Youth Assets and Sexual Activity: Differences Based on Race/Ethnicity

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Abstract

Race/ethnicity has been associated with the prevalence of sexual activity among youth as well as with youth assets. Research has also shown that youth assets are associated with youth abstinence. However, very few studies have examined whether the relationship between youth assets and sexual activity might differ based on race/ethnicity. The study sample consisted of youth (Mean age=14.9 ±1.8 years; 52% Female; 49% White; 25% Hispanic; 26% Black) and their parents (N=2090 youth/parent pairs) living in two Midwest cities. Thirty-seven percent of Black youth, 29% of White youth and 27% of Hispanic youth have reported being sexually active. Within the White subgroup only four assets (Family Communication, Use of time [Religion], Community Involvement and Peer Role Models) were significantly associated with never having had sexual intercourse. Within the Black subgroup only one asset (Non-Parental Adult Role Models) was associated with never having had sexual intercourse. Finally, within the Hispanic subgroup only two assets (Peer-Role Models and Use of Time [Religion]) were associated with never having had sexual intercourse. The results indicate that the asset/sexual relationship may vary by race/ethnicity. Thus, culturally relevant interventions with a focus on increasing specific youth assets may hold potential for reducing teen sexual behavior.

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Introduction

Sexual risk behaviors pose a significant threat to the physical and social well-being of youth, with approximately four million new cases of sexually transmitted diseases in adolescents each year including AIDS, the seventh leading cause of death for 15-24 year-olds (Centers for Disease Control and Prevention [CDC], 2004). Additionally, teen mothers are at a greater risk of poverty, school failure, and dependence on public assistance (Hoffman & Foster, 2001). Similarly, teen fatherhood seems to be associated with negative consequences including reduced educational attainment and greater financial hardship (Brein & Willis, 1997; Hoffman, 2006). Babies born to teens are also at increased risk of poverty, low educational attainment, early sexual activity, and are more likely to engage in problem behaviors and become teen parents themselves (Levine, Pollack, & Comfort, 2001).

Despite a decline in both teen pregnancy and teen birth rates since the early 1990s, the United States still has the highest rates of teen pregnancy and births among industrialized countries (United Nations Statistics Division, 2004). According to the Youth Risk Behavior Survey (YRBS), 46.8% of students in the United States attending 9th-12th grades have had sexual intercourse during their lifetime (CDC, 2006). Approximately one third (35.3%) of students nationwide had sexual intercourse within the three months preceding the survey (i.e., they are currently sexually active). There are racial/ethnic disparities in the percent of youth who engage in sexual intercourse (CDC, 2006). In 2005, Non-Hispanic Black teens were more likely to be sexually experienced (68%) than Hispanic (51%) or Non-Hispanic White teens (43%). There are also racial disparities in negative consequences associated with sexual intercourse among youth. In 2004, the birth rate for Hispanic girls aged 15 to 19 was the highest, 82.6 per 1,000, followed by the birth rate for Non-Hispanic Black teens 63.3 per 1,000, and Non-Hispanic White teens 26.7 per 1.000 (Martin et al., 2006). Non-Hispanic Black youth aged 13-24 are also disproportionately affected by HIV infection, accounting for 55% of all HIV infections (CDC, 2005).

Possible reasons for these disparities are related to personal, inter-personal, and contextual factors. Research has shown that earlier ages of pubertal development in Non-Hispanic Blacks and European American girls may partially account for racial differences in sexual risk behaviors (Obeidallah, Brennan, Brooks-Gunn, Kindlon, & Earls, 2000). Differences by race/ethnicity are also found regarding

peer sex norms, with Non-Hispanic Blacks more likely than Hispanics to agree that peers are having sex or are ready to have sex (O'Donnel, Myint-U, O'Donnell, & Stueve, 2003). Several studies have also linked poverty to the risk of teen pregnancy (Browning, Leventhal, & Brooks-Gunn, 2004; South & Baumer, 2000). For example, one study has shown that Non-Hispanic Black adolescents have higher rates of premarital childbearing than Non-Hispanic White adolescents partly because they are more likely to reside in neighborhoods of lower socioeconomic status (South & Baumer).

Youth development programs are based on the belief that assets can insulate youth from engaging in harmful behaviors (Bernard, 1990; Bogenschneider, 1996; Jessor, 1991). The youth development approach suggests that youth should be viewed as resources instead of potential problems and thus, provide youth an environment that encourages positive growth and development despite potential adversity (Bernard, 1990). A review of 19 asset-based youth development programs showed significant improvement in positive youth behaviors such as inter-personal skills, quality of adult and peer relationships, self-control, problem solving, cognitive competencies, self-efficacy, commitment to schooling, and academic achievement (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 1998). Kirby (2001) also proposed that programs focusing on non-sexual antecedents (e.g. youth development) are effective in preventing teen pregnancy.

