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Sexual intercourse among adolescents in Santiago, Chile: a study of individual and parenting factors

Ninive Sanchez¹, Andrew Grogan-Kaylor¹, Marcela Castillo², Gabriela Caballero², and Jorge Delva¹

¹School of Social Work, University of Michigan, Ann Arbor, Michigan, United States of America.

²Instituto de Nutrición y Tecnología de los Alimentos, Universidad de Chile, Santiago, Chile.

Abstract

Objective—To examine a range of individual, parenting, and family factors associated with sexual intercourse among a community sample of youth and their families in Santiago, Chile.

Methods—Data were taken from the first wave of the Santiago Longitudinal Study conducted in January 2008–November 2009. Participants were 766 youth (mean age = 14.03 years, 51% male) from municipalities of low-to mid-socioeconomic status. Variables included emotional and behavioral subscales from the Child Behavior Checklist’s Youth Self Report, parental monitoring, family involvement, parental control and autonomy, relationship with each parent, and sexual activity. Bivariate and multivariate logistic regression models were used to examine the odds of sexual intercourse initiation.

Results—Seventy (9.14%) youth reported having had sex in their lifetime; the average age of first sexual intercourse among this group was 13.5 years (Standard Deviation [SD] = 1.74) for males and 14.08 (SD = 1.40) for females. Having sex was inversely associated with withdrawn-depressed symptoms (Odds Ratio [OR] = 0.84, Confidence Interval [CI] = 0.72–0.97), but positively associated with somatic complaints (OR = 1.20, CI = 1.04–1.38) and rule breaking behavior (OR = 1.21, CI = 1.08–1.36), after adjusting for demographic and other individual and parenting variables. The majority (80%) of the youth who had had sex reported using protection at the time of last intercourse.

Conclusions—Findings highlight the role that mental health problems—some of them not commonly associated with onset of sexual activity—may play in a youth’s decision to have sex. The potential protective effects of several parenting and family characteristics disappeared with youth age and youth behavioral problems.

Keywords

Sexual behavior; adolescent; adolescent behavior; pregnancy in adolescence; Chile

Research among youth in Chile has found that some adolescents perceive sexual intercourse as an opportunity to experience positive outcomes, such as providing love and affection to a partner and appeasing one’s curiosity (1). However, sexual intercourse among youth, especially early sexual onset, can lead to a considerable number of problematic outcomes, ranging from decreased academic achievement (2) to sexually transmitted diseases (STDs) (3) and teen pregnancy (1). Pregnant students in Chile who dropped out of school reported two major reasons for discontinuing their education: being ashamed of being pregnant and

pregnancy-related complications (4). And although schoollevel interventions aimed at preventing adolescent pregnancy have been tried and tested (5, 6), overall effectiveness appears to be temporary (6). Moreover, the school curricula in Latin America often lacks information on various aspects of sexual behavior, including HIV prevention (7).

The current situation has led some health and psychology professionals in Chile to suggest that family interventions, such as home visits, may be promising ways to manage teen pregnancy and other adolescent sexual behaviors affecting families (8). Targeting the home requires learning more about the role that parents and families play in preventing adolescent pregnancy. To better inform potential family interventions for promoting healthy sexual behavior among adolescents, this study examined a number of individual, parenting, and family variables and how they relate to adolescent sexual intercourse.

A review of the literature suggests there is a gap in the research of the day-to-day family context regarding adolescent sexual behavior in Chile. Of the studies available, one found that youth who perceived their families as dysfunctional were more likely to have sex and feel insecure, sad, and anxious (9). The majority of research on sexual behavior at the family level has focused on the specifics of what parents tell their children about sex, rather than examining the larger family context in which this type of communication occurs (10). For example, results of a study conducted in Chile indicate that a mother's disapproval of premarital sex, along with a good mother-daughter relationship, decreased the likelihood of early sexual onset (6). However, that study excluded males and measured only a general satisfaction with the mother-daughter relationship, not other potentially important family and parenting variables, such as parental involvement, monitoring, and/ or control. Other research among families in Chile found that a father's presence in the household decreased the likelihood of sexual onset for females, but not males (11). Again, the study did not examine other parenting and family factors or the relationship between fathers and their children.

