

FACTORS THAT INFLUENCE VULNERABILITY TO STDS AND HIV/AIDS AMONG HISPANIC WOMEN

Elizabeth Abel, PhD, RNCS, ANP/FNP

School of Nursing, The University of Texas at Austin, Austin, Texas, USA

Kathryn B. Chambers, PhD, RNC

The University of Texas at Austin, Austin, Texas, USA

Self-esteem, motivation for sexual health, and sexual risk behaviors as indicated by condom use and number of sex partners was explored in a sample of 140 Hispanic women of childbearing age (18–44 years). The researchers used Cox's Interaction Model of Client Health Behavior (IMCHB) as the conceptual framework for the study. They found that 70% ($n = 79$) of single women reported condom use with their most recent sexual partner, and 49% ($n = 55$) of single women reported more than one sexual partner in the last 12 months. Self-esteem and motivation for sexual health were significantly associated ($r = .42$, $p = .001$), although only the latter was related to condom use among single women ($r = .29$, $p = .01$). Women who reported higher self-esteem were less likely to worry about acquiring sexually transmitted diseases (STDs) and human immunodeficiency virus (HIV)/acquired immune deficiency syndrome (AIDS). Despite public information about STDs, including HIV/AIDS, a proportion of these women and their partners are vulnerable to these diseases. Health promotion implications are discussed.

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Address correspondence to Elizabeth Abel, School of Nursing, The University of Texas at Austin, 1700 Red River, Austin, TX 78701, USA. E-mail: eabel@mail.utexas.edu

The researchers in this study used the IMCHB to explore relationships among background variables, motivation (for sexual health), cognitive appraisal (knowledge about STDs, including HIV/AIDS and risks), affective responses (self-esteem, attitudes, and worry about STDs), and health outcomes (sexual risk behaviors) among Hispanic women in the south central United States of America. The researchers found that many participants reported positive health practices that reduced risks for STDs and HIV/AIDS, yet a third practiced sexual behaviors that placed them at risk for STDs and HIV/AIDS. The researchers suggest that findings from this study can be used to develop interventions to promote safe sex and reduce sexual risk behaviors among these Hispanic women.

Although 15 million people each year acquire an STD, Hispanic women in the United States are affected disproportionately by STDs and HIV/AIDS (Centers for Disease Control and Prevention [CDC], 2000a). For example, Hispanics are three to four times more likely to acquire primary and secondary syphilis, and are 10 times more likely to give birth to a baby with congenital syphilis, than their White counterparts (CDC, 2000a). Women may develop cervical cancer as a consequence of recurring STDs, with the reported incidence two to three times higher in Hispanic women than in White women (Suarez & Ramirez, 1999). Having an STD also increases susceptibility to HIV/AIDS, particularly in women (U.S. Department of Health and Human Services [USDHHS], 2000).

The rate of AIDS cases per 100,000 population among Hispanic women in 1999 (15) was more than seven times that of White women (2; CDC, 2000c, 2000d), and it is the leading cause of death in the United States among persons aged 25–44 years (CDC, 2000b). Forty-seven percent of Hispanic women with HIV/AIDS were exposed through heterosexual encounters with partners who were infected (CDC, 2000c). Although a number of women acquire HIV/AIDS through intravenous drug use (IDU) or through sexual encounters with a partner with IDU, many are completely unaware of their partners' HIV/AIDS risks. Because STDs, including HIV/AIDS, exact such a devastating toll on women, men, and children in this country, public health leaders have identified responsible sexual behavior as one of the top 10 health indicators in *Healthy People 2010* (USDHHS, 2000).

Limited research focuses on issues uniquely related to Hispanic women's health behaviors and risks for STDs, including HIV/AIDS. Higgins and Learn (1999) noted a lack of culturally relevant knowledge about Hispanic women's disease prevention and health promotion practices, especially for Hispanic women 20 to 40 years of age. Wingood and DiClemente (1996) noted a lack of literature about HIV interventions and their effectiveness for women at risk for HIV. Similarly, Mallory and

Fife (1999), who analyzed 40 published papers related to HIV prevention, concluded that there is scant literature about women's unique behavioral vulnerability to HIV. These researchers recommended that HIV prevention studies be culturally relevant, gender specific, and derived from a theoretical base.

The purpose of this study is to use a conceptual framework to describe factors that influence risks for STDs including HIV/AIDS among a group of Hispanic women. Factors such as, background variables (demographics [age and ethnicity] and social influences [education and marital status]), intrinsic motivation (motivation for sexual health), cognitive appraisal (knowledge of diseases and risks), and affective responses (self-esteem, attitudes, and worry) related to health outcomes (sexual risk behaviors [number of sexual partners, alcohol use with a sexual encounter, and condom use]) were evaluated.

