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The Health and Health Behaviors of Young Men Who Have Sex with Men

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Abstract

Purpose—There is growing evidence that young men who have sex with men (YMSM) may be at increased risk for a wide range of health and mental health problems.

Methods—An audio-computer assisted survey was administered to a large, ethnically diverse sample of 526 YMSM (ages 18 to 24 years) recruited from bars, clubs, and other social venues using a venue-based probability sampling method.

Results—Subjects reported a range of health and mental health problems, and involvement in health-compromising behaviors, such as overweight/obesity, depression, suicidal thoughts/attempts, and many were found to have high rates of sexually transmitted infections. Moreover, many reported not having insurance coverage and/or limited access to care.

Conclusions—Many of the health concerns and risks reported by these young men are preventable and can be addressed by any number of sectors, including health care and social service providers, religious organizations, schools, and employers.

Introduction

While adolescence is one of the healthiest periods in the life span – characterized by relatively low incidence of disabling or chronic illness, low rates of morbidity and mortality associated with illness or diseases, fewer short-term hospital stays, and fewer days away from school because of illness – adolescence is also a time when young people are at high risk for engaging in behaviors that can result in poor health outcomes. The Centers for Disease Control and Prevention (CDC) has noted that six categories of behavior are responsible for 70 percent of adolescent mortality and morbidity: unintentional and intentional injuries, drug and alcohol abuse, sexually transmitted infections (STI) and unintended pregnancies, diseases associated with tobacco use, illnesses resulting from inadequate physical activity, and health problems due to inadequate dietary patterns [1]. The good news is that each and every one of these poor health outcomes is entirely preventable.

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One of the challenges to promoting adolescent health is the fact that late adolescence and early adulthood is a developmental period when young people experiment with behaviors that bring increased risk that to some extent are developmentally appropriate and socially adaptive (e.g. developing new and more intimate relationships with peers, testing new levels of independence, establishing a new identity, developing values), such as drug use and sexually risky behaviors [2,3]. Carried to extremes, however, risky behaviors may impair mental and physical health. Additionally, the consequences of certain health risks, such as substance abuse, can reach far into the future, and their antecedents are very likely to emerge even before adolescence [4]. But just as late adolescence and early adulthood is a time when damaging patterns of behavior can begin to take hold, it also represents an excellent opportunity for the formation of healthful practices.

There is growing evidence to suggest that gay, lesbian, and bisexual youth, as well as YMSM who may or may not identify as gay or bisexual, are at increased risk for a wide range of physical and mental health problems [5] including, physical abuse [6,7], sexual violence and victimization [8], school problems [9–12], homelessness [10,12,13], depression and suicide [13–16]. While YMSM share many of the same developmental tasks as heterosexual youth, the struggle to develop and integrate a positive adult identity (a primary developmental task for all adolescents and young adults) is made more challenging for YMSM given the disapproval, discrimination, and homophobia many of them experience from their families, peers, racial/ethnic community, and/or faith community [17–20]. This social and emotional isolation may in turn increase YMSM's vulnerability and risk for experiencing a range of poor health and mental health outcomes [21].

Perhaps of greatest concern is YMSM's risk for contracting an STI, including HIV. Rates of HIV infection among 15- to 24- year olds continue to increase, with same-sex sexual behavior remaining as the leading cause of HIV infection among adolescent males [22]. The most recent CDC seroprevalence study found that 14% of YMSM 18–24 were HIV-positive; of those who were HIV-positive, 79% were unaware of their positive serostatus [23]. Given the importance of YMSM as an at-risk group and because research focused on this age range of 18- to 24-year is somewhat limited in nature, there is little guidance for how to approach health promotion and disease prevention with YMSM, particularly YMSM between the ages of 18 and 24 years who are no longer in school and who fall within what is now being called the period of “emerging adulthood” [24].

In this paper, we report the health habits, perceived health status, health and mental health problems, health insurance status, and access to care among a large and ethnically diverse sample of YMSM recruited using a venue-based probability sampling design as part of the Healthy Young Men's (HYM) Study. The research received Institutional Review Board approval.

Methods

Study Sample and Sampling Design

A total of 526 subjects were recruited into the study between February of 2005 and January of 2006. Young men were eligible to participate in the study if they were 18 to 24 years old; self-identified as gay, bisexual, or uncertain about their sexual orientation and/or reported having had sex with a man; self-identified as Caucasian, African American, or Latino of Mexican descent; and a resident of Los Angeles County with no expectation of living outside the County for at least six months following recruitment.