Few studies have examined the relationship between youth assets and engagement in at-risk sexual behaviors by ethnicity/race. According to one study, (Evans et al., 2004), among Non-Hispanic White females and males aged 14-18 the most significant asset associated with sexual risk behavior was "quantity of other adult support." Among Non-Hispanic Black females and males, the most significant asset associated with sexual risk behavior was self-peer values. However, the study results are limited by its setting (schools) and that only two racial groups (Non-Hispanic Black and Non-Hispanic White) were represented in the sample. This study overcame these limitations by incorporating a community-based randomized sample in which all three major racial/ethnic groups, Non-Hispanic Black, Non-Hispanic White and Hispanic, were represented.

The purpose of this study was to examine the relationship between youth assets and race/ ethnicity in the prediction of youth sexual behavior. Specifically, the study investigated two research questions: a) What is the prevalence of youth assets by race/ethnicity? and b) How do youth assets differ by race/ethnicity in their prediction of youth abstinence from sexual intercourse?

Methods

Data analyzed for this paper were combined from two independent studies conducted at two points in time using similar methodology and geographic locations. The first study was conducted as part of program evaluation efforts of the *HEART of OKC* (Healthy, Empowered and Responsible Teens of OKC) project. The *HEART of OKC* project was 1 of 13 community-based projects involved in the Center for Disease Control and Prevention's Community Coalition Partnership Programs for the Prevention of Teen Pregnancy.

In the *HEART of OKC* project, pilot studies (including 23 focus groups) were conducted involving asset identification and asset measurement (Kegler, Rodine, Marshall, Oman, & McLeroy, 2003). A literature search was then conducted based on the focus group results to identify appropriate items for asset measurement. The Youth Asset Survey was finalized across a 2-year period and assessed the nine youth assets, as well as health risk behaviors, such as sexual behavior, alcohol and drug use, tobacco use, and violence. A full description of the development and construction of the survey, as well as information regarding the reliability and validity of its scales is published elsewhere (Oman et al., 2002). A description of each asset, its conceptual definition and examples of representative items can be found in Table 1.

Sampling and Recruitment

The first *HEART of OKC* study was conducted in 1999/2000, and it included 1,350 teenagers and one parent per household (linked parent/teenager data, N= 2,700) who were recruited using a probability sample of households in four neighborhoods in Oklahoma City and four neighborhoods in Tulsa. The interviews were conducted by two-person, male and female teams using a laptop computer-assisted data entry system. Informed consent/assent was obtained from both the parent and the teenager who were interviewed at the same time but in different rooms of the home. The teenager self-administered the risk behavior questionnaire by listening to tape-recorded items with headphones and entering responses into the laptop computer. These procedures minimized potential problems such as missing data, response confidentiality, and the participants' level of reading comprehension. A Spanish-speaking interviewer using a Spanish language version of the survey interviewed Spanish-speaking parents. The response rate was 51%, in part owing to the necessity of obtaining consent from two persons per household, and the difficulty in scheduling two in-home interviews to be conducted simultaneously.

The second study, Youth Asset Study (YAS) began in 2003-2004 and was conducted only in Oklahoma City (1117 youth and parent pairs). Census tracts were selected to achieve a sample with broader racial/ethnic and socio-economic status characteristics compared to the first study. The YAS followed the identical research protocol as the first one and had a response rate of 61%.

Table 2 provides the Cronbach's alphas for each of the asset scales for each racial/ethnic group. For Non-Hispanic Black youth, these estimates ranged between 0.53 for Use of Time (Religion) and 0.78 for Community Involvement. For Non-Hispanic White, the range was between 0.62 for Family Communication and 0.82 for Peer Role Models. For Hispanic youth, the range was between 0.64 for Family Communication and 0.81 for Community Involvement.