CONCEPTUAL FRAMEWORK

The IMCHB (Figure 1), a comprehensive, multidimensional health behavior model, was selected as a framework for this study because it includes the unique characteristics of the client from within his or her personal, social, cultural, and environmental contexts. Although the model is used by researchers to identify the complex process in which interrelated variables influence health behaviors, it is a flexible model where the researcher can select all or portions of the model depending on the research questions (Cox, 1982; Cox, Sullivan, & Roghmann, 1984). It is important in this study that the role of the participant's personal responsibility and self-determining choices for health promotion behaviors are considered. Hence, the two elements of the IMCHB that were used to provide conceptual direction for this study were client singularity and health outcomes.

As an antecedent to health behaviors, client singularity is a description of the person according to background variables, intrinsic motivation, cognitive appraisal, and affective responses (Cox, 1982). Background variables include demographic, social, and environmental characteristics that influence health. Intrinsic motivation for health includes the self-directed choices that a person makes between competing needs or desires, which may be influenced by an individual's personal, social, and cultural environment, as well as by his or her cognitive appraisal and affective responses to the situation (Cox, 1982). Cognitive appraisal is described as cognitive processes, which include knowledge acquisition and risk appraisal. Affective responses in the IMCHB are emotional elements and feelings of self-esteem and attitudes that may influence an individual's behavior (Cox, 1982). Health outcomes in the model include clinical

The Interaction Model of Client Health Behaviors as Operationalized in this Study

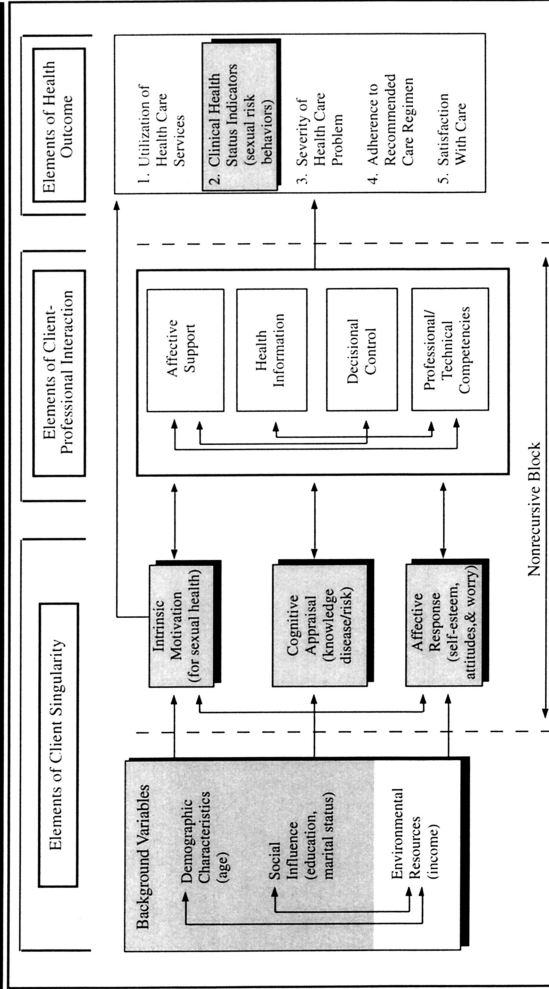


Figure 1. The interaction model of client health behaviors as operationalized in this study. Cox, C. L. (1982). An interaction model of client behavior: Theoretical prescription for research. *Advances in Nursing Science*, 5, 41–56. Shaded areas used in this study. Areas in parentheses indicate how variables were operationalized.

status indicators such as health behaviors and the health states that result from those behaviors (Cox, 1982).

Background Variables (Demographics and Social Influences)

Background variables such as gender (female), age (younger more at risk), ethnic origin (Hispanic), years of education (less educated more at risk), and marital status (single/married; CDC, 2000a, 2000b, 2000c, 2000d; USDHHS, 2000) are linked to sexual risk behaviors. Women are more at risk than men for acquiring STDs and HIV/AIDS, due in part to biological differences in the reproductive system, and younger, rather than older, women generally engage in more sexual risk behaviors. Individuals with less education may have fewer resources, as well as less specific knowledge from which to make choices about their health behaviors (USDHHS, 2000). Marital status also may affect risk for STDs, as single women may have more sexual partners than married women, while married women may not feel that condom use for disease protection is necessary (Abel, 1998; Abel, Hilton, & Miller, 1996).