Procedures

Young men were recruited at public venues using the stratified probability sampling design developed by the Young Men's Study [25] and later modified by the Community Intervention Trials for Youth study [26]. Public venues included settings and events at which YMSM were observed to spend time, such as bars, cafes, parks, and high-traffic street locations; social events sponsored by a youth serving agency; and special events such as gay pride festivals. Forty-one Type I and 47 Type II enumerations of young men attending these types of venues were conducted at different days and times (also see [27,28]) over a 3-month period. The attendance estimates derived from enumerations were then used to construct a list of 4-hour venue-day-time (VDT) sampling periods. Only VDTs with Type I attendance estimates of at least 16 eligible men or Type II estimates of 8 or more were included in the monthly sampling frame. The enumerations yielded a total of 80 VDTs that met the sampling frame inclusion criteria, and represented 36 different venues. Each month, 16–24 VDTs were randomly selected with an equal probability from the updated sampling frames to create monthly sampling calendars. Three to four researchers conducted recruitment during each 4-hour sampling event using the monthly sampling calendars.

Young men who entered the venues and appeared to be eligible for the study (e.g., appeared to be ages 18–24) were systematically counted and invited to complete a brief eligibility - screening interview, conducted in both English and Spanish. A single researcher or pair of researchers were assigned the task of systematically counting and identifying young men to be screened throughout the course of a recruitment event in an effort to make sure that young men were not approached multiple times. Young men that agreed to be screened received a small incentive (e.g. box of mints) and were taken to a nearby location that offered some privacy to complete the screener that required approximately five minutes to administer. If a young man was found to meet the study criteria, he was provided with a detailed description of the study. Informed consent and contact information was obtained from those who expressed an interest in participating in the study. Young men were stratified to one of the three ethnic groups -- African American, Caucasian, and Latino of Mexican descent -- based on their reported ethnicity.

In an effort to minimize sampling bias that might be introduced with seasonal variations in attendance patterns at the venues, recruitment was conducted over the course of a 12-month period. A total of 4,648 young men were screened at 203 sampling events, of which 1,371 (30%) met the study eligibility criteria. Of those eligible, 938 (68%) expressed an interest in participating in the study. Fifty-six percent (N= 526) of eligible young men who expressed an interest in participating in the study actually attended their appointment and completed the survey. The survey was administered at a location convenient to the participant, either the project office or at a Starbucks café.

Survey Instrument

The survey was administered in both English and Spanish using computer-assisted interview (CAI) technologies and an on-line testing format. CAI technologies have increasingly been found to improve both the quality of the data being collected and the validity of subjects' responses, particularly to questions of a sensitive nature, such as drug use and sexual behavior [29–31]. The CAI software used in this study incorporated sound files that allowed the respondent to silently read questions on the computer screen and/or listen to the questions read through headphones and enter their responses directly into the computer. The survey included 1,109 items and required 1 to 1 1/2 hours to complete. Participants received \$35 to compensate them for their time and effort. Analyses were performed to examine the following demographic, health, and psychosocial variables:

Demographic variables—Participants were asked to report their age; race/ethnicity; place of birth; immigration status; current place of residence; employment status; whether they are attending school; had ever been homeless; had ever “exchanged a sexual act or favor for something like money, drugs, or a place to stay;” and had ever participated in the street economy (e.g., selling/running drugs, prostitution, panhandling).

Sexual orientation—Participants were asked which sexual identity they most identified with (e.g., gay, queer, bisexual, same gender loving, straight) and how much they are attracted to males and/or females.

Perceived health status was assessed by asking respondents, “In general, would you say your health is excellent, very good, good, fair, or poor.” They were also asked if there was “something about your health or body that you are worried about.” *Personal satisfaction* was assessed by asking respondents, “In general, how happy have you been with your personal life during the past 12 months.” Body mass index (BMI) was measured using participants’ height and weight, and assigned to four categories (underweight, normal, overweight and obese) based on CDC designated percentiles for those under 20 years of age and cut-off points for those ages 20 and older [32].

Health behaviors were assessed using questions from the Youth Risk Behavior Surveillance Survey (YRBSS), including measures of respondents’ physical activity and dietary habits (how many days in the past seven did you participate in physical activity, eat fruit and eat a green salad). Respondents were also asked if they thought they were on average getting too little, too much, or the right amount of sleep.

