
Correlates of early sexual activity among Hispanic children in middle adolescence

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Objective: We analyzed early sexual activity among Hispanic 14 to 15-year-old adolescents residing in a poor neighborhood in Puerto Rico.

Methods: Information from a sample of 325 adolescents was collected from a randomized sample of community households. Logistic regression analysis was used to identify the variables that help explained adolescents' sexual behavior.

Results: Adolescents whose parents reported poor communication and poor parent control were more likely to engage in early sexual activity that those peers that did not report this type of family relationship.

Adolescents who reported poor parent bonding and lack of discipline were more likely to engage in early sexual relationships.

Conclusions: Intervention and prevention programs need to be aware and address the role of the Hispanic culture in gender differences in early sexual activity in adolescence. If sexual norms related to gender role are changing in Puerto Rico, is a question that needs to be answered in future research.

Key words: Adolescent, Early sexual activity, Puerto Rico, Risky neighborhood, Parental relationship, Hispanic.

Early sexual activity among adolescents exposes young people to health-related consequences, particularly sexually transmitted diseases (STDs), unplanned pregnancies, diminished mental health, and exhibiting other risk behaviors. (1-3) Early sexual activity concerns researchers and youth socialization agents because adolescents who begin having sex at an early age have been shown to have more sexual partners, more frequent sexual activity, and are more likely to ignore the use of contraceptives during adolescence and early adulthood. (4-6) The antecedents and correlates of early sexual activity encompass multiple domains of factors, including the biological factors with the timing of puberty, psychosocial characteristics, and socio-cultural factors such as gender-specific cultural norms and parental relations. (7)

Social science research on adolescence has recognized the importance of examining adolescent behaviors guided

by ecological models. According to these models, adolescents interact in various social settings and structures including families, peer groups, schools, and neighborhoods. (4, 8-10) These structural units provide immediate socialization settings that directly or indirectly impact the adolescent's development process. (11)

The interrelationships among these multiple settings and processes can shape adolescent development and determine whether they have a successful transition into adulthood. This line of research posits that adolescent behaviors are also rooted in differential access to economic, interpersonal, and organizational resources. (12) Early works document the disadvantage (e.g. poor academic performance, drug use, teenage pregnancy, and problem behaviors) that adolescents experience when they live in poor neighborhoods. (6, 12, 13)

Neighborhoods can influence adolescent well-being through parental mechanisms in which parents act as gatekeepers who manage risks and opportunities for their children. (14) The mechanisms that have been found to influence adolescent well-being are parental characteristics and behaviors such as bonding, monitoring, home environment, and the availability of helping social networks such as extended family members. (15) Parents living in poor neighborhoods, however, have a higher likelihood of experiencing or expressing poor mental health, stressful life events, poor coping or self-efficacy skills, and inadequate access to supportive individuals in a position to help both economically and

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psychologically. (16-18) Therefore, the negative circumstances within a disadvantaged neighborhood impact the domestic environment where resources are already scarce. (19-20) These stressful circumstances influence parents' psychological status and prompt them to be more likely to use verbal aggression and physical abuse. (21) The negative impact of these factors may further reduce the parents' potential to serve as protective intermediaries and lessen the multiple stressors associated with living in impoverished neighborhoods for themselves and for their children.

Various models outside the ecological social context model also address specific circumstances wherein neighborhood environments influence adolescent behavior. The Epidemiologic model assumes that problem behaviors operate mainly through peer influence (22-25) while the Collective Socialization model suggests that adults in neighborhoods act as role models for children who are not their own. (26, 27) In addition, the Institutional Model emphasizes the role of local organizations and institutional resources. Poor neighborhoods featuring few sustainable local organizational resources may create an environment which does not facilitate adolescent development. (8, 28, 29) The Relative Deprivation model suggests that if people feel they cannot compete successfully with mainstream society they feel compelled to form an alternative subculture in order to psychologically adapt and create a more comfortable environment, a condition highly prevalent in poor neighborhoods. (30-32) However, in these poor communities parents who possess personal resources such as connections with schools, churches, relatives, and friends outside the neighborhood, but continue to tolerate deviant cultural norms and maintain their relationships with troubled neighbors with inadequate social institutions, manage to withstand the inadequacy of the environment and promote healthy adolescent development. (21, 33-36)