Table 1

Youth Assets, Conceptual Definitions, and Representative Items

Asset scale	Conceptual definitions	Number of items	Examples of items
Non-parental adult role models[1]	Teen receives support from non-parent adult (social support).	7	You know adults who encourage you often. Most of the adults you know are good role models for you.
Peer role models[2]	Teens encourage and support each other in practicing health, responsible behavior.	6	Do most of your friends stay out of trouble? Are most of your friends responsible?
Family communication[2]	Teen communicates positively with, and seeks advice from parent(s), guardian, stepparent, or other family members with whom they currently live	4	How often do you talk to your mother or father (or an adult in the household) about your problems? My parents and I have talked about what is right and wrong in sexual behavior.
Use of time (group/sports)[2,3,4]	Teen participates in out-of-school and in-school programs/activities, such as recreation, sports, art, music, leadership skills, reading, etc.	4	You participate in an organized school activity outside of class.[2] How involved are/were you in out-of-school sports teams or groups?[3]
Use of time (religion)[3,5]	Teen participates in positive religious activities.	2	How involved are/were you in church/religious groups?[3] On average, how often did you attend religious services during the past 12 months?[5]
Good health practices[6]	Teen has habits that promote good health, including exercise and nutrition.	1	You take good care of your body by eating well and exercising.
Community Involvement[3,6]	Teen volunteers in service activities.	6	You work to make your community a better place.[6] You volunteer on a regular basis to help others in your community.[6]
Aspirations for the future[7]	Teen has positive view of future and self; teen feels his/her life has purpose.	2	As you look to your future, how important is it to you to stay in school? How important is it to your family that you continue your education after high school?
Responsible choices[6]	Teen is able to identify positive and negative consequences of behavior and choose appropriately.	6	You can say no to activities that you think are wrong. You think you should work to get something if you really want it.

[1] 1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree.
[2] 1=almost never, 2=some of the time, 3=usually, 4=almost always.
[3] 1=not at all, 2=somewhat involved, 3=very involved.
[4] 1=0, 2=1, 3=2, 4=3 or more.
[5] 1=never, 2=once a week, 3=about once a month, 4=one or two times a year.
[6] 1=not at all like you, 2=a little like you, 3=mostly like you, 4=very much like you.
[7] 1=not important at all, 2=somewhat important, 3=very important, 4=extremely important.

These ranges imply greater internal consistency of some scales than others and that the consistency of the instrument changes slightly by racial/ethnic group. Although these slight differences exist, these internal consistency estimates are generally good to excellent with only two Cronbach's alphas less than 0.60 [Family Communication, 0.56 and Use of Time (Religion), 0.53] both for the African American group.

Demographic Measures

Youth race/ethnicity was defined as Non-Hispanic Black, Non-Hispanic White, Hispanic, and Native American. Family structure was assessed via the parent for the *HEART of OKC* data and via the youth for the YAS and was defined as either both parents living in the household or only one parent living

Table 2

Cronbach's Alpha by Race/Ethnicity

Asset	Non-Hispanic Blacks		Non-Hispanic Whites		Hispanics	
	N	Cronbach's alpha	N	Cronbach's alpha	N	Cronbach's alpha
Non-parental adult role model	528	0.71	979	0.71	510	0.73
Peer role models	526	0.77	979	0.82	512	0.78
Family communication	550	0.56	1,025	0.62	538	0.64
Use of time (groups/sports)	529	0.69	989	0.69	523	0.73
Use of time (religion)	557	0.53	1,061	0.73	561	0.66
Good health practices (exercise/nutrition)		only 1 item		only 1 item		only 1 item
Community involvement	551	0.78	1,045	0.78	528	0.81
Future aspirations	532	0.64	993	0.68	530	0.67
Responsible choices	559	0.73	1,060	0.68	558	0.73

in the household. Yearly parental income was assessed via the parent data and was stratified into four categories: less than $20,000, $20,000 to $35,000, $35,001 to $50,000, and greater than $50,000. Parental education was assessed via the parent data and was also stratified into three categories: both parents had less than a high school education; at least one parent had completed high school, GED, or some college; and at least one parent had a bachelor's degree or higher. Assets were reported as present (1) or absent (0) based on youth mean responses to the items measuring the asset. Items comprising each asset were generally scored from 1 to 4, with 4 indicating the most positive response. An individual was said to have the asset if his/her mean score was 3 or higher. This indicated that the positive behavior was reported as "usually or almost always" or "very important or extremely important" or "agree or strongly agree." The youth's sexual behavior was assessed by the question, "Have you ever had sexual intercourse ('done it', 'had sex', 'made love', 'gone all the way')?" Youth responded either "yes" or "no" to the item. This is an established item recommended in teen pregnancy prevention research (Brindis, Peterson, Card, & Eisen, 1998; Card, Brindis, Peterson, & Niego, 1999).

