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Latino Parenting Practices: A Comparison of Parent and Child Reports of Parenting Practices and the Association with Gateway Drug Use

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Abstract

Parent and adolescent self-reports are the most common sources for measuring parenting practices. This study's purpose was to compare how parent and adolescent reports of parenting behaviors differentially predict adolescent gateway drug use. The sample consisted of 252 Latino adolescent-parent dyads. After controlling for potential confounding influences, only adolescents' reports about their parents' parenting behaviors were significant and explained 38% of the variance in gateway drug use. Practitioners may recommend to parents seeking parenting advice that they solicit feedback from their adolescent to ensure parenting efforts are received in the manner they were intended.

Keywords

adolescents; gateway drugs; Latino; parenting

Research has demonstrated the impact of parenting practices on adolescent gateway drug use (Hawkins, Catalano, & Miller, 1992; Latendresse, et al., 2008; Montgomery, Fisk, & Craig, 2008; Parsai, Voisine, Marsiglia, Kulis, & Nieri, 2009; Substance Abuse and Mental Health Services Administration, 2009; Szapocznik, Prado, Burlew, Williams, & Santisteban, 2007), which has traditionally included alcohol, tobacco, and marijuana (Chen, et al., 2002; Ellickson, Hays, & Bell, 1992; Fleming, Leventhal, Glynn, & Ershler, 1989; Galaif, Chou, Sussman, & Dent, 1998; Hall & Lynskey, 2005). When applied appropriately, parenting strategies can establish pro-social skills and support adolescents in avoiding gateway drugs (Liddle, et al., 2001; Liddle, Rowe, Dakof, Henderson, & Greenbaum, 2009; Meschke, Bartholomae, & Zentall, 2002). Studying the perceived impact of parenting on Latino adolescents' use of gateway drugs is important because Latinos are disproportionately socioeconomically disadvantaged in ways that may increase vulnerability to substance use (Warner, et al., 2006). Indeed, Latinos are more likely than non-Hispanic whites to suffer from substance dependency, despite lower teenage use of alcohol, tobacco, and marijuana (Substance Abuse and Mental Health Services Administration, 2009).

Parent and adolescent self-reports represent the two most commonly utilized sources to measure parental influence, and both provide useful information (Brown, Mounts, Lamborn, & Steinberg, 1993; Pelegrina, Garcia-Linares, & Casanova, 2003). In rare instances in the literature when both parents and their children report about parenting behaviors, parents demonstrate a tendency to overestimate (as compared to the child) involvement in their child's life, especially with regards to monitoring and discipline (Cottrell, et al., 2003; Gonzales, Cauce, & Mason, 1996). In fact, some studies report large differences between parent and adolescent reports of parenting practices (Latendresse, et al., 2009; Pelegrina, et al., 2003; Schwarz, Barton-Henry, & Pruzinsky, 1985), perceptions of family functioning (Bagley, Bertrand, Bolitho, & Mallick, 2001; Villar, Luengo, Gomez-Fraguela, & Romero, 2006), and socialization (Hughes, Hagelskamp, Way, & Foust, 2009).

While the difference between parent and adolescent reports is not new to the literature, an issue often overlooked is whether one report emerges as more predictive of other self-report outcomes (Bagley, et al., 2001), e.g., adolescent gateway drug use. Recent studies that have dealt specifically with alcohol and marijuana use have concluded that adolescents' reports regarding parenting behaviors are more predictive than parents' reports (Cottrell, et al., 2003; Latendresse, et al., 2009). However, no studies comparing the predictive value between parent and adolescent reports have expanded their focus to include tobacco in addition to alcohol and marijuana. Furthermore, most of the research comparing reports between parents and adolescents has not been conducted with non-Caucasian populations (Gonzales, et al., 1996; Spera, 2006).

