Assessing and Quantifying High Risk: Comparing Risky Behaviors by Youth in an Urban, Disadvantaged Community with Nationally Representative Youth

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SYNOPSIS

Objective. This study examined whether youth who live in an urban, disadvantaged community are significantly more likely than youth representing the nation to engage in a range of health-compromising behaviors.

Methods. Analyses were based on the Youth Violence Survey conducted in 2004 and administered to students (n=4,131) in a high-risk school district. Students in ninth grade (n=1,114) were compared with ninth-grade students in the 2003 national Youth Risk Behavior Survey (n=3,674) and the National Longitudinal Study of Adolescent Health conducted in 1995/1996 (n=3,523). Analyses assessed the differences in prevalence of risk and protective factors among ninth-grade students from the three studies using Chi-square tests.

Results. The results showed that youth in this urban, disadvantaged community were significantly more likely than their peers across the country to report vandalism, theft, violence, and selling drugs. Youth in this community also reported significantly less support from their homes and schools, and less monitoring by their parents. Moreover, youth in this community were significantly less likely to binge drink or initiate alcohol use prior to age 13 than youth across the U.S.

Conclusions. Youth who live in this urban, disadvantaged community reported significantly higher prevalence of some, but not all, risky behaviors than nationally representative U.S. youth. These findings highlight that some caution is justified when defining what might constitute high risk and that demographic and other characteristics need to be carefully considered when targeting certain high-risk behaviors.

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Researchers and health practitioners concerned with preventing unsafe sexual behaviors, substance use, suicide attempts, unintentional injuries, and violence among youth often use the term "high risk" as a shorthand to describe adolescents who face disadvantage or adversity narrowly or broadly defined. Disadvantage and adversity are often determined through the level of poverty, unemployment, and crime in a community,[1,2] living in an urban area,[3–7] or being a member of a minority group.[7] High-risk youth are also identified because they attend alternative high schools,[8–10] have been involved, or are at risk for involvement, in the juvenile justice system,[11] engage in certain behaviors such as drinking alcohol,[12] participate in school dropout prevention programs,[13,14] or participate in other programs or services such as youth drop-in centers.[15]

The term "high-risk youth" is so frequently used that an online search using Google® yielded 2.6 million hits. Likewise, a search of the PubMed database for "high-risk youth" yielded a list of 16,954 scientific publications related to this topic. In addition to the term "high-risk youth," there are other variations such as "at-risk youth" and "problem youth" that are also commonly used. While the term high-risk youth is frequently used, it is not always clearly defined. The underlying rationale for using this shorthand to describe youth who may be high risk, at risk, or who live in high-risk communities is based on efforts to streamline resources and to maximize the effectiveness of targeted prevention programs and interventions. Nevertheless, youth who live in high-risk communities, surrounded by poverty, unemployment, and crime, may not necessarily be at higher risk of engaging in risky behaviors despite their immediate surroundings and accompanying community-level risk factors. Efforts to quantify and describe high-risk behaviors among youth who live in an urban, disadvantaged community relative to nationally representative populations are scarce. However, such studies are needed to better determine and understand risk for involvement in health-compromising behaviors and to allocate limited resources for prevention and intervention programs.

National and state-level data collection projects frequently rely on complex sampling strategies to obtain representative samples of participants. These data systems are then used to determine the burden of disease, prevalence of health-risk behaviors, trends in disease or behavior patterns over time, geographic variability in disease patterns, and behaviors and demographic characteristics or risk factors associated with disease or health-risk behaviors.[16] The data obtained from these efforts are critical for health monitoring and disease prevention but are most often not available at the local level.[17] Local data (e.g., data from the county, city, or community) are needed to supplement national and state-level data by providing more specific information about geographic areas of increased risk and also to provide the baseline data for targeted prevention and intervention efforts. The need for local health data has been emphasized and explained in several publications,[17–20] and some large surveillance systems are now incorporating and collecting information in local areas.[21]

A recent study highlighted large variations in health conditions within a large city,[17] suggesting that there is a need to collect data at even smaller geographic boundaries or communities. As additional data collection efforts for smaller geographic regions are implemented and data become available, the need for appropriate and relevant comparisons for disease prevalence and health-risk behaviors across topics will be desirable. So far, general comparisons of involvement in high-risk behaviors across a range of health-risk behaviors among youth who live in a defined and urban, disadvantaged community and nationally representative samples of adolescents have not, to our knowledge, been systematically reported.

