	.204	.077	.198**	.515**	.515**	.515**	.515**	.515**	.515**

NOTE:  $R^2$  for family multiple regression are .07 for trapped, .08 for suicide, .01 for attempts at home, and .02 for attempts on the street.  $R^2$  for abuse and neglect regression are .15 for trapped, .11 for suicide, .08 for attempts at home, and .04 for attempts on the street.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

The family context variables parent criminality, parent substance abuse, and violent arguments among family members were examined for their influence on the dependent variables independently and when entered simultaneously into the regression. Although all were expected to have a significant impact on trapped and suicide variables, no hypotheses were made regarding their relative impact, making the multiple regression analysis exploratory. It was found that parent criminality was significantly related to the trapped ( $\beta = .16, p < .05$ ) and suicidal ( $\beta = .20, p < .01$ ) variables but did not significantly predict suicide attempts at home or on the streets. Violent arguments among family members, likewise, had significant associations with feeling trapped ( $\beta = .25, p < .001$ ) and suicidal ( $\beta = .23, p < .01$ ) but did not significantly relate to suicide attempts. The hypothesis that was not confirmed was the relationship between parental substance abuse and any of the dependent variables. When entered simultaneously into a multiple regression equation, it was found that parental criminality continued to predict suicidality ( $\beta = .18, p < .05$ ), and violent arguments continued to be significantly related to feeling trapped ( $\beta = .25, p < .01$ ) and suicidal ( $\beta = .21, p < .01$ ). The amounts of variance accounted for by this group of predictors were  $R^2 = .07$  for trapped and  $R^2 = .08$  for suicidal ideation, with almost no variance accounted for in the suicide attempt variables.

The youth's report of how they came to leave home, whether having run away, been thrown out, or both, was significantly related to the trapped variable ( $\beta = .19, p < .01$ ) and to suicidality ( $\beta = .16, p < .05$ ). The relationships with suicide attempts at home or on the street were not significant.

Physical and sexual abuse and neglect were also examined separately and together with regard to their respective influences on the trapped and suicidality variables. All three variables were found to be individually predictive of feeling trapped (physical abuse  $\beta = .19, p < .01$ ; sexual abuse  $\beta = .17, p < .05$ ; neglect  $\beta = .38, p < .001$ ), suicidal ideation (physical abuse  $\beta = .23, p < .01$ ; sexual abuse  $\beta = .24, p < .001$ ; neglect  $\beta = .28, p < .001$ ), and suicide attempts while at home (physical abuse  $B = .065, p < .05$ , odds ratio (OR) = 1.1; sexual abuse  $B = .142, p < .05$ , OR = 1.2), with neglect again showing a particularly strong association, with youth reporting higher levels of neglect being 1.8 times as likely to have attempted suicide while at home ( $B = .579$ ,



$p < .001$ , OR = 1.8). Only sexual abuse was significantly predictive of suicide attempts while on the streets ( $B = .122$ ,  $p = .04$ , OR = 1.1), though this association was relatively weak. When entered simultaneously into a regression equation, the strong association of neglect with the dependent variables, excepting suicide attempts on the streets, continued to be evident (trapped  $\beta = .36$ ,  $p < .001$ ; suicidal  $\beta = .20$ ,  $p < .01$ ; suicide attempts at home  $B = .515$ ,  $p < .01$ , OR = 1.7). The only other associations that remained significant were those between sexual abuse and suicidality ( $\beta = .16$ ,  $p < .05$ ) and suicide attempts while on the street ( $B = .141$ ,  $p < .05$ , OR = 1.2). The amounts of variance accounted for by this group of predictors were  $R^2 = .15$  for trapped and  $R^2 = .11$  for suicidal ideation,  $R^2 = .08$  for attempts at home, and  $R^2 = .04$  for attempts on the street.

