Family and Cultural Processes Linking Family Instability to

Mexican American Adolescents' Adjustment

Danyel A. Vargas[1*], Mark W. Roosa[1], George P. Knight[2], & Megan O'Donnell[1]

[1]T. Denny Sanford School of Social and Family Dynamics,

[2]Department of Psychology, Arizona State University

* Corresponding author's email address: Danyel.Vargas@asu.edu; phone number: (480) 727-6134; and fax number: (480) 965-6779

Abstract

Despite the rapidly growing Mexican American population, no studies to date have attempted to explain the underlying relations between family instability and Mexican American children's development. Using a diverse sample of 740 Mexican American adolescents (49% female; 5th grade M age = 10.4; 7th grade M age = 12.8) and their mothers, we prospectively examined the relations between family instability and adolescent academic outcomes and mental health in the 7th grade. The model fit the data well and results indicated that family instability between 5th and 7th grade was related to increased 7th grade mother-adolescent conflict and in turn, mother-adolescent conflict was related to decreased school attachment and to increased externalizing and internalizing symptoms in the 7th grade. Results also indicated that 7th grade mother-adolescent conflict mediated the relations between family instability and 7th grade academic outcomes and mental health. Further, we explored adolescent familism values as a moderator and found that adolescent familism values served as a protective factor in the relation between mother-adolescent conflict and grades. Implications for future research and intervention strategies are discussed.

Keywords: family instability, Mexican American, adolescent, adjustment, mental health

Family instability research with Mexican Americans is needed for several reasons. First, Latinos are the largest, and one of the fastest growing, ethnic minority groups in the U.S (Motel & Patten, 2012). Second, Mexican Americans account for nearly 65% of Latinos. Third, research has commonly found family instability to be related to adolescent negative academic outcomes and poor mental health (e.g., Cavanaugh & Fomby, 2012). In comparison to their peers, Mexican American adolescents are at high risk for school dropout (Pew Hispanic Center, 2004) and poor mental health (U.S. Department of Health and Human Services, 2001). Thus, Mexican American adolescents who experience family instability may be at even greater risk for negative academic outcomes and poor mental health than their Mexican American peers without this experience. Fourth, studies have yielded inconsistent results in regards to whether Mexican American cultural values are adaptive for development following a risk situation (e.g., Germán, Gonzales, & Dumka, 2009; Hernández, Ramírez García, & Flynn, 2010); understanding *how* culture is related to adolescent adaptation subsequent to family instability is important because this information may provide guidance for the development of culturally appropriate intervention programs for this population (Dumka, Lopez, & Carter, 2002).

García Coll and colleagues' (1996) integrative model has encouraged researchers to utilize a culturally sensitive approach by examining normative development over time while examining underlying mechanisms and within group variation (e.g., differences among Mexican Americans) instead of between group variation (e.g., differences between Mexican Americans and European Americans). Traditionally, researchers have studied ethnic minority children through a culturally deficient framework, in which minority children were assumed to lack the benefits and advantages of middle-class European Americans resulting in developmental deficiencies. Moreover, studies of Mexican Americans have typically relied on convenience

immigrants) were not sampled. Moreover, most of these studies were cross-sectional and only four examined processes that explained the relations between family instability and adolescent development (i.e., Cavanaugh et al., 2006; Cavanaugh & Fomby, 2012; Donahue et al., 2010; Forman & Davies, 2003). Using a diverse sample of Mexican American families, this study prospectively examined the influence of family instability on adolescent academic outcomes and mental health, while examining potential processes that may help explain these relations.

Parent-adolescent Conflict as a Potential Mediator

Research has found that family instability has been associated with decreases in the quality of the parent-adolescent relationship (Ruschena, Prior, Sanson, & Smart, 2005). Although it is normative for adolescents to become more independent, parents remain a significant source of support (McElhaney, Allen, Stephenson, & Hare, 2009) and a decrease in the quality of this relationship may threaten adolescent optimal development. One salient component of this relationship is conflict and research has suggested that increased levels of parent-adolescent conflict occur subsequent to family instability (Ruschena et al., 2005). Because parent-adolescent conflict in a Mexican American family would violate the cultural norm of showing respect to parents (and other adults; Marín & Marín, 1991), conflict could be particularly salient in this population. Although parent-adolescent conflict within Latino families has been reported to be low (Wagner et al., 2010), increased levels have been found to be related to Latino adolescent negative academic outcomes and poor mental health (e.g., Chung, Flook, & Fuligni, 2009; Crean, 2008). Therefore, we hypothesized that mother-adolescent conflict would mediate the relations between family instability and adolescent academic outcomes and mental health.

Exploring Familism as a Moderator

and adolescent development. Because research has shown that gender and nativity (U.S. versus Mexico born) may influence adolescent adjustment subsequent to a risk situation (e.g., Killoren, Updegraff, Christopher, & Umaña-Taylor, 2011), we tested the prospective mediational model (Figure 1) for gender and nativity differences. Moreover, because socioeconomic status has been found to be related to academic outcomes and mental health (Bradley & Corwyn, 2002), we included an indicator of socioeconomic status in the model as a control variable. Finally, because not all measures used in this study had been tested for cross language equivalence previously, we tested the full model for differences by language, essentially providing a test for equivalence within the study (Knight et al., 2009).

