Evaluation of a community-based sexual health intervention for young adult Latino and African-American men

Keywords

Sexual health

Men's health

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Debra Kalmuss, Bruce Armstrong, Molly Franks, Gabrielle Hecker and Jessica Gonzalez

Abstract

Background: Recent research has documented men's unmet need for sexual and reproductive health (SRH) care, a situation which negatively affects their sexual health outcomes as well as those of their partners. This unmet need is due, in part, to men's reluctance to seek health care in general and sexual health care in particular. In this study we evaluated an educational intervention for men designed to promote more positive attitudes toward health care utilization and increase their use of SRH care. The secondary aims of the intervention were to improve men's knowledge about sexually transmitted infections and emergency contraception as well as to promote positive condom attitudes and safer sex behaviors.

Methods: This study used a non-equivalent control group design with pretest and post-test assessments to evaluate a 3-session SRH educational intervention delivered in small group community settings. A total of 231 men participated in the intervention and completed pretest and post-test assessments, 113 in the intervention and 118 in the control group. To be eligible for the study men had to be aged 18–30, Latino or black and able to participate in an English-language educational program. Study participants were recruited from community-based organizations. Men completed self-administered pretest interviews at study enrollment and a brief telephone interview 3 months later.

Results: The intervention promoted more positive health care utilization attitudes and modestly improved use of SRH care services. In addition, post-test comparisons indicated that men in the intervention group, when compared to those in the control group, had higher levels of sexual health knowledge, more positive attitudes on one of two condom attitude measures, and fewer sex partners in the past 3 months. No significant intervention effect was observed for the frequency of condom use in general or with casual sex partners.

Conclusions: This modest success supports the viability and efficacy of delivering sexual health education to young adult men of color in community programs that address men's educational and job-related needs.

Debra Kalmuss, PhD
Heilbrunn Department of Population and Family Health, Mailman School of Public Health, Columbia University, 60 Haven Avenue, New York, NY 10032, USA

Bruce Armstrong, DSW
Mailman School of Public Health, Columbia University, New York, USA

Molly Franks, MPH
Multnomah County Health Department, Oregon, USA

Gabrielle Hecker, MPH
EngenderHealth, USA

Jessica Gonzalez, MPH
Newark Department of Health and Human Services, USA

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Introduction

The sexual health care needs of men are not adequately addressed [1–6]. Data from the 2002 National Survey of Family Growth indicate that half of sexually active men between the ages of 18 and 30 did not receive sexual health care services in the year before the interview [7]. These data also indicate that although two-thirds of adolescent males had a physical exam

in that same interval, fewer than 20% discussed birth control, sexually transmitted infections (STIs) or HIV with their provider, and only one-quarter of sexually experienced adolescent males had been tested for HIV [8]. Finally, among heterosexual men aged 18 to 30 who received sexual health services, only a minority received counseling about STIs (27%), HIV (32%) or birth control (28%) [7]. The lack of adequate sexual and reproductive health (SRH) care adversely affects not only young men, but their partners, families and communities. Rates of STIs, unintended pregnancies, and abusive or coercive relationships might well be reduced if more men received the clinical, educational and counseling services that constitute comprehensive SRH care.

This level of unmet need for SRH information and care is particularly problematic for two groups of males at elevated risk for poor sexual health outcomes, young males and men of color. Rates of sexual risk behavior are highest during the teen and early adult years and common STIs among males peak during the early to mid-20s [9,10]. Moreover, the asymptomatic nature of many STIs [11,12] means that during these high risk years, sexually active young men need STI screening even when they feel fine, a type of health-seeking behavior that is not common amongst men.

When compared to white males, men of color have higher rates of STIs, including, but not limited to, HIV/AIDS, and they engage in higher levels of sexual risk behavior [9,13,14]. In the United States, these groups of men also face potent economic barriers to SRH because they are more likely to be un- or underinsured and to lack the resources to pay for care [15]. Interventions are needed to connect young men of color to male-friendly, comprehensive SRH services.

