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Parenting and Later Substance Use Among Mexican-Origin Youth: Moderation by Preference for a Common Language

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Abstract

The primary goal of the current study was to test whether parent and adolescent preference for a common language moderates the association between parenting and rank-order change over time in offspring substance use. A sample of Mexican-origin seventh-grade adolescents (mean age = 12.5, *N* = 194, 52% female) was measured longitudinally on use of tobacco, alcohol, and marijuana. Mother, father, and adolescent all reported on consistent discipline and monitoring of the adolescent. Consistent discipline and monitoring both predicted relative decreases in substance use into early adulthood, but only among parent-offspring dyads who expressed preference for the same language (either English or Spanish). This moderation held after controlling for parent substance use, family structure, having completed schooling in Mexico, years lived in the U.S., family income, and cultural values. An unintended consequence of the immigration process may be the loss of parenting effectiveness that is normally present when parents and adolescents prefer to communicate in a common language.

Keywords

childrearing practices; Mexican Americans; immigrants; acculturation; drinking behavior; parenting

Early use of alcohol, tobacco and other drugs (ATOD) constitutes a major health risk (Anthony, Chen, & Storr, 2005), and Mexican origin adolescents share this risk (Johnston et al., 2012). Although many adolescents experiment with ATOD only to abandon them, other adolescents continue to use ATOD into adulthood (Ellickson et al., 2003). Therefore, it is important to identify factors that either exacerbate or inhibit continuity in ATOD use across

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adolescence. One factor believed to affect ATOD use is parenting behavior. We address whether early adolescents (age 12) and their parents preferring to speak the same language moderates the effectiveness of parenting behavior at preventing ATOD use at age 20 among a Mexican origin sample.

More than 16 million youth in the United States have at least one immigrant parent, and immigrant youth are the fastest growing population of children in the U.S. (Passel, 2011). The growth of this demographic group is currently the subject of a nationwide discussion about the needs and challenges facing children of immigrants (Marks, Ejesi, & Garcìa Coll, 2014). This discussion centers around the immigrant paradox: despite decreases in objective risk factors (e.g., low socioeconomic status and English proficiency), later immigrant generation status (or increased acculturation) is associated with a myriad of problems, including increased substance use (Chun & Mobley, 2014). The paradox that later generations are at increased risk is not limited to families that immigrate to the United States, but is evident among immigrants to Europe as well (Van Geel & Vedder, 2010). Although immigrant stress has been studied for decades, how immigration affects substance use among children of immigrants remains poorly understood.

What is understood is that the onset of substance use for most children of immigrants occurs simultaneously with increased salience of parent-child communication. For instance, as children mature and physical intimacy between parents and offspring decreases, conversations which convey feelings or information increase (Hartup & Laursen, 1991). The renegotiation of relationship roles between parents and offspring (an important developmental task of adolescence), increases the demand for fluid parent-adolescent communication. In fact, theories of parent-adolescent communication posit that stability in parental authority appears to be predicated on flexibility in parent-adolescent communication (Laursen & Collins, 2004).

Immigrants and their children frequently prefer to speak different languages (Portes & Rumbaut, 2001). As immigrant families spend time in a new country, children typically master the new language faster than their parents (Hurtado & Vega, 2004). However, children of immigrants rarely become proficient in their heritage language; this is referred to as limited bilingualism (Portes & Rumbaut, 2001). Among a large multi-ethnic sample of immigrants and their children, Portes and Rumbaut found that almost no first-generation parents were proficient in English, and almost no second-generation youth were proficient in their parents' native language. Children of immigrants retained enough knowledge of their parents' language for limited exchanges at home, while most parents learned at least some words of English, leading to "constrained but not ruptured intergenerational communication" (Portes & Rumbaut, 2001, *p.* 144).