This study sought to determine and statistically examine whether ninth-grade students who live in one disadvantaged, urban community (broadly defined as the catchment area of an urban school district) are significantly more likely to engage in a range of health-compromising behaviors than youth representative of the nation. Findings from this study can have implications for how we quantify and define high risk and also how we address health disparities in urban, disadvantaged communities disproportionately populated by minorities.

METHODS

The current analyses, conducted in 2005 and 2006, used data from the 2004 Youth Violence Survey: Linkages Among Different Forms of Violence (Linkages), the 2003 Youth Risk Behavior Survey (YRBS), and the first wave (1995/1996) of the National Longitudinal Study of Adolescent Health (Add Health).

Linkages

The cross-sectional Linkages covered topics pertaining to delinquency, substance use, interpersonal violence, suicide, and other high-risk behaviors. The survey was administered to students in grades seven, nine, 11, and 12 from 16 schools in a high-risk school district.[1,2] The

high-risk community was chosen by ranking U.S. cities on several community indicators (e.g., rates of poverty, unemployment, single-parent households, and serious crimes) and determining the most appropriate school districts within those cities based on the number of students enrolled, feasibility of conducting the study, and the school district's willingness to host the study. The selected city and school district were among the highest 25 nationally in poverty, the highest 15 in single-parent families, the highest 10 in serious crime, and the highest 35 in unemployment. The selected school district was racially and ethnically diverse and located in a city with a population of less than 250,000. Per the request of the school district, its name and location are not to be disclosed. This district operated 16 schools and served students at one or more of the targeted grades. All 16 schools were invited and all 16 schools agreed to participate in the study. These included elementary, middle, and high schools, as well as alternative schools.

All eligible English-speaking students in the selected grades were invited to participate in the survey. The three grade levels were selected to assess potential age differences or developmental patterns during the transition from early to late adolescence among high-risk students. Students were identified through class lists of required core subjects (e.g., English) in the selected grades or through their homerooms.

Prior to data collection, all students younger than 18 years of age were required to obtain signed, written parental permission to participate in the study. Students who were at least 18 years of age provided written consent prior to participating in the survey. Student permission forms were provided in English, Spanish, and other major languages as requested by the schools.

Data collection occurred in April 2004. The anonymous, self-administered questionnaire was conducted by experienced field staff during a 40-minute class period. Students were ineligible to participate if they could not complete the questionnaire independently (e.g., enrolled in a special education class, required the assistance of a translator, or had cognitive disabilities that would prevent adequate understanding and responding to the survey) (n=151) or if the student had dropped out of school, had been expelled, or was on long-term out-of-school suspension (n=202). Of the 5,098 students who were eligible for participation, 4,131 participated, yielding a participation rate of 81.0%. Participants were enrolled from three grade levels: 1,491 in seventh grade, 1,114 in ninth grade, and 1,523 in 11th and 12th grades.

YRBS

The YRBS is a nationally representative, cross-sectional, school-based survey of U.S. high school students that measures risk and health behaviors among students in grades nine through 12. Details of the survey have been described elsewhere.[22,23] The sampling frame for YRBS includes all public and private schools in the U.S. that have at least one grade between nine and 12. The current analyses are based on the 2003 survey administration, which was completed by 13,953 students. The overall response rate was 67.0%. Students voluntarily completed the anonymous, self-administered questionnaire in school following local parental permission procedures. The data were weighted to be representative of students in grades nine through 12 in public and private schools in the U.S.

Add Health

Add Health is a longitudinal study of health and health-related behaviors that collects information on a broad range of individual, family, school, and community factors. The first wave of data was collected from students in grades seven through 12 who attended either public or private schools during the 1994–1995 school year. Details regarding the survey methodology are described elsewhere.[24] In brief, this study used a multistage probability sample design, had a response rate of 78.9%, and resulted in a nationally representative sample of adolescents (n=18,924). Students completed the 90-minute in-home interview using computer-assisted personal interviewing and audio computer-assisted self-interviewing (ACASI) for sensitive information, where participants listened to the questions through headphones and gave responses directly on a laptop computer to increase accuracy of reporting.

