Why Are Young College Women Not Using Condoms? Their Perceived Risk, Drug Use, and Developmental Vulnerability May Provide Important Clues to Sexual Risk

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Background. **Young multiethnic college women (YMCW) are at risk for STDs and HIV secondary to high-risk sexual behaviors that are related to developmental issues such as invincibility, low perceived risk, and substance use.**

Method. **One hundred YMCW on a southern California university campus completed surveys that examined variables that impacted their sexual risk.**

Results. **The study yielded many significantly correlated variables. Women with low perceived risk, lower use of drugs and alcohol, and who had parental involvement had lower sexual behavior risk. Women that were sexually assertive, had intentions to use condoms, and did not use substances used condoms more often. Older students in advanced grades who had steady partners used substances less and had decreased sexual risk, however, they experienced partner resistance to condoms, which canceled out any reduced risk. In a multiple regression analysis, condom use intention and substance use predicted condom use, perceived risk and substance use predicted sexual behavior risk. White women had significantly higher substance use, perceived sexual risk, and sexual behavior risk than did Latinas and African Americans.**

Conclusions. **Despite their assertiveness and intentions, many participants had multiple sexual partners, and 64% of the YMCW were inconsistent condom users. Despite knowing the elevated risks, 52% used drugs and alcohol during sex. Negative attitudes (61%) about condoms were also demonstrated as a key factor in the lack of condom use.**

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THE NUMBER OF young adolescents and young women infected with STDs and HIV is growing at an alarming rate. In 2002, females comprised nearly half (47%) of AIDS cases among 13- to 24-year-olds (CDC, 2003). Young African Americans are most heavily affected, accounting for 56% of all new cases reported among 13- to 24-year-olds in 2000. Among all ethnic groups, heterosexual contact with an infected partner continues to be the leading cause for HIV infection among women nationwide (53%) (Centers for Disease Control and Prevention [CDC], 2003). Younger women are more likely to acquire HIV through heterosexual sex (73%) (Royce, Sena,

Cates, & Cohen, 1997). The biological and psychological sequelae of STDs and infection with HIV present health threats including sterility, pelvic inflammatory disease, cervical cancer, and even death. Evidence shows that postadolescent development and behaviors may be some of the most important variables in predicting condom use and sexual risk among young multiethnic college women (YMCW). The lack of consistent condom use is one of the most important factors contributing to the rise in these STD/HIV infections in this population. To effectively negotiate consistent condom use, young women must have a sense of control over the sexual encounter, favorable attitudes toward condoms, and a perception of risk (Bryan, Aiken, & West, 1997; Gerrard, Gibbons, & Bushman, 1996). Sexual risk is a challenging problem for adolescent and college age women because of developmental vulnerability (Crosby, DiClemente, Wingood, Lang, & Harrington, 2003; Mercer, 1979; Rosenthal et al, 1995). This includes beliefs of invincibility, lack of control over sexual encounters, low perceived risk, and lack of parental support or supervision, and substance use. Sexual risk behaviors include sex with multiple partners, anal sex, tattoos, piercing, early onset of sexual activity, and non-condom use (Goldman & Harlow, 1993; Millstein & Moscicki, 1995).

The purpose of this study was to determine contributing factors that lead to risk taking sexual behavior among YMCW. This article describes the background, methods, sample, and results of the study.

BACKGROUND

Secondary to developmental age, older female adolescents and YMCW often feel omnipotent, not at risk for STDs/HIV, drug and alcohol addiction, or pregnancy. Young college women are considered older adolescents, age 17–24 years old. Mercer (1979) proposed that tasks of the older adolescents are acceptance of body image, internalization of sexual role and identity, and achievement of independence from parents. YMCW may struggle with adjusting to the pressures of living with fewer parental controls, unrealistic perceptions of self as a sexual being, and changing relationships with friends, boyfriends, and family. Although perceived risk for HIV has failed in the past to predict condom use in college students (Goldman & Harlow, 1993), perceived risk to other STDs has been correlated with condom use (Campbell et al., 1992; Catania, Coates, & Kegeles, 1994).