In this paper, we present the evaluation of a community-based, 3-session SRH education program for young men of color, aimed at improving participants' attitudes toward utilizing health services and increasing their use of SRH care. The secondary aims of the intervention were to increase participants' sexual health knowledge, improve their attitudes toward condoms, and reduce their sexual risk behaviors. In addition to offering SRH education to young men in community settings, the program also tested a model for coordination between SRH service providers and community-based organizations.

Methods

Intervention and research design

This SRH intervention was developed and implemented by the Young Men's Clinic (YMC) in Washington Heights, a low-income, predominantly Latino community in northern Manhattan. Founded in 1987, the YMC provides male-friendly SRH services to young adult Latino and African-American men in northern Manhattan and the Bronx [16]. The intervention was delivered at community-based organizations (CBOs) that provide services to young men in the same geographic areas served by the YMC. The content of the three 50-minute educational sessions was informed by preliminary data collected from men in the target population who participated in several focus groups.

The educational sessions used an interactive, group discussion format. PowerPoint slide presentations helped focus discussion on key concepts, and demonstration materials and activities were designed to encourage participation. Topics included the importance of having regular health care exams; a description of services provided at the YMC; information about STI transmission, screening, and testing; condom use; and emergency contraception. Information about the clinic was presented in a 6-minute digital video that showcased the multicultural, multidisciplinary male and female staff, as well as the attractive interior and exterior of the facility. The video featured three YMC patients who gave personal testimonials about how the clinic had helped them and the benefits of having regular exams and STI screening. The intervention was delivered in English by a bilingual Latino health educator from the YMC.

The evaluation of the educational intervention was based on a non-equivalent control group, pretest/post-test design [17,18]. All study participants completed a 53-item baseline questionnaire and were interviewed by telephone 3-months post-intervention. The two questionnaires were equivalent except for several demographic questions that were asked only at pretest and questions measuring satisfaction with the intervention that were asked only at post-test. The satisfaction questions were only asked to men in the intervention arm, and, as such, the research assistants

(RAs) were not blinded to the study arm of the respondents they interviewed at follow-up.

Three rounds of pilot testing and de-briefing interviews were conducted with a total of 32 men in the pilot population before the questionnaires were finalized to eliminate knowledge and attitudinal questions that created a ceiling effect or held no room for improvement since virtually all men knew the information or held the positive attitude prior to the intervention. The pilots also identified problems with word usage and phrasing, overall comprehension and questionnaire length. Lack of resources did not permit validation of the questionnaire or any of the indices that it contained prior to administration.

Recruitment

Study participants were recruited from eight CBOs that offered preparation for the GED (General Educational Development) test, an exam-based route to high school completion for students who have not received a high school diploma through the traditional route, and/or job readiness services to men. Bilingual study RAs met with CBO staff at each site to develop recruitment plans that would maximize consistency in recruitment protocols across sites while at the same time being respectful of the needs of each individual program.

Men were eligible for study participation if they were between the ages of 18 and 30, had not been a client at the YMC for at least 2 years, and were able to participate in health education sessions in English. Within each CBO, study recruitment occurred every 8–12 weeks when a new group of participants was enrolled into their educational or workforce training programs. We recruited men into both study arms from each CBO to maximize overall comparability between the two arms. To minimize diffusion of educational content from the intervention to control group, recruitment at each site was limited to one arm at a time. We recruited for the intervention group from half the sites at the first recruitment interval and for the control group in the remaining sites. At the second interval, we switched arms at each site and kept repeating this pattern throughout the recruitment period which spanned 20 months, from March 2005 to October 2006. Intervention group participants received a $45 incentive for participation in the program and comparison group participants received $40.