The behavioral ecological model (BEM) provides the theoretical framework guiding the current study. The BEM (Hovell, Wahlgren, & Adams, 2009; Hovell, Wahlgren, & Gehrman, 2002) has been used in recent studies to explain physical activity (Adams, et al., 2006), condom use (A. Martinez-Donate, et al., 2004), weapon carrying (Blumberg, et al., 2009), and substance use (Bousman, et al., 2005; Hofstetter, et al., 2008; A. P. Martinez-Donate, et al., 2008; Zakarian, et al., 2004). It contends that factors at various levels (e.g., parenting, school, peers) influence behavior, and their relationship with a given behavior is identified as proximal or distal. While distal factors still exert influence, proximal factors are the most influential determinants of behavior. Figure 1 depicts this relationship and shows that demographic factors are predictive of substance use, but they are more distal than proximal factors such as peer pressure. This has been confirmed in recent studies (Blumberg, et al., 2009; Bousman, et al., 2005), where the researchers conclude that an accurate assessment of factors at any one level of influence (e.g., parenting) must be considered in the context of other more proximal factors (e.g., peer influence).

Purpose

The purpose of this study was to test and compare two predictive models of gateway drug use. Both models tested the same conceptual 4-block sequence of potential influences: demographics, parenting, school, and peer. The primary caregiver (PCG) reported the parenting variables in the first model; adolescents reported the parenting variables in the second model. We hypothesized that adolescent reports would be less biased, resulting in less error and therefore explaining more variance in gateway drug use.

Methods

Design

This study was part of a larger randomized controlled trial evaluating the effectiveness of a counseling intervention designed to increase medication adherence in a sample of Latino adolescents infected with latent tuberculosis infection (LTBI) and living in the San Diego-Tijuana border region. Studying substance use in this sample was very important due to the potential health complications resulting from concurrent use of alcohol and isoniazid (Kopanoff, Snider, & Caras, 1978). For the present study, baseline data from adolescents and PCGs were used to test and compare two predictive models of adolescent gateway drug use.

Screening and Recruitment

The researchers' University Institutional Review Board approved the study. Adolescents were ineligible to participate in the study if they had plans to relocate from the area within 12 months and/or to receive LTBI treatment in Mexico. Screenings were offered in 7 predominantly Latino schools closest to the US-Mexico border to increase the likelihood of positive LTBI results.

Participants

While study participants were recruited from a sample of LTBI infected adolescents, it is important to note that LTBI is an asymptomatic condition and there is no evidence that it compromises the generalizability of findings to other Latino adolescents. Indeed, we found no significant demographic differences between LTBI infected participants and the 2,795 Latino students that were screened for tuberculosis as part of the larger controlled trial. Of the 252 Latino adolescent participants in this study, 48.4% were male and 41.7% were foreign born (see Table 1). Adolescent participants' mean age was 15.9 years ($SD = 1.21$). The mean years of education for participating PCGs was just over 9 years ($M = 9.42$, $SD = 3.52$), and their average age was 42.5 years ($SD = 7.63$).

Interview Procedures

Bilingual interviewers completed face-to-face interviews with participating adolescents and their PCG, which was usually the mother (> 80% of cases). Interviews were conducted on the same day, apart from each other, but in the same general location (e.g., separate rooms in the respondents' home). Interviewers working in two-person teams completed the interviews with all of the participating PCG-adolescent dyads over the course of 1 year, after each had consented to participate, but before initiating the intervention study. PCGs and adolescents were encouraged to provide honest answers during the interviews. To help participants feel comfortable, interviewers were young college students, and were matched on gender with participating adolescents and PCGs. The interviewers underwent extensive training to increase cultural sensitivity in an effort to establish rapport. Interviewers assured adolescents and PCGs that their responses would remain confidential and would not be shared, even

with family members. This assurance was repeated to adolescents before they responded to sensitive items relating to their use of gateway drugs.

Measurement

Dependent variable—The main dependent variable of interest was adolescent gateway drug use. Much of the published literature defines gateway drug use as comprising alcohol, tobacco and marijuana use (Chen, et al., 2002; Ellickson, et al., 1992; Fleming, et al., 1989; Galaif, et al., 1998; Hall & Lynskey, 2005). The construction of the dependent variable in this study was an adaptation of an approach employed by Fleming et al, where gateway drug use scales were comprised of beer, wine, liquor, cigarettes and marijuana. Adolescents' use of alcohol was determined by asking if they had consumed beer, wine, and hard liquor (each asked in separate questions). Use of cigarettes was the only item representing tobacco use. Respondents were asked if they had ever used cigarettes (yes/no), and finally, if they had ever used marijuana (yes/no). Beer, wine, and hard liquor were combined to create an alcohol scale. Next, the alcohol scale was combined with tobacco and marijuana to create a gateway drug use scale (Cronbach's $\alpha = .7$). Any use of alcohol resulted in a value of 1, use of alcohol and either tobacco or marijuana was coded as 2, and use of alcohol, tobacco, and marijuana resulted in a value of 3. Respondents were coded as 0 if they had consumed none of these substances. No respondent reported using tobacco or marijuana alone.