The CDC (2002a) reports that one in three young people are infected with an STD by the age of 24 years. Chlamydia is the most prevalent STD and is higher in minority populations (CDC, 2002a). Young women age 15–19 years reported the highest incidence of all gonorrhea cases in 1999 (DHHS, 2000). Young women may use hormonal birth control to prevent pregnancy to the exclusion of using condoms, thus are not protected against STDs and HIV (Carmona, Romero, & Loeb, 1999; Newcomb et al., 1998; Roye, 1998; Russell, Williams, Farr, Schwab, & Plattsmier, 1993). Substance use has been found to play a large role in young women's sexual risk behaviors leading to infections with STDs and HIV (CDC, 2002b; Koniak-Griffin, 1995).

Frequently, YMCW remain dependent on parents for financial and emotional support. In a study by Millstein and Moscicki (1995), 571 sexually active 13- to 19-year-old young women reported that perceived parental support was related to lower sex risk behavior, whereas a lack of parental support lead to high-risk behavior and STDs.

Relationship issues are part of the adolescent's developmental stage and contribute to their HIV risk. Adolescents are beginning to experience committed relationships for the first time, and both male and female adolescents are often not monogamous. Among young women at the time of first sexual encounter, condom use has been reported to be low: 38% (CDC, 2002a).

Women often do not perceive themselves at risk for STDs and HIV if they are monogamous (Marin et al., 1993). Many women were unaware of the risk behavior of their main partner (Coates et al., 1996). Additionally, women who reported a lack of sexual assertiveness and condom resistance from their male sexual partners were unlikely to refuse sex or demand condom use by partners (Amaro, 1995; Bowen & Trotter, 1995; Gomez & Marin, 1996; Libbus, 1995; Marin et al, 1999). Partner resistance was often reported by young women as the main reason for not using condoms (Carrier & Magana, 1991; Flaskerud, Nyamathi, & Uman, 1997; Stevens, 1995).

Finally, teaching sexual abstinence has not been proven helpful in risk reduction. Sexual behaviors and what constitutes abstinence from the perspective of adolescents is poorly understood.

Young women place themselves at risk by engaging in genital sexual activities other than vaginal intercourse such as anal sex while believing themselves to be abstinent. Many abstinence programs fail to provide a clear description of what abstinence means to these adolescents (Haglund, 2003).

METHODS

This study was a descriptive/correlational design. Ten instruments and a demographic questionnaire were administered by a pencil-and-paper method to a sample of 100 YMCW. Reliability for these instruments ranged from $r = .62$ to $r = .83$. Instruments measured the YMCW's perception of control over the sexual encounter, perception of risk, perceived sexual assertiveness, condom use intention, actual condom use, partner resistance to condom use, substance use, STD history, sexual risk behaviors, and perceived parental support.

Control over the sexual encounter was measured by an instrument that was adapted from a tool developed by Bryan et al. (1997). Participants rated six items related to their control over the sexual encounter. A score of 5 or more was rated high control, and 4 or less was rated low. The alpha coefficient was .62.

Perceived sexual risk was defined as a scored 3 or more were rated "high risk" on a Likert scale adapted from Bryan et al. (1997). Those who received a score of 1–2 were rated "moderate risk," and a score of 0 was rated "low risk." The alpha coefficient was .83.

Actual sexual behavior risk was assessed by a questionnaire that was designed by the investigators and included items that place YMCW at risk for STDs and HIV such as multiple sexual partners, tattooing, body piercing, young age at first intercourse, anonymous sex, and anal sex. The scale had eight items, with 1 point given for each risk factor. High risk was scored as 3 or more points, moderate risk was 1–2 points, and low risk was 0 points.

The instrument survey that was used to assess sexual assertiveness was adapted from Wingood and DiClemente (1998). The alpha coefficient was .77. The 11-item tool measured women's ability to suggest condom use to male sexual partners. Responses were in a yes-or-no format. A "yes" response to 5 or more of 11 items was scored as high in sexual assertiveness. Questions included "Have you ever refused sex because you weren't in the mood," and "Have you ever insisted your partner use condoms?"

Condom use intention, attitude, and skill were measured using an 11-item scale adapted from Bryan et al. (1997), which has an alpha coefficient was .83. If participants agreed to 6 or more of the items on the scale, the score overall was rated high.