For a large proportion of immigrant families, this difference in language preference and proficiency disrupts parent-adolescent communication (Tseng & Fuligni, 2000), including communication about substance use (Walsh, Djalovski, Boniel-Nissim, & Harel-Fisch, 2014). This disruption in communication also changes the effectiveness of parenting, because effective parenting requires adequate communication (Clarke-Stewart & Parke, 2011). Among a sample of 674 Mexican origin families, proficiency in a common language

moderated the association from observed maternal parenting to relative change in two precursors of deviance among Mexican origin adolescents (Schofield, Conger, Robins, Coltrane, & Parke, 2016). That is, when mothers and adolescents were not proficient in a common language, language barriers weakened the links between positive discipline and relative change in adolescent behavior (i.e., self-control and aggression). Sharing a common language may facilitate intersubjectivity, or the mutual understanding that people create during communication (Rogoff, 1990). Intersubjectivity helps adolescents interpret parental efforts to discipline as motivated by investment and concern instead of parent-centered reasons.

In the current study, we focused on adolescent's use of alcohol, tobacco, and marijuana at age 20 because it is post-adolescence, but young enough for alcohol use to still be illegal. We included two parenting dimensions negatively associated with substance use among Latino families: consistent discipline (Leidy et al., 2011) and monitoring (Strunin et al., 2013). Although measures of language proficiency were not available in the current study, we included a behavioral assessment of language preference, which is correlated with language proficiency (Ayers, 2010). We hypothesized that the expected associations from parenting to offspring substance use would be stronger among families where parents and offspring both prefer a common language. We controlled for several variables that could account for the hypothesized moderation including socioeconomic status (Conger & Donnellan, 2007), family structure (Amato, 2005), and cultural values (Marsiglia & Holleran, 1999). Some studies of Mexican origin families show mother and father parenting to have similar associations with developmental outcomes (Parke et al., 2004) whereas other studies show differences (Leidy et al., 2011). Therefore, we made no hypothesis about possible differences in the association between parenting on changes to adolescent alcohol, tobacco, and marijuana across mothers and fathers.

Method

Participants and Procedures

Families were recruited from six school districts in two southwest U.S. metropolitan areas (Riverside/San Bernardino, CA and Phoenix/Tempe, AZ). Recruitment strategies varied between sites due to differing laws and school district policies. In Arizona, adolescents were recruited from eight ethnically diverse schools in the Phoenix metropolitan area. Teachers administered a short survey to all seventh graders asking about the students' ethnic background and family composition, in return for a small donation of equipment (scanner, fax machines) to the school. A total of 2,459 families appeared eligible. 640 families were telephoned according to a random selection scheme to ascertain eligibility, explain the project, and ask for consent to have research staff call the family. Research staff then called families to describe the project, offer remuneration for participation, and obtain consent. In Arizona, 204 (32%) families were both eligible and agreed to participate. In California, families were recruited from two school districts. School staff used emergency contact cards and enrollment data to identify families that appeared eligible, then contacted these families to explain the project and screen for eligibility. If the families agreed to participate and met eligibility requirements, research staff called families to describe the project, offer

remuneration for participation, and obtain consent. In California, a total of 540 families were contacted, and 192 (36%) were both eligible and agreed to participate. The current study focuses on the 194 Mexican origin families.

Initial interviews with mothers, fathers, and adolescents were conducted when the target adolescent was in the seventh grade. The families were of Mexican American (N = 194) ancestry, with all three family members of the same self-identified ethnicity. The current sample consisted of two-parent families, either "intact" (i.e., two birth-parents, n = 108) or "stepfather" (i.e., a birthmother and a stepfather, n = 86). Stepfather families were defined as those in which the target adolescent's birthmother had been living with a man who was not the adolescent's birthfather for at least the past year, and in which the target adolescent lived with the mother more than half of the time. Fifty-eight fathers (30%) and 59 mothers (30%) reported being born in the U.S, making this a predominantly immigrant sample.

At both assessments adolescent, mother and father/stepfather were interviewed individually in their language of preference. Measures that had not already been used among Spanish-speaking populations were translated and then back-translated to confirm the original meaning remained unchanged (LeVine & Campbell, 1972). Interviews lasted between one and three hours and used both self-administered and interviewer-led questions. Adolescents (M age = 12.5, SD = 0.84 at time 1 and 20.2, SD = 0.66 at time 2) were 92 males (47%) and 102 females (53%).