Aspects of Hispanic culture that may relate to sexual behaviors include cultural values and beliefs such as *simpatia*, familialism, collectivism, and fatalism (Marin, 1999; Marin & Marin, 1991; Suarez & Ramirez, 1999). *Simpatia* is a desire for harmonious, respectful relationships, while familialism is a strong attachment to and identification with one's family. The latter belief is related to collectivism, an emphasis on the values and needs of the group rather than of the individual, in which interdependence and trust among group members is promoted. Fatalism refers to a belief that one can do little to influence his or her own health outcomes. Folk or traditional beliefs about how diseases are transmitted also may affect sexual risk behaviors (McQuiston & Flaskerud, 2000).

Marin and Gomez (1997) described several features of Hispanic culture with relevance to psychological interventions for prevention of HIV/AIDS, which vary with acculturation status. Hispanic women may have more traditional beliefs about gender roles for men and women, lower levels of knowledge about sex and sexuality in general, and less emotional comfort in dealing with sexual issues. They also may believe that "moral" women should know little about sex, and that those who are assertive and discuss sexual matters deserve less respect. In an illustrative study, Castaneda and Collins (1998), who examined relationships between beliefs, attitudes, and condom use in a sample of 133 Mexican American and 110 White university students in the western United States, found that men rated women who introduced a condom in a sexual situation as more promiscuous than women who did not do so.

Intrinsic Motivation (Motivation for Sexual Health)

Motivation for sexual health, like motivation for general health, may involve competing needs and ultimately may be associated with safer or riskier sexual behaviors. In a sample of 53 African American (AA) and 88 White ship- and shore-based navy women of childbearing age, Abel (1998) reported persons with one sexual partner were more intrinsically motivated in sexual health decisions than those with more than one partner, and that older, rather than younger, women were more intrinsically motivated in their sexual health choices. Abel and colleagues (1996) observed similar results among women of childbearing age in an urban setting ($n = 106$ AA and $n = 19$ White). They also noted a significant relationship between intrinsically motivated choices for sexual health and higher self-esteem.

Cognitive Appraisal (Knowledge)

Cognitive processes that may impact sexual risk behaviors include knowledge about diseases and risks for STDs, including HIV/AIDS, and how to avoid them. In a meta-analysis of studies relating to psychosocial correlates of condom use for HIV prevention, Sheeran, Abraham, and Orbell (1999) noted a small but significant association between knowledge and condom use. Lindberg (2000), in a sample of 100 Hispanic and AA urban women ages 18–45 years, found an indirect relationship between condom use knowledge and condom use mediated by self-efficacy. In a qualitative study of 31 Mexican American immigrants in the United States for less than one year, McQuiston and Flaskerud (2000) reported that participants viewed HIV prevention primarily as activities that occurred after, rather than before, possible exposure to the virus. Thus, inadequate or incorrect knowledge about HIV/AIDS prevention may increase risks for disease. Knowledge may also influence attitudes and worry about condom use and sexual risk behaviors.

Affective Responses (Self-Esteem, Attitudes, and Worry)

Self-Esteem. Affective responses evaluated in this study include self-esteem, attitudes about condom use and STDs/HIV/AIDS, and worry about acquiring STDs/HIV/AIDS. Findings in relation to self-esteem and condom use reported by women have been mixed. A relationship was noted between higher self-esteem and partners' condom use between AA and White urban women (Abel et al., 1996) and between AA and White women serving in the Navy (Abel, 1998). Similarly, Gardner, Frank, and Amankwaa (1998) reported a positive relationship between

safe sexual behaviors and higher self-esteem between AA and White women in a southeastern U.S. family practice setting. Further, midwestern ($n = 276$) and southeastern U.S. ($n = 260$) university students who reported lower self-esteem scores perceived themselves to be more at risk for HIV/STD than students with higher self-esteem scores (Boney-McCoy, Gibbons, & Gerrard, 1999; McNair, Carter, & Williams, 1998). However, higher self-esteem may not be related to safer sexual behaviors. In samples of 105 young female Army recruits (Abel, Adams, & Stevenson, 1994), and 319 western U.S. community college students of varying ethnic backgrounds (Shapiro, Radecki, Charchian, & Josephson, 1999), researchers reported a positive association between higher self-esteem scores and increased sexual risk behaviors.