Actual condom use was assessed by a two-item questionnaire adapted from an instrument by Wingood and DiClemente (1998), and asked "How many times did you use a condom in the previous 3 months with your primary partner?" and "How many times did you use a condom in the previous 3 months with your secondary partner(s)?" Condom use was defined as the number of times condoms were used with all partners divided by the number of episodes of vaginal or anal sex. Consistent condom use was defined as 100% use during vaginal or anal sex with both primary and secondary partners.

Partner resistance to condom use was assessed by a questionnaire developed by Wingood and DiClemente (1998) to measure men's resistance to condom use. The tool had an alpha coefficient was .75. Participants rated the degree of resistance their partners had to using condoms in the past 3 months using a 5-point Likert scale of 1 (*partner never resisted using condoms*) to 5 (*partner resisted using condoms 5–10 times*). A score of 4–12 was rated as high partner resistance.

Substance use was assessed using an adapted tool from Millstein and Moscicki (1995). This scale asked participants to rate the type and frequency of drug and/or alcohol use. The investigators included two additional questions regarding participants substance use during sex and participants perceived impact of substances on sexual risk. The maximum score possible was 10. A score of 8–10 was rated as high use, 5–7 was rated as moderate use, 1–4 was rated as low use, and a score of 0 was rated as no use.

An STD survey measured the type and frequency of diagnosed STDs, with 11 questions in a yes-or-no format and was designed by the investigators.

The tool used to assess parental approval and financial support was developed by the investigators. The instrument asked six questions using a Likert scale regarding parental financial and emotional support. Each question was given 1 point. A score of 4 or more indicated high support, and a score of 1–3 indicated low support.

Finally, a sociodemographic questionnaire was also completed by all participants. Before beginning the study, all documents, forms, protocols, and questionnaires were reviewed and approved by the university's Institutional Review Board. All consented participants were included in the statistical analysis.

Setting and Sample

Participants were recruited at a state university in southern California. This university serves a highly diverse range of ethnic groups. A convenience sample of 100 YMCW was recruited. The following were inclusion criteria for the study: (1) age 18–24 years, (2) a history of sexual activity, and (3) ability to read and write in English at a sixth-grade level. All participants who provided written informed consent to participate and who met the inclusion criteria were invited to participate in the study. Participants were given the survey instruments that they completed in a private area. This took approximately 1 hour, for which participants were compensated $20. A power analysis was conducted using nine predictors. With a sample size of 100 and power of .80, medium effects could be detected (R^2 = .15, α = .05) in assessing the significance of an estimated regression model.

RESULTS

Table 1 shows the demographic profile of the 100 participants.

Table 1. Sociodemographic Profile of Study Subjects (*N* = 100)

Category	Subjects
Marital status	
Married	7 (7)
Never married	85 (85)
Separated	1 (1)
Living with Partner	7 (7)
Regular sexual partner	
Yes	41 (41)
No	58 (58)
Age	
18–20 years	63 (63)
21–24 years	29 (29)
Mean ± *SD* [range] (years)	20.2 ± 2.85 [18–24]
Years of college	
1–2	56 (56)
3–4	36 (36)
5–7	7 (7)
Mean ± *SD* [range]	2.4 ± 1.54 [1–6]
Religion	
Catholic	36 (36)
Protestant	9 (9)
Jewish	3 (3)
Other	32 (32)
None	18 (18)
Religiosity	
Low	67 (67)
High	33 (33)
Health-care coverage	
None	15 (15)
California State University plan	6 (6)
Parent's plan	70 (70)
Other	9 (9)
Ethnic group	
Black	22 (22)
Hispanic	30 (30)
White	41 (41)
Asian	3 (3)
Other	2 (2)

Values are given as *n* (%).

Reporting on control over the sexual encounter, most subjects (93%) reported that they perceived themselves to have high control. Women reported they could "decide when they would have sex" (90%), "make decisions about the time and place when having sex" (95%), and "could say no to any encounter" (96%). The reliability coefficient was .86.

Related to the YMCW's perceived risk, 16% rated themselves high risk, 35% moderate, and 49% rated themselves at low risk accordingly. Perceived risk was correlated with ethnic group (r = .384, P = .01), with Whites having the highest rates of high-perceived risk (24%), followed by Latinas (13%) and African Americans (0%). Examples of items included, "I am not confident I can prevent an STD" (27%) and "There is a chance that I might be exposed in the future" (39%). Perceived risk was correlated with STDs (r = .224, P = .01) and sexual behavior risk (r = .379, P = .01). Perceived risk was much lower than actual sexual behavior risk. The reliability coefficient was .75.