When initially interviewed, the mean age of mothers and fathers/stepfathers was 37 and 38 years. On average, mothers educated in the U.S. had completed 12.41 years of school (SD = 2.26) and fathers/stepfathers completed 11.62 years of school (SD = 2.30). The majority of parents (51% of mothers, 55% of fathers/stepfathers) were educated in Mexico. Of those parents educated in Mexico, mothers completed 8.66 years of school (SD = 3.89) and fathers/stepfathers completed 8.97 years of school (SD = 4.30). Families earned an average of $48,000 per year ($SD$ = $2,659, range: $8,000–$151,000; average per-capita income was $8,976).

Using U.S. Census data disaggregated by school district (U.S. Department of Education, National Center for Educational Statistics, 2000) we assessed whether this sample resembled the six school district populations from which they were drawn. The sampled parents in five of the six districts did not differ from the surrounding Hispanic population in terms of per-capita income, educational attainment, or age. Across all six school districts, the parents reported being employed at levels statistically similar to their school district counterparts. In terms of language, our sample tended to over-represent Spanish speakers. In the three districts where the parents differed statistically from the district population, they exhibited lower levels of English proficiency. Overall, each sample was broadly representative of the surrounding community.

Measures

Parental monitoring—A six-item scale adapted from Stattin and Kerr (2000) was completed by adolescent, mother, and father/stepfather at the first assessment (parents self-reported because the scale assesses parental knowledge). Responses ranged from 1 (*never*) to

5 (*almost always*). Items included “How often did you know what your child did doing during free time” and “How often did you know where child went and what child did after school?” Reliabilities for the Spanish version were α = .67/.72 (self-report/adolescent report) for father monitoring, and .56/.77 (self-report/adolescent report) for mother monitoring. Reliabilities for the English version were α = .72/.70 (self-report/adolescent report) for father monitoring, and .71/.68 (self-report/adolescent report) for mother monitoring.

Parent consistent discipline—Adolescent, mother and father/stepfather reported on consistent discipline (parents reported on each other) at the first assessment using an adapted version of the Child’s Report on Parental Behavior Inventory (Teleki, Powell, & Dodder, 1982) which has been used previously with Mexican American samples (Parke et al., 2004) and shows cross-language measurement equivalence (Nair, White, Knight, & Roosa, 2009). Parents reported on each other’s consistent discipline (instead of self-reporting) in order to reduce self-enhancement bias (Schofield, Parke, Coltrane, & Weaver, 2016). Unlike monitoring, this was possible for consistent discipline because the scale assesses behavior the spouse could observe. Nine items were answered with responses that ranged from 1 (*false*) to 3 (*true*). Reliabilities for the Spanish version were α = .81/.66 (spouse report/ adolescent report) for father discipline, and .78/.66 (spouse report/adolescent report) for mother discipline. Reliabilities for the English version were α = .86/.74 (spouse report/ adolescent report) for father discipline, and .87/.74 (spouse report/adolescent report) for mother discipline.

Language preference—Project staff asked participants in which language they wished to complete the first assessment interview. One hundred and eleven fathers/stepfathers (57%) and 108 mothers (56%) requested to complete the interview in Spanish. Twelve adolescents (6%) requested to complete the interview in Spanish. These preferences were used to create a grouping variable in which a score of 0 indicated the adolescent and parent expressed preference for different languages, and a score of 1 meant the adolescent and parent expressed preference for the same language. Ninety-two fathers/stepfathers and adolescents expressed preference for a common language (80 dyads both preferred English, 12 both preferred Spanish), and 96 mothers and adolescents expressed preference for a common language (84 dyads both preferred English, 12 both preferred Spanish).

Adolescent substance use—Adolescents reported their use of tobacco, alcohol, and marijuana over the past 30 days at age 12 and again at age 20 using items from the Youth Risk Behavior Survey, which is used annually by the Centers for Disease Control among Latino samples. Response options included 1 (*zero days*) 2 (*1 or 2 days*) 3 (*3 to 5 days*) 4 (*6 to 9 days*) 5 (*10–19 days*) 6 (*20–29 days*) and 7 (*all 30 days*). Similar to other work that combines items to make a polysubstance use index (Ramírez García, Manongdo, & Cruz-Santiago, 2010; Zaha, Helm, Barker, & Hayes, 2013), tobacco, alcohol, and marijuana use were summed to create a composite measure of substance use (log-transformed before analyses; α = .72 at baseline, .77 at age 20).

