Briefs

Prevalence and Correlates of Survival Sex Among Runaway and Homeless Youth

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ABSTRACT

Objectives. This study examined the prevalence and correlates of survival sex among runaway and homeless youths.

Methods. A nationally representaptive sample of shelter youths and a multicity sample of street youths were interviewed.

Results. Approximately 28% of street youths and 10% of shelter youths reported having participated in survival sex, which was associated with age, days away from home, victimization, criminal behaviors, substance use, suicide attempts, sexually transmitted disease, and pregnancy.

Conclusions. Intensive and ongoing services are needed to provide resources and residential assistance to enable runaway and homeless youths to avoid survival sex, which is associated with many problem behaviors. (Am J Public Health. 1999;89:1406–1409)

"Survival sex" refers to the selling of sex to meet subsistence needs. It includes the exchange of sex for shelter, food, drugs, or money. The dangers inherent in survival sex make it among the most damaging repercussions of homelessness among youths.

Previous estimates of the proportion of runaway and homeless youths who engage in survival sex range from 10% to 50%. 1-16 These estimates, however, were based on relatively small and geographically limited samples. We report the proportions engaging in survival sex among runaway and homeless youths in a nationally representative sample of youths in shelters and in a multicity sample of youths on the streets. We also examined potential correlates of survival sex; identification of such correlates may help programs tailor specialized interventions for this high-risk population.

Methods

Sample Selection

Eligibility requirements were the same for youths identified in shelters and on the streets: (1) age 12 to 21 years and (2) having spent at least 1 night in the previous year in a youth or adult shelter, an improvised shelter (e.g., abandoned building), outside (e.g., under a bridge), or with a stranger. Youths 17 years or younger who had spent at least 1 night in the past year away from home without the permission of parents or legal guardians also were eligible. The sampling procedures used in each survey are described briefly below. The sampling design is reported elsewhere in greater detail. ^{17,18}

Shelter sample. Multistage sampling techniques were used to select a nationally representative sample of youths from youth shelters. In the first stage, 25 primary sampling units (PSUs) representing metropolitan and nonmetropolitan areas were selected

with probability proportional to size from the 125 PSUs selected for the 1991 National Household Survey on Drug Abuse; 5 of the PSUs were selected with certainty because of their large size. In the second stage, 30 shelters were selected from a frame of all youth shelters (n = 82) in the PSUs; 11 shelters were included with certainty (5 because of size and 6 because they provided transitional living programs for youths 17 years or older). Of the remaining shelters, a proportional number of federally and nonfederally funded shelters were randomly selected.

After sampling frame errors (n = 1), ineligible shelters (n = 5), and refusals (n = 1) were accounted for, the second-stage sample included 23 shelters in 17 PSUs. Shelters were considered ineligible if they operated under a system that referred youths to the homes of volunteer families rather than housing youths on site or if they had a bed capacity of less than 5, which we considered to be the point below which the costs of collecting data would have outweighed the yield of interviews.

Finally, youths were randomly selected within shelters. A total of 840 shelter youths were sampled and screened for eligibility. Of 660 eligible youths, 640 (97%) completed the survey; the analysis is restricted to the 631 who were homeless the night preceding the interview.

Street sample. Because of difficulties in randomly sampling street youths, a convenience sampling strategy was used. Ten

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cities, each located within a PSU selected for the shelter sample, were chosen because of expected high concentrations of street youths. Multiple data collection sites within each city were selected on the basis of information provided by street outreach programs and police departments. Interviewers approached youths and screened them for eligibility. Although screening information was not recorded, interviewers reported that few eligible youths refused. A total of 600 youths completed the survey; the analysis is limited to the 528 who were currently homeless.

Data Collection

Data collection occurred in November and December 1992. Previous research indicated that because equal numbers of youths use shelters throughout the year, seasonal biases in our shelter sample were likely to be small. 19 However, interviewing during winter months may have affected the street sample in that fewer youths may have been on the streets. In the shelter sample, interviews were conducted over one 2-week period each month, with interviewers making multiple visits to the shelters. 17,18 In the street sample, data collection continued until a quota of approximately 60 interviews per city was obtained. 17,18 Face-to-face interviews, lasting approximately 30 minutes, were conducted after informed consent was obtained. English and Spanish versions of the questionnaire were available.