The Institutional Review Board (IRB)-approved consent procedure for the study was administered immediately before completion of the baseline interviews. Men in both the intervention and control groups then completed the 53-item baseline interview. The first intervention session was conducted that same day and, in most cases, the two additional sessions were conducted over the following 2 days. The RAs contacted respondents 3 months after they completed the baseline interview for a short telephone follow-up interview. The final payment was sent to participants in the form of a money order after the follow-up interview. Both intervention and control group respondents were sent a flyer with information about the YMC with their final payment.

Sample

A total of 272 young men were enrolled in the study, split equally between the intervention and control groups, and 231 participants completed both baseline and follow up, giving a response rate of 85%. The data reported in this paper are based on those 231 men. Bivariate analysis showed no significant differences in respondents' age, race/ethnicity, high school or GED completion rates, health insurance status, employment status, and reported sexual behavior between those lost to attrition and those who completed the post-test (data not shown).

Measures

The primary outcome variables were attitudes toward health care utilization and visiting the YMC in the 18-month period after the initial interview. The attitudes regarding health care utilization scale summarized responses to three attitudinal items that were each based on a 4-point Likert scale ranging from strongly agree to strongly disagree (see Appendix for items). Prior to constructing the scale, the appropriate items were reverse coded so that high scores reflected positive attitudes and low scores reflected negative attitudes toward health care utilization. The scale ranged from 1–12 with a mean of 10.8 and a Cronbach's Alpha of 0.41.

The coding of visits to YMC was based on data from the clinic information system. We searched for visits made by each of the study

participants during the 18 months following their baseline interview. Men who made a visit during this interval were coded 1 on this variable and 0 otherwise.

The secondary outcomes were sexual health knowledge, attitudes toward condoms, and sexual risk behaviors. The knowledge domain assessed knowledge about sexual and reproductive health and about the YMC. The sexual health knowledge scale combined six items, four about STIs, one about emergency contraception and one about sexual pleasure and condoms (see Appendix for items). Each of the items was recoded so that correct answers were coded 1 and incorrect or 'don't know' responses were coded 0. The scale ranged from 0–6 with a pretest mean of 2.94.

Knowledge about the YMC was measured using two individual items: one about the cost of services at the clinic and one about whether services at the clinic are confidential. Responses to each item ranged from 'strongly agree' (1) to 'strongly disagree' (4). Traditionally, scales are only created with three or more items and so we assessed each of the YMC knowledge items separately.

The condom attitude items included two questions. One asked respondents whether they agreed with the statement, 'There is no way to enjoy sex when using a condom.' Responses ranged on a 4-point Likert scale from strongly agree to strongly disagree. The second condom attitude question asked how men would rate their feelings about condoms on a scale ranging from 1 to 10 where 1 meant very negative feelings, and 10 meant very positive feelings.

The sexual behavior outcomes were number of sexual partners in the past 3 months (0, 1, 2, 3 or more), frequency of condom use in the last 3 months (1 = all the time, 2 = most of the time, 3 = some of the time, 4 = none of the time), and whether men had always used a condom when they had had sex with casual partners in the last 3 months.

The primary independent variable of interest was group assignment (1 = intervention group, 0 = control group).

Analysis

In the analysis, we used logistic regression for dichotomous dependent variables and ordinary least squares regression for continuous outcomes. Since the intervention and control groups differed on age, age was introduced as a control variable in all analyses. While the groups did not significantly differ on any of the other factors we examined, the quasi-experimental design of the study raises the possibility of differences on unexamined factors. The pretest/post-test design of the study enabled us to include a potent control for these possible group differences, respondent's baseline score on the outcome variable. Each regression included the appropriate baseline measure as the second control variable.

The number of outcome variables in this analysis increased the risk of a Type 1 error, or of rejecting the null hypothesis when it is true. To control for this we combined the outcome variables into conceptual sets (families) and used the Bonferroni procedure to adjust the critical p-value in our analyses. For families that included more than one outcome variable, we obtained an adjusted p-value by dividing the standard critical p-value (0.05) by the number of outcome variables in that family. Three outcome families contained more than one outcome variable: SRH knowledge (3), attitudes toward condoms (2), and sexual behavior (3). The critical p-value for statistical significance was therefore 0.017 in the first and third families and 0.025 in the second. For families that contained only one outcome, we used the standard $p < 0.05$ to determine statistical significance.