#### STREET CONTEXT VARIABLES

Street context variables hypothesized to be significantly related to suicidality were sex trade involvement, street victimization, drug overdoses, subjective report of physical health, and suicidal friends (Table 2). Sex trade involvement was found to be significantly related to feeling trapped ( $\beta = .16$ ,  $p < .05$ ), to prestreet suicide attempts ( $B = .252$ ,  $p < .05$ , OR = 1.3), and to street attempts ( $B = .274$ ,  $p < .05$ , OR = 1.3) but not to current suicidality. Street victimization showed a similar pattern of relationships, being associated with trapped ( $\beta = .14$ ,  $p < .05$ ), prestreet attempts ( $B = .107$ ,  $p < .05$ , OR = 1.1), and street attempts ( $B = .137$ ,  $p < .01$ , OR = 1.2). Number of drug overdoses was also related to the trapped construct ( $\beta = .23$ ,  $p < .01$ ), prestreet attempts ( $B = .149$ ,  $p < .01$ , OR = 1.2), and street attempts ( $B = .192$ ,  $p < .01$ , OR = 1.2) but not suicidality. It is likely, however, that the association of overdoses with suicide attempts is spurious, given that overdosing was reported as a frequent means of attempt. Subjective report of physical health showed a particularly strong set of associations, with reports of poorer health related to feeling trapped ( $\beta = -.33$ ,  $p < .001$ ), suicidal ideation ( $\beta = -.33$ ,  $p < .001$ ), and prestreet ( $B = -.350$ ,  $p < .05$ , OR = .71), and street ( $B = -.625$ ,  $p < .001$ , OR = .54) attempts. Last, reports of friends who had attempted or committed suicide was related to feeling trapped ( $\beta = .19$ ,  $p < .01$ ), suicidal ideation ( $\beta = .27$ ,  $p < .001$ ), and prestreet ( $B = .306$ ,  $p < .01$ , OR = 1.4) and street ( $B =$

TABLE 2  
Summary of Regression Analyses of Street Context Variables

Variable	Trapped			Suicidal			Prestreet Attempt			Street Attempt		
	B	SE	$\beta$	B	SE	$\beta$	B	SE	Odds Ratio	B	SE	Odds Ratio
Sex trade involvement	.135	.057	.162*	.097	.057	.117	.252*	.057	1.29	.274*	.057	1.32
Street victimization	.043	.021	.142*	.037	.021	.122	.107*	.021	1.11	.137**	.021	1.15
Drug overdoses	.091	.028	.225**	.053	.028	.131	.149*	.028	1.16	.192**	.028	1.21
Physical health	-.342	.069	-.326***	-.346	.069	-.330***	-.350*	.069	0.71	-.625**	.069	0.054
Suicidal friends	.060	.022	.193**	.085	.021	.274***	.306***	.021	1.36	.124*	.021	1.13
Multiple regression												
Sex trade involvement	.075	.056	.090	.039	.055	.047	.235	.055	1.27	.156	.055	1.17
Street victimization	.016	.021	.051	.008	.020	.026	.045	.020	1.05	.101	.020	1.11
Drug overdoses	.027	.031	.066	-.033	.030	-.080	-.029	.030	0.97	.103	.030	1.11
Physical health	-.273	.076	-.263***	-.305	.074	-.298***	-.084	.074	0.92	-.442*	.074	0.064
Suicidal friends	.023	.023	.073	.064	.022	.206**	.297***	.022	1.35	.039	.022	1.04

NOTE:  $R^2$  for street context factors multiple regression are .14 for trapped, .16 for suicidal, .19 for attempts at home, and .11 for attempts on the street.  
\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

.124,  $p < .01$ , OR = 1.1) attempts. With regard to relative strength in predicting dependent variable levels, following multiple regression, only physical health and suicidal friends continued to be significant predictors, though suicidal friends no longer predicted feeling trapped and attempts on the street, and health did not continue to be associated with prestreet attempts. The amounts of variance accounted for by this group of predictors were  $R^2 = .14$  for trapped,  $R^2 = .16$  for suicidal ideation,  $R^2 = .19$  for attempts at home, and  $R^2 = .11$  for attempts on the street.

