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Sexual Communication and Knowledge among Mexican Parents and their Adolescent Children

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Abstract

This study describes the sexual knowledge and communication of Mexican parents and adolescents. Pre-intervention data was analyzed from 829 high school students (ages 14-17) and one of their parents. Differences were found between parents and adolescents in sexual knowledge (M = 16.16 vs. M = 14.92; $t = 7.20$; $p < 0.001$); specifically parents had higher knowledge related to STD's, HIV/AIDs, and condom use. Parents perceived more general communication (t (787) = 6.33 $p < .001$), and less discomfort talking about sex (t (785) = 4.69, $p < .001$) than adolescents. Parents with higher education levels scored higher in HIV knowledge and general communication. Fathers had higher total sexual knowledge while mothers perceived higher sexual communication than fathers. There were no differences in knowledge and communication by parental socioeconomic level. Results suggest health care providers need to assist parents in developing specific knowledge and skills to support their adolescents' sexual decision making.

Introduction

The prevention of sexually transmitted HIV/AIDS among adolescents is a priority in Mexico. Youth represent a large sector of the population (21%), and studies show that the age at which they become sexually active is decreasing (M = 12 years) (*Consejo Estatal para la Prevención y Control del SIDA* [COESIDA], NL 2004; *Instituto Nacional de Estadítica, Geografía e Informática* [INEGI], 2005). A high rate of reported STDs, as well as an increasing number of adolescent pregnancies (16.8% of births to women less than 20 years of age [INEGI, 2005]), indicate that adolescents are engaging in unprotected intercourse.

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Rapid changes in Mexican political, economic and social systems present new challenges for adolescents. As some have noted, the conservative customs and traditions that have characterized Mexico for many years are in crisis as a result of a changing society (Brito, 2000). Fundamental institutions such as the church have increasingly less influence on the sexual behavior of young people. For example, youth are less likely to feel guilty for having pre-marital sex and view the Church teachings as conservative in relation to sex (Baird, 1993). However, the family continues to be the most valued social institution in Mexico. Therefore, participation of the family, and particularly of parents, is necessary to decrease or change risky behavior in adolescents in an effort to reduce the incidence of HIV/AIDS. This study explores the sexual knowledge and related communication of parents and adolescents.

Various studies have found parents play a fundamental role in the prevention of risky sexual behavior in their adolescent children (Blake, Smikin, Ledsky, Perkins, & Calabrese, 2001; Lehr, Demi, Dilorio & Facteau, 2005). However, the successful development of this role depends on how much sexual knowledge parents have and the way in which they communicate with their children about these issues (Blake et al., 2001; Lehr et al., 2005). In Mexico, as in other countries, most research regarding sexual knowledge and communication has focused on adolescents rather than parents. Recent studies with Mexican adolescents report there is a relatively low level of sexual knowledge, including causes and risk behaviors for contracting STDs, and forms of transmission and prevention (Castro-Sansores, López- Ávila & Góngora-Biachi, 2000). In one study youth (96%) indicated they had received information on STDs and HIV/AIDS, yet low percentages of these youth (35% to 55%) had correct answers on a sexual knowledge questionnaire (Castro-Sansores et al., 2000).

Factors such as socioeconomic level, urban residence, and being older, were positively associated with sexual protective behaviors, including the use of condoms. However, researchers consistently report that Mexican adolescents have incorrect knowledge about HIV/AIDS transmission (Caballero-Hoyos & Villaseñor- Sierra, 2001 & 2003; Castro-Sansores, et al., 2000; Piña-López, 2004; Tapia-Aguirre, Arillo-Santillán, Allen, Angeles-Llerenas, Cruz-Valdéz, et al., 2004; Villaseñor-Sierra, Caballeo-Hoyos, Hidalgo-San Martín, & Santos-Preciado, 2003). These reports are similar to results from youth from other Spanish speaking countries such as Cuba and Spain (Álvarez-García, López-Menéndez, García-Bobia & Fernández-Corrales, 1996; Guerrero-Soler, Quiroz-Viqueira, Sánchez-Miranda, Más-Álvarez, & RodrÍguez-Bencomo, 2002).