Access to care was assessed by asking “What is the source of your current medical coverage” and “Is there any place you go to if you are sick or need advice about your health.”

History of STIs and HIV was assessed by asking respondents if they had ever been told by a doctor or health care provider that they had an STIs, and if so, how many times per STIs. Respondents were also asked if they had ever been HIV tested, if they had returned for their test result, and if they had ever been [2] told by a test counselor, doctor, or other health provider that they were HIV-positive. Those who had tested HIV positive were also asked if they had ever been told by a health provider that they had AIDS and they were asked about the services sought and received, and whether they had had difficulty obtaining HIV/AIDS care.

Depression was assessed using the 20-item Center for Epidemiologic Studies Depression Scale (CES-D) [33] whereby participants were asked if they had experienced depressive symptoms within the past week using a 4-point scale (less than a day or never, 1–2 days, 3–4 days, 5–7 days). A total score was calculated by summing the items, and cut points were created as referenced in the literature with gay men [34,35]: a score of 6 to 21 was considered distressed, greater than 22 was considered depressed.

Suicidality was assessed by asking respondents if during the past 12 months they had: a) felt so sad or hopeless almost every day or two weeks or more in a row that you stopped doing some usual activities; b) seriously considered attempting suicide; c) made a plan about how you would attempt suicide; and d) actually attempted suicide. If they had attempted suicide, respondents were asked the number of attempts they had made during the previous 12 months and whether an attempt had required medical care.

Statistical Analysis

All statistical analyses were conducted using SPSS version 13.0. Because the current study is largely descriptive, results presented are based on univariate analyses of key variables of

interest. Previous empirical work, existing theory, and current descriptive results informed cut-off points for categorical variables created from continuous variables (e.g., CES-D, BMI). Results from frequency analyses characterized key demographics (e.g., age, ethnicity, employment) of the study sample. The cross-tabulation procedure was then used to identify categorical distribution of health variables based on different ethnic groups. Chi-square analyses were used to test whether some of these categorical variables were significantly different based on ethnicity. To determine where specific group differences may lie, standardized residuals based on observed and expected values within each cell were examined.

Results

Sample Characteristics

As summarized in Table 1, a total of 526 YMSM were enrolled in the study, including 195 (37%) Caucasian, 126 (24%) African American, and 205 (39%) Latino YMSM of Mexican descent. The average age was 20.1 years, with 40% of the sample being 18–19 years of age. Thirty percent of the Latino respondents reported having been born outside of the US. Over half (54%) of the respondents reported living at home with their family, while 22% reported being in school and 27% reported both attending school and being employed; only 13% reported being neither in school nor employed.

Eighty-one percent self-identified as gay or some other same-sex sexual identity, 16% identified as bisexual, and 1% identified as straight or heterosexual. In contrast, 71% reported being sexually attracted to males exclusively, 27% to both males and females, and 1% to females exclusively. Twenty percent reported having a history of sexual abuse/assault, 16% reported having exchanged sex for money or something else, and 9% reported a history of homelessness.

Perceived Health Status

As presented in Table 2, 65% of respondents perceived themselves to be in excellent or very good health, while 8% reported that they were in fair to poor health. Moreover, 40% reported that they were very or extremely happy with their personal life, while 15% reported that they were not very or not at all happy with their life. A comparison by racial/ethnic group revealed that African American respondents were less happy with their personal life ($p \leq .05$) than Caucasian and Latino respondents. Forty-seven percent of respondents reported that there was something about their health or body that worried them. The most common concerns related to weight or body image (38%), followed by miscellaneous medical or health problems (22%) such as sore throats, back aches, blood pressure, ulcers or heart related issues, and an additional 16% reported concern about contracting an STI or HIV.

BMI, Eating Habits, and Sleep

Based on the calculated BMI, 4% of respondents were determined to be underweight, 14% overweight, and 5% obese, as presented in Table 2. A comparison of BMI by race/ethnicity revealed no differences across the three racial/ethnic groups with respect to the percentage of respondent who were underweight, however, African American respondents were significantly more likely to be overweight and Latino respondents were significantly more likely to be obese than the Caucasian respondents (mean BMIs were 23.41, 23.03, and 21.86, respectively, $p < .001$).

Half (51%) reported that they did not believe that they were getting enough sleep, with African Americans being significantly more likely to report that they were not getting enough sleep as compared to Caucasian and Latino respondents (62% vs. 49% and 49%, respectively, $p < .05$).