Given the strong association of reported physical health with both trapped and suicidal variables, a regression analysis was done to determine the degree to which the trapped construct might mediate the relationship between health and suicidality. Although the addition of the trapped variable to the regression of subjective health as predictive of level of suicidality resulted in a substantial change in the degree of the relationship between health and suicidality ( $\beta = -.33$  to  $\beta = -.13$ ), it continued to be a significant predictor ( $p < .05$ ). Furthermore, adding health to the regression results in  $\Delta R^2$  of .02 (total  $R^2 = .44$ ), which is significant ( $p < .05$ ). These findings suggest that although health may be mediated to some degree by the trapped experience in its influence on suicidality, there is a significant direct relationship between the two variables.

## DISCUSSION

### THE TRAPPED EXPERIENCE

In the present study, it was proposed that the trapped construct, composed of experiences of feeling trapped, helpless, and hopeless, was most central to the suicidality of homeless youth. In the model derived from previous exploratory work (Kidd, 2004), feeling trapped was found to have a mediatory role and, along with the variables self esteem, loneliness, abusive past, and drug problems, interacted to strongly predict the level of suicidality of the participants. Noting how rarely the feeling labeled *trapped* arises in the literature, helplessness is used as an equivalent concept in the following discussion.

At a general level, although helplessness has, in the past, been an emphasis in the study of suicidality and continues to be examined in some forums (Lester, 2001; Melges & Weisz, 1971; Orbach, 1986; Shneidman, 1996), hopelessness theory has become predominant in the study of suicide and depressive symptomatology (Abramson, Metalsky, & Alloy, 1989; Peterson, Maier, & Seligman, 1993). There are several groups, however, among whom issues of helplessness continue to arise. These groups, which include the homeless, appear to have some commonalities in both context and personal characteristics.

Studies of helplessness highlight a lack of control over stressors, changes in life circumstance, failure of coping strategies, and social isolation. The elderly have been described as being particularly vulnerable to helplessness, experiencing multiple losses of social roles, health, and relationships and high suicide rates (Goldstein, 1979; Osgood, 1991). Among northern aboriginal peoples, researchers have described how forced cultural change, governmental control, and disintegration of family result in isolation and helplessness, frequently leading to suicidality (Charles, 1991). Kissane and Clarke (2001), arguing for the viability of a "demoralization syndrome" among individuals with serious physical illness, explicitly refer to suicidality arising from a trapped experience. These authors emphasize the lack of control inherent to serious health problems leading to helplessness and hopelessness and the loss of a meaningful role in society attended by feelings of social isolation and alienation. As in the present work, giving up is described as a common outcome of the demoralization syndrome, often leading to poor outcomes (Kissane & Clarke, 2001). In a discussion of potential reasons for the increase in adolescent suicide among African American males, Willis, Coombs, Cockerham, and Frison (2002), have called attention to similar factors. They describe a breakdown in many sociocultural institutions within some African American communities. At-risk youth are described as marginalized, having greater difficulty controlling and predicting risks and events because of a lack of protective mediators (e.g., family, church). They evidence extreme individuality with little structural constraint, leading to a condition of learned helplessness, "the cage," with violence and suicide occurring as a product of this process (Willis et al., 2002).

Homelessness has been characterized as a condition that is conducive to learned helplessness because of the numerous uncontrollable sources of environmental stress encountered on the streets (Burn, 1992; Flynn, 1997; Goodman, Saxe, & Harvey, 1991). The lack of control over sources of stress, difficulty in regulating contact with others, and repeated failures of attempts to cope with stressors or to get off of the streets are isolating (Goodman et al., 1991) and lower self-esteem (Flynn, 1997). In such circumstances, the more the homeless person believes that his or her circumstances are because of his or her own failings (internal loci of control), the more likely he or she is to be depressed (Burn, 1992).