There is recent and longstanding evidence that the family exerts a powerful influence on the behavioral patterns which lead to resilience or increased health risks in youths. (36, 37) Parental monitoring of children, disciplinary styles, the quality of the relationship between parents and children, cohesion within the family, and the psychological condition of the parents have all been shown to be highly correlated with adolescent problem behaviors including early sexual activity among youths raised in adversity. (38, 39) These studies show that children behavior begins and develops in the context of their relationships with their parents. Within this familial context, children develop behavior patterns and form an identity. This identity and its correlating behaviors and communication skills are later

transferred into the school setting. (40-43)

Prioritizing family has been identified as a defining trait of Hispanic culture believed to be protective against many negative behaviors including early adolescent sexual activity. (44) Due to the primacy of the family unit among Hispanics some research has examined family structure and function to identify which family aspects are associated with adolescent problem behaviors. However, compared with other areas of research on adolescent problem behaviors, the knowledge base regarding family level influences, particularly related to adolescent sexual behavior, is less developed.

Parental involvement in adolescents' lives has a greater effect on drug use among Hispanic adolescents than among Black and non-Hispanic White adolescents (45-47). Similarly the warmth of the parent-child relationship (e.g. parental involvement and positive interaction) has a greater effect on Hispanic adolescent problem behaviors including drug use and sexual risk behaviors than disciplinary measures. (48) However, studies regarding Hispanic families and early sexual activity and other behavioral problems have been conducted using families residing in the US mainland who are greatly impacted by factors (e.g. migration, acculturation) that do not pertain to Hispanic families in Puerto Rico. To our knowledge no study has linked family processes such as parent-child relationships and early sexual activity among Hispanic adolescents residing in Puerto Rico.

Methods

Subject recruitment. This study is part of a larger longitudinal project examining risk and resilience in adolescents age 12 to 15, residing in families with drug and/or alcohol using parents and environments. The sampling frame was developed by identifying all census sectors with copping areas (drug-selling venues) in the municipality of San Juan, Puerto Rico. Starting from households closest to the copping area, outreach workers visited households to enumerate residents. Households with at least one adolescent 12 to 15 years old were eligible to participate. An outreach worker visited the eligible families and invited them to participate. In households with two or more adolescents, one adolescent was randomly selected as a study participant. All participants were assured that their involvement was entirely voluntary and that their decision to participate would have no impact on their ability to stop the interview whenever they decided. Although a total of 720 eligible households were identified, 691 parents and their adolescent offspring consented to participate for a response rate of 96%. All study activities and the informed consent forms were

reviewed and approved by the Institutional Review Board of the UCC School of Medicine.

Interviewing process. Data was collected from parents and youths in their homes by trained interviewers utilizing a computer-assisted personal interviewing (CAPI) system and a self-administered form. Parents and adolescents were interviewed separately. The computer-assisted interview consists of well-known measures of adolescent psychopathology (e.g. Composite International Diagnostic Interview, CIDI: depression and anxiety). Impulsivity were measured with the Barratt Impulsivity Scale (BIS), as were family structure and processes, personal attributes, parent-child relationships, communication skills, descriptions of neighborhood environments and schools, and parental monitoring. The self-administered form included questions about sensitive topics such as use of alcohol and illicit drugs, violent behaviors, illegal activities and sexual behaviors. The mother or female guardian was the primary parental respondent in 96.2% of the cases. Upon completion of the interviews, the family (mother, father, and child) were compensated with \$85.00 for their time. The total testing time for the completion of a self-report questionnaire and interviews was approximately three hours.

Sample. Participants of this analysis are a subset of adolescents. From the total sample only youths 14 and 15 years old were used in this analysis. A very small number of 12 and 13 year old participants reported any sexual activity. The sample involved 325 children with an equal proportion of females and males. The majority of the participants (62.8%) were in intermediate school and 33.3% were in high school. Only a 3.8% of the adolescents were in elementary school.

Measures

Sexual activity. To examine adolescent sexual activity we used a pilot tested questionnaire developed by researchers with questions regarding sexual activity including age of first sexual relations, number of sexual partners, contraceptive use, pregnancy history, use of alcohol or drugs during sexual activity, and sex with an adult or partner at least five years older.