Parent substance use—At the first assessment, mother and father/stepfather self-reported on their own alcohol and drug use and whether or not it was a problem using parallel items from the Youth Risk Behavior Survey. Response options for the use variables mirrored those for adolescent use, and response options for problem variables ranged from 1 (*not at all*) to 3 (*yes, it is a problem*). Items were averaged into a single scale for each parent (α = .81 for mothers, .83 for fathers).

Cultural values—Parents and adolescent completed the Mexican American Cultural Values Scale (Knight et al., 2010) at the first assessment. This scale includes 50 items that assess values common among Mexican American families (i.e., familísmo, respéto, religion, and traditional gender roles) as well as mainstream values (i.e., material success, independence, self-reliance, competition, and personal achievement). Knight and colleagues combine these items into two composites (i.e., Mexican American values and mainstream values). Reliabilities for the Spanish version were α = .83/.73/.89 for Mexican American values (father/mother/adolescent), and .69/.76/.69 for mainstream values (father/mother/adolescent). Reliabilities for the English version were α = .84/.94/.87 (father/mother/adolescent) for Mexican American values, and .64/.68/.67 (father/mother/adolescent) for mainstream values.

Socioeconomic status (SES)—The indicator of socioeconomic status was adjusted per-capita family income reported at the first assessment. To facilitate model estimation, this variable was divided by 10,000 (Muthén, 2011).

Generational status—Mothers indicated whether they were born in 1(*Mexico*) or 0(*the U.S.*). Mothers also reported on the adolescent's nativity with the same scale.

Results

The families in which parents spoke English and the adolescent spoke English were not different in their parenting from families in which parents spoke Spanish and the adolescent spoke English (all *p*s > .05). Parents who preferred to complete the interview in the same language as adolescents were not different in terms of monitoring, or consistent discipline (Table 1). Attrition (26% of the original sample), was unrelated to parenting behavior, substance use, and the common language grouping variable. Attrition was related to family income ($r = .17$, $p = .017$). Both mother and father shared a common language with the adolescent among 89% of the families. Parent-adolescent language match was correlated for mothers and fathers ($r = .83$). Correlations between reporters of parenting ranged from .15 (mother monitoring) to .29 (father monitoring). Adolescent substance use showed continuity across adolescence ($r = .20$). The full correlation matrix is provided in Table 2.

Test of study hypotheses

We used Mplus Version 7 (Muthén & Muthén, 2015) to estimate the models using full-information maximum-likelihood estimation. Preliminary analyses showed the pattern of associations was similar for fathers and stepfathers, so results are presented for the combined sample. To evaluate study hypotheses, we estimated structural equation models for two groups (the adolescent-parent dyads who expressed preference for the same language, and

those who did not), then tested for equivalence of structural paths across these two groups. We assessed change in model fit using the standard chi-square index of statistical fit, as well as the root mean square error of approximation (RMSEA; Browne & Cudeck, 1993) and the Tucker Lewis Index (TLI; Tucker, & Lewis, 1973).

We regressed adolescent substance use at age 20 onto adolescent substance use and parenting behavior at age 12, running separate models for each parenting behavior. Family structure, generational status, family income, years lived in the U.S., years of education in Mexico, parent cultural attitudes and adolescent cultural attitudes were initially included as covariates, but were dropped because none predicted change in adolescent substance use or changed the pattern of results. Coefficients reflect the expected change in log of substance use at age 20 with respect to a one standard-deviation unit increase in the predictor. The paths from parenting to rank-order change in substance use could be equated across reporters for all models except mother monitoring, $\Delta\chi^2(1) = 4.20$, $p = .040$. The paths from parenting to rank-order change in substance use could be equated across match and mismatch groups without a loss of fit in two out of four cases (father monitoring and mother discipline, see Figures 1–2). The final fits for all four models was acceptable: χ^2s ranged from 4.32 to 2.02, p values were all > .10, RMSEA values ranged from .041 to .000, and TLI values ranged from .972 to 1.00.