The factors described above intersect in the lives of many homeless youth: (a) the high levels of abuse experienced by these young people suggests a history of learned helplessness, (b) the shift to life on the streets breaks bonds with social institutions, potentially leading to normlessness and a loss of a sense of self or a blueprint from which a life might be given meaning, (c) exposure to numerous uncontrollable stressors and variables that can amplify harmful experiences (victimization, drug dependence), and (d) repeated difficulties in coping with their situations (e.g., finding work, breaking dependencies). It is also notable, given the emphasis on social isolation in the literature discussed above, that the second-strongest relationship in the hypothesized model was that between loneliness and feeling trapped, lending support to the role of social connectedness in the helplessness process. Although helplessness is a component of suicide for most people (Shneidman, 1996), it is likely that for some populations, such as homeless youth, it is particularly salient, given their life circumstances.

Aside from the trapped construct, the other elements in the model have been previously linked to youth suicide. Loneliness, though not a focus of study in research into homeless youth suicide, has been consistently linked with suicidality among adolescents (Laederach, Fischer, Bowen, & Ladame, 1999). Low self-esteem (Yoder, 1999), abusive past (Molnar et al., 1998), and drug use (Greene & Ringwalt, 1996) have all been previously linked with suicidality among homeless youth, though posited relationships are primarily bivariate, with few attempts to examine interaction patterns (an exception is Yoder, 1999). Two findings suggested that the analysis of suicide narratives gathered previously (Kidd, 2004) did not completely match the expe-

riences of participants in this study. First, self-esteem continued to have a direct relationship with suicidality, despite the mediating effect of the trapped experience, attesting to the strength of this variable noted in earlier work (Yoder, 1999), and suggesting that feeling trapped is not the only intrapsychic experience directly linked to suicide. Second, drug use and dependence did not directly affect the trapped experience as operationalized in this work. Drug use and dependence is likely mediated by loneliness and, particularly, self-esteem in influencing trapped feelings, and overall drug use predicted increased hopelessness. This finding, noted in previous work with adolescents (Spirito, Mehlenbeck, Barnett, Lewander, & Voss, 2003) and homeless youth (Rohde et al., 2001), suggests that it may be beneficial to separate hopeless and helpless constructs in some instances.

**CHANGES IN RISK LEVEL:  
HOME TO STREET ENVIRONMENTS**

Along with the development of the trapped model for street youth suicidality, several other findings emerged from the analysis. The hypothesis that there would be a reported decrease in overall level of suicidality among participants as they left home and came to the streets was supported. Participants reported marked declines in number of suicide attempts, suicidal ideation, and self-harm. Two factors may play a role in this reported decline in suicidality. First, the extremely negative home experiences of many homeless youth could be more distressing than the stressors faced on the streets and could result in decreased suicidality and self-harm behavior. It is also possible, given the negative attitudes many youth on the street have regarding suicidality (Kidd, 2002) and reports of negative experiences with health professionals following suicidal behaviors (Kidd & Kral, 2002), that suicidality is not reinforced or may be actively discouraged in the street context. The lack of reported change in risk-taking behavior may be reflective of the degree to which risk taking is reinforced (and in some instances, may be necessary for survival) on the streets, though this variable needs to be better operationalized and examined in greater depth in future work. The only related finding noted in the literature is the decline in reported depressive symptoms following youth leaving home (Rohde et al., 2001).

**FAMILY CONTEXT**

The relationships between several family context variables and the trapped, suicidal, and suicide attempt variables were examined. Parental criminality and violent arguments among family members were both found to be related to feeling trapped and suicidal, with violent arguments having the strongest relationship. Though not highlighted in research into street youth suicidality, family dysfunction indicators such as these have been consistently linked to youth suicidality (Dube et al., 2001). Additionally, it was found that youth who had been thrown out demonstrated greater levels of trapped experience and suicidal ideation, consistent with previous work linking throwaways with greater suicide risk levels (Adams et al., 1985; Ringwalt et al., 1998). A hypothesis that was not confirmed was the relationship between parent substance abuse and suicidality. Previous work has linked parental substance use and suicide attempts among homeless youth (Greene et al., 1996; Sibthorpe et al., 1995), though it is noteworthy that Sibthorpe et al. (1995) found this relationship to be relatively weak, and Greene and Ringwalt (1996) noted a weaker relationship among youth accessed on the streets as opposed to in shelters. This is pertinent, given that the participants in this study were primarily street-entrenched youth. None of these variables was found to be related with suicide attempts either at home or on the street. Given the strong relationships between feeling trapped and ideation variables and attempts, it is likely that unexamined interactions account for the lack of predictability.