Expanding on the current understanding of this topic, the present study examines individual factors (i.e., behavioral problems) and parenting and family factors that may be associated with sexual intercourse among youth in Chile. The Santiago Longitudinal Study (SLS) is an on-going collaboration between the University of Michigan (Ann Arbor, Michigan, United States) and the Institute of Nutrition and Food Technology (University of Chile, Santiago, Chile [INTA]), with funding from the National Institute on Drug Abuse (Bethesda, Maryland, United States). More details about the study are provided elsewhere (12). Approval was granted by the institutional review boards of both the University of Michigan and INTA.

MATERIALS AND METHODS

Participants and data collection

This study used cross-sectional data from the SLS, a study of communitydwelling adolescents in Santiago, Chile (12). Study participants were recruited from a convenience sample of approximately 1 100 families that had participated in a study of iron and nutritional status when the youth were infants, 5, and 10 years of age (13). The present study reports findings based on the 766 youth (mean age = 14.03 years, 51% male) who completed a comprehensive assessment of substance use in January 2008–November 2009 and had no missing data. The participants were from municipalities with low-to mid-level socioeconomic status. The study was specifically designed to understand youth development among those who may experience more social and economic disadvantages.

Study instrument

Adolescent participants completed a 2-hour interviewer-administered questionnaire with standardized measures that were pilot tested and validated with the population under investigation prior to conducting the present study. Interviews were conducted in Spanish in a private office at INTA. Youth assent and parental consent were obtained by the psychologists prior to commencing the interviews. Parents were not present when youth were interviewed. Interviewers were Chilean psychologists trained in the administration of standardized instruments.

The questionnaire, which consists of nearly 900 questions, was created by combining standardized instruments commonly used in the United States and in Chile to assess the constructs measured in the study (see the Measures section below). To ensure language and conceptual equivalence, instruments that only existed in the English language were first translated into Spanish by three Chilean educators who reside in the United States, one of whom was the study's Principal Investigator. Each translated instruction and stem question was subsequently reviewed in Chile by the Co-Investigator and three of the study interviewers. Following modifications, the entire instrument was pilot tested with 30 youth (representative of the study participants) and finalized based on their feedback.

Topics assessed measured the adolescents' relationship with parents, the adolescents' perceptions of self, their behavior, health status, any substance use, and more.

Measures

Sexual intercourse—The dependent variable in this study—whether or not the youth had had sex—was assessed from the question, “Have you ever had sexual intercourse (made love or gone all the way)?” This information was used to create a dichotomous indicator of whether or not a youth had had sex.

Demographic characteristics—Demographic variables included the youth's self-reported age and gender, and a parent's report of the family's socioeconomic status (SES). The SES instrument was completed by the parental figure who accompanied the youth to the interview site. This instrument was separate from the youth questionnaire. The SES variable was based on a measure sensitive to SES circumstances in the developing world (14) and consisted of 86 questions, of which, 13 were specifically used to obtain a composite score of SES. Examples of items assessed were “total number of adults in the same house,” “type of job held by the head of household,” and “father's level of education” (Cronbach's $\alpha = 0.88$).

Youth behavior—Youth assessed their behavior during the preceding 6 months using the Child Behavior Checklist's 112-item Youth Self Report (CBCL/YSR) (15). The CBCL/YSR uses the following response scale: 0 (not true), 1 (somewhat or sometimes true, and 2 (very true or often true). Subscale scores are based on the sum of the items in that scale. All eight subscales were used in this study: anxious-depressed (Cronbach's $\alpha = 0.74$), withdrawn-depressed (0.68), somatic complaints (0.66), social problems (0.61), thought problems (0.62), attention problems (0.64), rule breaking behavior (0.70), and aggressive behavior (0.81).

Youth's relationship with each parent—Youth rated their relationships with their mother and father, separately, using the same 17-item scale for each parent (16, 17). The stem question was: “When you and your mother (or father) spend time talking or doing things together, how often does she (he)” and was paired with items such as “. . . help you do something that is important to you?” or “. . . listen carefully to your point of view?” Items were rated on a 4-point scale (1 = never, 2 = sometimes, 3 = often, 4 = always). Higher

scores represented a more positive relationship with the parent (Cronbach's $\alpha = 0.88$). The Cronbach's alpha was the same for both the relationship with mother scale and the relationship with father scale.

Parental control and autonomy—Youth rated their perception of parental control and autonomy using an 8-item scale with items that asked them to report how decisions in their families were made (17–19). The stem question: “In your family, how do you make most of the decisions about . . .” was followed by topic items, such as “. . . how late you can stay up on a school night,” “. . . which friends you can spend time with,” and “. . . how you dress.” Items were rated on a 5-point scale (1 = my parents decide, 2 = my parents decide after discussing it with me, 3 = we decide together, 4 = I decide after discussing it with my parents, 5 = I decide all by myself) ($\alpha = 0.70$).