Analyses

The studies used for the analyses included different grade levels in their study populations. The Linkages survey included students in seventh, ninth, 11th, and 12th grades, whereas the YRBS included students in ninth through 12th grades. To allow for meaningful comparisons among students in the same grade level, all analyses were restricted to students in the ninth grade. Therefore, the numbers of participants included in the analyses from each of the three studies were: Linkages, n=1,114; YRBS, n=3,674; and Add Health, n=3,523. YRBS also included a measure of urbanicity that was used to identify participants in the ninth grade who attended school in urban areas (n=1,411).

For the current analyses, measures of demographic characteristics, school performance, violence, assault

and delinquency, suicidal behaviors, substance use, parental monitoring, and support were used to compare data from the three studies. For some variables, survey questions were worded slightly differently, different time periods were captured, or response options varied. In such cases, efforts were made to recode the variables, where possible, to allow for meaningful comparisons. (A description of how all the variables were recoded is available upon request from the authors.) A detailed comparison of the questions included in the comparisons as well as their response options is presented in the Figure. Analyses were conducted using SAS® Version 9.1[25] and SUDAAN®[26] statistical software to incorporate the survey sampling designs of YRBS and Add Health. Differences in proportions were assessed using Chi-square tests.

RESULTS

Comparisons among ninth graders in the Linkages study, YRBS, and Add Health (Table 1) showed that there were racial/ethnic differences among study participants primarily reflected by a larger proportion of Hispanic and African American participants in the Linkages study vs. the other two studies. Several significant differences in the prevalence of involvement or exposure to risky behaviors were observed. In terms of school factors, skipping school without an excuse was significantly more common among Linkages participants (44.0%) than among participants in Add Health (26.9%). Moreover, lower grades (mostly Ds or Fs) were also significantly more common among Linkages participants (17.5%) than among participants in either YRBS (8.3%) or Add Health (6.7%).

In terms of involvement in delinquent or violent behaviors, Linkages participants (20.1%) were significantly more likely to carry a weapon than YRBS participants (18.0%), but there were no differences for carrying a gun. Using or threatening to use a weapon to get something from someone, involvement in group fighting, and having hurt someone badly enough to require bandages were significantly more common behaviors among Linkages participants than among Add Health participants. Likewise, deliberately damaging others' property and selling marijuana or other drugs were also significantly more common behaviors among Linkages participants than among Add Health participants. Significant differences were also noted for reporting suicide ideation or attempts.

Early alcohol use initiation (younger than 13 years of age) was less prevalent among Linkages participants than among YRBS participants. Also, while current binge drinking was less common among Linkages participants than among YRBS and Add Health participants, Linkages participants were more likely than YRBS or Add Health participants to report current, but less heavy, alcohol use. Inhalant and other illegal drug use was also more prevalent among Linkages participants than among YRBS or Add Health participants. Potentially protective factors for involvement in risky behaviors such as parental monitoring (time to be home on weekdays) and support in the home (parent/family cares about me) or at school (teachers care about students) were significantly less common among Linkages participants than among Add Health participants.

Further comparisons between Linkages participants and YRBS participants who live in an urban setting were made to determine if there were significant differences between youth in a high-risk community and nationally representative youth due to living in an urban setting (Table 2). Demographic differences were noted, and the Linkages participants included a smaller proportion of male, African American, and other minority youth and a larger proportion of Hispanic youth than the YRBS. Linkages participants relative to YRBS participants living in urban settings reported a higher prevalence of lower grades, gun carrying, forced sexual intercourse, suicide ideation, and current drinking. Linkages participants relative to YRBS participants also reported a lower prevalence of early alcohol use initiation and less prevalent binge drinking.