There are only a few studies in Mexico on parent-adolescent communication related to sexual topics. In one study, adolescents who reported high levels of communication with their parents showed a higher level of knowledge on sexual topics. (Tapia-Aguirre, et al., 2004). In a related study, parent gender (i.e. female) and higher educational level were the most influential factors for adolescents in establishing communication with one or both parents (Gayet, Rosas, Magis & Uribe, 2002).

Considering the lack of available studies among Mexicans regarding parental and adolescent sexual knowledge and communication about these themes, the purpose of this study was to: 1) describe the level and type of sexual knowledge and communication of parents and adolescents, and 2) identify the differences in sexual knowledge and communication by socioeconomic and parental educational levels and gender.

Method

Procedure

Participants were part of a randomized, controlled intervention designed to reduce sexual risk behavior among Mexican youth (Villarruel, Gallegos, Loveland-Cherry, 2001). The Human

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Subjects Committees of the University of Michigan and the *Universidad Autonoma de Nuevo Leon* (UANL) in Monterrey, Mexico approved the study.

Participants were recruited from four local *preparatorias* or high schools associated with the UANL. Adolescents and their parents were invited to participate in "*¡Cuidáte!*" *Promueve tu Salud* (Take care of your self! Promote your health), an 8-hour program conducted over two consecutive Saturdays. Interested youth were provided with a cover letter and parental consent form. To participate in the program, a student had to meet the inclusion criteria (age and availability) and participate with one of their parents. Parental consent and adolescent written assent were required.

Parent and adolescent participants completed questionnaires at pre- and immediately post-intervention, and also at 6, and12-month follow-up intervals. Additionally, adolescents completed follow-up questionnaires at 3 months. This article is based on pre-intervention data from adolescent and parent participants.

Participants

This study was conducted with 829 adolescents (458 girls, 371 boys) and one of their parents. Adolescents ranged in age from 14 to 17 years with a mean age of 15.2 (SD = 0.66). Reported grade in school ranged from the equivalent of 9th grade to 12th grade, with a median of 10th grade. Less than 10% reported ever having sexual intercourse, with an average age of first intercourse of 14.5 years (SD= 0.90).

A total of 791 parents participated. The majority of parent participants were women (83%; n = 660). The mean age for parents was 42.7 (SD = 8.00) with 87% reporting they were married. For parents, 41.6% had middle school education or less, 15.7% completed high school, 22.6% completed technical/secretarial school, and 21.6% completed college or graduate school. In relation to socioeconomic level, the majority of families were at the medium income level (72%), with 23% families at the medium low level and 5% of families at the medium high level.

Instruments

Measures used in the adolescent questionnaire were based on previous research with inner-city adolescents, including Latino and Spanish-speaking youth 13 to 18 years of age (Jemmott, Jemmott, & Fong 1992, 1998; Villarruel, Jemmott, Jemmott, & Ronis, 2004). Most of the adolescent measures were previously translated into Spanish (Villarruel, et al., 2004). Similar procedures based on the method of decentering (Werner & Campbell, 1970) were used to translate new items for this study. Pilot testing with Mexican adolescents and parents was conducted to reduce ambiguity in terminology and format.

HIV/AIDS Knoweldge—We used a questionnaire with 24 items to measure knowledge about pregnancy, condom use, AIDS and STDs (Jemmott, Jemmott, & Fong, 1992). Questions were answered in a true/false format with 1=correct answer and 0=incorrect answer. The same scale was used for both parents and adolescents.