Family involvement—This measure, taken from the Child Health and Illness Profile—Adolescent Edition (CHIP-AE) (20, 21), refers to the level of parental monitoring by those whom the adolescent considers to be parent figures. Youth rated their perceptions of family involvement using a 5-item scale. The stem question: “Thinking about your family, about how many days in the past 4 weeks did your parents or other adults in your family. . .” was followed by: “. . . talk with you or listen to your opinions and ideas,” “. . . spend time with you doing something fun,” “. . . eat meals with you.” The scale also included, “In the past 4 weeks, on how many days did you like being a member of your family?” and “. . . did you and your family get along?” Items were rated on a 5-point scale (1 = 0 days, 2 = 1–3 days, 3 = 4–6 days, 4 = 7–14 days, 5 = 15–28 days). Higher scores represented more family involvement (Cronbach's $\alpha = 0.72$).

Parental monitoring—Youth rated their perceptions of their parents' monitoring using a 7-item scale (22) that included items such as: “How often would your mom/dad/guardian know if you came home an hour late on weekends?”; “Are there kids your mom/dad/guardians don't allow you to hang out with?”; and “How often, before you go out, do you tell your mom/dad/guardian when you will be back?” Items were rated on a 5-point scale (1 = never, 2 = hardly ever, 3 = sometimes, 4 = most times, 5 = always). Higher scores represented more parental monitoring (Cronbach's $\alpha = 0.68$). In addition to examining the association between adolescents' behavioral problems and parenting and family characteristics with the study's dependent variable defined earlier (ever had sex), some additional descriptive analyses were conducted of the types of sexual activity in which the youth engaged. Due to small sample sizes, only descriptives for these data are reported; inferential analyses were not conducted. It was thought that a description would provide a richer perspective of the sexual behaviors of youth in the study sample. The questions utilized to assess these behaviors follow.

Sexual activity—Sexual activity was measured with questions taken from the CHIP-AE (20, 21), with the following questions: “How old were you when you had sexual intercourse for the first time?”; “How many people of the *opposite* sex have you had sex with?”; and “How many people of the *same* sex have you had sex with?”

As a follow-up question, those youth who had sexual intercourse with opposite sex partners were asked, “Did you or your partner use something to prevent pregnancy or sexually-transmitted diseases the *last time* you had sexual intercourse?” Those youth who responded “yes” were asked, “Which of the following things did you use to prevent pregnancy or sexually-transmitted diseases the last time you had sexual intercourse?” Youth responded with “yes” or “no” to each of the following choices: the pill/Norplant/Depo provera; foam/cream/jelly/suppository; diaphragm/ sponge; rubber/condom; withdrawal/ pulling out; the

morning after pill; and, something else. In addition, adolescents were asked, “Have you ever been pregnant/gotten someone pregnant?”

Finally, youth were asked, “Has a doctor ever told you that you had a sexually-transmitted disease or venereal disease like gonorrhea, syphilis, Chlamydia, genital warts, or genital herpes?” Items were rated on a 3-point scale (1 = no, never; 2 = yes, but no problems with it in the last 12 months; 3 = yes, and had a problem with it in the last 12 months).

Statistical analyses

Four sets of analyses were tested using logistic regression. First, the bivariate associations of each independent variable with the dependent variable (ever had sex) was examined. Model 1 examined the multivariate association of ever having had sex with the behavioral problem variables while statistically adjusting for the demographic characteristics of study participants, using multivariate logistic regression.

Model 2 examined the multivariate association of ever having had sex with the parenting and family variables also adjusting for demographics, using multivariate logistic regression.

The Full Model examined the association of ever having had sex with the individual, parenting, and family variables entered simultaneously while adjusting for demographic characteristics.

Analyses were conducted with STATA 10.0 (Stata Corporation, College Station, Texas, United States). As indicated earlier, as a follow-up to this set of logistic regression models, the sexual behavior of youth who reported having had sexual intercourse was examined, to provide a more complete description of these behaviors. However, the relatively small number of youth who reported having had sex precluded testing of models using multivariate statistics. Only descriptive statistics could be employed in these follow-up analyses.

RESULTS

The study analyses included only the 766 youth who had both a mother and father figure in their lives. The majority had a biological mother (80.6%). The analyses also excluded any youth with missing data. The average age of the study participants was 14 years (SD = 1.2). About half of the sample is male (51.2%). The average score on the SES scale was 32.7 (Table 1).