Statistical Analyses for the Combined Data

The two surveys combined (*HEART of OKC* and YAS) resulted in a total of 2,461 youth/parent interviews. In this paper only youth who classified themselves as Non-Hispanic Black (n=560), Non-Hispanic White (n=1065), or Hispanic (n=560) were included. Youth were excluded due to classifying themselves as a different race/ethnicity (Native American n=178, Asian or Pacific Islander n=35, other race/ethnicity n=49) or not reporting a race/ethnicity (n=13) and due to small sample size of the racial/ethnic group. For the analyses pertaining to the prevalence of the assets, the sample sizes ranged from 526-559 for Non-Hispanic Black, 979-1060 for Non-Hispanic White, and 510-561 for Hispanics. Youth who answered all questions for each asset were included regardless of missing demographic variables other than race/ethnicity. For the analyses examining the prevalence of assets and the relationship between assets and sexual activity, youth were not included in the analyses due to one or more of the following reasons: missing demographic information (parental income n=58), and/or missing response on sexual intercourse question (n = 42). Maximum sample size for analysis involving the risk behavior never had sexual intercourse was 534 for Non-Hispanic Black, 1025 for Non-Hispanic White and 531 for Hispanics for a total of 2090 youth. The sample sizes varied due to the number of youth who were missing responses for a particular asset.

All statistical analyses were performed with SPSS for Windows, Release 14.0 or Microsoft Excel. An alpha of 0.05 was used to determine statistical significance unless otherwise noted. All analyses were performed separately by race/ethnicity for the risk behavior "never had sexual intercourse." Bivariate associations between categorical variables were assessed using a chi-square test. Analysis of variance (ANOVA) followed by Tukey's HSD (honestly significant difference) post-hoc test was used to detect any differences in the mean number of assets between the three racial/ethnic groups. The unadjusted odds ratios (OR) between each asset and each risk behavior were calculated using logistic regression. Adjusted ORs were calculated using multiple logistic regression between assets and each risk behavior while controlling for possible confounders. Youth age and gender, parent income and education, and family structure were only controlled for if the bivariate analysis indicated a p-value of ≤0.20 in any of the three strata. The same demographic variables were controlled for in all racial/ethnic strata to ease comparisons across race/ethnicities.

Multiple logistic regression was also use to calculate a multivariate model to determine whether the assets were significant in the presence of the other assets. Potential two-way interactions between each asset and each demographic variable were assessed in each logistic regression with the alpha level set at ≤0.005 in order to decrease the risk of a Type I error. Interactions were tested to examine whether the effects of the assets were similar across the levels of each demographic variable. For significant interactions, logistic regression was conducted by stratifying the demographic variable that showed the significant association or by adding an interaction term to the final model when appropriate. Interactions between assets were also examined and treated in a similar fashion.

Results

Demographic Characteristics

The sample for these analyses included 2,090 youth. The sample was 52% female and 26% were Non-Hispanic Black, 49% were Non-Hispanic White, 25% were Hispanic. The average age of the youth was 14.9 years (standard deviation 1.8 years). When considering the household environments of these youth, 58% lived in households with incomes of $35,000 or less; 42% lived in single-parent homes; and 22% had at least one parent who had graduated from college or had a higher level of education. Of the 2,090 youth in the sample, 70% reported that they had never had sexual intercourse with 63% of Non-Hispanic Black, 71% of Non-Hispanic White and 73% of Hispanic youth reporting abstinence.

Table 3 contains the frequencies and chi square results for youth and parent demographics by ethnic groups. Youth age was associated with abstinence in all three racial/ethnic groups ($p < 0.001$); as age increased the proportion of youth reporting abstinence decreased. Youth gender was associated with abstinence only among Hispanics ($p=0.043$) with males more likely to be sexually active than females. Parental income was associated with abstinence in only the Non-Hispanic Black ($p=0.002$) and the Non-Hispanic White ($p < 0.001$) groups indicating that as the income increased so did the proportion of youth reporting abstinence. Family structure was also associated with abstinence in all three groups in that youth who lived in two-parent households were more likely to report abstinence than youth living in one-parent households ($p < 0.001$ for Non-Hispanic Black and Non-Hispanic White youth and $p = 0.008$ for Hispanic youth). Parental education was also significantly associated with abstinence for youth who had at least one parent with a bachelor's degree having the highest rates of abstinence ($p = 0.003$ for Non-Hispanic Black youth, $p < 0.001$ for Non-Hispanic White youth, and $p=0.032$ for Hispanic youth).