Communication Scales—Similar scales were used with parents and adolescents to measure both general communication and sexual communication. There were 10 questions regarding general communication between parents and adolescents (Hutchinson, 1999), eight about parent/adolescent communication on sexual topics (Hutchinson, 1999; Hutchinson & Cooney, 1998), and nine about how comfortable parents or adolescents feel when talking about sexual topics (DiIorio, Kelley, & Hockenberry-Eaton, 1999). All items were measured with 5-point Likert scales, where a higher score means more communication or comfort when talking about

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sexual topics. The reliability of the communication scales was excellent for parents and adolescents ranging from an α of 0.85 to 0.95

Socioeconomic level—To assess socioeconomic level, zip codes reported by parents were used to identify the AGEB (Área Geoestadística Básica) or census track in which families resided. AGEBs are classified by factors including land value, quality of house construction, and municipal services. AGEBs, are an indirect measure of SES but are not dependent on self-report. The classification of AGEBs consists of five levels: poor, medium low, medium, medium-high, and high income.

Data Analysis

Data were analyzed using the Statistical Package for the Social Sciences (SPSS), Version 11.0. More than one adolescent per family was able to participate in this study. When making comparisons between adolescents and parents, we randomly selected one adolescent per family, resulting in 791 pairs. We used paired, 2-tailed *t-tests* to compare differences in sexual knowledge and communication between parents and adolescents and analysis of variance (ANOVA) to assess differences in parent and adolescent knowledge and perceptions of communication by parental socioeconomic status, educational level, and gender.

Results

Knowledge

Table 1 presents data from parents and adolescents regarding knowledge about pregnancy, STDs, HIV/AIDS, and condom use. For parents, overall knowledge levels were significantly higher than for adolescents ($M = 16.16$ vs. $M = 14.92$; $t = 7.20$; $p < 0.001$). When analyzed by sub-topics, parents demonstrated significantly higher knowledge related to STD’s, HIV/AIDs and condom use. However both parents and adolescents had low condom use knowledge scores.

Communication

As seen in Table 1, communication was perceived differently by parents and adolescents. Parents perceived they had more general communication (t (787) = 6.33 $p < .001$) and further, were more comfortable with sexual communication as compared with perceptions of their adolescents (t (785) = 4.69, $p < .001$). Conversely, adolescents perceived their parents communicated more about sexual topics than did parents (t (785) = -6.86, $p < .001$). Communication about sexual topics was perceived to be lower than general communication by both parents and adolescents.

Differences in Adolescent and Parental Sexual Knowledge and Communication by Parent Socioeconomic Status, Education, and Gender

Analysis of variance (ANOVA) indicated there were no significant differences in adolescent sexual knowledge or perceived general communication, sexual communication, or comfort with communication according to parent socioeconomic status, education, and gender. For parents, there was no significant difference in sexual knowledge or perceived communication by socioeconomic status. However, as shown in Table 2, results of ANOVA indicated a significant difference in general communication and sexual knowledge in relation to education level. Higher levels of education were associated with higher sexual knowledge scores (F (2, 783) = 21.50; <.001) and higher perceptions of general communication (F (2, 782) = 5.57; .004). There were no significant differences in comfort with communication or sexual communication by educational level.

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As shown in Table 3, the effect of parent gender on sexual knowledge and sexual communication was also significant. Fathers had higher total sexual knowledge than did mothers (F (1, 788) = 16.19; <.001) while mothers perceived higher sexual communication with adolescents than did fathers (F (1.787) = 8.56; .004).

Discussion

Parents play a very important role in the prevention of HIV/AIDS. Knowledge about sexuality and communication skills to facilitate the sharing of knowledge and values are important tools for parents to increase the effectiveness of the guidance they offer their children. In this study, parental knowledge about pregnancy, STDs, and HIV/AIDS was higher than shown in other studies (Villaseñor-Sierra, et al., 2003). However, it is important to note the low level of knowledge about condom use among both parents and adolescents. It is possible that parents made their sexual debut before the AIDS epidemic and are less familiar with how to use a condom. Parental lack of knowledge, specifically in relation to condom use, may explain in part the limited knowledge adolescents have about similar topics and is therefore an area that nurses and other health providers need to address.