Independent variables

PCG demographic variables: PCG's demographic information included age, the total number of languages spoken, and annual household income. The information on household income was obtained by asking the PCG, "Including all sources, can you please estimate your household's total income for last year?" They selected from the following categories: \$0, \$1–9k, \$10–19k, \$20–29k, \$30–39k, \$40–49k, and \$50k and above.

Adolescent demographic variables—Age, gender, foreign-born status, acculturation, and receiving an allowance (yes/no) were all ascertained from the demographics section of the adolescent interview. Foreign-born status was ascertained by asking the country of birth. Respondents born outside of the United States were coded as foreign-born. Acculturation was measured using the bidimensional acculturation scale for Hispanics (Marin & Gamba, 1996). The acculturation scale consists of 24 questions regarding language use (e.g., How often do you speak English/Spanish?), linguistic proficiency (e.g., How well do you read in English/Spanish?), electronic media use (e.g., How often do you listen to music in English/Spanish?), and had a Cronbach's α equal to .8, for this sample. Following recommendations for administering the instrument, each question had four possible responses: very poorly, poorly, well, or very well. The questions were separated into 2 domains, Hispanic (all items about Spanish usage) and non-Hispanic (all items about English usage), with 12 items in each. For each cultural domain, an average of the 12 items was calculated, obtaining a mean range of scores between 1 and 4. Scores on both domains were used to determine the level of acculturation. Acculturation categories were computed using a 2.5 cutoff score to indicate low or high level of adherence to each cultural domain. An individual scoring higher than 2.5 in both domains was considered bicultural.(Marin & Gamba, 1996)

Parenting variables—Only information about the PCG's parenting was included in analyses due to missing values for the secondary caregiver. These variables included measures of the PCG's use of praise, punishment, and involvement in the participant's life, including joining parent groups at school and helping with homework. Our previous community research efforts informed the adaptation of these parenting questions (Hovell, 1996), and similar items have been shown to impact gateway drug use (Substance Abuse and Mental Health Services Administration, 2009).

Reported by PCG: PCG's use of praise was measured with the following item: "Do you celebrate when (child's name) does something well (yes/no)?" PCG's use of punishment was estimated by asking: "When you are upset with (child's name) because of something he/she did or did not do, do you yell at (child's name)(yes/no)?" Parental involvement with their adolescent was measured by asking: "Do you help with (child's name) homework (yes/no)?" and "Do you join parent groups at (child's name) school (yes/no)?"

Reported by adolescents: Adolescents were asked an identical set of questions regarding their PCG's parenting practices. PCG's use of praise was measured with the following item: "Does your PCG celebrate when you have done something well (yes/no)?" PCG's use of punishment was measured by asking: "When your PCG is upset with you because you did or did not do something, does she yell at you (yes/no)?" Parental involvement with the adolescent was measured by asking two questions: "Does your PCG help you with your homework (yes/no)?" and "Does your PCG join parent groups at your school (yes/no)?"

School influence—Only adolescent responses were used to assess school truancy. Students were asked how many times they had skipped school in the previous 12 months. This variable was negatively skewed, and therefore dichotomized (0 = never, 1 = ever).

Peer influence variables—Peer modeling of gateway drug use was measured with the following three items, reported in raw numbers: "How many of your close friends have ever used cigarettes?"; "...ever used alcohol?"; and "...ever used marijuana?" These three variables were then summed to make one measure of friends' gateway drug use (Cronbach's $\alpha = .7$). The density of social support was measured by asking respondents: "How many (raw#) close friends do you have?" This variable was not normally distributed and was therefore recoded into four levels based on quartiles (1 = few friends to 4 = a lot of friends).