Prevalence of Youth Assets by Racial/Ethnic Group

Table 4 contains the prevalence of youth assets by racial/ethnic group. The prevalence of all assets, with the exception of Good Health Practices (exercise/nutrition) and Responsible Choices, was significantly different between racial/ethnic groups. For the other seven assets, Hispanics reported the lowest prevalence for each asset except for Aspirations for the Future. In addition, a difference in the mean number of assets was detected among the three racial/ethnic groups ($p=0.001$), with the Non-Hispanic Black and Non-Hispanic White youth having a significantly higher mean number of assets than Hispanics (5.80, 5.56, 5.03 respectively).

Youth Assets and Abstinence

Table 5 contains the adjusted odds ratios (OR) and 95% confidence intervals (CI) from individual multiple logistic regression models for youth assets on youth abstinence by ethnic group. For the Non-Hispanic Black group, only one asset (Non-Parental Adult Models) remained significantly associated with abstinence after controlling for youth age and gender, parental education and income, and family structure. Youth with this asset were about 1.9 times as likely to report abstinence compared to youth without this asset.

For the Non-Hispanic White teens, all assets except Good Health Practices (exercise/nutrition) remained significantly associated with abstinence after adjusting for youth age and gender, parental education and income, and family structure with odds ratios ranging from 1.49 to 2.75. In addition, there was an interaction between Peer Role Models and income levels. The Peer Role Model asset is not significantly related to abstinence for those with a parental income of $20,000 – $35,000. However, for youth in other parental income categories the relationship is significant with youth possessing the Peer Role Models asset having 3.65, 2.86 and 7.92 greater odds of abstinence as compared to youth without the Peer Role Models asset for the income groups of less than $20,000, $35,000 – $50,000 and more than $50,000, respectively.

For Hispanic youth (Table 5), four assets remained significantly associated with abstinence after adjusting for youth age and gender, parental education and income, and family structure. These assets included Peer Role Models (OR = 2.42), Use of Time (Religion) (OR = 3.17), Aspirations for the Future (OR = 1.94), and Responsible Choices (OR = 2.42).

Table 6 contains the results of the overall multiple logistic regression model comparisons for each of the three racial/ethnic groups. For the Non-Hispanic Black youth, only one asset, Non-Parental Adult Role Models (OR=1.94) remained significant after adjusting for youth age and gender, parental education and income, family structure, and other assets in the model. For the Non-Hispanic White youth, four assets remained significant after adjusting for the same demographic variables as above and other assets in the model. These are: Family Communication (OR=1.68), Use of Time (Religion) (OR=2.47), Community Involvement (OR=1.72), and Peer-Role Models (interaction). The interaction analysis reveals that the relationship between Peer Role Models and abstinence is different for the different levels of income.

Table 3

Frequencies and Chi-Square Values for Youth and Parent Demographics for Non-Hispanic Blacks (n=534), Non-Hispanic Whites (n=1025), and Hispanics (n=531) for Never had Sexual Intercourse

	Non-Hispanic Blacks			Non-Hispanic Whites			Hispanics		
Demographic variable	No.	% Never had sexual intercourse	P-value	No.	% Never had sexual intercourse	P-value	No.	% Never had sexual intercourse	P-value
Youth age									
12-14	228	83.8	<0.001	447	90.4	<0.001[1]	267	86.5	<0.001[1]
15-16	173	52.6		367	64.3		173	69.9	
17-19	133	41.4		211	42.7		91	41.8	
Youth gender									
Females	290	61.7	0.470	528	69.3	0.166	276	77.2	0.043
Males	244	64.8		497	73.2		255	69.4	
Parent income									
< 20K	203	57.1	0.002[1]	156	52.6	<0.001[1]	247	73.7	0.870
20–35K	146	58.9		277	67.5		189	73.0	
35–50K	101	67.3		265	77.4		58	70.7	
> 50K	84	79.8		327	78.3		37	78.4	
Family structure									
2 Parent household	224	71.9	<0.001	627	78.0	<0.001	353	77.1	0.008
1 Parent household	310	56.8		398	60.6		178	66.3	
Parent education									
< High school, both parents	23	65.2	0.003	54	68.5	<0.001[1]	235	75.3	0.032
1 Parent had high school, GED or some college	390	59.0		682	67.6		255	69.4	
At least one parent had bachelor's degree or higher	121	76.0		289	80.3		41	87.8	

[1] Test for trend significant at alpha = 0.05

Youth whose parental income was between $20,000 and $35,000 did not have a significant relationship between Peer Role Models and abstinence. For all other parental income categories the odds of abstinence is about 3 to 6 times higher for youth who have the Peer Role Model asset as compared to youth who do not have this asset. Finally, for the Hispanic group, Peer Role Models (OR=2.20) and Use of Time (Religion) (OR=3.00) were the only two assets that remained significant in the model after adjusting for youth age and gender, parental education and income, family structure and other assets in the model.