Seventy (approximately 9%) of the 766 youth reported having had sex in their lifetime. The average age of youth who reported having had sex (15.5 years, SD = 1.2) was significantly higher than that of youth who reported never having had sex (13.9 years, SD = 1.1, $P < 0.001$). However, of the 9% who had had sex, the percent of males (48.5%) and females (51.4%) was fairly similar. In addition, the difference in the average age of first sexual intercourse between males (13.5 years, SD = 1.7) and females (14.1 years, SD = 1.4) was not statistically different.

Of the 70 youth who reported having had sex, 56 (80%) reported using protection to prevent pregnancy/STDs at the time of last sexual intercourse. The mean age of first intercourse for those who reported using protection was 14 years (SD = 1.39); versus 12.9 years (SD = 2.04) for those who reported not using protection, a statistically significant difference ($P < 0.05$). Of the 56 who used protection, 29 were male (almost 50%), and 27 were female. In addition, of the 56 youth who used protection, 36 (64%) used one form of contraceptive. Eighteen (32%) youth used two different types of contraceptives, and two (0.04%) youth

used three different types of contraceptives at the time of last sexual intercourse. The preferred form of contraception was the condom, followed by the pill and withdrawal. Of the youth who reported having had sex none reported ever having been told by a doctor that they had a sexually-transmitted disease (STD).

Sixty-seven of the 70 adolescents (95.7%) reported having had sex with the opposite sex. Most of these adolescents (52 individuals) also reported having had sex with one person. Three adolescents reported having had sex with the same sex. Two of these reported having had sex with one person. Finally, five total adolescents reported having ever been pregnant/gotten someone pregnant.

Bivariate analyses

These analyses examined the associations between youth ever having had sex and demographic characteristics, mental health and behavioral problems, and parenting and family characteristics. The results are shown in Table 2. As expected, age was positively associated with increased odds of youth ever having had sex (Odds Ratio [OR] = 3.23, 95% Confidence Interval [CI] = 2.51–4.15). Other demographic variables were not associated with youth having had sex.

Several behavioral problems were associated with the likelihood of youth having had sexual intercourse. The odds of ever having had sex increased with youth having higher levels of somatic complaints (OR = 1.13, 95% CI = 1.04–1.24), thought problems (OR = 1.12, 95% CI = 1.02–1.24), rule breaking behavior (OR = 1.21, 95% CI = 1.13–1.29), and aggressive behavior (OR = 1.07, 95% CI = 1.02–1.12). The other behavioral problems assessed in this study were not significantly associated with the dependent variable.

The majority of the parenting and family factors were significantly associated, as expected, with youth having had sexual intercourse; that is, the odds of ever having had sex were lower among youth who reported having a better relationship with their mother (OR = 0.97, 95% CI = 0.94–0.99) and father (OR = 0.95, 95% CI = 0.93–0.98), and more parental monitoring (OR = 0.93, 95% CI = 0.89–0.97). In addition, youth who experienced more autonomy and less parental control had higher odds of ever having had sex (OR = 1.12, 95% CI = 1.06–1.17).

Multivariate models

Mental health and behavioral factors—Model 1 included associations of mental health and behavioral factors with youth's sexual intercourse while adjusting for demographic controls (Table 2). The odds ratios associated with age (OR = 3.57, 95% CI = 2.67–4.78), somatic complaints (OR = 1.20, 95% CI = 1.04–1.38), and rule-breaking behavior (OR = 1.22, 95% CI = 1.10–1.35) not only remained significant, but also increased slightly. Thought problems were no longer significantly associated with ever having had sex after demographics and other behavioral problems were included in the model. In addition, in this multivariate model, the magnitude of the coefficient estimating the association between ever having had sex and withdrawn-depressed increased, resulting in a significant, inverse association (OR = 0.84, 95% CI = 0.73–0.97). The Chisquare for the overall model was 153.32 ($P < 0.001$).

Parenting and family factors—Model 2 included associations of parenting and family factors with youth's sexual behavior while adjusting for demographic controls (see Table 2). The associations between all of the parenting variables with ever having had sex became nonsignificant with the exception of parental monitoring. Parental monitoring remained

significantly and inversely associated with the odds of youth ever having had sex (OR = 0.94, 95% CI = 0.88–1.00). The Chi-square for the model was 123.86 ($P < 0.001$).