When asked about their diet, 87% of respondents reported eating fruit at least once a week as compared to 81% of the YRBSS nationally representative sample of 18-year old males as presented in Table 3. In addition, 74% of the study participants reported eating a green salad at least once a week as compared to the national figure of 59%. Some ethnic/racial differences were found, particularly between the Latino and African American respondents, with 26% of the African American respondents reporting that they had not eaten fruit within during the past week as compared to 8% of the Latino respondents ($p<.001$).

Half of the sample (51%) reported vigorous exercise at least three times a week as compared to 60% reported by the YRBSS sample of 18-year old males. In addition, 20% of the national respondents reported exercising every day in the last week compared to only 7% of HYM respondents. African Americans were significantly less likely to have exercised during the past week as compared to Latino respondents ($p<.05$).

Mental Health

Nearly a quarter (21%) of respondents reported mental health symptoms to suggest depression using CES-D criteria, and 18% reported symptoms suggesting they were distressed, as presented in Table 2. When asked about the previous 12 months, 30% reported that they had felt sad or hopeless almost every day for two or more consecutive weeks, 10% reported that they had seriously considered suicide, 4% reported that they had developed a plan for how they would attempt suicide, and 4% reported that they had actually attempted suicide. Of those who had actually attempted suicide, half experienced sufficient injury or harm to require medical attention.

Access to Care

Forty-four percent reported having health insurance through their parents, 21% had health insurance through their school or employer, 11% through Medical/Medicaid, and 22% reported having no health insurance. Mexican respondents born outside the US were significantly less likely to have health insurance than US born Mexican Americans ($p<.05$). Respondents reported receiving care from their physician (59%), community/public health clinic (20%), a hospital emergency department (16%), or school clinic (9%). Twelve percent reported that they would have nowhere to go if sick or needing advice about their health. The Internet was noted by 26% as a source of information about their health.

STIs and HIV

As summarized in Table 4, 25% reported having been diagnosed with an STI, with 7% having been diagnosed with two or more STIs. Older respondents (20 years and older) were significantly more likely than younger respondents (18 and 19 year olds) to report a previous STI ($p<.001$) and to have had more than one infection ($p<.001$). Moreover, African American respondents were significantly more likely than Latino respondents to report a prior STI ($p<.001$). African American respondents were also significantly more likely to report infection with Gonorrhea ($p<.001$) and Chlamydia ($p<.01$) than Latino respondents, while Caucasians were significantly more likely to report scabies ($p<.001$) than Latino respondents.

Nearly three-quarters of the sample (72%) reported having been HIV tested, 80% reported that they were HIV-negative, and 3% reported that they were HIV-positive; 17% reported that they did not know their HIV-status. Of the 15 who reported that they were HIV-positive, 3 (20%) also reported having AIDS. Among those who reported being HIV-positive, 12 (80%) reported having sought care for their HIV/AIDS, 4 (27%) reported having had difficulty obtaining HIV/AIDS services, and 8 (53%) reported that they had not used support nor prevention services. While there were no differences by race/ethnicity with respect to HIV testing, African

American respondents were significantly more likely to report being HIV-positive than Caucasian respondents ($p < .01$).

Discussion

In this study, we found that YMSM recruited from gay-identified venues are a heterogeneous population, with segments of this population being in better or poorer health. Importantly, African American and Latino YMSM were found to be in poorer health according to a number of health indices reported in this paper. While these findings provide useful information when considering how to tailor health promotion and disease prevention educational messages and interventions to this population, there are a number of limitations of the study that need to be acknowledged. First, the findings rely on respondents' self-reported behaviors, which cannot be independently verified. Self-report data regarding respondents' health behaviors (e.g., physical inactivity, suicidal attempts) may have underestimated the true prevalence given that some of these behaviors may be perceived as socially undesirable, although we expect that the use of CAI may have minimized the underreporting in these behaviors [29–31]. A second limitation is that the data are cross-sectional and therefore do not contain information about the temporal relationship between the demographic and health data. Thus, no statements can be made about the causal relationship between these variables. Given that the HYM Study is a longitudinal study, we will have the opportunity to confirm whether these and other causal relationships do indeed exist. Finally, although this sample is likely to be representative of YMSM who can be recruited through gay-identified venues, this sample is certainly not representative of the larger YMSM population.