Results

Sample characteristics and comparability of the study arms

The results in Table 1 indicate that the overall sample was relatively young (mean age = 20.7) and was Latino (62%) or black (38%). The high levels of unemployment (65%) and low levels of educational attainment (34% had a high school diploma or GED) are not surprising since participants were recruited from GED and job training programs. A sizeable minority of men had engaged in risky sexual behavior in the 3 months prior to the baseline interview, 41% had had more than one sex partner, more than half (55%) had not always used a condom when they had sex, and one-third had not always used a condom with casual sex partners.

Table 1 Percentage distributions of selected background characteristics and sexual behaviors measured at baseline for the total sample, the intervention and the control groups

	Total sample	Intervention group	Control group
Age (%)			
18–19	43.3	41.5	45.1
20–22	39.0	34.7	43.4
23–24	6.0	7.6	4.4
25–30	11.7	16.1	7.1
Race/ethnicity (%)			
Latino	62.3	66.4	58.2
Black	37.7	33.6	41.8
Current employment status (%)			
Full time	14.2	10.6	17.5
Part time	20.6	21.2	20.2
Not employed	65.1	68.3	62.3
Currently have health insurance (%)	63.0	57.8	67.8
Completed GED/high school (%)	33.5	32.1	34.7
No. of sexual partners in past 3 months (%)			
0	22.7	25.5	20.2
1	33.6	30.2	36.8
2	19.1	19.8	18.4
3 or more	24.6	24.6	24.5
Frequency condom use in past 3 months (%)			
None of the time	12.4	7.1	17.2
Some of the time	15.8	15.5	16.1
Most of the time	26.6	25.0	28.0
All of the time	45.2	52.4	38.7
Always used condoms with a casual partner in last 3 months	67.2	65.5	68.9

The intervention and comparison groups did not significantly differ at baseline on any of the characteristics or behaviors in Table 1 except age; the mean age in the control group was 21.2 compared to 20.2 in the intervention group (data not shown).

Primary outcomes

The results in Table 2 indicate that the intervention was successful in improving attitudes toward health care utilization. After controlling for age and baseline health care utilization

Table 2 Bivariate and multivariate analysis of the effects of the intervention on primary study outcomes, health care utilization attitudes and coming to the Young Men's Clinic for health care.

Health care utilization attitudes	Bivariate findings		Multivariate findings		
	Mean/percentages		Effect of membership in the intervention group		
	Intervention group (113)	Control group (118)	Regression coefficient (95% CI)	*p*-value	Adjusted *p*-value
Health care utilization attitudes	11.23	10.37	0.233 (0.143, 0.343)	0.000	NA
			Adjusted odds ratio (95% CI)		
Visit the YMC Clinic	15.7	0.8	19.08 (2.47, 147.47)	0.005	NA

CI, confidence interval.

attitudes, intervention group participants had more significantly positive attitudes toward health care utilization at follow-up than did control group respondents.

In the multivariate model, intervention group participants were significantly more likely to have visited the YMC than were men in the control group. Of the 19 men who made a visit to the clinic within 18 months of their baseline interview, 18 were in the intervention group. This is true despite the fact that men in the control group received information about the YMC when the incentive payment was mailed to them after their telephone follow-up interview.

Secondary outcomes

The intervention increased men's SRH knowledge as well as knowledge about the YMC (Table 3). Those in the intervention group had significantly higher scores on the SRH knowledge scale as well as on both knowledge items about the YMC (that services are confidential and that men with little or no money can get free services at the clinic) and the findings persisted after controlling for men's age and their baseline scores on each of the outcome variables.