Consistent with other studies (Lehr, et al., 2005, Tapia-Aguirre, et al. 2004), parents in this study that had more education showed higher levels of sexual knowledge but not higher communication about sexual topics or comfort. Similarly, while fathers had higher levels of sexual knowledge, mothers perceived higher levels of sexual communication with their adolescents. These findings support the need to provide parents with skills that go beyond accurate knowledge. In contrast to prior studies (Tapia-Aguirre, et al., 2004) socioeconomic level was not associated with knowledge or perceived communication by parents and adolescents. It is possible that, in spite of the difference in socioeconomic level among families in this study, beliefs about how to support adolescents were consistent across groups. Further, neither parents' educational level nor gender affected communication with their children – from the parent or adolescent perspective.

There were several limitations of this study that should be noted. First, results may not be generalizable to adolescents who are out of school, since the total sample was school based. In northeastern Mexico, only 46.8% of the adolescent population is enrolled in a higher education institution (*Secretaría de Educación Pública* [SEP], 2001). Second, participants for this study were not randomly selected, thus there may be some bias in the level of communication and knowledge of the parents.

Despite limitations, these findings are important efforts in creating interventions for parents and adolescents to facilitate communication and knowledge sharing about sexual topics and prevention efforts. Results of this study suggest that parents may need assistance in deciding what and when to discuss with their adolescents about sexuality and may also need specific information related to condom use. Further, it might suggest parental preferences for delivering the information to their adolescents – namely, schools or health care facilities. This is an area that needs to be further explored in order to support parents in facilitating sexual communication. The family unit, specifically in Mexico, is a strong and viable source of support for adolescents. Nurses and other health care professionals should partner with families in order to support adolescents as they are confronted with sexual decision making.

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Table 1

Comparisons of knowledge and communication between parents and adolescents.

Scales	# Items	Parents		Adolescents		
		Mean	SD	Mean	SD	t
Knowledge	24	16.16	3.71	14.92	3.55	7.20**
Pregnancy	4	2.50	1.03	2.44	0.89	1.21
STD	8	5.79	1.80	5.62	1.65	2.09*
AIDS	7	5.50	1.30	4.68	1.31	13.50**
Condom Use	5	2.38	1.32	2.20	1.38	2.72*
General Communication	10	3.95	0.60	3.76	0.71	6.33**
Sexual Communication	8	3.06	1.03	3.37	1.12	-6.86**
Comfort with Communication	9	3.47	0.76	3.27	0.94	4.69**

* $p = 0.05$,

** $p = 0.01$

Table 2

Differences in parental sexual knowledge and communication by parental education.

	General Communication		Sexual Communication		Comfort with Communication		Total Knowledge	
Parent Education Level	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**
Elementary 1st – 6th	3.88	0.60	3.10	1.06	3.44	0.81	15.20	3.91
High School 7th – 12th	3.96	0.60	2.97	1.04	3.49	0.75	16.66	3.28
College and Beyond	4.07	0.60	3.15	0.97	3.51	0.65	17.20	3.40
F statistics	5.57		2.03		0.65		21.50	
Significance	0.004		0.132		0.521		0.000	

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Table 3

Differences in parental sexual knowledge and communication by gender.

	General Communication		Sexual Communication		Comfort with Communication		Total Knowledge	
Parent Gender	**Mean**	**STD**	**Mean**	**STD**	**Mean**	**STD**	**Mean**	**STD**
Female	3.96	0.62	3.11	1.04	3.47	0.74	15.92	3.68
Male	3.91	0.52	2.82	0.94	3.48	0.81	17.34	3.61
F statistics	0.58		8.56		0.03		16.19	
Significance	0.445		0.004		0.868		0.000	