Despite these limitations, this descriptive data provide clear evidence that segments of the YMSM population are at increased risk for engaging in health compromising behaviors. In particular, we found that African American respondents were significantly less likely to be satisfied with their personal lives, and they were significantly more likely to report that they were not getting enough sleep and to be overweight, while Latino respondents were significantly more likely to be obese. Of great concern was the fact that nearly a quarter (21%) of the sample reported symptoms of depression, and 10% reported that they had seriously considered suicide. Further, nearly a quarter (22%) of respondents reported having no health insurance and 12% reported having nowhere to go if sick or needing advice about their health. Finally, 25% of the sample reported a history of STI, with older youth and African Americans being at significantly greater risk for both an STI and HIV infection. A comparison of the HYM findings with data for 18-year old males who participated in the Youth Risk Behavior Surveillance Survey (YRBSS) revealed considerable similarities. While not a perfect comparison given the younger age of the YRBSS respondents and the fact that not all HYM data could be compared to this national sample, these comparisons do suggest that YMSM may not be at much greater risk for negative health outcomes associated with diet, weight, physical activity, and suicide, although they may be at increased risk for exposure to STIs and HIV infection.

While health care providers are an important source of such prevention and health promotion education, adolescents and young adults are among those least likely to have access to health care and they have the lowest rate of primary care use of any age group in the United States [36–38]. As found in this study, many YMSM do not have insurance coverage and/or do not have access to care or use available services when needed. This was particularly true for African American and Latino YMSM. Even when available though, health insurance may inadequately emphasize treatment rather than prevention or outreach, and payment restrictions further reduce the range of services available. For this and other reasons, many adolescents and young adults are not receiving needed prevention and health promotion education. Mental health services share many of these same problems. While it is estimated that approximately 25

percent of all adolescents have a significant mental health problem, mental health services are often fragmented and unavailable to the adolescents and young adults who need them most [39].

While the prevention and health promotion needs of adolescents and young adults, are great, health care providers, particularly providers of adult care, often are not trained to recognize and deal with the health-related challenges experienced by young adults, particularly when the symptoms are more psychosocial in nature. Moreover, many health concerns of adolescents emerging into adulthood, such as drug use and sexual behaviors or relationships, are socially stigmatizing or difficult to discuss. This is particularly true for YMSM who may feel even less comfortable discussing their sexual identity, partners, and behaviors with their health care provider [40]. But while health care providers are an important source of prevention and health promotion, this is just one of many sectors that can play an important role in delivering prevention and health promotion interventions. Indeed, ensuring the safe and healthy transition from adolescence to adulthood is the responsibility of everyone, from schools, religious organizations, employers, and social service agencies, to the media. Each and every one of these sectors can individually and collectively play an important role in promoting health and preventing lifelong negative health outcomes among all adolescents and young adults.

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Table 1

Description of the Study Sample (N=526)

Variables	Categories	n (%)
Age	18 – 19 yrs	143 (29)
	20 – 21 yrs	186 (37)
	22+ yrs	170 (34)
Race/ethnicity	African- American	115 (23)
	Caucasian	188 (38)
	Mexican descent	196 (39)
Immigration	Born in other country	82 (16)
Residence	Family	255 (51)
	Own place/apartment	199 (40)
	With friends/partner	35 (7)
	No regular place/other	10 (2)
Employment	In school	52 (11)
	In school, employed	146 (32)
	Employed, not in school	219 (48)
	Not employed, not in school	40 (9)
Sexual identity	Gay	384 (77)
	Other same-sex identity	27 (5)
	Bisexual	76 (15)
	Straight	5 (1)
	DK/RF	7 (1)
Sexual attraction	Males only	363 (73)
	Males and females	126 (25)
	Females only	4 (1)
	Neither, don't know, missing	6 (1)
HIV Testing Status	Never tested	83 (18)
	Tested > 1 year ago	92 (20)
	Tested 6mos – 1 year ago	109 (23)
	Tested $\leq$ 6 months ago	188 (40)
Sex exchange (ever)		70 (14)
Street economy (ever)		110 (21)
Homeless (ever)		45 (9)

Table 2

Health and Mental Health Status by Ethnicity (N = 526)