The results in Table 3 indicate that the intervention significantly increased favorable attitudes toward condoms as measured by the 1–10 attitude scale. At the bivariate and multivariate levels, men in the intervention group rated condoms more favorably at follow-up than those in the control group. Intervention group membership was marginally related to the other condom attitude variable, agreement with the statement 'there is no way to enjoy sex when using a condom' at the bivariate ($p = 0.52$), and multivariate levels (adjusted p-value = 0.058).

The results for sexual risk behaviors are mixed. The 3 sessions successfully reduced the number of sex partners that men reported in the 3 month period following the intervention. However, it had no significant impact on the frequency of condom use in the last 3 months or whether men always used a condom when they had sex with someone other than their main partner.

Table 3 Bivariate and multivariate analysis of the effects of the intervention on primary study outcomes: health care utilization attitudes and coming to the Young Men's Clinic for health care.

	Bivariate findings	Multivariate findings		
	Means/unadjusted odds ratio (95% CI)	Regression coefficient/ adjusted odds ratio (95% CI)	Obtained *p*-value	Adjusted critical *p*-value
Knowledge outcomes				
SRH knowledge scale	4.90 Intervention 3.60 Control	1.37 (1.08, 1.67)	0.000	0.017
Services at the YMC are confidential	9.34 (5.08, 17.16)	9.34 (9.09, 9.8)	0.000	0.017
Men with little or no money can get free services at YMC	16.828 (8.56, 33.08)	18.233 (9.07, 36.66)	0.000	0.017
Condom attitudes				
No way to enjoy sex with a condom	3.47 Intervention 3.66 Control	0.21 (0.02, 0.40)	0.058	0.025
Condom attitudes (1–10 scale)	7.95 Intervention 8.63 Control	0.45 (0.36, 0.54)	0.000	0.025
Sexual risk behavior				
Number of sex partners	0.88 Intervention 1.25 Control	−0.32 (−0.56, −0.08)	0.009	0.017
Frequency of condom use in last 3 months	3.14 Intervention 2.76 Control	NA	NA	NA
Always use condom with sex partner who is not main partner	2.4 (0.26, 22.67)	NA	NA	NA

Discussion

This 3-session sexual health intervention was designed by staff at the Young Men's Clinic (YMC) in order to bring sexual and reproductive health education to community venues where men gather, and to increase participants' use of the services provided at the YMC. The intervention was geared to serve young men who were disconnected from employment and school, which in turn decreased their access to sexual health education and clinical care.

The educational modules promoted positive health care utilization attitudes and modestly improved use of SRH services. They also improved sexual health knowledge, produced positive changes in one of the two condom attitude measures, and reduced the number of sex partners men reported over the previous 3 months. The intervention had no effect on the frequency of condom use in that same interval. The intervention's modest impact is worthy of note given its limited scope and duration. We purposefully designed a set of educational modules that could be implemented and sustained without demanding an inordinate amount of time from the clinic health educator, CBO participants or the CBO programs. Our success in achieving this goal is reflected by the fact that 82% of the intervention group participants attended all three educational sessions, and that 88% of participants reported that they were very satisfied with the educational sessions. Overall, the results of this intervention support the viability and efficacy of delivering sexual health education to young adult men of color in community settings that offer programs to meet their educational and job-related needs.

Implementation of this program highlighted an important fact about collaborative community-based interventions. It is commonly understood that such programs involve an upfront investment of time and resources to build relationships and establish trust. What is frequently overlooked is that these investments must be sustained over time. For example, several of the CBOs with whom we partnered experienced substantial staff turnover during the intervention's planning and implementation stages. When administrative or direct service staff with whom linkages had been forged left the CBO, we had to start from scratch in building a relationship with their replacements. The costs of sustaining collaborative programs with community partners need to be factored into the planning of such projects.

The fact that the intervention sought to promote attitudinal and behavioral outcomes regarding health care seeking is important in its own right. Prior sexual health interventions have tended to overlook these outcomes. This may reflect the fact that many of these programs were designed for women who have higher rates of sexual health care utilization than men. Research documenting the barriers to men's utilization of sexual health care services illustrates the need for interventions that focus on health care utilization attitudes and behaviors.