Statistical Analysis

All statistical analyses were performed using SPSS 15.0 for Windows. Two separate models were created, one for PCGs and a second for adolescents. In each case, adolescents' gateway drug use was sequentially regressed on 14 independent variables. Using the BEM as a guide, variables were added sequentially to the respective models by block based on their conceptual proximity to the dependent variable. The first block comprised parent and adolescent demographic variables, block 2 included parenting variables, block 3 represented school influence variables, and block 4 included peer influence variables. The BEM justifies the inclusion of a large number of variables for analyses to ensure adequate representation of the most influential domains.

Results

Table 2 shows that 69.3% of adolescents in this study reported gateway drug use. Forty-seven percent reported using alcohol only, 13.5% used alcohol and tobacco, 3.6% used just alcohol and marijuana (although for analyses, alcohol + tobacco and alcohol + marijuana were collapsed into one category), and 5.2% used all three substances. No respondent reported using only tobacco or only marijuana.

Bivariate analyses

Table 3 presents a comparison between PCG and adolescent reports on the four items selected to estimate parental influence. In preliminary analyses, each of these variables was assessed independently for its association with gateway drug use. Although none of the variables reported by parents reached significance, two of four of the variables reached significance when reported by the adolescent. These findings justified a comparison of

parent and adolescent predictive models of gateway drug use, while controlling for possible confounding variables.

PCG's model

Demographic variables were entered in block 1 and accounted for a significant 9.0% of the variance in gateway drug use ($F = 2.29, p = .03$). This block included the parents' age, parents' marital status, number of languages the parent spoke, and annual household income. Variables reported by the adolescent include age, number of siblings, acculturation, and gender. Age of the adolescent was the only significant variable in this block ($p < .01$), with older adolescents being more likely to use gateway drugs.

Block 2, the parenting influence block, was not significant. Variables in this block were reported only by the parent and included celebrating when the child does well, yelling when the child behaves poorly, helping with homework, and joining parent groups at the adolescent's school. Adolescent's age (from block 1) remained significant with the addition of the second block ($p < .01$).

The next block (block 3) represented school influence and was reported by the adolescent. The only new variable added in this block was skipping school in the previous 12 months. This block significantly added 2.5% to explained variance (F change = 4.46, $p = .04$). Skipping school in the past year was significantly related to gateway drug use ($p = .04$) and adolescent's age remained significant in the third block ($p = .03$). With the inclusion of the third block, the overall model explained 12.2% of the variance in gateway drug use.

Block 4 included variables related to peer influence, which included the number of close friends and peer modeling of gateway drug use. This block significantly added 21.9% to explained variance (F change = 26.35, $p < .01$). Having more close friends was negatively associated (protective) with gateway drug use ($p < .01$). Also, peer modeling of gateway drug use resulted in a significant positive association with reported use ($p < .01$). Adolescent's age was no longer significant in the final model. After entering the fourth block, the full model explained 34.1% of variance in gateway drug use. Table 4 presents the summary statistics for the complete model by block. All variables were eligible to remain in the model based on results from collinearity diagnostics.

Adolescent's model

Block 1 (demographic variables) accounted for a significant 8.6% of the variance in gateway drug use ($F = 2.15, p < .01$). As in the parent's model, adolescent's age was the only significant variable in this block ($p < .01$).

Block 2 (parenting influence) was significant and added 5.2% to explained variance (F change = 2.36, $p = .05$). In contrast to the parent model, in which parent-reported variables were included in this block, only adolescent-reported variables were added to the adolescent model. Having a PCG that yells at you was related to increased risk for gateway drug use ($p = .02$). Age remained significant in this block ($p < .01$). With the addition of block 2, the overall model accounted for 13.8% of explained variance.

The third block involved variables related to the school environment. This block added a significant 2.3% to explained variance (F change = 4.26, $p = .04$). Skipping school in the past year was associated with increased risk for gateway drug use ($p = .04$) as were age ($p = .04$) and having a PCG that yells at you ($p = .02$). At this point, the overall model accounted for 16.1% of explained variance in gateway drug use.

The final block (block 4) was related to peer influence. These variables significantly added an additional 22.0% to explained variance (F change = 26.31, $p < .01$). Table 5 presents the summary statistics for the complete model by block. Again, all variables were left in the model based on collinearity diagnostics. The final regression model accounted for 38.1% of the explained variance in gateway drug use ($F = 6.17$, $p < .01$). As was the case for the parent's model, adolescent's age was no longer significant in the final model. The number of close friends was negatively associated with gateway drug use ($p < .01$). Peer modeling of gateway drug use was also associated with reported use ($p < .01$). Having a PCG who yells at you was marginally significant ($p = .06$). Having a PCG who joins parent groups at school reached significance for the first time and was negatively associated with gateway drug use ($p = .03$).