	National Sample ¹ n = 1046 n (%)	HYM sample N = 526 n (%)	African American n = 126 n (%)	Caucasian n = 195 n (%)	Mexican descent n = 205 n (%)	p-value ²
Health Status						
Excellent	290 (28)	116 (22)	32 (25)	43 (22)	41 (20)	
Very Good	388 (38)	226 (43)	57 (45)	92 (47)	77 (38)	
Good	281 (27)	136 (26)	28 (22)	46 (24)	62 (30)	
Fair	59 (6)	34 (7)	6 (5)	10 (5)	18 (9)	
Poor	12 (1)	5 (1)	2 (2)	1 (0.5)	2 (1)	
Satisfaction with personal life						
Extremely happy	--	50 (10)	14 (11)	9 (5)	27 (13)	
Very happy	--	154 (30)	33 (26)	55 (28)	66 (32)	
Fairly happy	--	245 (47)	53 (42)	103 (53)	89 (43)	≤.05
Not very happy	--	64 (12)	22 (18)	25 (13)	17 (8)	
Not happy at all	--	13 (3)	4 (3)	3 (2)	6 (3)	
Sleep habits						
Too many hours	--	40 (8)	4 (3)	14 (7)	22 (11)	
The right amount	--	207 (40)	44 (35)	84 (44)	79 (40)	≤.05
Not enough hours	--	269 (51)	76 (61)	94 (49)	99 (49)	
Body Mass Index (BMI)³						
Underweight	27 (3)	20 (4)	3 (2)	8 (4)	9 (5)	
Normal	675 (67)	394 (77)	87 (71)	168 (87)	139 (71)	≤.001
Overweight	144 (14)	73 (14)	26 (21)	13 (7)	34 (17)	
Obese	155 (16)	26 (5)	7 (6)	4 (2)	15 (7)	
Depression						
Non-distressed <16 CES-D	--	320 (61)	75 (59)	115 (60)	130 (63)	
Distressed 16–21 CES-D	--	97 (18)	23 (18)	39 (20)	35 (17)	
Depressed 22+ CES-D	--	108 (21)	28 (22)	41 (21)	39 (19)	
Suicidality						
Considered in past 12 months	134 (13)	53 (10)	11 (9)	21 (11)	21 (10)	
Made plan in past 12 months	111 (11)	22 (4)	5 (4)	8 (4)	9 (4)	

	National Sample ¹ n = 1046 n (%)	HYM sample N = 526 n (%)	African American n = 126 n (%)	Caucasian n = 195 n (%)	Mexican descent n = 205 n (%)	p-value ²
Attempted	56 (6)	20 (4)	6 (5)	6 (4)	8 (4)	
Required medical treatment	16 (2)	10 (2)	2 (2)	2 (1)	6 (3)	

¹ 2005 National YRBSS survey filtered to include 18 year-old males only

² Significance calculated within the HYM study sample

³ BMI categories are based on CDC designated percentiles for those under 20 years of age and cut-off points for those ages 20 and older

Table 3

Dietary and Physical Exercise by HYM Sample and National Comparison

	National Sample ¹ n = 1046 n (%)	HYM sample N = 526 n (%)	African American n = 126 n (%)	Caucasian n = 195 n (%)	Mexican descent n = 205 n (%)	p-value ²
Eat fruits in past seven days						
4 + times a day	46 (5)	17 (3)	5 (4)	3 (2)	9 (5)	
3 times per day	28 (3)	17 (3)	3 (2)	8 (4)	6 (3)	
2 times per day	87 (8)	33 (6)	6 (5)	16 (8)	11 (6)	
1 time per day	109 (11)	42 (8)	10 (8)	15 (8)	17 (9)	
4–6 times	187 (18)	97 (19)	10 (8)	33 (17)	54 (27)	
1–3 times	405 (40)	247 (48)	57 (46)	101 (52)	89 (44)	
Did not eat fruit	152 (15)	67 (13)	33 (26)	19 (10)	15 (8)	≤.001
Eat green salad in past 7 days						
4 + times a day	17 (2)	2 (4)	0 (0)	0 (0)	2 (1)	
3 times per day	7 (1)	1 (2)	0 (0)	0 (0)	1 (4)	
2 times per day	34 (3)	13 (3)	2 (2)	5 (3)	6 (3)	
1 time per day	66 (7)	27 (5)	7 (6)	10 (5)	10 (5)	
4–6 times	117 (12)	90 (17)	12 (10)	41 (21)	37 (19)	
1–3 times	405 (40)	245 (48)	56 (46)	95 (49)	94 (47)	
Did not eat salad	369 (36)	138 (27)	44 (35)	44 (23)	50 (25)	
Exercise						
3–7 days	684 (67)	266 (51)	70 (55)	102 (53)	94 (46)	
1–2 days	172 (17)	162 (31)	28 (23)	57 (30)	77 (38)	<.05
0 days	161 (16)	83 (16)	26 (21)	33 (17)	24 (12)	
Don't know	--	14 (3)	2 (2)	3 (2)	9 (4)	