As depicted in panel A of Figure 1, the prediction from father monitoring (spouse report) to rank-order change in adolescent substance use was greater among dyads that preferred the same language ($\beta = -.14$) than among dyads who preferred different languages ($\beta = .04$), and this difference was statistically significant, $\Delta\chi^2(1) = 5.66$, $p = .017$. This was also the case for adolescent-reported monitoring by the father. The prediction from father consistent discipline to rank-order change in adolescent substance use (panel B) was significant among dyads that preferred the same language ($\beta = -.12$ for spouse report, −.13 for adolescent report), but not significant among dyads that preferred different languages ($\beta = -.07$ for spouse report, −.06 for adolescent report). However, the difference between the two groups in the magnitude of association between discipline and later substance use was not statistically significant, $\Delta\chi^2(1) = 2.58$, $p = .11$. Figure 2 includes the results from parallel analyses for mother behavior. In every case, parenting behavior did not predict rank-order changes in substance use among dyads who did not share preference for a common language.

Supplemental analyses showed no significant difference between parent-offspring dyads who preferred a common language and dyads who did not prefer a common language on substance use at the first assessment. Parents having completed their education in Mexico and years lived in the U.S did not significantly moderate the link from parenting to substance use. Finally, cultural values were also specified as moderators by multiplying parent cultural values by adolescent cultural values (after centering both). Cultural values did not significantly moderate, nor did the moderation by language match attenuate when this additional moderator was included in the model.

Discussion

When immigrant parents and their offspring are not proficient in a common language, parenting ceases to predict changes in adolescent self-control and aggression (Schofield et al., 2016). In the current study, we extended this work by testing a similar hypothesis in relation to substance use in early adulthood. We predicted that when parents and adolescents preferred different languages, parenting would cease to predict rank-order changes in substance use. Results generally supported this hypothesis. Specifically, for father models, there were significant differences by language preference in the association between monitoring and substance use but not between discipline and substance use. For mother models, there were significant differences by language preference in the association between consistent discipline and substance use but not between monitoring and substance use. Compared to parents in our sample who expressed preference for the same language as their adolescent, parents who did not express preference for the same language demonstrated similar parenting behaviors (consistent with Schofield et al. 2016). Nevertheless, the same kinds of effective parenting behaviors that typically predict decreases in substance use (Ozer, Flores, Tschann, & Pasch, 2011) failed to do so among families in which parent and adolescent did not prefer the same language. The absence of an association between parenting and change in offspring substance use in this group suggests that there are limitations on the extent to which parenting behaviors predict substance use among Latinos.

We consider adolescents' preference for completing the interview in English and parents' preference for completing the interview in Spanish a result of the limited bilingualism reported in other studies of immigrants (Portes & Rumbaut, 2001). This limited bilingualism reduces parent child communication (Schofield et al., 2012) and appears to weaken the socializing influence of parenting enough for the moderation to become statistically significant in two out of four tests. The moderation by preference for a common language on the prediction from parent monitoring to substance use is consistent with cross-sectional findings by Marsiglia et al. (2014), who also interpreted the effect as support for an acculturation-related disruption of family processes. The ability to nullify the prediction from parenting to substance use among Mexican origin families may explain why some studies show monitoring to have no association with adolescent substance use (e.g., Voisine et al., 2008).

This finding that parenting was unrelated to substance use among dyads not sharing preference for a common language has implications for Latino families. First, these two groups of parents (i.e., those who do and those who do not prefer the same language as their adolescent) are not different in their parenting behaviors, which raises the question of why offspring who preferred a different language than their parents showed no response to parent monitoring and consistent discipline. One interpretation is that sharing a common language facilitates intersubjectivity, or the mutual understanding that people share during communication (Rogoff, 1990). The importance of such shared understanding among families with language barriers could explain why parental warmth (which would facilitate benign attributions of parent behavior) augments the beneficial effects of parenting among Latino families (Lowe & Dotterer, 2013; Suizzo et al., 2012). Support for this interpretation would be stronger had the current study included measures of language proficiency, and

must be considered in the context of our reliance on a proxy measure (observed language preference).