Discussion

The purpose of this study was two-fold: to examine the prevalence of youth assets by race/ethnicity and to examine how youth assets differ by race/ethnicity in their association with youth abstinence from sexual activity. Our findings support previous findings (CDC, 2006) that found Non-Hispanic Black youth to be the most sexually experienced group of youth (37%) among the other racial/ethnic groups.

Our results concerning the relationship between assets and sexual intercourse also found differences by race/ethnicity. For example, Non-Hispanic Black youth group had the highest mean number of assets, but only one asset was significantly associated with abstinence, whereas the Non-Hispanic White youth group had eight assets and the Hispanic group four. This could imply that assets are more important for the Non-Hispanic White and Hispanic youth who are more likely to be sexually abstinent than for the Non-Hispanic Black youth or that various cultures interpret assets differently.

The significant asset for the Non-Hispanic Black youth was the Non-Parental Adult Role Models. This finding was supported by another study (Reininger et al., 2005), in that other adult support was a significant asset in the prevention of a cluster of risky behaviors. Another study (Beier, Rosenfeld, Spitalny, Zansky, & Bontempo, 2000) found that having a mentor or "an adult in your life you can turn to for help or advice" was associated with lower risk taking, including high-risk sexual activity. The importance of role modeling has been highlighted in a multi-ethnic youth study where it was found that having a role model was associated with higher self-esteem levels and academic achievement (Yancey, Siegel, & McDaniel, 2002). Our results suggest that adult role models such as counselors, physicians, coaches, teachers, clergy members and lawyers are important in the lives of

Table 4

Asset Prevalence by Race/Ethnicity

Asset	Non-Hispanic Blacks		Non-Hispanic Whites		Hispanics	
	N	% with asset	N	% with asset	N	% with asset
Non-parental adult role model*	507	84.0	962	87.7	502	75.7
Peer role models *	534	55.8	1,025	61.8	529	51.6
Family communication *	534	67.0	1,025	68.0	531	55.7
Use of time (groups/sports)*	532	41.9	1,022	33.1	526	24.5
Use of time (religion)*	534	62.4	1,025	52.2	531	49.3
Good health practices (exercise/nutrition)	534	71.2	1,025	65.5	530	67.7
Community involvement *	534	18.4	1,024	13.9	530	11.7
Future aspirations*	508	92.5	965	86.3	504	87.7
Responsible choices	534	84.5	1,025	83.6	531	82.1
Mean number of assets†,‡	506	5.8	961	5.6	499	5.1

*$p \leq 0.05$ between race/ethnicities
†Only youth who have a response for all 9 assets
‡ANOVA $p<0.01$; Tukey HSD post hoc test: Black versus White $p=0.06$, Black versus Hispanic $p<0.01$, White versus Hispanic $p<0.01$

Non-Hispanic Black youth especially in the delay of sexual intercourse.

The Peer Role Models and Use of Time (Religion) assets were associated with abstinence for both Non-Hispanic White and Hispanic youth. The importance of peer influence in the engagement of youth sexual activity has been documented in the literature. Peers who engage (or are perceived to engage) in sexual activity may encourage sexual onset by reinforcing the acceptability of such activity and providing opportunities for its occurrence (Blum et al., 2000). Also, youth who indicated that they value risky behaviors and perceive that their friends also value or endorse risky behaviors, in general are more likely to be classified in high-risk group (Evans et al., 2004). The role of peer influence for Non-Hispanic White youth was further highlighted through its interaction with income. Research has shown that as income increases youth are more likely to be abstinent (Blum et al., 2000). However, in our study Non-Hispanic White youth in the lowest socioeconomic status who possessed the Peer Role Models asset were less likely to engage in sexual intercourse than those in the middle socioeconomic status. One possible explanation is that Non-Hispanic White youth in the lowest socioeconomic status may be embedded in social networks that protect them from engaging in risky behaviors despite the fact they live in poverty.

Surprisingly, the Peer Role Models asset was not associated with abstinence among the Non-Hispanic Black youth despite evidence supporting the opposite (Evans et al., 2004). One possible explanation for this finding is the difference in operationalization of the construct of peer influence in the two studies. In the study by Evans et al. the construct was defined as "self and peer values regarding risk behaviors" whereas in our study the construct was exclusively focused on the peers (e.g. Do most of your friends stay out of trouble?).