Attitudes and Worry. Marin and Gomez (1997) noted that although sexual behaviors are influenced by a variety of emotional, biological, interpersonal, and cultural factors, much of the research in this area has focused on cognitive processes. Attitudes and feelings such as fear, guilt, and anxiety may influence the way that situations are interpreted, affect subsequent behaviors, and thus result in diverse health outcomes (Cox, 1982). Because of the potential to override cognitive processes, affective responses to situations can have a considerable influence upon behavior. For example, attitudes about condoms may affect their use. Embarrassment, perceived barriers, and perceived negative consequences for self or partner may decrease condom use, while beliefs that condoms do not interfere with sexual pleasure may increase use (Sheeran et al., 1999). Marin, Tschann, Gomez, and Kegeles (1993), in a study that included 398 Hispanics and 540 Whites from a western urban area of the United States, reported that Hispanics had less positive attitudes than Whites about condoms, and less belief in their ability to avoid acquiring HIV/AIDS, resulting in less use of condoms.

Health Outcomes (Sexual Risk Behaviors)

Health outcomes that were measured in this study are sexual risk behaviors associated with STDs, including HIV/AIDS. Those identified in this study are lack of condom use, having more than one sexual partner, and using alcohol around the time of a sexual encounter (DiIorio, Parsons, Lehr, Adame, & Carlone, 1992; USDHHS, 2000). The primary protective strategy advocated by the CDC for prevention of transmission of STDs, including HIV/AIDS, is consistent use of latex condoms during sexual intercourse (CDC, 2000b), which typically involves negotiation for use with the sexual partner. Having more than one sexual partner, either sequentially or concurrently, increases women's exposure to partners who may have an STD, and thus increases a woman's risk for acquiring an STD (USDHHS, 2000).

Although Hispanic women may not necessarily have Hispanic-only partners, Marin, Gomez, and Hearst (1993), in a study of Hispanic men in a nine-state sample, found that 60% of unmarried and 18% of married Hispanic men reported multiple sexual partners in the previous year. Hence, single as well as married women may be at risk for STDs related to their partners' behaviors. Ford and Norris (1993), who examined the relationship of acculturation to sexual behavior with a sample of 711 urban Hispanic adolescents and young adults, found that Hispanic women and men with higher levels of acculturation were more likely to have non-Hispanic partners. More highly acculturated Hispanic women also were more likely to have oral and anal sex and to use condoms than women with lower acculturation levels. Alcohol use around the time of a sexual encounter is associated with less frequent condom use (DiIorio et al., 1992; McNair et al., 1998).

A woman's sexual partner can significantly influence the use of a condom during sexual encounters (Lieberthal & Beckmann, 1997), and communication with a potential or actual partner is significantly associated with condom use (Sheeran et al., 1999). A partner may view bringing up condom use later in a sexual relationship as a lack of trust (Hutchinson, 1998; Lock, Ferguson, & Wise, 1998). If a woman feels that her partner disapproves of condoms and discussion of their use, she may choose to ignore the subject and engage in unprotected sex.

The concepts from the IMCHB that were used in this study are similar to those studied among other groups of sexually active women (Abel, 1998; Abel et al., 1996; Abel & Miller, 1997). Relationships among background (demographic [age and ethnicity] and social factors [education and marital status]), intrinsic motivation (motivation for sexual health), cognitive appraisal (knowledge of diseases and risks), affective responses (self-esteem, attitudes, and worry), and health outcomes (sexual risk behaviors [number of sexual partners, alcohol use with a sexual encounter, and condom use]) of Hispanic women are explored.

METHODS OF RESEARCH

A survey method was used in this descriptive, correlational study, which was approved by the institutional review board of the sponsoring institution. The following three research questions were addressed:

1. What are the background (demographic and social) characteristics, intrinsic motivation (motivation for sexual health), cognitive appraisal (knowledge of diseases and risks), affective responses (self-esteem, attitudes, and worry), and health outcomes (sexual risk behaviors) of childbearing-aged Hispanic women?

2. What are differences and similarities among background characteristics (age and years of education), intrinsic motivation (motivation for sexual health), affective responses (self-esteem, attitudes, and worry about STD and HIV/AIDS), and sexual risk behaviors (number of sexual partners and alcohol use) between single Hispanic women who report condom use with their current sexual partner and those who do not?
3. What are the relationships among background characteristics (age, marital status, and years of education), intrinsic motivation (motivation for sexual health), affective responses (self-esteem, worry about STDs and HIV/AIDS), and sexual risk behaviors (number of partners and condom use) among single childbearing age Hispanic women?

Setting and Procedures

A convenience sample of low-income Hispanic women receiving primary health care in a family planning clinic located in central Texas were recruited through advertisements, by staff invitations to participate upon check-in at the clinic, and by the snowballing method. Inclusion criteria for participation included being Hispanic, between the ages of 18–44 years, the ability to speak and write English, sexually active with a male partner within the past year, and perceived mental ability to participate based on orientation to time, place, and location.