DISCUSSION

The comparisons between youth who live in a high-risk community and youth from nationally representative studies revealed several important findings. Youth who live in an urban, disadvantaged community identified and defined primarily through census indicators (e.g., population below the poverty level, unemployment, single-parent households, and serious crime) were significantly more likely to engage in a range of health-risk behaviors than their peers across the U.S. While a number of statistically significant differences were observed, the largest and potentially most important differences were related to vandalism, involvement in violence including group fighting (a proxy for gang violence), weapon use, and drug selling. Further comparisons between youth in the selected high-risk community and nationally representative youth who live in diverse, urban settings revealed important, but fewer significant differences. These comparisons from our study showed that low grades, gun carrying, suicide ideation, violent sexual victimization, and current alcohol use were significantly more prevalent among

Figure. Question wording and response options of measures included in three youth studies

	Linkages questions (response options)	*YRBS questions (response options)*	*Add Health questions (response options)*
School			
Skipped school without an excuse	How often did you skip school without an excuse? (Never to ≥5 times)	NA	During this school year, how often did you skip school without an excuse? (0 times to 99 times)
Grades—mostly Ds or Fs	During the past 12 months, how would you describe your grades in school? (Mostly As to mostly Fs)	During the past 12 months, how would you describe your grades in school? (Mostly As to mostly Fs)	1) At the last/most recent grading period, what was your grade in English or language arts? (A to D or lower) 2) Mathematics (A to D or lower) 3) History or social studies (A to D or lower) 4) Science (A to D or lower)
Teachers care about students	I agree that at school, there are adults I can talk to, who care about my feelings and what happens to me. (Not at all to a lot)	NA	How much do you feel that your teachers care about you? (Not at all to very much)
Violence, assault, and delinquency			
Carried a weapon (past 30 days)	During the past 30 days, on how many days did you carry a weapon such as a gun, knife, or club? (0 days to ≥6 days)	During the past 30 days, on how many days did you carry a weapon such as a gun, knife, or club? (0 days to ≥6 days)	NA
Carried a gun (past 30 days)	During the past 30 days, on how many days did you carry a gun? (0 days to ≥6 days)	During the past 30 days, on how many days did you carry a gun? (0 days to ≥6 days)	NA
Forced sexual intercourse	1) In the past 12 months, how often has someone you have been on a date with forced you to have sex or to do something sexual that you did not want to? (Never to ≥10 times) 2) Before you were 10 years of age, did someone ever force you to have sex or do something sexual that you did not want to? (Yes or no)	Have you ever been physically forced to have sexual intercourse when you did not want to? (Yes or no)	NA
Hurt someone badly enough to need bandages	How often did you hurt someone badly enough to need bandages or care from a doctor or nurse? (Never to ≥5 times)	NA	How often did you hurt someone badly enough to need bandages or care from a doctor or nurse? (Never to ≥5 times)
Fought as part of a group	How often did you take part in a fight where a group of your friends was against another group? (Never to ≥5 times)	NA	In the past 12 months, how often did you take part in a fight where a group of your friends was against another group? (Never to ≥5 times)
Deliberately damaged other's property	How often did you deliberately damage property that didn't belong to you? (Never to ≥5 times)	NA	In the past 12 months, how often did you deliberately damage property that didn't belong to you? (Never to ≥5 times)
Sold marijuana or other drugs	How often did you sell marijuana or other drugs? (Never to ≥5 times)	NA	How often did you sell marijuana or other drugs? (Never to ≥5 times)
Used or threatened to use a weapon to get something	How often did you use or threaten to use a weapon to get something from someone? (Never to ≥5 times)	NA	How often did you use or threaten to use a weapon to get something from someone? (Never to ≥5 times)

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Figure (continued). Question wording and response options of measures included in three youth studies