We are left to explain why 84% of men who received the intervention did not come to the YMC for a checkup. Although some men may have accessed care at other venues, we do not believe that this was true of large numbers of men. There are no other health clinics exclusively for men in the New York metropolitan area, and few facilities provide free care for men who cannot pay. Those that do are public STI clinics that many men are reluctant to use because they feel that they are 'airing their business' by walking in the door (unpublished results).

We believe that additional intervention group men will visit the YMC after the 18-month observation interval if they experience symptoms of an STI or other health problems. This speculation is consistent with the observations that many men will not seek health care if they have no symptoms and often delay even when symptomatic, until the symptoms are extreme [19–21]. Findings from a recent focus group study of Latino and African-American men living in the communities in which the CBO intervention was conducted suggest that men were most likely to seek sexual health care when they experienced STI symptoms. Some men described a strategy of 'toughing it out' and only seeing a doctor when their symptoms become unbearable (unpublished results). These descriptions are rooted in masculinity beliefs that do not support health care utilization unless there is really something wrong.

Socially constructed beliefs and behavioral repertoires regarding health care utilization

are difficult to change. What would it take to get men, particularly high risk men in their late teens and early 20s, to seek periodic sexual health care exams? Health care system change would be necessary. Health care providers would need better training to provide comprehensive, high-quality male sexual health services. There would need to be more community-based sites that provide affordable sexual health care services to men. The provision of affordable sexual health care services would require substantial modifications of our health insurance system which fails low income men who do not have private insurance and who are ineligible for public health insurance as well as insured men whose coverage does not extend to SRH services.

Social marketing and educational programs would be needed to promote health care utilization among young men. These programs could take several approaches. Our intervention stressed the asymptomatic nature of STIs as a rationale for men getting checked even if they had no symptoms. Although this negative motivation for seeking routine checkups (e.g., 'you could be sick and not know it') should not be discarded, more positive motivational strategies should be developed. Health care visits should be presented as a way that young men empower themselves by 'taking care of business,' much as they do in other spheres of their lives. These programs should also explicitly focus on helping young men consider how traditional masculinity scripts can hurt them and should help men reconstruct conceptions of masculinity that are compatible with preventive health care visits.

Several limitations of this study should be noted. While the intervention succeeded in reducing the number of sex partners, it did not increase condom use. As noted by other interventionists, behavioral change is often modest and, in some cases, elusive. Reliance on self-report outcomes measures is a weakness. Finally, since assignment into the intervention and control groups was not random, the generalizability of our findings is limited. Our ability to control for the most potentially contaminating group differences (baseline scores on the outcome variables), however, maximizes the validity of these quasi-experimental findings.

This is an exciting time for men's sexual health promotion. In response to new advocacy efforts and funding opportunities, a variety of programs are being developed. However, few of these programs have been systematically evaluated. This evaluation constitutes an early step in that direction with a hope that more will follow.

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Appendix A

A.1. Attitudes Regarding Health Care Utilization Scale

- I *only* need to get a health check-up when I am sick or hurt.
- Except for the emergency room, there is no place where I can go to get a physical exam or health check-up that I can afford.
- If I was sick or in pain, I would go to see a doctor as soon as possible.

A.2. Sexual Health Knowledge Scale

- Putting lubricants ('lube') on the *inside* of a condom can increase sexual pleasure for men.
- If a condom breaks while a couple has sex, the woman can go to a clinic the next day to get pills to keep her from getting pregnant.
- If a man has a sexually transmitted disease (STD), he will *always* have symptoms, like bumps, a rash or a drip.
- Having an STD like Gonorrhea, Chlamydia, or Herpes increases a person's risk of becoming infected with HIV.
- Most STDs will go away by themselves without treatment.
- One out of every 4 people in the United States will become infected with an STD other than HIV/AIDS at some point in their life.

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