A bilingual English–Spanish research assistant (RA) was on site to recruit subjects, a recommendation of Marin and Marin (1991). There were two phases to this study. During Phase I, a focus group was used to determine the readability and suitability of the questions for use among Hispanic women. Use of focus groups for this purpose can enhance gender and cultural sensitivity of quantitative instruments (Timmerman, 1999). The focus group, led by a bilingual woman, included 10 bilingual Hispanic women aged 18–30 years who completed the proposed questionnaires. Participants recommended several minor editorial changes and deletion of a 17-item problem-solving instrument. These modifications to the questionnaires were implemented for Phase II data collection, which took place between April and August 1995.

Instrumentation

A battery of questionnaires, which took about 30 minutes to complete, was used to gather study data. A demographic and sexual history form (DSHF) included questions about age, marital status, number of children, years of education, country of origin, and if born in or out of the United States. Motivation for sexual health was measured by the Health

Self-Determinism Index-Sexual (HSDI-S; Abel, Marion, & Seraphine, 1998), which was modified from Cox's original HSDI to measure intrinsic motivation for sexual health. Cronbach's alpha reliabilities on the original HSDI have ranged from .78 to .84, and construct validity has been supported in previous studies (Cox, 1985; Cox, Miller, & Mull, 1987). Responses on the HSDI-S using a 5-point Likert scale ranged from strongly agree to strongly disagree. Higher scores indicate intrinsic motivation for sexual health. Cronbach's alpha for the HSDI-S were reported between .75 and .77 in White and AA women (Abel, 1998; Abel & Miller, 1997; Abel, Hilton, & Miller, 1996).

Because of low internal reliability obtained with this sample (Cronbach's alpha = .62), the HSDI-S was modified by discarding seven items with less than .30 in item-total correlation coefficients (Nunnally, 1978). Principal component factor analysis with varimax rotation was performed to identify two factors and 10 items that met acceptable criteria of an eigenvalue greater than one and an item-factor loading of at least .40 (Kerlinger, 1973). The 10 items of the modified HSDI-S had item total correlations that met the criteria for acceptability for a new scale (Kerlinger, 1973; Nunnally, 1978) and were related to intrinsic motivation for sexual health. The Cronbach's alpha for the HSDI-S 10-item scale with this sample was .74.

Several questions used to elicit knowledge related to condom use and STD prevention were taken from the Knowledge of Condom Use Scale, developed by Solomon and DeJong (1989), who reported support for reliability (Cronbach alpha = .69) and validity in predicting knowledge of condom use for STD prevention among clinic patients (Solomon & DeJong, 1989). The scale has a true-false format, which resulted in low reliability scores (Cronbach alpha = .39) in this sample; therefore, selected questions, rather than the entire scale, were used to elicit knowledge of condom use; that is, "The only way for condoms to prevent sexually transmitted diseases is to use a condom every time a person has sex."

Self-esteem was measured by the Coopersmith Self-Esteem Inventory (SEI), a 25-item inventory, which measures self-esteem as "like me" or "not like me." A high SEI score corresponds to high self-esteem, with a maximum high score of 100 possible. Average adult mean SEI scores have ranged in the high 60s to low 70s with a standard deviation of 19, with Cronbach's alpha reliabilities ranging from .78 to .85 (Coopersmith, 1987). Independent researchers have established construct, concurrent, and predictive validity of the SEI (Earhardt, 1992; Simon & Simon, 1975). Cronbach's alpha in the present sample was .85.

Attitudes about condom use and STDs/HIV/AIDS were measured by questions taken from two condom attitude scales, the modified (Marion & Abel, 1992) Attitudes Toward Condom Use Scale (Valdeserri, Arena,

Proctor, & Bonati, 1989; Cronbach alpha = .32) and Marion's Condom Grid (Marion & Abel, 1992). The first scale is measured by a 3-point Likert format in which the respondent agrees, disagrees, or is unsure. Statements given were, "Most women do not like using condoms" and "Most men do not like using condoms." Two questions about condom use attitudes from the Marion Condom Grid, measured by a 4-point Likert format, where participants selected responses of oppose, favor, did not care, and not sure were used. For example, "How do you feel about using condoms, and how does your partner feel about using condoms?" (Cronbach alpha = .54). Worry was measured by asking participants "if they worried a lot about getting STDs and HIV/AIDS." These questions had a 5-point Likert format, with higher scores indicating more worry related to protecting themselves from STDs and HIV/AIDS.