Full Model—The Full Model included demographics, and individual, parenting, and family factors. Age continued to be positively associated with having had sex (OR = 3.65, 95% CI = 2.69–4.96). In this multivariate model, the odds of ever having had sex remained inversely associated with being withdrawn-depressed (OR = 0.84, 95% CI = 0.72–0.97) and positively associated with experiencing somatic complaints (OR = 1.20, 95% CI = 1.04–1.38) and rule breaking behavior (OR = 1.21, 95% CI = 1.08–1.36). In the full model, none of the parenting variables remained significantly associated with ever having had sex. The Chi square for this model was 158.47 ($P < 0.001$).

DISCUSSION

Mental health

The study results suggest that there is a positive association between some of the behavioral problems youth may have and the likelihood of ever having had sex. These findings indicate that youth experiencing higher levels of somatic complaints and withdrawn-depression had higher odds of having had sex, even after accounting for age, other behavioral problems, and parenting factors. The somatic complaints measured in this study were complaints for which no medical cause could be ascertained.

One could argue that the somatic complaints are symptoms of the withdrawn-depression experienced by some youth. However, by including both somatic complaints and withdrawn-depression in the model, this study controlled for potential comorbidity. It may be that the somatic complaints are independent of withdrawn-depression. For instance, research suggests that children can learn to use somatic complaints to draw attention from family members when they are unable to draw attention for emotional problems (23). In addition, research suggests that somatic complaints may be more likely to occur in households where it is more acceptable to express one's somatic complaints rather than one's feelings (23).

The finding that youth experiencing withdrawn-depression had higher odds of having had sex is somewhat consistent with what was found in Brazil (24). Researchers found that in Brazil, female adolescents 13–17 years of age who were pregnant for the first time experienced significantly higher levels of withdrawn-depression (as measured by CBCL/YSR) compared to females who were sexually active, but not pregnant (24).

Behavioral problems

Rule breaking behaviors was another variable that was consistently associated with youth having had sex, even after accounting for age, other behavioral problems, and parenting and family factors. This is consistent with research using a nationally representative sample of youth in the United States which found that higher levels of externalizing behavior, including rule breaking, was associated with increased likelihood of sexual onset (25). Youth who receive very limited support from family and who engaged in rule breaking behaviors might look to others, including romantic partners, for support. In turn, these partners may then influence youth's behavior and sexual activity. For example, prior research has found that the delinquent behavior of a youth's romantic partner is associated with the youth's delinquent behavior (26).

Parenting and family factors

Another interesting finding is that in the Full Model, parenting and family factors were no longer significantly associated with sexual intercourse. Bivariate results suggested that youth who had had sex had lower mean levels on relationship with mother and father, parental monitoring, and parental control, than youth who had not had sex. However, no measure of relationship with families and parents was statistically significant in a multivariate model, suggesting that mental health issues may play a larger role in the onset of sexual behavior than parenting and family factors. However, this does not indicate that the family is not an important target for intervention in adolescents' sexual activity. Research focused predominantly on youth in the United States suggests that positive parenting practices—parental monitoring and high quality parent-child relationships—have a protective influence on youth's risk-taking behaviors, including sexual behavior (27). It is possible that mental health problems may mediate the relationship between families and sexual activities.

Home visits

Some mental health professionals suggest that home visits made by facilitators to adolescents and their families may be an effective way to encourage families to interact and discuss issues that are important, including sexual behavior (28). In addition, these facilitators are likely to facilitate families' access to health and human services (28).

A program using home-visit facilitators may be a good option for families in Chile. In fact, health and mental health workers in Chile have found that some teens are scared to access public health services, possibly due to the stigma associated with teen pregnancy (8). Another reason for the home-visit option is that individuals and families looking for services sometimes make initial contact with individuals who are unable or not trained to engage them at first contact; whereas, trained home-visit facilitators may be able to discuss and provide guidance on various issues experienced by the family (28). Even as it relates to the findings of the present study, which indicated that most of the youth who had had sex also reported using protection and none reported an STD, a home-visit facilitator could explain the possibility of an asymptomatic infection. Another topic of discussion might be the risks involved with having multiple sex partners without protection.

Limitations

As is the case with all studies, this study had some limitations that must be noted. One of the limitations is the crosssectional design that limits the directions of the associations found. Further research is needed to examine whether youths' withdrawn-depressive, somatic, and rule breaking behavior follows sexual intercourse or precedes it. It is possible that somatic complaints may result from having sexual intercourse. Youth may also engage in rule breaking or experience withdrawn-depressive symptoms as a result of shame, regret, or other outcomes that result from the sexual experience.