	Linkages questions (response options)	*YRBS questions (response options)*	*Add Health questions (response options)*
Suicidal behaviors			
Suicide ideation (past 12 months)	During the past 12 months, did you ever seriously consider attempting suicide? (Yes or no)	During the past 12 months, did you ever seriously consider attempting suicide? (Yes or no)	During the past 12 months, did you ever seriously think about committing suicide? (Yes or no)
Attempted suicide (past 12 months)	During the past 12 months, how many times did you actually attempt suicide? (0 times to ≥6 times)	During the past 12 months, how many times did you actually attempt suicide? (0 times to ≥6 times)	During the past 12 months, how many times did you actually attempt suicide? (0 times to ≥6 times)
Substance use			
Alcohol initiation <13 years of age	How old were you when you had your first drink of alcohol, other than a few sips? (Never to ≥17 years)	How old were you when you had your first drink of alcohol, other than a few sips? (Never to ≥17 years)	Think about the first time you had a drink of beer, wine, or liquor when you were not with your parents or other adults in your family. How old were you then? (1 year to ≥19 years)
At least one drink of alcohol (last 30 days)	During the past 12 months, on how many days did you have at least one drink of alcohol? (Every day/almost every day to never)	During the past 30 days, on how many days did you have at least one drink of alcohol? (0 days to all 30 days)	During the past 12 months, on how many days did you drink alcohol? (Every day/almost every day to 1 or 2 days)
Binge drinking (last 30 days)	During the past 12 months, on how many days did you drink ≥5 drinks in a row? (Every day/almost every day to never)	During the past 30 days, on how many days did you drink ≥5 drinks in a row; that is, within a couple of hours? (0 days to all 30 days)	During the past 12 months, on how many days did you drink ≥5 drinks in a row? (Every day/almost every day to 1 or 2 days)
Used inhalants or illegal drugs (last 30 days)	During the past 12 months, on how many days did you use inhalants (glue or solvents) or illegal drugs such as marijuana, cocaine, or heroin? (Every day/almost every day to never)	1) During the last 30 days, how many times did you use marijuana? (0 times to ≥40 times) 2) During the past 30 days, how many times did you use any form of cocaine, including powder, crack, or freebase? (0 times to ≥40 times) 3) During the past 30 days, how many times have you sniffed glue, breathed the contents of aerosol spray cans, or inhaled any paints or sprays to get high? (0 times to ≥40 times)	1) During the past 30 days, how many times did you use marijuana? (0 times to 900 times) 2) How many times did you use cocaine? (0 times to ≥33 times) 3) How many times did you use inhalants? (0 times to 789 times) 4) How many times did you use any other type of illegal drug? (0 times to 900 times)
Parental monitoring/support			
Set time to be home weekends	In the past 30 days, how often did you have a set time to be home on weekend nights? (No set time to I almost always had a set time)	NA	Do your parents let you make your own decisions about what time to be home on weekend nights? (Yes or no)
Parent/family cares about me	I agree that there are people in my family I can talk to, who care about my feelings, and what happens to me. (Not at all to a lot)	NA	How much do you feel that your parents care about you? (Not at all to very much)

Linkages = 2004 Youth Violence Survey: Linkages Among Different Forms of Violence

YRBS = 2003 Youth Risk Behavior Survey

Add Health = National Longitudinal Study of Adolescent Health (1995/1996)

NA = not applicable

Table 1. Comparison of demographic characteristics and involvement in risk behaviors and experiences among ninth graders

	Linkages 2004 Urban students n=1,114 (percent)	*YRBS 2003 All students n=3,674 (weighted percent)*	*Add Health All students n=3,523 (weighted percent)*
Demographic characteristics			
Male	551 (49.6)	1,859 (52.2)	1,600 (51.4)
Hispanic	503 (46.4)[a,b]	956 (18.7)	505 (12.3)
African American	278 (25.7)[a,b]	860 (16.1)	683 (15.2)
White	263 (23.6)[a,b]	1,539 (56.1)	1,865 (67.6)
Other race	40 (3.6)[a,b]	293 (8.8)	190 (4.9)
Two-parent family	486 (43.7)[b]	NA	1,969 (62.1)
School			
Skipped school without an excuse	477 (44.0)[b]	NA	855 (26.9)
Grades of mostly Ds or Fs	187 (17.5)[a,b]	311 (8.3)	213 (6.7)
Teachers care about students	714 (67.7)[b]	NA	2,718 (83.8)
Violence, assault, and delinquency			
Carried a weapon (past 30 days)	222 (20.1)[a]	602 (18.0)	NA
Carried a gun (past 30 days)	67 (6.1)	198 (5.9)	NA
Forced sexual intercourse	133 (12.1)[a]	281 (8.0)	NA
Hurt someone badly enough to need bandages	298 (27.9)[b]	NA	678 (21.5)
Fought as part of a group	328 (30.0)[b]	NA	706 (22.8)
Deliberately damaged others' property	488 (44.8)[b]	NA	678 (21.8)
Sold marijuana or other drugs	127 (11.7)[b]	NA	855 (2.1)
Used or threatened to use a weapon to get something	168 (15.4)[b]	NA	166 (4.9)
Suicidal behaviors			
Suicide ideation (past 12 months)	213 (19.6)[a,b]	599 (16.9)	481 (15.1)
Attempted suicide (past 12 months)	116 (10.7)[b]	322 (10.1)	148 (4.9)
Substance use			
Alcohol initiation <13 years of age	281 (26.0)[a,b]	1,068 (30.8)	402 (14.5)
At least one drink of alcohol (last 30 days)	548 (51.1)[a,b]	1,261 (36.2)	506 (16.4)
Binge drinking (last 30 days)	96 (8.7)[a]	708 (19.8)	302 (10.3)
Used inhalants or illegal drugs (last 30 days)	283 (25.9)[a,b]	773 (21.6)	511 (16.3)
Parental monitoring/support			
Set time to be home weekdays	576 (52.7)[b]	NA	2,268 (75.6)
Parent/family cares about me (some to a lot or very much)	915 (88.1)[b]	NA	3,185 (98.7)