The association of the Use of Time (Religion) asset with abstinence was also noted in this study for both Hispanic and Non-Hispanic White youth. Studies have shown that teens who exhibit high levels of religiosity (including church attendance, valuing religion, and holding religious beliefs) have lower levels of sexual experience and more conservative attitudes about sexual activity than other teens (Bridges & Moore, 2002). There is consistent evidence that Non-Hispanic White female adolescents who attend religious activities more frequently are more likely to delay their first sexual intercourse (Rostosky, Wilcox, & Wright, 2004). On the other hand, evidence cited for Non-Hispanic White adolescent males is less consistent (Rostosky et al., 2004). For Hispanic teens, there is insufficient empirical evidence to describe the relationship between religiosity and abstinence (Hardy & Raffaelli, 2003; Rostosky et al., 2003).

Another surprising finding was that the Use of Time (Religion) asset did not seem to be important among the Non-Hispanic Black youth. This is in contrast to existing literature showing that religion may be particularly important for healthy development among Non-Hispanic Black youth (Steinman & Zimmerman, 2004). However, another study found that Non-Hispanic Black adolescent males who were more religious were significantly more likely to initiate sexual intercourse than both Non-Hispanic White males

Table 5

Adjusted Odds Ratios (OR) with 95% Confidence Intervals (CI) from Individual Multiple Logistic Regression Models for Youth Assets on Never Had Sexual Intercourse

	Non-Hispanic blacks			Non-Hispanic whites			Hispanic		
	Adjusted[1]			Adjusted[1]			Adjusted[1]		
Youth asset	N	OR	95% CI	N	OR	95% CI	N	OR	95% CI
Non-parental adult role models	507	1.91*	(1.12, 3.27)	962	1.83*	(1.15, 2.90)	502	1.51	(0.92, 2.49)
Peer role models	534	1.13	(0.76, 1.68)	1,025	Interaction		529	2.42*	(1.55, 3.76)
Family communication	534	1.14	(0.75, 1.72)	1,025	2.10*	(1.51, 2.91)	531	1.49	(0.97, 2.29)
Use of time (groups/ sports)	532	1.00	(0.66, 1.51)	1,022	1.49*	(1.06, 2.10)	526	1.16	(0.70, 1.92)
Use of time (religion)	534	1.23	(0.82, 1.85)	1,025	2.75*	(1.99, 3.80)	531	3.17*	(2.00, 5.02)
Good health practices (exercise/nutrition)	534	1.36	(0.88, 2.11)	1,025	1.34	(0.98, 1.84)	530	1.23	(0.78, 1.93)
Community involvement	534	1.41	(0.82, 2.40)	1,024	2.21*	(1.36, 3.59)	530	1.32	(0.64, 2.74)
Future aspirations	508	1.92	(0.92, 3.99)	965	1.64*	(1.06, 2.52)	504	1.94*	(1.05, 3.57)
Responsible choices	534	1.22	(0.71, 2.09)	1,025	1.90*	(1.26, 2.84)	531	2.42*	(1.42, 4.14)

[1] Adjusted for youth age and gender, parental education and income, and family structure
* $P \leq 0.05$

and Non-Hispanic Black males who were less religious (Rostosky et al., 2003). More research is needed to explore the role of religiosity in the promotion of healthy sexual behaviors among Non-Hispanic Black youth, and why Non-Hispanic Black youth seem to be religious and yet, are the most sexually active group relative to their peers from other ethnic/racial groups.

Within the Non-Hispanic White group, two more assets (Community Involvement and General Family Communication) were associated with abstinence. Previous studies suggest that youth who engage in voluntary service in the community through service learning programs are less likely to engage in sexual activity than those who do not (Kirby, 2001). Moreover, studies have shown that youth who engage in civic activities and provide needed services to their communities tend to do better in school, and are less likely to become pregnant and use drugs (Zaff & Michelsen, 2002). Interestingly, despite its high importance, the prevalence of this asset for all three ethnic groups was low (less than 20%). Therefore, practitioners involved in youth development programs need to provide opportunities for civic engagement in which teens feel appreciated for their work and can see the impact that they are making on their communities (Zaff & Michelsen). Regarding family communication, previous research has found that parent-teen relationships and interactions are associated with more positive child and youth outcomes including sexual abstinence (Moore, Guzman, Hair, Lippman, & Garrett, 2004).