A second limitation is that some of the youths' mental health and behavior measures had Cronbach's alphas lower than 0.70. Measures with lower reliabilities may impede ability to discern statistically significant constructs.

A third limitation has to do with the use of the CBCL/YSR with the sample in this study. The CBCL/YSR was not developed solely for use with Chilean youth, and as such, some of the behavioral problems of Chilean youth may not have been captured by this measure. Nevertheless, the CBCL/YSR is a measure that is easy to administer and that includes one of the most comprehensive sets of behavioral problems youth may experience. The CBCL/YSR has been successfully used in a wide variety of international settings, including with

many Spanish-speaking populations, and is broadly considered to be a sufficiently reliable and valid instrument for use with diverse populations (29, 30).

The fourth limitation is that all the data are based on youth self-report. Youth may have either underreported or overreported sexual behaviors. Youth may feel more comfortable and report more accurately when responding through audio and computer support (31). However, it is important to note that these youth and their parents had been interviewed by INTA psychologists several times in the past and a rapport had been established. In addition, these participants have reported trusting these professionals and the work affiliated with INTA (32).

Finally, the study does not measure whether the parents are biological, adoptive, or step-parents, and the family dynamics of two-parent families may differ substantially from that of single-parent families. Future research is needed with diverse families.

Future research

Notwithstanding these limitations, the study findings contribute to the research on individual and family factors associated with sexual intercourse in a community sample of youth in Chile. This study also suggests that sexual activity in relation to youths' withdrawn-depressed, somatic complaints, and rule-breaking behavior is an area for further study. A number of important associations were identified, but a future study could include other sources, such as peers, teachers, and/or parents, who would provide additional perspectives not assessed in the present study.

Future research might also examine other factors, such as the importance of virginity and satisfying sexual needs (33), along with other measures of parenting among international populations. Research is also needed to examine whether for some youth, having sex and experiencing its outcomes, both positive and negative, provides skills necessary for managing other aspects of life. In addition, a greater understanding of these associations and behaviors in countries other than the United States can serve to enhance the overall understanding of adolescent sexual development.

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REFERENCES

1. Gonzalez EA, Molina MG, Montero A, Martínez NV, Leyton MCI. Sexual behavior and gender differences among adolescents consulting at a university public health system. *Rev Med Chile*. 2007; 135:1261–1269. [PubMed: 18180832]
2. Coker AL, Richter DL, Valois RF, McKeown RE, Garrison CZ, Vincent ML. Correlates and consequences of early initiation of sexual intercourse. *Journal Sch Health*. 1994; 64(9):372–376.
3. Kaestle CE, Halpern CT, Miller WC, Ford CA. Young age at first sexual intercourse and sexually transmitted infections in adolescents and young adults. *Am J Epidemiol*. 2005; 161(8):774–780. [PubMed: 15800270]
4. Molina M, Ferrada C, Perez R, Cid L, Casanueva V, Garcia A. The relationship between teenage pregnancy and school desertion. *Rev Med Chile*. 2004; 132:65–70. [PubMed: 15379055]