[a]Comparison with YRBS resulted in differences significant at $p \leq 0.05$.

[b]Comparison with Add Health resulted in differences significant at $p \leq 0.05$.

Linkages = 2004 Youth Violence Survey: Linkages Among Different Forms of Violence

YRBS = 2003 Youth Risk Behavior Survey

Add Health = National Longitudinal Study of Adolescent Health (1995/1996)

NA = not applicable

youth in a high-risk community relative to urban youth in general.

The findings also showed that youth in the disadvantaged community recruited for Linkages were significantly less likely to binge drink (i.e., consume five or more drinks during the same occasion) and also less likely to initiate alcohol use prior to age 13 than youth across the U.S. In fact, while youth in an urban, disadvantaged community were more likely to report current alcohol use than urban youth across the nation, they remained less likely to report initiating alcohol use prior to age 13 or to binge drink compared with nationally representative urban youth. These findings highlight that some caution is justified when defining what may constitute high-risk youth and that demographic and other characteristics need to be carefully considered when targeting certain high-risk behaviors.

With respect to alcohol use, studies indicate that drinking prevalence and patterns vary dramatically dur-

Table 2. Comparison of demographic characteristics and involvement in risk behaviors and experiences among ninth graders in urban areas

	Linkages 2004 Urban students n=1,114 (percent)	*YRBS 2003 Urban students n=1,411 (weighted percent)*
Demographic characteristics		
Male	551 (49.6)[a]	746 (54.9)
Hispanic	503 (46.4)[a]	460 (30.3)
African American	278 (25.7)[a]	436 (30.8)
White	263 (23.6)	353 (28.5)
Other race	40 (3.6)[a]	144 (10.3)
School		
Grades of mostly Ds or Fs	187 (17.5)[a]	114 (8.3)
Violence, assault, and delinquency		
Carried a weapon (past 30 days)	222 (20.1)	226 (17.1)
Carried a gun (past 30 days)	67 (6.1)[a]	57 (4.2)
Forced sexual intercourse	133 (12.1)[a]	118 (8.7)
Suicidal behaviors		
Suicide ideation (past 12 months)	213 (19.6)[a]	227 (15.2)
Attempted suicide (past 12 months)	116 (10.7)	122 (9.3)
Substance use		
Alcohol initiation <13 years of age	281 (26.0)[a]	391 (27.3)
At least one drink of alcohol (last 30 days)	548 (51.1)[a]	453 (32.2)
Binge drinking (last 30 days)	96 (8.7)[a]	239 (15.7)
Used inhalants or illegal drugs (last 30 days)	283 (25.9)	311 (24.1)

[a]Comparison with YRBS resulted in differences significant at $p \leq 0.05$.

Linkages = 2004 Youth Violence Survey: Linkages Among Different Forms of Violence

YRBS = 2003 Youth Risk Behavior Survey

ing the adolescent years,[22] and binge drinking tends to be less common among African American and Hispanic adolescents relative to white adolescents.[16] These findings likely contribute to the patterns observed in the current study, in which a higher percentage of students were self-described as minorities than in the general population. Moreover, the risk factors pertaining specifically to youth alcohol initiation are relatively poorly understood and very few studies have examined alcohol initiation specifically among minority youth.[27,28]

Limitations

Several limitations should be noted when interpreting these findings. First, the analyses compared prevalence of health-risk behaviors between students in one urban, disadvantaged community relative to participants in two studies of nationally representative youth. The selected urban, disadvantaged community may not be representative of other urban, disadvantaged communities. However, the comparisons provided highlight that health-risk behaviors among youth within an urban, disadvantaged context, and also relative to nationally representative youth, are worth further exploration.