Measures

Youths were asked whether they had "ever had sex with someone to get money, food, a place to stay, or something else you wanted," and whether they had "ever had sex with someone to get drugs or money to buy drugs." Responses were combined to create a dichotomous measure of lifetime survival sex.

Potential correlates included background characteristics, indicators of victimization, criminal behaviors, substance use, sexually transmitted diseases (STDs), pregnancy, and suicide attempts. Sexual orientation and risky sexual behaviors were not examined because the study was precluded by the federal government from asking questions about sex other than survival sex. Measures were coded dichotomously unless otherwise indicated.

Background characteristics were age (continuous), sex, race (White, Black, other), current length of time (days) away from home (continuous), previous street experiences (shelter sample only: whether a youth had ever spent the night in nonshelter circumstances when homeless), institutional

TABLE 1—Percentages of Shelter and Street Youths Who Had Ever Participated in Survival Sex, by Background Characteristics: United States, 1992

	Shelter Sample ($n = 631$)	Street Sample (n = 528)
Age, y		
12–13	4.7**	14.3*
14–15	4.0	11.3
16–17	12.3	21.4
18–19	13.9	28.7
20–21	18.0	36.3
Sex		
Male	11.1*	28.2
Female	8.3	26.3
Race		
White	11.6**	28.8
Black	2.1	23.9
Other	10.8	28.5
Family structure		
Two parents	11.5	30.8
Other family structure	9.2	26.2
Low socioeconomic status ^a		
Yes	8.5	25.3
No	10.3	28.9
Familial illicit drug use ^b		
Yes	25.8**	33.7
No	7.6	26.2
Street experiences ^c		
Yes	18.6**	NA
No	4.3	NA
Current length of time away from h	ome, d	
1–30	5.5**	9.2**
31–365	11.8	25.2
366+	18.0	37.4
Ever placed in foster care		
Yes	11.1	33.6
No	9.1	25.7
Ever placed in group home		
Yes	12.0	31.9
No	9.0	26.1
Ever placed in psychiatric hospital		
Yes	17.5**	40.7**
No	7.7	22.5

Note. NA = not applicable.

placements (ever placed in a foster home, group home, or psychiatric/mental hospital), family structure (both parents at home vs another arrangement), family economic status (whether the family had ever lived in publicly assisted housing or received other public assistance), and family drug use (any illicit drug use by any family member during the 30 days before leaving home).

Victimization measures were robbery and assault while away from home in the past year, physical abuse before leaving home ("someone you lived with hurt you or threatened to hurt you physically, other than sexually; that is, they struck or beat you"), and emotional abuse before leaving home ("someone you lived with hurt you emotionally; that is, they said or did things to cause you to feel bad about yourself"). Reference periods for

the behavioral measures ranged from lifetime to recent occurrence. Lifetime criminal behaviors were theft, assault, weapon carrying, and drug trade offenses. Substance use measures were lifetime injection drug use and recent use (from 30 days before leaving home to the interview day) of alcohol, marijuana, cocaine, or other illicit drugs. Suicide attempts, STDs, and pregnancy (females only) were based on lifetime reports.

Data Analysis

Analyses were conducted separately for each sample because of different sampling designs. Prevalence estimates for survival sex were calculated for each total sample and separately by background characteristics and potential correlates. The shelter design allowed

^aDefined as having received public assistance or lived in publicly assisted housing.
^bIn the 30 days before a youth left home.

Obefined as having ever spent the night in a public place, in an abandoned building, in a vehicle, outside, in a subway, or with a stranger.

^{*}P<.01; **P<.001.