One rival interpretation for these findings involves cultural values. Familísmo, respéto, and other cultural values often vary between immigrant parents and their offspring, and could conceivably account for any moderating effects of differences in language preference. Much of the literature on the acculturation gap-distress hypothesis is interpreted in terms of unmeasured cultural values (Lui, 2015). However, cultural values were included as covariates, and they offered no support for this rival hypothesis. Another alternative interpretation for these findings involves the parents' social backgrounds. Parents who preferred to complete the interview in Spanish were more likely to be schooled in Mexico, and to have spent less time in the U.S. However, supplemental analyses testing these as moderators did not support this interpretation. We interpret these findings as evidence that our language match variable captured something other than values and social background.

A third alternative interpretation of this moderation involves disrupted parent-child relationships. This would be consistent with the original acculturation gap-distress hypothesis, which viewed family conflict as the proximal mediator between parent-child acculturation gaps and adolescent substance abuse (Szapocznik & Kurtines, 1989) Self-reports of parent-child relationship quality have been shown to mediate (Martinez, 2006) and moderate (Schofield et al., 2008) the links from acculturation gaps and adolescent functioning, though observations of parent-adolescent interactions suggest that differences in language proficiency were more likely to affect parent-adolescent communication than parent-adolescent conflict (Schofield et al, 2012). Communication is central to any relationship, so any disruption to the ability to communicate must at some point affect the parent-child relationship, though it need not precipitate overt conflict.

A final alternative interpretation of these findings is that the ability to communicate in a common language may be a proxy for access to kinship networks (Haxton & Harknett, 2009), which can vary among Hispanics according to proficiency in Spanish (Gamoran, Lopez Turley, Turner, & Fish, 2011). This rival hypothesis could not be addressed in the current study, and merits consideration in future research on this topic.

Some literature on Mexican origin families shows mother and father parenting to have similar associations with developmental outcomes (Parke et al., 2004) whereas other literature shows differences (Leidy et al., 2011). Fathers in this study appeared to reduce substance use through monitoring, which is consistent with other work showing that monitoring is perceived as a particularly important fathering role among Mexican origin adolescents (Crockett, Brown, Russell, & Shen, 2007). However, literature on parental monitoring among Latino families is decidedly mixed. Latino mother's monitoring (but not father's monitoring) predicted social competence (Taylor, Conger, Robins, & Widaman, 2015) in one sample, leading authors to speculate that Latino mothers may have more responsibility for facilitating their children's whereabouts than Latino fathers. In another study father and mother monitoring were equally associated with adolescent self-esteem among intact Latino families, but father monitoring was more strongly associated with adolescent self-esteem in single parent families (Plunkett, Williams, Schock, & Sands,

2007). Additional research predicting change over time in adolescent behavior is needed before any firm conclusions can be drawn about the relative importance of mother and father monitoring among Latino families.

In contrast, consistent discipline appeared to most robustly predict adolescent substance use for mothers. This is consistent with other work among Latino families showing mother discipline to reduce externalizing behavior, but for father discipline to show mixed results. For instance, effective discipline by Latino mothers was negatively associated with adolescent externalizing, whereas effective discipline by Latino fathers was positively associated with adolescent externalizing (Holtrop, McNeil Smith, & Scott, 2015). This pattern of associations is consistent with the idea that Latino fathers are relatively less engaged in discipline than mothers, but respond to adolescent misbehavior with greater engagement (Larzelere, Kuhn, & Johnson, 2004).

These findings should be tested in other groups that experience parent-child differences in language preference. Although this community sample was demographically similar to families in the surrounding areas, these families may be different in unmeasured ways from the surrounding population. These nonexperimental data cannot be used to support strong causal inference. Our measure of language preference, while having the advantage of being a behavioral measure, is nevertheless limited and can only be considered a proxy for proficiency in a common language. Few adolescents elected to complete the interview in Spanish meaning most families in the match group had parents who completed the interview in English. Our measure of monitoring showed modest reliability, which would have attenuated findings related to that parenting behavior. Our focus on adolescence allowed us to study substance use before it became developmentally normative, and parenting behaviors at a period early enough to meaningfully influence the emerging parent-adolescent dynamic. However, differences in parent-offspring language preference could change trajectories of parenting over time during adolescence; this possibility merits additional study. The geographic residential patterns of Mexican origin families (particularly recent immigrants) could lead to linguistic isolation and ethnic insularity; such insularity could promote maintenance of native country norms and values, including those specific to substance use (Constantine et al., 2010). Finally, our tests of moderation may have been underpowered, which would explain why the pattern of results was consistent with our hypothesis, but only significant for two of the four models. Future research is needed, yet the current findings offer a plausible explanation as to why for some groups, immigration heralds socioeconomic progress, but regress in other areas. Preference for a common language facilitates communication, and without communication, social influence wanes. The parent child dyad may not be immune to these fundamental principles of social interaction.