Parent-child relationship. To determine parent and child relationships we used data gathered from the child and their parent(s). The concept of relationships included parent-child closeness and bonding, parental monitoring, control, and discipline. For each variable we constructed a single dichotomous variable which represents the absence or presence of the elements of the specific variables of concern. From parent questionnaires three variables related to the relationship between child and

parent were identified: communication, monitoring, and control. Communication represents the satisfaction level with the degree of openness, understanding, and frequency there is in conversations between parent and child; monitoring express the parent's knowledge about the child's plans and daily conduct; control was determined by the frequency that the parent controlled the child's activity at home. From the child questionnaire two parent-child relationship variables were identified. The child variables were measured by the information in response to two questions about how close their relationship is with their parents. The elements included bonding (how often their parents practice a sport or activity with them) and discipline (how they respond to parental orders).

Analyses. We conducted cross-tabulations to examine distributions and associations between socio-demographics and parent-child relationship variables when early sexual activity is present. A logistic regression analysis was performed to identify the parent-child relationship variables that were independently associated with early sexual activity. Gender, age, and the absence of a father or father figure during the youth's childhood were used as control variables. All the statistical analyses were performed using SPSS version 11.5 (2002).

Results

Table 1 shows the proportion of participants reporting early sexual activity and the distribution of this behavior by socio-demographic characteristics. Overall, 20.6% of the participants reported early sexual activity. Similar proportions among males and females were observed (21.0% vs. 20.2%, respectively). Age is related to early sexual activity as 26.8% of the 15 year old participants reported having sex, compared with 15.8% of 14 year olds ($p=0.019$). The proportion of participants who reported having sex nearly doubles from elementary to intermediate school (8.3% vs. 14.3%) and from intermediate to high school (14.3% vs. 25.0%), ($p=0.047$). The absence of a father or father figure during the youth's childhood (27.2% vs. 17.6%, $p=0.055$) and a regular or bad relationship with the mother (39.1% vs. 19.2%, $p=0.032$) were associated significantly with the participant early sexual activity.

Table 2 shows the incidence of early sexual activity among male and female participants by sex risk variables. The mean age for initial sexual activity was 13.6 years and no differences were observed between sexes. However, males more often reported having several sex partners than females ($p=0.033$). More than one-third of the males (34.4%) reported having three or more sexual partners in contrast to only 15.2% of females. No statistically significant gender differences for condom use were

Table 1. Early sexual activity of the study sample by socio-demographic variables

	Early sexual activity				p-value
	Total	No	Yes		
Sociodemographic variables	n	%	n	%	
Overall	325	258 79.4	67	20.6	
Gender					
Male	162	128 79.0	34	21.0	0.892
Female	163	130 79.8	33	20.2	
Age					
14 years old	183	154 84.2	29	15.8	0.019
15 years old	142	103 73.2	38	26.8	
Grade					
Elementary	12	11 91.7	1	8.3	0.047
Intermediate	196	168 85.7	28	14.3	
High school	104	78 75.0	26	25.0	
Single parent					
No	156	129 82.7	27	17.3	0.172
Yes	169	129 76.3	40	23.7	
Paternal figure present in childhood					
No	103	75 72.8	28	27.2	0.055
Yes	222	183 82.4	39	17.6	
Paternal relationship ^a					
Bad/regular	28	21 75.0	7	25.0	0.289
Good/excellent	194	162 83.5	32	16.5	
Maternal relationship ^a					
Bad/regular	23	14 60.9	9	39.1	0.032
Good/excellent	291	235 80.8	56	19.2	

a=Total n varies due number of missing data

observed. However, more males reported always using condoms compared to females (54.8% vs. 33.3%, p=0.071). Nearly 27%, 16 of 44, of the total study sample reported

Table 2. Early sexual activity of male and female participants by sex risk variables

	Early sexual activity				p-value
	Total n	Males n	Females %		
Sex risk variables	n	%	n	%	
Overall	67	34 21.0	33	20.2	
Mean age of first sexual relationship – mean (std. dev.)	13.6 (1.2)	13.6 (1.5)	13.5 (0.9)		0.811
Number of sex partner					
1	35	18 56.3	17	51.5	0.033
2	14	3 9.4	11	33.3	
3 or more	16	11 34.4	5	15.2	
Condom use					
Never	8	5 16.1	3	9.1	0.071
Sometimes	28	9 29.0	19	57.6	
Always	28	17 54.8	11	33.3	
Sex with adult or at least 5 years older					
No	44	26 83.9	18	62.1	0.081
Yes	16	5 16.1	11	37.9	

having sex with an adult at least 5 years older than themselves. Females were nearly two and half times more likely than males to report this behavior, although these differences were not statistically significant (37.9% vs. 16.1%, p=0.081).