Actual reported sexual behaviors showed that the YMCW's first sexual experience was 13–24 years, with 44% under age 16 years at first coitus and 10% at 14 years or younger. The average number of lifetime partners was 5; 43% had 4 or more partners; 17% had 10 or more partners; and 5% had more than 20 lifetime partners. Only 5% reported having had anal sex. Two percent reported sex with a male bisexual or homosexual, 34% had tattoos, and 32% had body piercing. Number of partners in the past 3 months was correlated with tattoos (r = .299, P = .01). Whites had significantly higher

rates (93%) of moderate- to high-risk behavior scores than African Americans (73%) and Latinas (67%) (r = .303, P = .01). Thirty-eight percent of women scored high risk, 43% moderate risk, and 19% low risk. High scores for sexual behavior risk (38%) were twice as high as self-reported perceived risk (16%).

The sexual assertiveness survey showed that most women (94%) scored high in sexual assertiveness. Sexual assertiveness was correlated with condom use (r = .284, P = .01). Women scored high in assertiveness to questions about sexual treatment (78%) and refusing sex practices they did not like (77%). Although 52% had refused sex when their partner refused a condom, 73% said they would refuse sex if their future partner refused to wear a condom. Most women (91%) responded that they had asked a partner to use condoms, however, consistent condom use was only 36%. Assertiveness was associated with greater sexual control (r = .291, P = .01) and condom use intention (r = .349, P = .01). The reliability coefficient was .52, lower that previous studies using this tool.

For condom use intention, attitude, and skill, 84% of women related high condom use. Condom use intention was correlated with condom use (r = .300, P = .01). Women reported high intention to acquire or discuss condoms (65%), to purchase (84%), and use condoms in the next sexual encounter (80%). Only 39% had positive attitudes about condoms, including not being embarrassed to purchase condoms (75%) and not affecting the mood (66%). Women reported condoms did not affect their personal pleasure (56%), but believed that condoms affected their partner's pleasure (62%). Condoms were used correctly by 94%. The reliability coefficient was .74.

In actual condom use, 64% of YMCW were inconsistent or non-condom users. Thirty-two percent rated condom use as none (0% of sexual episodes), 17% rated condom use as low (1–49% of sexual episodes), and 15% rated condom use as moderate (50–99% of sexual episodes). Only 36% rated their condom use as consistent (100%) in the past 3 months with a primary or secondary partner. Additional comments included were "almost always," "just about every time," and "8/10."

Regarding the resistance of male partners to condom use, most subjects (57%) experienced low partner resistance to condoms, whereas 43% of women experienced resistance by partners. Women with regular sexual partners experienced more resistance to condom use (r = .257, P = .05). The reliability coefficient was .75.

Substance use was correlated with sexual behavior (r = .446, P = .05) and inversely with condom use (r = −.237, P = .05). Most respondents used drugs and alcohol (89%). As many as 25% reported high use, 37% reported moderate use, 27% reported low use, and 11% reported no use. No subjects reported using any intravenous drugs. The types of substances used were alcohol (86%); marijuana (50%); ecstasy (5%); mushrooms (4%); cocaine, Vicodin, and codeine (3%); and Valium or Darvocet (1%). The frequency of drugs ranged from never (11%), none or rarely (19%), once to several times a month (27%), weekly (21%), and daily (22%). The total using alcohol or marijuana at least monthly was 70%. Although 67% agreed that substance use increased their sexual risk, 52% had used alcohol or drugs during the previous four sexual episodes. Whites had higher substance use (34%) than Latinas (17%) and African Americans (5%) (r = .452, P = .01). Substance use was inversely correlated with regular partners (r = −.277, P = .010), and with grade in school (r = −.379. P = .010).

Only 10% had ever had an STD, although 58% scored at high risk for acquiring an STD or HIV. Herpes (2%), chlamydia (3%), vaginal warts (5%), and gonorrhea (2%) were reported. Most (79%) had had a Pap smear, 52% had been tested for HIV, and 41% had asked partners to be tested. None reported being positive for HIV but 27% reported worrying about the HIV test results. STDs were correlated with sexual risk behaviors (r = .324, P = .05).