Discussion

The purpose of this study was to test and compare two predictive models of gateway drug use. Overall, the model based on adolescents' report explained more variance than the model based on parents' report. The parenting block, the block defining the key difference between the two models, was significant only in the adolescent's model and explained approximately 12% more variance. The adolescents' report of parenting also resulted in more components of subsequent blocks reaching significance, seemingly increasing the precision of the overall predictive model. This suggests a need for additional measures or more refined measures of parenting practices. With additional corroborating research, the public health sector, including health educators and practitioners, may consider the discrepant nature of reports as a function of the data source (e.g., parent vs. child).

Parent's model

The value of the sequential regression approach is tied to its ability to reveal relationships among variables as they are added to the model. As such, a brief discussion of each block is warranted. For example, age and skipping school were significantly related to gateway drug use when they entered the model in their respective blocks, but did not remain significant in the final model. After controlling for other variables, the initial associations between the outcome and age and skipping school were essentially mitigated. This is not surprising since the age range for participants was relatively small as only high school students were recruited. Also, peer modeling of gateway drug use possibly overshadowed the influence of skipping school. Indeed, peer modeling might subsume skipping school, e.g., kids that skip school are likely to do so with their peers.

When parents report about their own parenting behaviors, none of these variables reached significance. The entire parental influence block was not significant as it entered the model, nor in the final model. The final block represents peer influence. Its position as the final block in the sequential regression approach indicates a theory based assumption that it has the strongest association with gateway drug use due to more powerful reinforcing contingencies from peers than parents and due to more proximal influence by peers, including concurrent drug use. The effects of peer influence are well documented in published literature and results observed here confirm that (Almodovar, Tomaka, Thompson, McKinnon, & O'Rourke, 2006; Beal, Ausiello, & Perrin, 2001; Elder, et al., 2000; Kandel, Kiros, Schaffran, & Hu, 2004; Mowery, Farrelly, Haviland, Gable, & Wells, 2004).

Adolescent's model

As previously mentioned, the parental influence block was not significant in the parent's model. However, when adolescents' report about their parent's parenting behaviors the

block was significant, both upon entrance in the model and in the final model. When reported by adolescents, parental involvement in the adolescent's school life and having a PCG that yells at you (as reported by the adolescent) were significant. Lack of parental involvement in school has been shown previously to be associated with adolescent behavior problems (Substance Abuse and Mental Health Services Administration, 2009), and yelling is a well-known family stressor and supports the finding reported here (Connell, Spencer, & Aber, 1994; McCubbin, Needle, & Wilson, 1985; Ramirez-Valles, Zimmerman, & Newcomb, 1998). Other significant variables were identical between the two models—that is, having a lot of close friends (negative association) and peers that model gateway drug use (positive association)

The observed findings suggest that adolescents may provide a more accurate (less bias and error) estimate of parenting practices than do parents, or at least an estimate more predictive of gateway drug use. This may relate to parents providing a more global or idealized approach to assessing parenting, whereas the adolescent may report on perceptions stemming from their immediate interactions between themselves and their parent (Bagley, et al., 2001). Other studies have shown that nonconcordance in perceptions between adolescents and their parents may be negatively related to adolescent adjustment, including increased levels of conflict and stress within the family resulting in problem behaviors (Ohannessian, Lerner, Lerner, & Von Eye, 2000). Although this study's objective was not to test how nonconcordance predicts problem behaviors in adolescents, adolescent perceptions should be considered with or preferentially over that of parent's estimates of parenting practices. To this end, Barnes and Farrell (1992) suggest that reliance on one respondent in the family represents a common methodological shortfall in many studies, especially when there is not perfect agreement between adolescent and parental perspectives. Findings reported here suggest that beyond nonconcordance between parents and adolescents, there is a difference in the predictive value of these reports.