Table 3 shows early sexual activity in the study sample by parent-child relationship variables: communication, monitoring, control, bonding and discipline. Adolescents whose parents reported poor or little communication, monitoring, or control over their children were more likely to engage in early sexual activity. The children of parents who reported a lack of or poor communication were nearly three times more likely to engage in early sexual activity (50.0% vs. 18.7%, p=0.002). The proportion of children who engage in early sexual activity is nearly double in cases where parents reported a lack of or poor monitoring (33.3% vs. 19.9, p=0.225) and control (28.0% vs. 15.7%, p=0.010) over their children.

The same patterns were observed with the parent-child relationship variables reported by adolescents. Adolescents who reported poor bonding with their parents were more than two times more likely to report early sexual activity than those who reported having a strong, bonded relationship with their parents (24.3% vs. 10.5%, p=0.008). Moreover one-third of the adolescents who reported a lack of disciplined behavior toward their parents were more likely to be engaged in early sexual activity versus those who did not exhibit such behavior (38.6% vs. 17.8%, p=0.004).

Table 4 shows the results of the logistic regression analysis for early sexual activity by age, gender and parent-child relationship variables. Age, communication, control, bonding, and discipline were the statistically significant variables related to early sexual activity among this sample. Older children were nearly two times more likely to engage in early sexual activity (OR=1.83, CI=1.02-3.29). Adolescents whose parents reported poor communication were nearly four times more likely to engage in early sexual activity than those who reported good communication (OR=3.80, CI=1.36-10.59). Poor parental control over adolescents out the youths in nearly two times as great a risk for engaging in early sexual activity (OR=1.83, CI=1.02-3.30). Adolescents who reported poor parental bonding were more than two and a half times

Table 3. Early sexual activity in the study sample by parent-child relationship variables

Parent-child relationship	Early sexual activity				p-value
	Total	No	Yes		
	n	%	n	%	
Parent variables					
Communication					
No	20	10	50.0	10	50.0
Yes	305	248	81.3	57	18.7
Monitoring					
No	18	12	66.7	6	33.3
Yes	307	246	80.1	61	19.9
Control					
No	125	90	72.0	35	28.0
Yes	198	167	84.3	31	15.7
Child variables					
Bonding					
No	239	181	75.7	58	24.3
Yes	86	77	89.5	9	10.5
Discipline					
No	44	27	61.4	17	38.6
Yes	281	231	82.2	50	17.8

more likely to engage in early sexual activity as those who reported having a bonded relationship with their parents (OR=2.55, CI=1.14-5.69). Also, adolescents reporting a lack of discipline were nearly four times more likely to engage

Table 4. Results of logistic regression analysis for early sexual activity by age, gender, and parent-child relationship variables

	OR	95% CI	p
Age: 15 years	1.83	1.02-3.29	0.044
Gender: male	1.35	0.74-2.45	0.325
During childhood: absence of father or father figure	1.78	0.97-3.26	0.062
Parent variables*			
Communication	3.80	1.36-10.59	0.011
Monitoring	1.06	0.33-3.44	0.921
Control	1.83	1.02-3.30	0.042
Child variables			
Bonding	2.55	1.14-5.69	0.023
Discipline	3.39	1.60-7.16	0.001

* To facilitate the interpretation, the parent-child relationship variables were recoded in terms of lack of relationship

in early sexual activity (OR=3.39, CI=1.60-7.16).

Conclusions

This study posits two research questions: what is the prevalence for early sexual activity among Hispanic adolescents, ages 14-15 years old residing in Puerto Rico, and what influence does the parent-child relationship have on adolescent sex activity. As hypothesized, family relationships (conceptualized as parental control and

monitoring over offspring, bonding, and parent-child communication levels) were found to be related to early adolescent sexual activity. Adolescents whose parents reported having poor communication with their children and little to no monitoring or control over them were more likely to engage in early sexual activities than those adolescents whose parents had closely bonded with them and maintained control of their households. These findings are in accord with previous studies that have shown that youth who enjoy a healthy home environment, despite living in high risk communities, do well in spite of community adversities. (49, 50)

Similar to previous studies, we found that older adolescents were more likely to be sexually active than younger adolescents. (51-53) Girls were found to be as likely to engage in early sexual activities as boys, a behavior that came as a surprise considering the study was conducted in a Hispanic society that dictates the virtues of girls maintaining their virginity until marriage. However, information regarding the specific sexual activities in which adolescents engage, particularly for girls, requires future research. The equal levels of sexual activity among boys and girls may be the result of the island's rapidly changing cultural traditions. Sexual norms among adolescents and young adults in Puerto Rico may be changing as technological advances in communication, particularly media and internet access have increased islanders' exposure to other socio-cultural environments. In fact, we found a positive correlation between youths who use the internet to acquire sexual information and engagement in early sexual activity.