Most women (69%) reported parents were financially supportive and involved. Most women reported parents disapproved of drug use (91%), alcohol use (55%), premarital sex (54%), and multiple sexual relations (89%). Women agreed (61%) that their parents' approval influenced their choices. There was a disparity in disapproval by parents of alcohol (55%) versus drugs (91%), and in the disapproval of sexual relationships (54%) versus multiple sexual relationships (89%). For subjects ages 21 years or older, alcohol was not illegal, thus not disapproved of as strongly as drugs. Parent support was inversely correlated with sexual behavior risk (r = −.218, P = .05). The reliability coefficient was .75.

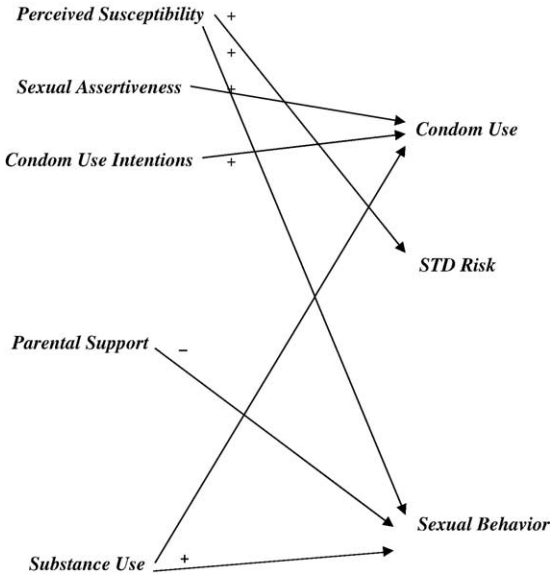

Fig 1. Summary model of significantly correlated independent variables with dependent variables.

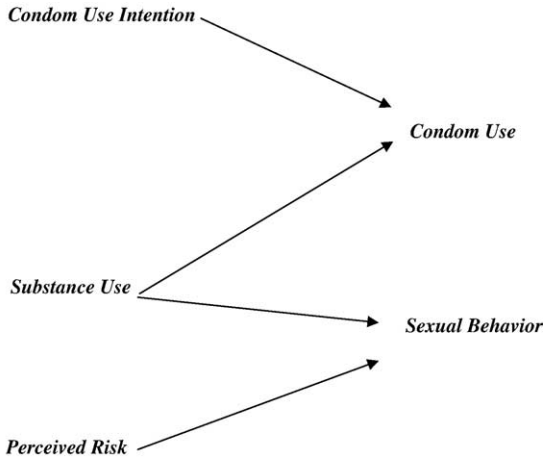

Fig 2. Summary model of multiple regression analysis of significantly correlated independent variables on dependent variables.

Five independent variables significantly correlated with outcome variables are shown in a summary model (see Figure 1).

Bivariate correlation analysis using Spearman correlation was conducted to determine relationships among the variables. Significant relationships are presented in Table 2.

Multiple Regression Analysis

Multiple regression analysis was conducted on the variables that had significant correlations combined on the outcome variables. Three independent variables were predictive in two of the three outcome variables (see Figure 2). The variability of sexual behavior was explained by perceived risk (R^2 = .26, β = .244, P = .01) and substance use (R^2 = .26, β = .358, P = .00). Condom use was explained by condom use intention (R^2 = .14, β = .226, P = .03). In a stepwise regression, the variability of condom use was explained by condom use intention (R^2 = .14, β = .284, P = .01) and substance use (R^2 = .14, β = −.209, P = .04), and sexual behavior was explained by substance use (R^2 = .26, β = .361, P = .00). These variables support the theoretical model in predicting sexual risk. The concept variables supported the theory that perceived susceptibility, control over sexual decision-making, and substance use predict sexual risk and condom use. Figure 2 illustrates a summary model of multiple regression analysis.