Sexual risk behaviors measured in this study included number of sexual partners in the last 12 months, frequency of alcohol use around the time of sexual encounters, and type of STD/HIV/AIDS protection used during sexual intercourse, which were included in the DSHF. The health outcome of condom use was measured as the percentage of time that condoms were used with the most recent sexual partner.

Sample

One hundred forty-five Hispanic women volunteered to participate in the study. Five surveys were eliminated after data collection because of missing data, leaving 140 surveys available for data analysis. Participants ranged in age from 18 to 42 years old, with a mean age of 23.33 years ($SD = 4.97$), which reflects the young median age of Hispanics in the United States (Suarez & Ramirez, 1999). The majority (81%) of women were single ($n = 113$), while 19% ($n = 26$) were married (missing data $n = 1$). Although there was a wide range in years of education reported (2–24), the mean years of education reported was 11.9 years. Ninety-one percent ($n = 127$) of women were born in the United States, and 9% ($n = 13$) were born outside the United States (Mexico). Women born outside of the United States were compared with those born within the United States using Mann–Whitney U tests. No significant differences were noted for age, years of education, marital status, percentage of condom use, SEI, or 10-item HSDI-S scores; therefore, both groups were included in all data analyses.

RESULTS

The results are reported according to the three research questions. The .05 level was used to determine statistical significance.

Research Question 1. What are the background (demographic and social) characteristics, intrinsic motivations (motivations for sexual health), cognitive appraisals (knowledge of diseases and risks), affective responses (self-esteem, attitudes, and worry), and health outcomes (sexual risk behaviors) of childbearing-aged Hispanic women?

Background characteristics are described earlier under the discussion of the sample. The mean score on the HSDI-S 10-item scale used to measure intrinsic motivation for sexual health was 40.25 ($SD = 5.71$), with scores ranging from 23 to 50. Women were generally knowledgeable about condoms and STDs/HIV/AIDS. Almost all women knew that STDs could be transmitted without symptoms (94%), and that condoms prevented STDs if used every time (91%). The mean self-esteem score on the SEI was 69.22 ($SD = 20.23$), with scores ranging from 16 to 100. Women generally had positive attitudes about using condoms, with 91% reporting condom use with new sexual partners, only 26% reporting that they did not want to use condoms, and only 35% reporting that their partners did not want to use condoms. Mean scores for worry about STDs was 3.13 ($SD = 1.36$) and for worry about HIV/AIDS was 3.37 ($SD = 1.43$). Forty-nine percent ($n = 69$) of women reported worrying *a lot* about getting STDs, while 56% ($n = 78$) worried a lot about getting HIV/AIDS.

All married women reported one sexual partner in the last 12 months, while almost one-half (49%, $n = 55$) of single women ($n = 113$) reported two or more partners. Only one-fourth (26%, $n = 34$) reported drinking alcohol around the time of a sexual encounter. More single (70%, $n = 79$) than married women (42%, $n = 11$) reported condom use with their most recent sexual partner ($X^2 = 7.06$, $p = .008$). Other differences between single and married women were also identified. Single women were younger ($t(137) = -3.91$, $p = .001$), more likely to drink alcohol during a sexual encounter ($t(67) = 3.46$, $p = .001$), and more likely to report worry about STDs ($t(136) = 2.92$, $p = .004$) and HIV/AIDS ($t(134) = 3.55$, $p = .001$) than married women. Because of these findings, subsequent data analyses and results are reported for single women only.

Research Question 2. What are differences and similarities in relation to background characteristics (age and years of education), intrinsic motivation (motivation for sexual health), affective responses (self-esteem, attitudes, and worry about STD and HIV/AIDS), and sexual risk behaviors (number of sexual partners and use of alcohol) between single Hispanic women who report condom use with their current sexual partner and those who do not?

Single women were compared on background variables, sexual risk behaviors, self-esteem, motivation for sexual health, and worry about STDs

Table 1. Differences in background variables, sexual risk behaviors, self-esteem, intrinsic motivation, and worry reported by current condom use/nonuse for STD protection among Hispanic single women ($n = 113$)

Variable	Condom users		Condom nonusers		<i>t</i>	df
	Mean	SD	Mean	SD		
Background characteristics						
Age	21.76	3.96	23.83	5.46	-2.13*	64
Years education	12.59	3.09	11.00	2.96	2.63*	109
Sexual risk behaviors						
Partners last 12 months	2.25	1.82	1.51	.93	2.85**	110
Drink alcohol with sex	2.81	1.03	2.60	1.15	.97	110
Self-esteem ^a	69.76	19.11	64.74	21.92	1.23	104
Intrinsic motivation ^b	40.78	5.64	38.14	5.53	2.30*	102
Worry about STDs	3.35	1.31	3.20	1.31	.59	111
Worry about HIV/AIDS	3.48	1.41	3.68	1.31	-.76	110

^aSelf-esteem measured by SEI.