The finding that parental communication did not seem to be important for the Hispanic nor the Non-Hispanic Black youth despite its high prevalence was surprising. Recent research has found that Hispanic adolescents who postponed sexual activity indicated greater support, supervision, and parental involvement (Velez-Pastrana, Gonzalez-Rodriguez, & Borges-Hernandez, 2005). The importance of family communication in the Latino culture is further highlighted by the existence of "familism" (familismo) which refers to attitudes, behaviors, and family structures operating within the extended family system and is believed to be the most important influence in the lives of Latinos (Romero, Robinson, Haydel, Mendoza, & Killen, 2004). Another study has found that parental sexual attitudes and the quality of parent-adolescent relationship predicted abstinence among Non-Hispanic Black adolescent females above and beyond the influence of peers (Maguen & Armistead, 2006). Thus, more research is needed among ethnic minority groups to explain the role of parental communication in the promotion of sexual abstinence.

This study has several limitations. First, the validity of the self-reported measures may be modified by the need for youth to provide socially acceptable answers. However for all risk behavior questions, youth actually read the items and entered their answers into a computer without anyone seeing their responses thus lessening the likelihood of pressure to provide socially acceptable responses. Second, the outcome of interest, "Have you ever had sexual intercourse?" did

Table 6

Adjusted Odds Ratios (OR) with 95% Confidence Intervals (CI) from Multiple Logistic Regression Model for Never Had Sexual Intercourse For Non-Hispanic Blacks, Non-Hispanic Whites, and Hispanics

		Adjusted	
Race/ethnicity and asset	N	OR	95% CI
Non-Hispanic Blacks[a]	507		
Non parental role models		1.91	(1.12 3.27)
Likelihood ratio test[b] χ^2=37.89 p<0.0001 Hosmer and Lemeshow Goodness-of-Fit Test χ^2=6.31=8, p=0.6217			
Non-Hispanic Whites[a]	1,024		
Peer role models			
<$20,000		2.94*	(1.35, 6.41)
$20,000-$35,000		0.88	(0.47, 1.65)
$35,001-$50,000		3.37*	(1.71, 6.63)
>$50,000		5.63*	(2.93, 10.80)
Family communication		1.68*	(1.17, 2.41)
Use of time (religion)		2.47*	(1.76, 3.47)
Community involvement		1.72*	(1.02, 2.89)
Likelihood ratio test[b] χ^2=109.57, df=7, p<0.0001 Hosmer and Lemeshow Goodness-of-Fit Test χ^2=1.76, df=8, p=0.9876			
Hispanics[a]	529		
Peer role models		2.20*	(1.40, 3.47)
Use of time (religion)		3.00*	(1.88, 4.79)
Likelihood ratio test[b] χ^2=41.30, df=2, p<0.0001 Hosmer and Lemeshow Goodness-of-Fit Test χ^2=6.31, df=8, p=0.6126			

[a] Adjusted for youth age and gender, parental education and income, family structure, and other variables in the model.
[b] Comparing the model with demographic variables only to model with demographic variables and assets.
* P ≤ .05

not discriminate between consensual intercourse and rape or molestation, inhibiting our ability to interpret a positive answer as including only those who chose to engage in sexual intercourse voluntarily. Third, this study is cross-sectional, making it impossible to draw inferences about the causal directions of the relationships found. Finally, the response rates (51% for *HEART of OKC* and 61% for the YAS) may raise questions about the generalizability of the results. However, the racial/ethnic and parental income results from the sample were compared to census data from the same neighborhoods by zip codes to determine if the profile of the study sample was different from the actual targeted neighborhood profiles. No significant differences were found, suggesting that the sample was representative of the intended population.

To conclude, the results of this study indicate that emphasizing specific assets may be effective in supporting youth abstinence, and given that there was no one common asset significantly related to sexual abstinence for all racial/ethnic groups, program developers should tailor culturally sensitive interventions with appropriate asset emphasis. In other words, practitioners should incorporate into their interventions, activities promoting assets mostly associated with the race/ethnicity of the youth they are working with. For instance, since Non-Parental Role Model was a significant asset for the Non-Hispanic Black youth, practitioners should incorporate activities such as identifying and engaging youth with appropriate non family role models and mentors. Finally, differences exist among racial/ethnic groups not only regarding sexual intercourse but also for relevant protective factors. Because the source of these differences could not be identified through this cross-sectional quantitative study, more research is needed to address issues such as why peer-influence and religiosity among the Non-Hispanic Black youth may not be important assets in terms of promoting abstinence, and the role of family communication in the promotion of abstinence among the Hispanic youth.

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