TABLE 2—Odds of Having Ever Participated in Survival Sex, by Potential Correlates: Shelter and Street Youths, United States, 1992

	Shelter Sample (n = 631) AOR ^a (95% CI)	Street sample (n = 528) AOR ^a (95% CI)
Victimization		
Robbery ^a	2.5 (1.9, 3.4)	1.6 (1.0, 2.5) ^d
Assault ^b	2.7 (2.1, 3.5)	2.3 (1.5, 3.7)
Emotional abuse ^c	1.7 (1.3, 2.3)	1.5 (0.9, 2.4) ^d
Physical abuse ^c	2.1 (1.3, 2.7)	1.8 (1.2, 2.7) ^d
Criminal behaviors ^c	, ,	, ,
Theft	2.0 (1.5, 2.6)	2.3 (1.2, 4.2)
Assault	2.2 (1.7, 2.7)	1.3 (0.9, 2.0) ^d
Drug trade	1.9 (1.5, 2.4)	1.9 (1.2, 2.8) ^d
Weapon carrying	1.8 (1.4, 2.3)	2.0 (1.3, 3.2) ^d
Substance use ^a		, ,
Alcohol	2.5 (1.9, 3.4)	1.9 (1.1, 3.5) ^d
Marijuana	2.5 (2.0, 3.3)	2.8 (1.6, 5.0)
Cocaine	5.6 (4.2, 7.4)	2.4 (1.6, 3.6)
Other drugs	3.6 (2.7, 4.7)	1.8 (1.1, 2.7)
Injection drug use ^c	8.8 (4.3, 17.8)	3.0 (1.8, 5.0)
Suicide attempt ^c	1.9 (1.5, 2.5)	2.9 (1.9, 4.4)
Sexually transmitted disease ^c	2.3 (1.6, 3.1)	2.9 (1.7, 4.9)
Pregnancy ^c	1.4 (1.0, 2.0) ^d	2.4 (1.1, 5.0) ^d

Note. All correlates are dichotomous variables; therefore, the reference groups for odds ratios are the "0" or "no" categories. AOR = adjusted odds ratio (adjusted for age, sex, race, and length of time away from home); CI = confidence interval.

weighting to provide unbiased prevalence estimates generalizable to youths in shelters in the United States. We conducted χ^2 and logistic regression analyses to determine the significance and strength of association between survival sex and other measures. Because of possible confounding effects, logistic regression models were adjusted for age, sex, race, and length of time away from home (95% confidence intervals are provided).

All analyses were performed with SAS software (SAS Institute, Inc, Cary, NC). We did not use another statistical package, such as SUDAAN, to provide variance estimates that could account for the multistage sampling design used with the national sample of shelter youths. Hence, variance estimates for this sample may be biased, leading to overestimation of statistical significance. However, given the high level of statistical significance for most relationships examined (P < .001), the variance adjustment should not substantively change the interpretation of results.

Sample Characteristics

The mean age was 16.1 years (SD = 5.9) for shelter youths and 18.1 years (SD = 2.2) for street youths. Approximately 61% of the shelter sample were female; 41% were Black,

31% White, and 29% other. Approximately 61% of the street sample were male; 49% were White, 25% Black, and 26% other. Around 46% of shelter youths had been away from home for longer than 1 month, compared with 78% of street youths. Approximately 37% of the shelter sample reported previous street experiences.

Results

The proportion of respondents who had ever engaged in survival sex was 27.5% in the street sample and 9.5% in the shelter sample. The percentages varied across several background characteristics (Table 1). In both samples, participation in survival sex was significantly and positively related to age, length of time away from home, and previous hospitalization in a psychiatric hospital. Additionally, in the shelter sample, participation in survival sex was more common among males, among Whites and those of "other" race, among youths with substance-using family members, and among those with previous street experiences.

In both samples, the odds of engaging in survival sex were increased for youths who had been victimized, those who had participated in criminal behaviors, those who had attempted suicide, those who had had an STD, and those who had been pregnant (Table 2). Survival sex was strongly associated with all recent substance use indicators and with lifetime injection drug use.