5. Cabezón C, Vigil P, Rojas I, Leiva ME, Riquelme R, Aranda W. Adolescent pregnancy intervention: an abstinence-centered randomized controlled intervention in a Chilean public high school. *J Adolesc Health*. 2005; 36:64–69. [PubMed: 15661598]
6. Silva M, Ross I. Association of perceived parental attitudes towards premarital sex with initiation of sexual intercourse in adolescence. *Psychol Rep*. 2002; 91:781–784. [PubMed: 12530724]
7. DeMaria LM, Galárraga O, Campero L, Walker DM. Sex education and HIV prevention: An evaluation in Latin America and the Caribbean. *Rev Panam Salud Publica*. 2009; 26(6):485–493. [PubMed: 20107702]
8. Chereau BM, Silva CB, Alvarez MA. An integrative perspective of adolescent pregnancy: Home visitation program as an intervention strategy. *Rev Psicol*. 2001; 001:21–43.
9. Santander S, Zubarew T, Santelices L, Argollo MP, Cerda LJ, Bórquez PM. Family influence as a protective factor against risk behaviors in Chilean adolescents. *Rev Med Chile*. 2008; 136:317–324. [PubMed: 18575657]
10. Elliot S. Parents' constructions of teen sexuality: Sex panics, contradictory discourses, and social inequality. *SI*. 2010; 33(2):191–212.
11. Murray NJ, Zabin LS, Toledo-Dreves, et al. Gender differences in factors influencing first intercourse among urban students in Chile. *Int Fam Plan Perspect*. 1998; 24(3):139–152.
12. Delva, J.; Castillo, M. International Research. In: Thyer, B., editor. *Handbook of Social Work Research Methods*. 2nd ed. CA: Sage; 2010.
13. Lozoff B, De Andraca I, Castillo M, Smith JB, Walter T, Pino P. Behavioral and developmental effects of preventing iron-deficiency anemia in healthy full-term infants. *Pediatrics*. 2003; 112(4):846–854. [PubMed: 14523176]
14. Graffar M. Une methode de classification sociale d'échantillons de population. *Courrier*. 1956; 6(8):455–459.
15. Achenbach, TM.; Rescorla, LA. *Manual for the ASEBA schoolage forms and profiles*. Burlington, VT: Research Center for Children, Youth, and Families; 2001. *Child Behavior Checklist. Youth Self-Report for Ages 11–18 (YSR 11–18)*.
16. Conger, RD.; Ge, X. Conflict and cohesion in parent-adolescent relations: changes in emotional expression from early to mid-adolescence. In: Cox, M.; Brooks-Gunn, J., editors. *Conflict and cohesion in families: Causes and consequences*. Mahwah, NJ: Erlbaum; 1999. p. 185-206.
17. National Institute of Child Health and Human Development. [Accessed 20 October 2009] NICHD study of early child care and youth development. Phase IV Instrument Documentation. Available from: <https://secc.rti.org/Phase4InstrumentDoc.pdf>
18. Brody GH, Moore K, Gleit D. Family processes during adolescence as predictors of parent/young adult attitude similarity. A 6-year longitudinal analysis. *Family Relations*. 1994; 43:369–373.
19. Eccles J, Buchanan CM, Midgley C, Fuligni AJ, Flanagan C. Individuation reconsidered: Autonomy and control during early adolescence. *J Soc Issues*. 1991; 47:53–68.
20. Riley AW, Green BF, Forrest CB, Starfield B, Kang M, Ensminger ME. A taxonomy of adolescent health: development of the adolescent health profile-types. *Med Care*. 1998; 36(8):1228–1236. [PubMed: 9708594]
21. Riley AW, Forrest CB, Starfield B, Green B, Kang M, Ensminger M. Reliability and validity of the adolescent health profile-types. *Med Care*. 1998; 36(8):1237–1248. [PubMed: 9708595]
22. Patterson, GR.; Capaldi, DM. *Psychometric properties of fourteen latent constructs from the Oregon Youth Study*. New York City: Springer-Verlag; 1998.
23. Silber TJ, Pao M. Somatization disorders in children and adolescents. *Pediatr Rev*. 2003; 24:255–264. [PubMed: 12897265]
24. Caputo VG, Bordin IA. Mental health problems among pregnant and non-pregnant youth. *Revista de Saude Publica*. 2007; 41(4):573–581. [PubMed: 17589755]
25. Meier AM. Adolescent first sex and subsequent mental health. *AJS*. 2007; 112(6):1811–1847.
26. Lonardo RA, Giordano PC, Longmore MA, Manning WD. Parents, friends, and romantic partners: Enmeshment in deviant networks and adolescent delinquency involvement. *J Youth Adolesc*. 2009; 38:367–383. [PubMed: 19636751]

27. DeVore ER, Ginsburg KR. The protective effects of good parenting on adolescents. *Curr Opin Pediatr.* 2005; 17(4):460–465. [PubMed: 16012256]
28. Tapia MI, Schwartz SJ, Prado G, Lopez B, Pantin H. Parent-centered intervention: A practical approach for preventing drug abuse in Hispanic adolescents. *Res Soc Work Pract.* 2006; 16:146–165.
29. Gershoff ET, Grogan-Kaylor A, Lansford JE, Chang L, Zelli A, Deater-Deckard K, Dodge KA. Parent discipline practices in an international sample: Associations with child behaviors and moderation by perceived normativeness. *Child Dev.* 2010; 81(2):480–495. [PubMed: 20438454]
30. Achenbach, TM.; Rescorla, LA. *Multicultural understanding of child and adolescent psychopathology: implications for mental health assessment.* New York: Guilford Press; 2007.
31. Gutiérrez JP, Torres-Pereda P. Acceptability and reliability of an adolescent risk behavior questionnaire administered with audio and computer support. *Rev Panam Salud Publica.* 2009; 25(5):418–422. [PubMed: 19695131]
32. Horner P, Sanchez N, Castillo M, Delva J. Parental perceptions of neighborhood effects in Latino comunas. *Subst Use Misuse.* [In press].
33. Deardorff J, Tschann JM, Flores E, Ozer EJ. Sexual values and risky sexual behaviors among latino youths. *Perspect Sex Reprod Health.* 2010; 41(1):23–32. [PubMed: 20415881]