To account for the loss of discrimination in the model because of combining abuse and neglect variables into one latent factor, these variables were also examined separately. Physical abuse, sexual abuse, and neglect were all found to be related to trapped experience, suicidal ideation, and suicide attempts while at home, with only sexual abuse being related to suicide attempts on the street. Of these variables, neglect showed the strongest relationships. Multiple regression analysis revealed that neglect likely underlies much of the association between abuse and suicidality, though it is of note that sexual abuse continued to show unique variance in its relationship with current suicidal ideation and attempts on the street. Although suicide attempts and ideation have been consistently linked with physical and sexual

abuse among homeless youth (Molnar et al., 1998; Yoder, 1999), no such linkage has been made for neglect. In the general adolescent literature, examinations of the relative impacts of various forms of abuse are rare. The above pattern has, however, been found among high-risk adolescents for whom neglect and sexual abuse remained significant predictors of suicidal behavior when included in a multiple regression analysis along with physical abuse (Lipschitz et al., 1999). Last, by differentiating between home and street suicide attempts, it becomes apparent that physical abuse and neglect primarily affect attempts at home, with only sexual abuse impacting street attempts. This potentially attests to the strong impact of street factors in influencing overt suicidal behavior and to the potent negative effect of sexual abuse, being the only home-context variable found that continues to affect numbers of suicide attempts on the street.

#### **STREET CONTEXT**

Several street contextual variables were also examined. Consistent with previous reports (Greene et al., 1999; Kidd & Kral, 2002; Yates et al., 1991), degree of sex trade involvement was related with feeling trapped and both home and street suicide attempts. The same pattern of relationships was found with regard to street victimization (noted previously in Yoder et al., 1998) and number of drug overdoses reported (Kidd, 2004). These variables were not, however, significantly related to current suicidality. This could indicate that although at certain points in their lives these factors were related to high levels of suicidality, the influence may not be ongoing to the extent that they do not predict current levels of suicidality. Strong relationships were found, however, between having friends who had attempted or committed suicide and all of the suicide variables measured in this study. This finding has been highlighted before among homeless youth (Yoder, 1999) and may indicate both a social support network composed of at-risk individuals and a spreading of the idea of suicide (Kral, 1998) that could contribute to fewer coping resources and increased likelihood of suicide being regarded as a viable way of ending distress (Shniedman, 1996). Last, a strong association was found between perceived physical health, feeling trapped, suicidal ideation, attempts on the streets, and to a lesser extent, attempts at home. Poor



health has been highlighted as a major problem among street youth (Ensign, 1998) and has been linked with suicidality among other populations (Brown & Vinokur, 2003; Dixon, Postrado, Delahanty, Fischer, & Lehman, 1999) but has not been associated with suicide risk among homeless youth. This association, with the exception of having had suicidal friends, was the only one to continue to be significant when entered into a multiple regression analysis with the other street context variables. Physical health is likely more proximal to suicidality, being an outcome of a range of other risk behaviors, and although in part mediated by the trapped experience in its influence on suicidal ideation, continues to have a direct effect after accounting for the trapped variable. This finding is, admittedly, limited because of single-item measure of general perceived health status and requires further work to more clearly define the nature of the relationships between health and suicide risk.