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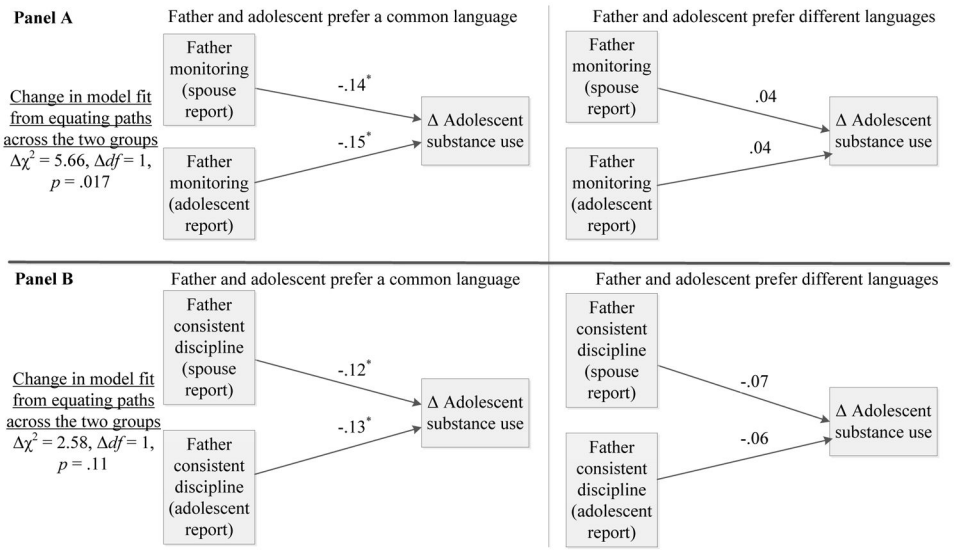

Figure 1.

Association between father/stepfather parenting and relative change over time in substance use across adolescence

Note. * $p < .05$

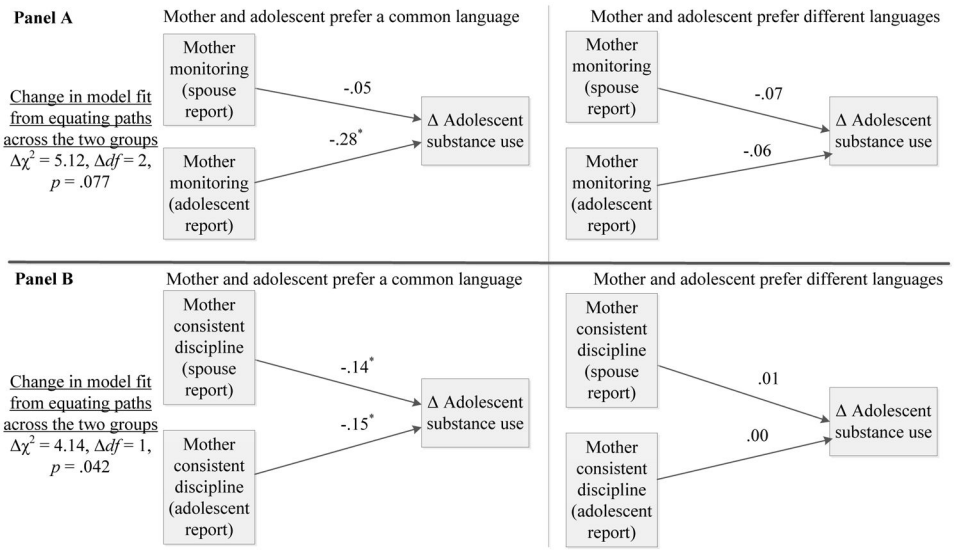

Figure 2.

Association between mother parenting and relative change over time in substance use across adolescence

Note. * $p < .05$.