In terms of impact on future studies, it should be noted that the actual parenting behaviors in this study remain unknown. That is, both parent and adolescent reports are subject to error and may include biases. Pelegrina et al (2003) state that adolescents assess certain family characteristics more negatively than their parents do, whereas the parents' self-reports tend to exaggerate certain dimensions, such as acceptance and discipline. Future studies of the influence of parenting behaviors should incorporate more state-of-the art objective observational procedures to advance the current state of the science and determine the actual parents' parenting practices. To the extent that such procedures and innovations are incorporated, scientific understanding of parental influence on children will be clarified.

Limitations

The construction of the dependent variable is this study's greatest limitation. The example from the literature that was used to create the gateway drug scale in this study consisted of some representation of how frequently substances were used (e.g., past 30 days or past 6 months) (Fleming et al, 1989). A dependent variable comprised of items measuring gateway drug use at more frequent time periods would have been better. These data were collected for the current study, but unusable because the sample's prevalence of 6-month and 30-day gateway drug use was too low. While the researchers acknowledge this limitation, the observed significant findings are not invalidated; rather, they should be replicated with different measures in future studies. The next limitation relates to the construction of the multivariate model. The assumed ordering of distal to proximal factors was based on theory, but placement would ideally be determined using longitudinal rather than cross-sectional data. Limitations notwithstanding, the entirely Latino sample of parent (PCG) and adolescent dyads represents an important feature of this study, making it a valuable addition to extant literature.

Implications for clinical and public health practice relate to the interactions between PCGs and practitioners. PCGs often approach health educators and other healthcare providers for help with parenting their adolescents. Indeed, these professionals can play an important role in encouraging positive parent-adolescent interactions and skills training (Centers for Disease Control and Prevention, 2009). While it would be useful to explain to PCGs that the messages they send to their adolescent influences his/her behavior, PCGs may not have a perfect sense of their own parenting behaviors or how their adolescent is interpreting those behaviors. They may benefit from asking their adolescent for feedback, and then addressing their own behaviors accordingly. In this effort and among immigrant communities, practitioners may also prompt PCGs to take special consideration of their adolescent's level of acculturation and then alter their approaches as necessary. For example, acculturated adolescents may interpret their parents parenting differently than their less acculturated peers.

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Figure 1.

Application of the Behavioral Ecological Model

Image adapted from: Hovell MF, Wahlgren DR, Gehrman C. The Behavioral Ecological Model: integrating public health and behavioral science. In DiClemente RJ, Crosby R, Kegler M, eds. *New and Emerging Theories in Health Promotion Practice and Research*. San Francisco, CA: Jossey-Bass; 2002.

Table 1

Characteristics of the Study Sample (N = 252 adolescents; N = 252 primary caregivers)

Family	Acculturation
Adolescent age 15.9 (1.2)	Hispanic 70 (27.8%)
Parent age 42.5 (7.6)	Bicultural 160 (63.5%)
# Siblings 1.7 (1.2)	Assimilated 22 (8.7%)
Income	Country of birth
<30k 154 (64.4%)	U.S. 144 (57.9%)
>30k 85 (35.6%)	Non-U.S. 106 (42.1%)
Sex	Marital status (PCG^a)
Male 122 (48.4%)	Married 116 (64.1%)
Female 130 (51.6%)	Other 136 (53.9%)
Languages spoken (PCG^a)	Skipped school past year
Spanish 167 (66.3%)	Yes 97 (38.5%)
Spanish & English 85 (33.7%)	No 155 (61.5%)
	Peers/Friends
	# Friends 12.5 (10.3)
	# Using gateway drugs 2.4 (1.4)

^aPCG = Primary Care Giver.

Table 2

Use of Gateway Drugs (N = 251)

Condition	n	%
None	77	30.7
Alcohol only	118	47.0
Alcohol and tobacco	34	13.5
Alcohol and marijuana	9	3.6
Alcohol, tobacco, and marijuana	13	5.2

Table 3

Parent and Adolescent Report of Parenting Variables (N = 252 adolescents; N = 252 primary caregivers)

Variables	Reported by		
	PCG ^a , % (n)	Adolescent, % (n)	Concordance ^b , % (n)
Yell at child when s/he has done something bad	61.1 (154)	46.2 (115)	59.8 (149)
Help child with her/his homework	34.9 (88)	47.4 (118)	63.5 (158)
Join parent groups at child's school	42.5 (107)	19.8 (49)	63.2 (156)
Celebrate when your child has done something well	78.9 (198)	62.2 (155)	63.7 (158)

^aPCG = Primary Care Giver.