Conclusions

The estimates presented here are probably minimum estimates because of the likelihood that respondents underreported their participation in survival sex, a highly stigmatized behavior. Even so, the percentages are unacceptably high at more than one quarter of street youths and almost one tenth of shelter youths. The health implications of survival sex are underscored by the strong associations between survival sex and other high-risk behaviors and characteristics: substance use, suicide attempts, STDs, pregnancy, and criminal behavior. These findings suggest that survival sex may be part of a cluster of problem behaviors among runaway and homeless vouths, although differences in reference periods across measures preclude the ability to link behaviors during the same time periods.

The following results provide support for the assumption that survival sex is an economic survival strategy linked to the circumstances and duration of homelessness: (1) the finding that a higher proportion of street youths than of shelter youths had engaged in survival sex (although demographic differences between the samples account for some of the difference); (2) the finding that the behavior was more prevalent among shelter youths with previous street experiences than among those without such experiences; (3) the positive relationship between participation in survival sex and length of time away from home; and (4) the association between survival sex and economic criminal behaviors.

The results also suggest that factors other than homelessness may contribute to survival sex. Most notably, both street and shelter youths were twice as likely to report having engaged in survival sex if they also reported having been physically abused by family members. Among shelter youths, emotional abuse and family drug use were additional correlates. Although the correlations were cross-sectional, they suggest that an abusive family environment is a risk factor for further victimization through participation in survival sex once a youth is on the streets. Previous research has shown that an abusive environment is a contributor to youths' running away from home 20-22 and that family drug abuse is associated with child abuse.2

These findings add to the growing literature indicating that family abuse, including

^aDuring the period from 30 days before the youth left home until the day of the interview.

^bWhile away from home in the past 12 months.

cLifetime.

^dAll estimates except these were statistically significant at P<.001.

physical abuse, is a strong correlate of highrisk sexual behaviors among adolescents 11,12 and that prostitution may be among the sequelae of abuse. 24,25 It is also noteworthy that other studies have shown that survival sex is more common among gay and bisexual youths26 and that conflict over sexual orientation is a reason that some youths leave home. 20,27 Unfortunately, our study was limited in the sexual behavior measures available, but the linkage of survival sex to sexual minority status should not be ignored.

These findings highlight the urgent need to develop intensive and long-term services that provide alternatives to the sex trade as means of meeting economic needs, as well as comprehensive counseling and treatment services to assist youths with drug addictions, mental health problems, and family problems. Given the high rates of physical and emotional abuse, it is likely that many youths cannot return home; independent living programs, which teach participants how to find employment and housing, may be especially important. The high percentage of street youths who engage in survival sex suggests the need for drop-in centers and outreach programs, because these youths may not respond to traditional programs. \square

Contributors

J. M. Greene and S. T. Ennett planned the paper, and each wrote various sections. J. M. Greene analyzed the data, and S. T. Ennett was responsible for revising the paper from a full-length manuscript to a brief. C. L. Ringwalt assisted with the writing.