^bIntrinsic motivation for sexual health was measured by 10-item HSDI-S.

* $p < .05$; ** $p < .01$.

and HIV/AIDS by current condom use/nonuse reported with their current sexual partner. Using *t* tests, we noted significant differences (Table 1) between condom users and nonusers: Condom users were younger and reported more years of education, more sexual partners in the last 12 months, and more intrinsic motivation for sexual health.

Research Question 3. What are the relationships among background characteristics (age, years of education, and marital status), intrinsic motivation (motivation for sexual health), affective responses (self-esteem, worry about STDs and HIV/AIDS), and sexual risk behaviors (number of partners and condom use) among single childbearing age Hispanic women?

Table 2 illustrates significant associations between self-esteem (SEI) scores, intrinsic motivation for sexual health (HSDI-S 10-item scale), years of education, worry about STDs and HIV/AIDS, sexual risk behavior, and condom use with most recent sexual partner among single Hispanic women. Condom use was associated only with years of education and intrinsic motivation for sexual health.

DISCUSSION

Hispanic women in this study are similar in age, marital status, and years of education to AA and White women in other studies of sexual

Table 2. Pearson correlations of self-esteem,^a intrinsic motivation for sexual health,^b age, education, worry about STD and HIV/AIDS, number of partners, and condom use among Hispanic single women (N = 102)^c

Variable	1	2	3	4	5	6	7	8
1. Self-esteem ^a	—	.42***	.01	.23*	-.25*	-.24*	-.10	.18
2. Motivation ^b		—	.02	.28**	-.06	-.02	.00	.29**
3. Age			—	.16	-.10	-.08	-.10	-.17
4. Years education				—	.08	.03	.05	.26*
5. Worry re: STD					—	.73***	.08	.18
6. Worry re: HIV/AIDS						—	.12	-.05
7. No. partners in last year							—	.14
8. % condom use								—

^aSelf-esteem measured by SEI.

^bIntrinsic motivation for sexual health measured by 10-item HSDI-S.

^cN = 102 based on women with complete responses on HSDI-S.

* $p < .05$; ** $p < .01$; *** $p < .001$.

health risks (Abel, 1998; Abel et al., 1996; Lindberg, 2000). These single Hispanic women practiced safer sex related to the use of condoms compared with other women. The percentage of single women reporting condom use (70%) exceeds the goal of *Healthy People 2010* objectives (50%) for sexually active women (USDHHS, 2000) and is higher than reported in other samples of Hispanic (40%; Maxwell, Bastani, & Warda, 1999) and Army (29%) women (Abel et al., 1994). However, women in this study reported unsafe behaviors related to multiple sexual partners where 49% ($n = 55$) reported having more than one sex partner during the past year; this is higher than Navy (41%; Abel, 1998), rural (19%; Abel et al., 1996), and urban women (11%; Abel & Miller, 1997).

Women regardless of age or marital status may be vulnerable to STDs including HIV/AIDS due to sexual risk behaviors. Younger women, compared with older women, reported more sexual partners as well as more condom use. Younger women may have been more exposed, or more receptive, to health promotion programs that stress the importance of using condoms as protection than older women. However, older married women or those with a steady partner may be vulnerable to STDs and HIV/AIDS due to lack of protection. Wyatt, Forge, and Guthrie (1998) examined HIV risk behaviors in a sample of 270 AA, 268 White, and 297 urban Hispanic women aged 18–50, and noted that Hispanic women who were married or lived with a partner were at risk primarily because of sexual practices of their partners. Castaneda (2000) examined HIV risk reduction in close relationships among a community sample of 115 Mexican American men and women and found that individuals who were committed to the partner and the relationship were less likely to perceive themselves at risk and to report condom use in the last 3 months. Use of condoms by Hispanic men occurs more often with secondary, rather than with primary, partners (Marin & Gomez, 1997), which may increase disease risk for primary partners if condom use was inconsistent with those secondary partners.

For those women who had Hispanic partners, cultural values such as *simpatia* as well as the dominance of traditional gender roles also may be contributing factors to lack of condom use. In this study we do not know if the male partners were Hispanic; however, Hispanic women may believe that they should respect or defer to their partners' wishes regardless of the ethnicity of the partner and they may not use condoms in spite of their worries (Marin, 1999; Suarez & Ramirez, 1999). Fear of loss of relationship was a significant factor for women not to address issues of safe sex and condom use with partners (Sobo, 1993).