Second, analyses were restricted to students in the ninth grade to allow for meaningful and relevant comparisons with other data sources and also because the proportion of ninth graders who remain in school is higher than that of students in subsequent grades. Limiting analyses to ninth graders may yield findings that do not generalize to younger or older students or to youth who are no longer attending school.

Third, the Linkages and YRBS studies are the most appropriate comparisons because the survey administrations, which included anonymous paper and pencil multiple-choice survey formats, were nearly equivalent and also administered only one year apart. The Add Health study was administered in 1995 and the data were obtained through in-home interviews, mostly using ACASI. Therefore, differences noted between the Linkages and Add Health studies may be attributable, in part, to the different methodologies and the number of years between data collections. In particular, research on the effects of data collection methodology

reveals that school-based surveys tend to yield higher prevalence estimates for health-risk behaviors than do household-based surveys.[29] Despite these limitations, the inclusion of the Add Health data provides an additional source and useful national comparison of these risky behaviors, which are relatively stable across time and also are rarely assessed in other national studies.

Fourth, not all questions were worded identically, which may also yield differences among the studies.[30] Fifth, because the purpose of the analyses was to compare urban youth relative to the U.S. representative youth, statistical analyses were conducted and presented to illustrate the similarities and differences among the groups without statistically controlling for potential factors that may explain these differences. Moreover, because the number of participants was relatively large across the studies, some of the statistical differences observed were small. Finally, all the findings were based on self-reported data without any corroboration with other sources and were, therefore, subject to reporting biases.

CONCLUSIONS

This study compared and quantified involvement in a range of health-compromising behaviors among ninth-grade students who live in an urban, disadvantaged community relative to their peers across the U.S. The findings showed that youth who may be described as high risk because they live in an urban, disadvantaged community (based on census indicators) are significantly more likely than their peers across the country to report involvement in a number of risky and criminal behaviors including vandalism, violence, and selling drugs. Moreover, the youth who live in an urban, disadvantaged community were also significantly more likely than their peers across the country to report less support from their homes and schools and less monitoring by their parents. These additional barriers in forms of lower academic achievement and less available support and structure in the home and school environments likely exacerbate the already limited opportunities for youth to engage in safe, productive, and meaningful activities within an urban, disadvantaged community and can further provide context as to why these youth engage in more high-risk behaviors.

While this study showed significantly higher involvement in many high-risk behaviors among youth in an urban, disadvantaged community compared with youth in national samples, the relative difference between youth in an urban, disadvantaged community and nationally representative youth may not be as pronounced as one would expect and may in some cases not represent meaningful differences. In fact, lower levels of involvement in some risk behaviors among youth from the high-risk community were observed. It is important to recognize, however, that the type of disadvantage can vary across communities and can also comprise different social issues and community characteristics.

Nonetheless, it is recommended that the term high risk, unless specifically quantified and described, be used with caution. There is a clear need to rethink our use of the term high risk and the impact it may have both for research and practice. Minimally, it will be important to specify if, and when, high risk refers to primarily social or environmental contextual factors such as living in an urban, disadvantaged community or when high risk refers to individual behaviors or other exposures that increase the likelihood of adverse health outcomes. However, in either case, a comparison or a reference point that quantifies the excess risk would also be helpful and meaningful. Finally, because of diminishing resources and increased demand for accountability and impact of our research and programs, providing a specific and carefully operationalized approach to identifying and quantifying youth at high risk is necessary and could greatly improve comparisons across studies as well as the identification of priorities for prevention.

Drs. Swahn and Bossarte were in the Division of Violence Prevention, the National Center for Injury Prevention and Control, Centers for Disease Control and Prevention (CDC) when this research was conducted. The findings and conclusions in this article are those of the authors and do not necessarily represent the views of CDC.

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