Self-reported descriptive statistics of a sample of 766 youth from low- and middle income municipalities who participated in a study of substance abuse in Santiago, Chile, 2008–2009

TABLE 1

Variable	No.	%	Mean	Standard deviation	Minimum	Maximum
Demographics						
Male	392	51.7				
Age			14.0 years	1.22	11.3 years	17.7 years
Socioeconomic status ^a			32.75	6.53	18	53
Sexual behavior						
Ever had sex	70	9.14				
Age at first sexual intercourse	70		13.8 years	1.60	9.0 years	17.0 years
Mental health/behavioral problems						
Anxious-depressed			6.00	3.71	0	20
Withdrawn-depressed			4.17	2.75	0	14
Somatic complaints			3.10	2.46	0	14
Social problems			4.03	2.70	0	18
Thought problems			2.56	2.25	0	16
Attention problems			5.61	3.04	0	17
Rule breaking behavior			4.92	3.23	0	22
Aggressive behavior			8.04	4.80	0	25
Parenting/Family						
Relationship with mother			55.85	8.03	23	68
Relationship with father			54.75	8.99	18	68
Parental control and autonomy			29.75	6.17	8	40
Family involvement			18.80	4.15	5	25
Parental monitoring			27.80	5.23	7	35

^aSocioeconomic status was measured using a composite score of the following items: father abandonment, head of household's employment, father's benefits, father's education, land arrangement, type of housing, kitchen appliances, type of waste disposal system, type of access to drinking water, frequency of trash pickup, crowdedness in the home, and amount and type of belongings in the home.

TABLE 2

Logistic regression analyses of youths' likelihood of sexual onset among 766 youth from low- and middle-income municipalities who participated in a study of substance abuse in Santiago, Chile, 2008–2009

Variable	Bivariate			Model 1		Model 2		Full Model	
	Odds ratio (OR)	95% confidence interval (CI)		OR	CI	OR	CI	OR	CI
Demographics									
Age	3.23	2.51–4.15		3.57	2.67–4.78	3.16	2.41–4.13	3.65	2.69–4.96
Sex	1.12	0.86–1.83		0.93	0.48–1.83	0.95	0.53–1.68	0.97	0.49–1.92
Socioeconomic status	0.98	0.94–1.01		0.99	0.95–1.04	0.99	0.95–1.04	0.99	0.95–1.04
Mental health/behavioral problems									
Anxious–depressed	1.01	0.94–1.08		0.96	0.85–1.08			0.95	0.84–1.08
Withdrawn–depressed	0.97	0.89–1.07		0.84	0.73–0.97			0.84	0.72–0.97
Somatic complaints	1.13	1.04–1.24		1.20	1.04–1.38			1.20	1.04–1.38
Social problems	0.99	0.91–1.09		0.96	0.82–1.12			0.96	0.82–1.12
Thought problems	1.12	1.02–1.24		1.12	0.97–1.30			1.34	0.98–1.32
Attention problems	1.07	0.98–1.15		0.99	0.87–1.13			0.99	0.87–1.13
Rule breaking behavior	1.21	1.13–1.30		1.22	1.10–1.35			1.21	1.08–1.36
Aggressive behavior	1.07	1.02–1.12		0.99	0.91–1.09			0.99	0.90–1.08
Parenting/family									
Relationship with mother	0.97	0.94–0.99				1.00	0.96–1.04	1.02	0.97–1.06
Relationship with father	0.95	0.93–0.98				0.97	0.94–1.01	0.97	0.93–1.00
Parental control and autonomy	1.12	1.06–1.17				1.01	0.95–1.06	0.98	0.92–1.04
Family involvement	0.86	0.67–1.09				1.03	0.95–1.11	1.03	0.94–1.12
Parental monitoring	0.93	0.89–0.97				0.94	0.88–1.00	0.96	0.90–1.03

Note: Bold cells indicate statistical significance at the $P < 0.05$ level