DISCUSSION

The investigators sought to elicit what motivated YMCW to use condoms and what barriers they encountered to enact safe sex practices. Findings supported that YMCW were at tremendous risk for STD and HIV infections. Perceived risk strongly predicted sexual behavior, however, women's perceived risk was about half that of their actual risk, a discernment that was unrealistic and

Table 2. Correlations of Independent Variables With Outcome Variables

	Perceived Risk	Sexual Assertiveness	Condom Use Intention	Parent Support	Substance Use
Condom Use	*ns*	.284*	.300*	*ns*	−.237**
STDs	.224*	*ns*	*ns*	*ns*	*ns*
Sexual behavior risk	.379*	*ns*	*ns*	−.218**	.446**
Ethnicity	.384*	*ns*	*ns*	*ns*	.452*

*Correlation is significant at the .01 level.

**Correlation is significant at the .05 level.

probably related to developmental narcissism. Although we are uncertain as to why White women had the highest perceived risk, we believe that health threats for women of all ethnicities must be addressed.

The data pointed to a tendency of these YMCW to focus on their "future risk" and additionally indicated that these same women were failing to protect themselves in their current sexual situations. Despite women's reports of assertiveness and high levels of control during their sexual encounters, more than half were having unprotected sex. A strong correlation with sexual assertiveness and condom use was found, however, despite feeling confident in their ability to ask their partner to use a condom, over half did not refuse sex if their partner did not want to use a condom, and one third had not used a condom the last time they had sex. This indicates that there is a gap between these YMCW's beliefs about their assertiveness to their actual behaviors.

In new and untested sexual relationships, women may be unaware of or reluctant to acknowledge male behaviors that make women more susceptible to STDs. Women who had a regular sexual partner experienced more resistance to condom use. Steady, so-called monogamous relationships may promote a false sense of security in otherwise assertive, controlled young women who may erroneously believe their partners are also monogamous. Partner resistance to condom use often presents a form of coercion that goes unrecognized, although none of the participants reported feeling coerced. Partners may pressure young women into skipping condoms during sex and, despite previous intentions, women give up the fight and may even avoid discussions of condom use to avoid confrontation. Interventions that focus on addressing resistance despite sex and cultural forces are paramount in risk reduction strategies.

Despite reports of high overall condom use intention, among this group of young women, there were some negative attitudes concerning condoms (61%) and beliefs about partners' diminished sexual pleasure (62%), which may be key factors in the lack of condom use. Although some studies show that women's attitudes are more positive than those of men, other studies have pointed to negative attitudes of youths toward condoms (Campbell & Peplau, 1992; Sacco, Levine, & Reed, 1991). Additionally, the high condom use intention responses may have been reported as what the investigators wanted to hear, or an indication that women were beginning to focus on what they "ought" to be doing. Most women expressed intentions to discuss condom use in the future but did not use condoms with current partners. Condom use intention had a strong relationship with condom use and may be the only factor in our model that promotes condom use. Lack of embarrassment to purchase or carry condoms can be incorporated into prevention messages that help YMCW to establish well-developed intentions and to purchase and keep condoms before they are in a sexual encounter, that is, before being sexually aroused. Previous research has shown that adolescents are more likely to have used condoms during their most recent sexual encounter in schools where condoms were available (Blake et al., 2003). Strategies that promote condom availability on college campuses help YMCW to take advantage of this method to prevent STDs and pregnancy (Blake et al., 2003).

The significance of substance use leading to non-condom use and sexual risk cannot be overemphasized and should be part of a comprehensive risk prevention program wherein students are encouraged to increase intentions to abstain from drugs before they are in a risky situation. Shrinking inhibitions together with developmental invulnerability affects judgment and decision-making. Millstein and Moscicki (1995) reported that 35% of teens that used substance during sex reported having low perceived risk and multiple sexual partners, compared with 18% of subjects who did not use substances during sexual activity. Awareness that substance use increased their sexual risk behaviors did not appear to affect this sample of YMCW's persistence in using drugs and alcohol when engaging in sexual intercourse. This risky behavior may be related to developmental influences and casual "partying" common to college culture. However, the issue of drug and alcohol abuse and availability on college campuses must be addressed with all students, regardless of ethnicity or age.

It is interesting that Whites had greater sexual risk because women of color have been previously reported as having higher risk. White students may have let their guard down despite having elevated self-perceived risk.

YMCW have a continuing dependence on parents for financial and psychological support and

acknowledged parents' disapproval of alcohol, drug use, and premarital sex influenced their choices in these matters. Parental support reduces sexual behavior risk, and perhaps this impact of parental approval can be used as an important educational tool to promote responsible decision-making by YMCW while away from parental supervision.