^bConcordance: [*parent yes* = *adolescent yes* + *parent no* = *adolescent no*]/*total*.

Table 4

Predictors of Gateway Drug Use: Contributions of Each Variable Block to Changes in R^2 (Parent's Model) (N = 236)

Variable	Block 1			Block 2			Block 3			Block 4		
	B	SE	β	B	SE	β	B	SE	β	B	SE	β
Age	.16	.05	.24**	.16	.06	.22**	.12	.06	.19*	.06	.05	.09
Gender	.04	.13	.02	.04	.13	.02	.06	.13	.04	.14	.11	.08
Income	.03	.04	.05	.03	.04	.06	.03	.04	.05	.03	.04	.05
Parent's age	.00	.01	.02	.00	.01	.02	.00	.01	.02	.00	.01	.01
Acculturation	.13	.11	.09	.13	.11	.09	.11	.11	.08	.18	.10	.13
# of siblings	-.07	.05	-.12	-.087	.05	-.13	-.07	.05	-.12	-.00	.04	-.02
# languages spoken	.14	.14	.08	.15	.14	.09	.17	.14	.09	.20	.12	.12
Yell at you				.13	.13	.07	.15	.13	.19	.08	.11	.05
Help you with homework				-.07	.14	-.04	-.06	.14	-.03	-.12	.12	-.07
Join parent groups-school				.04	.13	.02	.07	.13	.04	.08	.17	.05
Celebrate				-.02	.16	-.01	-.03	.16	-.01	.03	.14	.01
Skipped school in past year							.28	.14	.17*	.09	.12	.06
# close friends										-.18	.05	-.23***
# friends use gateway drugs										.31	.05	.49***
R^2	.09			.10			.12			.34		
F for change in R^2	2.29*			.34			4.46*			26.35***		

Notes: A sequential regression strategy was used in the analysis in which blocks of variables were added to the regression equation sequentially. R^2 refers to the overall regression equation after each block has been entered into the model; F for change in R^2 describes the contribution of each individual block.

* $p < .05$.

** $p < .01$.

*** $p < .001$

Table 5

Predictors of Gateway Drug Use: Contributions of Each Variable Block to Changes in R^2 (Adolescent's Model) (N = 233)

Variable	Block 1			Block 2			Block 3			Block 4		
	B	SE	β	B	SE	β	B	SE	β	B	SE	β
Age	.17	.05	.24**	.15	.05	.22**	.12	.06	.17*	.06	.05	.08
Gender	.02	.13	.01	.05	.13	.03	.06	.13	.04	.15	.11	.09
Income	.03	.04	.05	.04	.04	.07	.03	.04	.06	.04	.04	.08
Parent's age	.00	.01	.01	.00	.01	.04	.01	.01	.04	.00	.01	.02
Acculturation	.13	.11	.09	.12	.11	.08	.10	.11	.07	.17	.10	.12
# of siblings	-.07	.05	-.11	-.07	.05	-.11	-.06	.05	-.09	.00	.04	.00
# languages spoken	.11	.14	.06	.20	.14	.11	.21	.14	.12	.24	.12	.14
Yell at you				.31	.13	.19*	.29	.13	.18*	.25	.11	.15*
Help you with homework				-.06	.13	-.04	-.02	.13	-.01	.00	.12	.00
Join parent groups-school				-.21	.16	-.10	-.24	.16	-.12	-.35	.14	-.17*
Celebrate				-.08	.14	-.05	-.09	.14	-.05	-.03	.12	-.02
Skipped school in past year							.28	.14	.16*	.12	.12	.07
# close friends										-.18	.05	-.24**
# friends use gateway drugs										.30	.04	.48***
R^2	.09			.14			.16			.38		
F for change in R^2	2.15*			2.36*			4.26*			26.31***		

Notes: A sequential regression strategy was used in the analysis in which blocks of variables were added to the regression equation sequentially. R^2 refers to the overall regression equation after each block has been entered into the model; F for change in R^2 describes the contribution of each individual block.

* $p < .05$.

** $p < .01$.

*** $p < .001$