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References

- 1. Anderson JE, Freese TE, Pennbridge JN. Sexual risk behaviors and condom use among street youth in Hollywood. Fam Plann Perspect. 1994;26:22-25.
- 2. Greenblatt M, Robertson MJ. Life-styles, adaptive strategies, and sexual behaviors of homeless adolescents. Hosp Community Psychiatry. 1993;44:1177-1180.
- 3. Kipke MD, Montgomery S, MacKenzie RG. Substance use among youth seen at a community-based health clinic. J Adolesc Health. 1993:14:289-294.
- 4. Kipke MD, O'Connor S, Palmer R, MacKenzie RG. Street youth in Los Angeles: profile of a group at high risk for human immunodeficiency virus infection. Arch Pediatr Adolesc Med. 1995;149:513-519.
- 5. Pfeifer RW, Oliver J. A study of HIV seroprevalence in a group of homeless youth in Hollywood, California. J Adolesc Health. 1997;20: 339-342.
- 6. Sullivan TR. The challenge of HIV prevention among high-risk adolescents. Health Soc Work. 1996;21:58-65.
- 7. Yates GL, MacKenzie R, Pennbridge J, Cohen E. A risk profile comparison of runaway and non-runaway youth. Am J Public Health. 1988;
- 8. Yates GL, MacKenzie RG, Pennbridge J, Swofford A. A risk profile comparison of homeless vouth involved in prostitution and homeless youth not involved. J Adolesc Health. 1991;12: 545-548.
- 9. Clements K, Gleghorn A, Garcia D, Katz M, Marx R. A risk profile of street youth in northern California: implications for gender-specific human immunodeficiency virus prevention. J Adolesc Health. 1997;20:343-353.
- 10. Forst ML. Sexual risk profiles of delinquent and homeless youths. J Community Health. 1994;19:101-114.
- 11. Johnson TP, Aschkenasy JR, Herbers MR, Gillenwater SA. Self-reported risk factors for AIDS among homeless youth. AIDS Educ Prev. 1996;8:308-322.
- 12. Rotheram-Borus MJ, Mahler KA, Koopman C, Langabeer K. Sexual abuse history and associated multiple risk behavior in adolescent runaways. Am J Orthopsychiatry. 1996;66: 390-400.
- 13. Rotheram-Borus MJ, Meyer-Bahlburg HF, Rosario M, et al. Lifetime sexual behaviors among predominantly minority male runaways and gay/bisexual adolescents in New York City. AIDS Educ Prev. 1992; fall(suppl):34-42.

- 14. Simons R, Whitbeck L. Sexual abuse as a precursor to prostitution and victimization among adolescent and adult homeless women. J Fam Issues. 1991;13:361-379.
- 15. Sugerman ST, Hergenroeder AC, Chacko MR, Parcel GS. Acquired immunodeficiency syndrome and adolescents: knowledge, attitudes, and behaviors of runaway and homeless youths. Am J Dis Child. 1991;145:431-436.
- 16. McCarthy B, Hagan J. Surviving on the street: the experiences of homeless youth. J Adolesc Res. 1992;7:412-430.
- 17. Greene JM, Ennett ST, Ringwalt CL. Substance use among runaway and homeless youth in three national samples. Am J Public Health. 1997;87:229-235.
- 18. Greene J, Ringwalt C, Kelly J, Iachan R, Cohen Z. Youth with Runaway, Thrownaway, and Homeless Experiences: Prevalence, Drug Use, and Other At-Risk Behaviors. Washington, DC: US Dept of Health and Human Services, Administration on Children, Youth and Families: 1995.
- 19. Greene JM, Ringwalt CL, Iachan R. Shelters for runaway and homeless youths: capacity and occupancy. Child Welfare. 1997;76: 549-561.
- 20. Robertson M. Homeless youth: an overview of recent literature. In: Kryder-Coe JH, Salamon LM, Molnar JM, eds. Homeless Children and Youth: A New American Dilemma. New Brunswick, NJ: Transaction Publishers (Rutgers University); 1991:33-68.
- 21. Farber ED, Kinast C, McCoard WD, Falkner D. Violence in families of adolescent runaways. Child Abuse Negl. 1984;8:295-299.
- 22. Janus MD, Archambault FX, Brown SW, Welsh LA. Physical abuse in Canadian runaway adolescents. Child Abuse Negl. 1995;19: 433-447.
- 23. Stiffman AR. Physical and sexual abuse in runaway youths. Child Abuse Negl. 1989;13: 417-426.
- 24. James J, Meyerding J. Early sexual experience and prostitution. Am J Psychiatry. 1977;134:
- 25. Silbert MH, Pines AM. Sexual child abuse as an antecedent to prostitution. Child Abuse Negl. 1981:5:407-411.
- 26. Pennbridge JN, Freese TE, MacKenzie RG. High-risk behaviors among male street youth in Hollywood, California. AIDS Educ Prev. 1992; fall(suppl):24-33.
- 27. Kruks G. Gay and lesbian homeless/street youth: special issues and concerns. J Adolesc Health. 1991;12:515-518