IMPLICATIONS AND RECOMMENDATION

This study is limited by a convenience sampling method, a single recruitment site, and self-reported data. It was a one-time survey and the self-report format may be further impacted by participants' low estimate of sexual risk as well as denial. The findings of this study cannot be generalized to the multiethnic population of young women in general.

Prevention strategies should focus on counseling college women about their current and genuine risk for STDs, within the developmental context of invulnerability to disease. YMCW need a range of information and services regarding the choices and decisions they make to ensure safer sex, as well as interventions that are consistent with their cultural values and beliefs. Consideration for the individual's developmental phase and issues that influence risky sexual partnerships and behaviors is paramount.

YMCW are likely to become infected with an STD or HIV in the future if they continue their risky sexual behaviors. However, they must first perceive that STDs such as chlamydia, gonorrhea, and HIV are a real threat to them. This is perhaps the most important factor to be addressed in risk prevention. Although past high-risk behaviors cannot be erased, women can be encouraged to use new behaviors to reduce their current risk. Additionally, the investigators recommend conducting a study with YMCW in which we use qualitative methodology through in-depth questioning of students to explore risk perception and sexual behaviors. We plan to present the data obtained in this study to other young women in small focus groups to facilitate discussions and foster insights about STD and HIV risk. We also intend to focus on students who report always using condoms (100%) to gain additional insight into YMCW's motivation and intentions for condom use.

For now, for the YMCW who are sexually active, condom use is the only reliable protection against STDs and HIV. Strategies to increase the use of condoms and condom use consistently are essential to reducing the number of STD and HIV infections in this vulnerable population.

REFERENCES

Amaro, H. (1995). Love, sex, and power. *American Psychologist*, *50*(6), 437–445.

Blake, S. M., Ledsky, R., Goodenow, C., Sawyer, R., et al. (2003). Condom availability programs in Massachusetts high schools: Relationships with condom use and sexual behavior. *American Journal of Public Health*, *93*(6), 955–963.

Bowen, A. M., & Trotter, R. (1995). HIV risk in intravenous drug users and crack cocaine smokers: Predicting stage of change for condom use. *Journal of Consulting and Clinical Psychology*, *63*(2), 238–248.

Bryan, A. D., Aiken, L. S., & West, S. G. (1997). Young women's condom use: The influence of acceptance of sexuality, control over the sexual encounter, and perceived susceptibility to common STDs. *Health Psychology*, *16*(5), 468–479.

Campbell, S. M., & Peplau, L. A. (1992). Women, men, and condoms. *Psychology of Women Quarterly*, *16*, 273–288.

Carmona, J. V., Romero, G., & Loeb, T. B. (1999). The impact of HIV status and acculturation on Latinas' sexual risk taking. *Cultural Diversity and Ethnic Minority Psychology*, *5*(3), 209–221.

Carrier, J. M., & Magana, J. R. (1991). Use of ethnosexual data on men of Mexican origin for HIV/AIDS prevention programs. *Journal of Sex Research*, *28*, 189–200.

Catania, J. A., Coates, T. J., & Kegeles, S. (1994). A test of the AIDS risk reduction model: Psychosocial correlates of condom use in the AMEN cohort survey. *Health Psychology*, *13*, 548–555.

Centers for Disease Control and Prevention. (2002a). HIV/AIDS surveillance report through September 30, 2000. Atlanta, GA: HIV Surveillance.

Centers for Disease Control and Prevention. (2002b). Trends in sexual risk behaviors among high school students—United States, 1991–2001. *MMWR Morbidity and Mortality Weekly Report*, *51*(38), 856.

Centers for Disease Control and Prevention. (2003). HIV surveillance. HIV/AIDS Surveillance report through December 30, 2002. Atlanta, GA: Author.

Coates, T. J., Chesney, M., Folkman, S., Hulley, S. B., Hyanes-Sanstad, K., Lurie, P., et al. (1996). Designing behavioural and social science to impact practice and policy in HIV prevention and care. *International Journal of STD & AIDS*, *7*(2), 2–12.