Table 1

Means of Parenting Variables Across Groups (Standard Deviations in Parentheses)

Group	Monitoring[A]	Monitoring [B]	Consistent Discipline[A]	Consistent Discipline [B]
Mother English preference x adolescent English preference (n = 84, 43%)	2.71(0.20)	3.28(0.69)	2.55(0.45)	2.11(0.45)
Mother Spanish preference x adolescent English preference (n = 85, 44%)	2.80(0.24)	3.34(0.61)	2.50(0.41)	2.21(0.38)
Mother Spanish preference x adolescent Spanish preference (n = 12, 13%)	2.87(0.18)	3.33(0.60)	2.59(0.38)	2.17(0.38)
Father English preference x adolescent English preference (n = 79, 41%)	2.64(0.27)	3.11(0.61)	2.64(0.37)	2.12(0.36)
Father Spanish preference x adolescent English preference (n = 89, 46%)	2.64(0.31)	3.06(0.58)	2.57(0.43)	2.09(0.37)
Father Spanish preference x adolescent Spanish preference (n = 12, 13%)	2.69(0.23)	3.16(0.50)	2.60(0.35)	2.15(0.32)

Note.

A spouse/parent self-report,

B adolescent report

Table 2

Descriptive Statistics

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. Father monitoring^{A}	-																		
2. Father monitoring^{B}	.29*	-																	
3. Mother monitoring ^{A}	.21*	.15*	-																
4. Mother monitoring ^{B}	.18*	.56*	.15*	-															
5. Mother discipline^{A}	.27*	.14*	.06	.08	-														
6. Mother discipline^{B}	.11*	.26*	.11*	.38*	.16*	-													
7. Father discipline^{A}	−.01	.06	.20*	.00	.14*	.12*	-												
8. Father discipline^{B}	.09	.31*	.09	.27*	.09	.62*	.19*	-											
9. Adolescent substance use (age 12)	−.20*	−.19*	−.06	−.34*	−.08	−.15*	.06	−.12*	-										
10. Adolescent substance use (age 20)	−.09	−.13*	−.20*	−.15*	−.14*	−.13*	.05	−.12*	.20*	-									
11. Mother substance use	−.02	.04	−.10*	−.02	−.11*	−.11*	−.03	−.04	−.02	.17*	-								
12. Father substance use	−.07	−.05	.10*	.00	−.23*	−.04	−.09	−.02	−.02	.12*	.36*	-							
13. Adolescent Mexican American values	.06	.24*	−.05	.21*	.09	.01	−.17*	.03	−.12*	.02	−.13*	−.10*	-						
14. Adolescent mainstream values	−.02	.09	−.07	−.02	−.03	−.18*	−.17*	−.13*	.07	.16*	.03	.02	.46*	-					
15. Father mainstream values	.00	−.10	.05	−.14*	−.21*	−.17*	−.10	−.17*	.06	−.03	.00	.04	.06	.11*	-				
16. Father Mexican American values	.02	−.12*	.07	−.11*	−.06	−.03	−.10*	−.12*	−.04	−.11	−.23*	−.16*	.18*	.03	.52*	-			
17. Mother Mexican American values	.04	−.05	.13*	−.02	.10*	.06	.05	−.02	.03	−.11	−.26*	−.11*	.18*	−.01	−.05	.35*	-		
18. Mother mainstream values	−.04	−.06	.12*	.01	−.21*	−.10	−.05	−.11*	.03	−.03	−.06	−.01	.04	.17*	.31*	.23*	.05	-	
19. Per capita income	−.02	.05	.02	.05	.09	.18*	.12*	.24*	.02	.04	.32*	.12*	−.12*	−.05	−.22*	−.31*	−.15*	−.19*	-
Mean	2.63	3.09	2.76	3.32	2.52	2.16	2.59	2.11	3.19	5.42	2.79	3.33	23.01	33.44	35.3	23.31	13.91	34.31	8975.81
Standard deviation	0.30	0.60	0.23	0.65	0.43	0.42	0.42	0.36	1.22	3.45	0.56	1.03	2.81	5.4	5.43	2.35	1.74	6.19	6145.77

Note.

[A] spouse/parent self-report,

[B] adolescent report.

* $p < .05$.