¹ 2005 National YRBSS survey filtered to include 18 year-old males only² Significance calculated within the HYM study sample

Table 4

Access and Sources of Health Care, HIV/STI Status by Ethnicity (N = 526)

	National Sample ^d n = 1046 n (%)	HYM sample N = 526 n (%)	African American n = 126 n (%)	Caucasian n = 195 n (%)	Mexican descent n = 205 n (%)	p-value ²
Sources of Medical Coverage						
Work or School	--	112 (21)	27 (21)	49 (25)	36 (18)	
Parents	--	229 (44)	48 (38)	105 (54)	76 (37)	≤ .01
Spouse/partner	--	1 (0.2)	0 (0)	0 (0)	1 (1)	
Medical/Medicaid	--	57 (11)	26 (21)	5 (3)	26 (13)	≤ .01
Other insurance	--	22 (4)	2 (2)	8 (4)	12 (6)	
No insurance	--	116 (22)	25 (20)	39 (20)	52 (25)	
Where do you go when sick or need advice about your health						
Holistic/alternative healer	--	25 (5)	3 (2)	11 (6)	11 (5)	
Community/public health clinic	--	105 (20)	28 (22)	36 (19)	41 (20)	≤ .01
School or work clinic	--	59 (11)	6 (5)	26 (13)	27 (13)	
Doctor's office	--	309 (59)	75 (60)	132 (68)	102 (50)	≤ .01
Hospital ER	--	83 (16)	28 (22)	39 (20)	16 (8)	≤ .01
Hospital clinic	--	33 (6)	9 (7)	11 (6)	13 (4)	
Internet	--	139 (26)	23 (18)	76 (39)	40 (20)	≤ .01
Spiritual or religious leader	--	9 (2)	4 (3)	4 (3)	1 (5)	
None	--	65 (12)	9 (7)	13 (7)	43 (21)	
STI History						
Lifetime	--	132 (25)	41 (33)	57 (29)	34 (17)	≤ .01
Gonorrhea	--	46 (9)	23 (18)	13 (7)	10 (5)	≤ .01
Syphilis	--	9 (2)	2 (2)	2 (1)	5 (3)	
Chlamydia	--	25 (5)	12 (10)	10 (5)	3 (2)	≤ .01
Genital herpes	--	4 (0.8)	1 (1)	2 (1)	1 (1)	
HPV/Genital warts	--	19 (4)	5 (4)	11 (6)	3 (2)	
Hepatitis	--	5 (1)	0 (0)	1 (1)	4 (2)	
Scabies/crabs	--	52 (10)	8 (6)	34 (17)	10 (5)	≤ .01
HIV Testing/Experience						
Ever tested for HIV	138 (15)	380 (72)	97 (77)	136 (70)	146 (72)	

	National Sample ¹ n = 1046 n (%)	HYM sample N = 526 n (%)	African American n = 126 n (%)	Caucasian n = 195 n (%)	Mexican descent n = 205 n (%)	p-value ²
Obtained results of last test	--	350 (92)	90 (93)	129 (95)	130 (89)	
HIV Status						
Positive	--	15 (3)	8 (6)	3 (2)	4 (2)	≤ .01
Negative	--	420 (80)	103 (82)	153 (79)	164 (80)	
Don't know	--	90 (17)	15 (12)	38 (20)	37 (18)	
Among HIV positive (n=15)						
Told by doctor have HIV	--	14 (93)	7 (88)	3 (100)	4 (100)	
Told by doctor have AIDS	--	3 (20)	0 (0)	1 (33)	2 (50)	
Sought care for HIV/AIDS	--	12 (80)	5 (63)	3 (100)	4 (100)	
Difficulty obtaining care	--	4 (27)	2 (40)	1 (33)	1 (25)	
Receiving medication	--	3 (20)	1 (20)	0 (0)	2 (50)	
Used support/prevention services	--	7 (47)	2 (25)	2 (67)	3 (75)	

¹ 2005 National YRBSS survey filtered to include 18 year-old males only

² Significance calculated within the HYM study sample