In general, it becomes apparent that suicide attempts on the street are likely better predicted by street contextual variables, though feeling trapped and suicidal ideation seem dually influenced by home and street experiences. This lends credence to the notion that interactions between home and street experiences lead to varying degrees of risk, possibly through a risk trajectory effect (Whitbeck et al., 1999).

## CONCLUSION

Overall, homeless youth at risk for suicide appear to have had experiences at home and on the streets that were socially isolating and disempowering, leading to lives marked by little perceived control over their circumstances, loneliness, and low self-regard. It is a bleak and hopeless feeling of being trapped, dictated not only by psychological processes but also by the numerous real and structural impediments faced by the homeless. Circumstances that potentiate feeling trapped (e.g., victimization, poor health) increase risk, especially when the idea of suicide has been internalized, possibly via suicidal friends, as a means of escape. The development of and reaction to such feelings of helplessness by homeless youth seem comparable with others who face isolating situations in which control over stressors is minimal.

Clinical work and suicide interventions with homeless youth may be informed and further developed through incorporation of the present findings. Evaluation for suicidality should include reports of parental criminality, violent family arguments, being thrown out of the home, abuse, and particularly, severe neglect. Numerous street factors also increase risk level, such as sex trade involvement, victimization, drug use, dependence and overdoses, poor physical health, and having had suicidal friends. Of these street context factors, reported level of physical health may prove to be a powerful indicator of elevated likelihood of suicide. The most crucial part of the intervention, however, will likely involve evaluating levels of loneliness, low self-worth, and especially experiences of helplessness, feeling trapped, and hopelessness. In terms of overt communications of suicidality, indications that the youth is giving up should be included with more traditionally understood forms of ideation.

Both the previous study, from which the present work was primarily based (Kidd, 2004), and the present study suggest that a core component of working with these youth, particularly those considering suicide as a way out of their situation, will revolve around allowing them opportunities to experience mastery and community and, through those experiences, to improve their self-concept. This will likely include mastery over external situations (e.g., obtaining a diploma) and mastery over intrapsychic factors (e.g., better coping with the effects of traumatic memories). A difficult part of this work is the fact that many systemic factors impede the ability of these youth to have such empowering experiences (Goodman et al., 1991), and systemic barriers are often not acknowledged in a context of Western individualism with attendant assumptions of personal choice and freedom (Cross & Markus, 1999). This problem is often faced by street workers, who can do excellent work in developing psychological resources but whose work can falter and becomes undone because of a lack of social and structural resources (Kidd, 2005). Effective work with these youth will likely require interventions that address the psychological factors discussed here and changes at various policy levels to create the spaces and opportunities in which improved psychological functioning might be lived out.

### LIMITATIONS

The findings outlined in this report are limited in several ways. First, there is a need for longitudinal work to examine the various paths of risk and resilience youth follow, initiated in prestreet experiences. Although some have attempted to extrapolate longitudinal models from cross-sectional data (Whitbeck et al., 1999), this continues to severely limit research with this population, which has proven exceedingly difficult to access longitudinally. Second, all measures in this study were self-reported and subject to the biases that attend such measures. Additionally, several of the measures used in this study were necessarily brief because of the breadth of variables accessed, possibly contributing to error resulting from narrow operations. Third, this study focuses most heavily on risk and does not account well for protective factors, other than to state that youth who do not exhibit the risks presented here are less likely to be in distress and suicidal. There is a compelling need for the development of studies examining resilience among homeless youth, which are only recently beginning to be developed (e.g., Rew & Horner, 2003). Fourth, although the present findings suggest ways in which interventions can be improved, there is a need for outcome studies that might evaluate what aspects of interventions are most effective. At present there is a dearth of outcome research for the homeless youth population. The last point is more a note of caution than a limitation. There is a tendency, on reading studies detailing risk among homeless youth, to apply such understandings broadly, in effect ignoring the other half of the distribution. Large numbers of homeless youth are not at a high risk for suicide and are coping quite well, given their circumstances. For these youth, for whom issues of risk (and, likely, morality) are greyer, means of intervention are far less clear.

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