Crosby, R. A., DiClemente, R. J., Wingood, G. M., Lang, D., & Harrington, K. F. (2003). Value of consistent condom use: A study of sexually transmitted disease prevention among African American adolescent females. *American Journal of Public Health*, *93*(6), 901–902.

Department of Health and Human Services. (2000). Sexually transmitted disease surveillance, 1999 Retrieved February 4, 2004 from http://www.cdc.gov/nchstp/dstd/Stats_Trends/1999SurvRpt.htm.

Flaskerud, J. H., Nyamathi, A. M., & Uman, G. (1997). Longitudinal effects of an HIV testing and counseling program for low-income Latina women. *Ethnicity and Health*, *2*(1/2), 89–103.

Gerrard, M., Gibbons, F. X., & Bushman, B. J. (1996). Relation between perceived vulnerability to HIV and precautionary sexual behavior. *Psychological Bulletin*, *119*(3), 390–409.

Goldman, J. A., & Harlow, L. L. (1993). Self-perception variables that mediate AIDS preventive behavior in college students. *Health Psychology*, *12*(6), 489–498.

Gomez, C. A., & Marin, B. V. (1996). Gender, culture, and power: Barriers to HIV-prevention strategies for women. *Journal of Sex Research*, *33*(4), 355–362.

Haglund, K. (2003). Sexually Abstinent African American Adolescent Females' Descriptions of Abstinence. *Journal of Nursing Scholarship*, *35*(3), 231.

Koniak-Griffin, D., & Brecht, M. L. (1995). Linkages between sexual risk taking, substance abuse, and AIDS knowledge among pregnant adolescents and young mothers. *Nursing Research*, *44*, 340–346.

Libbus, K. (1995). Women's beliefs concerning condom acquisition and use. *Public Health Nursing*, *12*(5), 341–347.

Marin, B. V., Gomez, A. A., & Hearst, N. (1999). Multiple heterosexual partners and condom use among Hispanics and Non-Hispanic Whites. *Family Planning Perspectives*, *25*(6), 170–174.

Marin, B. V., Tschann, J. M., Gomez, A. A., & Kegeles, S. M. (1993). Acculturation and gender differences in sexual attitudes and behaviors: Hispanic vs. Non-Hispanic White unmarried adults. *American Journal of Public Health*, *83*(12), 1759–1761.

Mercer, R. T. (1979). Perspectives on adolescent health care. New York: JB Lippincott.

Millstein, S. G., & Moscicki, A. (1995). Sexually-transmitted disease in female adolescents: Effects of psychosocial factors and high risk behaviors. *Journal of Adolescent Health*, *17*, 83–90.

Newcomb, M. D., Wyatt, G. E., Romero, G. J., Tucker, M. B., Waymant, H. A., Carmona, J. V., et al. (1998). Acculturation, sexual risk taking, and HIV health promotion among Latinas. *Journal of Counseling Psychology*, *45*, 454–467.

Rosenthal, S. I., Biro, F. M., Cohen, S. S., Succop, P. A., & Stanberry, L. R. (1995). Strategies for coping with sexually transmitted diseases by adolescent females. *Adolescence*, *30*(119), 655–666.

Royce, R. A., Sena, A., Cates, W., & Cohen, M. (1997). Sexual transmission of HIV. *New England Journal of Medicine*, *336*(15), 1072–1078.

Roye, C. F. (1998). Condom use by Hispanic and African-American adolescent girls who use hormonal contraception. *Journal of Adolescent Health*, *23*(4), 205–211.

Russell, A. Y., Williams, M. S., Farr, P. A., Schwab, A. J., & Plattsmier, S. (1993). Patterns of contraceptive use and pregnancy among young Hispanic women on the Texas–Mexico border. *Journal of Adolescent Health*, *14*, 373–379.

Sacco, W. P., Levine, B., & Reed, D. L. (1991). Attitudes about condom use as an AIDS-relevant behavior: Their factor structure and relation to condom use. *Journal of Consulting and Clinical Psychology*, *3*, 265–272.

Stevens, P. E. (1995). Impact of HIV/AIDS on women in the United States: Challenges of primary and secondary prevention. *Health Care for Women International*, *16*, 577–595.

Wingood, G. M., & DiClemente, R. J. (1998). Partner influences and gender-related factors associated with noncondom use among young African American women. *American Journal of Community Psychology*, *26*(1), 29–50.