Most women reported being knowledgeable about STDs and realized the importance of condom use for protection. However, Lindberg (2000) and Cobb (1997) observed indirect relationships between knowledge,

self-efficacy (belief in ability to perform a certain skill) for condom use, and condom use among Hispanic, AA, and White women. A person's knowledge that transforms into attitudes and behaviors is an indicator of acculturation, which has a major influence on health risk behaviors (Suarez & Ramirez, 1999).

Self-esteem (SEI) scores for Hispanic women ($M = 69$, $SD = 20$) were higher than those reported among rural ($M = 63$) and urban ($M = 63$) AA and White women, and lower than that reported for AA and White Navy women ($M = 71$; Abel, 1998; Abel et al., 1996; Abel & Miller, 1997). Self-esteem was not associated with condom use among Hispanic women in this study as it was among Navy women (Abel, 1998) and urban women (Abel et al., 1996). Women who reported higher self-esteem were less worried about acquiring STDs and HIV/AIDS than women who reported lower self-esteem, which supports the findings of Boney-McCoy and colleagues (1999) and McNair and colleagues (1998).

Women with more education reported higher self-esteem, and these feelings of self-worth were important in their motivation for sexual health. These findings are similar to those that Abel and colleagues (1996) reported with a sample of urban AA and White women of childbearing age, where women with higher self-esteem were more motivated for sexual health than women who reported a low self-esteem; that is, they perceived that they could get their partners to comply with condom use.

In the current study, the relationships among motivation for sexual health, self-esteem, and condom use may be explained in part by lower acculturation and consequent stronger influences of *simpatia*, familialism, collectivism, and fatalism (Marin, 1999; Marin & Marin, 1991). How women view their influence over disease, the importance of respect of their partners' feelings, whether they perceive themselves in traditional female roles, and their comfort in dealing with sexual issues related to safe sex will all impact whether their sexual behavior is safe or risky (Marin & Gomez, 1997). Hispanic women seem to be in a paradoxical situation related to promoting their own safe sexual behavior. Women may wish to avoid being labeled as promiscuous if they initiate use of condoms (Castaneda & Collins, 1998), and they may wish to be seen as moral and therefore respected, and so should not know too much about sexual matters (Marin & Gomez, 1997). Hence, it may be easier for women and their partners who are more acculturated to practice safer sex by using condoms.

There are several limitations of this study. Self-report, and any difficulty that participants had reading and understanding English, may have limited accurate responses about sexual behavior. Having a bilingual RA available to recruit participants and provide directions about filling out the questionnaires may have minimized these issues related to compre-

hension. A convenience sample of clients from a family planning clinic limits generalizing the results. Level of acculturation was determined partially by identifying the participants' education and ability to read and use English, a common consideration of acculturation measures (Castro, Cota, & Vega, 1999; Marin & Marin, 1991). Although there is anecdotal evidence to suggest that the sexual partners of Hispanic women in this community are predominantly Hispanic, partner ethnicity was not identified. Finally, the use of a cross-sectional approach limits the determination of cause and effect relationships.

Although caution is in order when generalizing these findings to other female Hispanic populations, the reliability of the HSDI-S 10-item scale and the SEI were satisfactory for use among these Hispanic women. The stability of the HSDI-S across samples of women from different ethnic backgrounds provides further support for its reliability (Abel, Tak, & Gortner, 2003).

Implications for Future Research

Studies to explore the meaning of safe sex among Hispanic women using quantitative methods would provide further information to aid in the development and testing of culturally appropriate interventions. Strategies to help Hispanic women introduce the topic of condom use with their partner and interventions that include the partner in discussions of safe sex are steps to promote safe sex among Hispanic women and their partners. Interventions to enhance self-esteem also may be an avenue to promote safer sex for Hispanic women. Future research that evaluates the efficacy of interventions to promote safer sex among Hispanic women should consider sample selection regarding the country of origin, language, and length of time in the United States to address issues of acculturation.

In summary, many of the participants in this study reported positive health practices that reduced sexual risk, which is commendable. However, a third of these women practiced sexual behaviors that placed them at risk for STDs including HIV/AIDS. The complexity of the relationships among background variables, motivation (for sexual health), cognitive appraisal (knowledge about diseases and risks), affective responses (self-esteem, attitudes, and worry), and health outcomes (sexual risk behaviors) provides insights for the development of interventions to reduce sexual risk and promote safe sex among Hispanic women.

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