Consistent with recent studies on family structure, in this study, adolescents who reported the absence of a father or father figure in their lives were more likely to engage in early sexual activity than those youths who resided in a family where both parents were present. Miller and colleagues (14) reported that many studies have shown an early onset of intercourse and lower rates of contraceptive use among adolescents who come from single parent families. Adolescents who reported had a lack of or poor relationship with their mothers also showed high rates of early sexual activity, which is disconcerting considering that mothers are most often the only parental figure in a single parent family and are considered the most important person in an adolescent's life. (54)

Compared to boys, girls who were sexually active

reported having lower frequencies of condom and contraceptive use and a higher likelihood to have sex with partners five or more years older than themselves. These behaviors are known to increase the likelihood of contracting STDs including HIV/AIDS and thus place the youths at higher risk for acquiring serious health problems and early pregnancy.

One factor that should be acknowledged is the difficulty that young girls living in Puerto Rico are most likely to encounter when attempting to buy condoms, as the society at large discourages early sexual activity or premarital sex for girls. The finding that young sexually active girls are likely to have sexual relations with partners up to five years their senior is an important fact that must be analyzed further. The concern is that this type of sexual activity is not consensual in nature, as in cases of statutory rape or incest.

The need for programs to decrease early sexual initiation must be addressed for both sexes. However, the need for programs seems to be more urgent for adolescent girls as they are less likely to have access to condoms and might be more likely to be sexually abused by older partners.

Several caveats regarding the study's validity need to be addressed. First, we recruited child participation from homes in order to have access to a representative sample of children including those who may not be attending school, a group that may be the most likely to engage in early sexual and other non-normative behaviors. Some of our interviews were conducted in small, crowded households where it sometimes proved difficult to maintain confidentiality. However, interviewers were able to establish a relationship of trust that helped to improve the data collection process while maintaining the necessary confidentiality. For data collection purposes we also relied upon participating adolescent and parent disclosure of their mutual relationships which may not be the type of information easily obtained within a Hispanic family-oriented culture.

In spite of these limitations this study can make several conclusions and implications. First, the findings affirm that good parent-adolescent relationships wherein the parent monitors and, if need be, controls the child, can withstand the possible negative effects expected when living in poor, high risk communities. Early sexual activity appears to be one such negative side-effect which can be avoided with good parenting techniques, despite the environmental influences surrounding the household. Second, girls are more exposed to risky sexual behaviors than boys in this environment, suggesting that Hispanic culture is still contributing to the disparities exerted on women. Adolescent prevention intervention for early sexual activity should include family participation, particularly with

mothers, for caretakers play a critical role in adolescent development even among those youths who may appear disrespectful toward their parents.

Moreover, findings from the present study support the call for future research to be conducted related to the changing elements of traditional Hispanic culture, especially those regarding gender roles and sexual behavior in a world that is continually being changed by the forces of global communication and exchange.

Resumen

Este estudio analiza la conducta sexual temprana entre adolescentes hispanos de 12 a 15 años de edad residentes de vecindarios de escasos recursos económicos en Puerto Rico. La información fue obtenida de 325 adolescentes y sus padres o madres provenientes de una muestra aleatoria viviendo en estos vecindarios. Se utilizaron varios modelos de regresión logística para identificar las variables asociadas con la conducta sexual temprana. El análisis demuestra que aquellos adolescentes mayores de edad, que tienen una relación pobre con sus padres y que sus padres tienen poco control sobre sus conductas son más dados a tener relaciones sexuales tempranas que aquellos que no reportan este tipo de relación con sus familiares. Los adolescentes que informaron un pobre vínculo con sus padres también reportaron actividades sexuales tempranas. Programas de prevención que atienden los problemas del proceso de desarrollo de los adolescentes tienen que proveer sus servicios de prevención de conducta sexual prematura no solamente a los adolescentes en la escuela sino también a sus padres y organizaciones comunitarias.

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