Hypotheses.We hypothesized that family instability, during the transition from elementary to junior high school, would positively predict 7th grade mother-adolescent conflict (while controlling for 5th grade conflict). Next, we hypothesized that mother-adolescent conflict would negatively predict 7th grade academic outcomes (i.e., academic self-efficacy, school attachment, and grades) and positively predict 7th grade externalizing and internalizing symptoms (while controlling for 5th grade outcomes). Next, we hypothesized that mother-adolescent conflict would mediate the relations between family instability and adolescent academic outcomes and mental health. Finally, we explored whether 7th grade adolescent familism values moderated the relations between mother-adolescent conflict and academic outcomes and mental health and whether this moderator buffered or exacerbated the effects of the stressor.

Method

Participants

married at T2). When they answered *yes* that there was a change in their living arrangements at

T2 and the change indicated that the mother either gained or lost a partner (e.g., divorced at T1 to

living with a partner but not legally married at T2) they received a score of one. In order to

prevent counting the same maternal transition twice, when mothers responded *yes* that they

experienced a divorce or separation and the change in their living arrangements reflected this

separation or divorce (e.g., married and living together at T1 to married and not living together at

T2), they only received a score of one. When mothers reported that they both gained and lost a

partner they received a score of two. Finally, mothers who answered *no* to both questions

received a score of zero. From T1 to T2 nearly 15% of families experienced family instability.

That is, 9% (60) of mothers experienced a separation or divorce, 4% (28) a new partner, < 1%

(4) became widowed, and 2% (11) experienced both a separation or divorce and a new partner.

Economic hardship.Economic hardship at T2 was used as an indicator of

socioeconomic status because a large portion of the mothers in this sample were immigrants and

assessments of income are unlikely to be accurate for many immigrants due to irregular work,

payments in cash, and no records of income (Roosa, Deng, Nair, & Burrell, 2005). Similarly, the

value of a specific level of education to one's economic well-being is different if the education is

completed in the U.S. versus Mexico. Mothers rated their levels of economic hardship using 20

items from Conger and Elder's (1994) economic hardship measure. *Inability to make ends meet*

was measured with two items ($r = .55$; "Think back over the past 3 months and tell us how much

difficulty you had with paying your bills" [responses ranged from 1 = *a great deal of difficulty* to

5 = *no difficulty at all*, with responses reverse coded]). *Having enough money for necessities* was

measured with seven items ($\alpha = .93$; "Your family had enough money to afford the kind of home

you needed" [responses ranged from 1= *not at all true* to 5 = *very true*, with responses reverse

coded]). *Financial strain* was measured with two items ($r = .71$; "In the next three months, how often do you expect that you and your family will experience bad times such as poor housing or not having enough food?" [responses ranged from 1 = *almost never or never* to 5 = *almost always or always*]). *Economic cutbacks* was measured by nine event count items ("In the last 3 months, has your family changed food shopping or eating habits a lot to save money?" [responses were 1 = yes and 2 = no; 2s were recoded into zeros and 1s were summed to create a count of cutbacks]). Note that Cronbach's alpha is not appropriate for event count scales. A total T2 economic hardship score was computed by standardizing and then summing the scores for each of these measures ($\alpha = .81$). This scale has been found to be reliable and valid for Mexican American families (e.g., Parke et al., 2004).

Mexican American cultural values. Adolescents rated their familism values with 16 items (T2 $\alpha = .85$) from the Mexican American Cultural Values Scale (MACVS; Knight et al., 2010). The current study used the familism values subscales (support and emotional closeness [6 items; "It is important for family members to show their love and affection to one another"], family obligations [5 items; "Children should be taught that it is their duty to care for their parents when their parents get old"], and family as referent [5 items; "Children should always be taught to be good because they represent the family"]) to compute a total adolescent familism values score; responses ranged from 1 = *not at all* to 5 = *completely*. The authors of this scale have found it to be reliable and valid for Mexican American adolescents.

Mother-adolescent conflict. Adolescents rated conflict with their mothers using the ten item (T1 $\alpha = .72$; T2 $\alpha = .82$) *Parent Adolescent Conflict Scale* (PACS; Ruiz & Gonzales, 1998). The PACS measured minor and serious disagreements (e.g., "How often did you and your mother disagree with each other?") with responses from 1 = *almost never to never* to 5 = *almost*

always or always. This scale has been found to be reliable and valid for Mexican American adolescents (e.g., Corona et al., 2012).

Academic self-efficacy. Adolescents rated their academic self-efficacy using an eight item scale (T1 α = .77 [English speakers], .83 [Spanish speakers]; T2 α = .85 [English speakers], .85 [Spanish speakers]) by Arunkumar, Midgley, and Urdan (1999). This scale measured adolescent schoolwork mastery beliefs (e.g., "You can do even the hardest schoolwork if you try") with responses from 1 = *not at all true* to 5 = *very true*.

School attachment. Adolescents rated their school attachment with nine items (T1 α = .64 [English speakers], .63 [Spanish speakers]; T2 α = .77 [English speakers], .70 [Spanish speakers]) derived from three conceptually overlapping measures (Lord, Eccles, & McCarthy, 1994; Smith et al., 1997). This scale measured school attachment (e.g., "You like to do well in school") with responses from 1 = *not at all true* to 5 = *very true*.

Grades. At T1, teachers ranked adolescent academic performance relative to their peers because elementary schools in the study did not have compatible grading methods; responses ranged from 1 = *far below average/at the bottom 1/5 of the class* to 5 = *excellent/the top 1/5 of the class*. At T2, both English and math teachers reported on grades (e.g., "If you were giving final grades today, what grade would you give this student for your course?"). Responses ranged from 1 = A to 5 = E/F (reverse scored) and were averaged to compute one grade.

Externalizing and internalizing symptoms. At T1 and T2, mothers and adolescents independently reported on adolescent mental health from the computerized version of the Diagnostic Interview Schedule for Children (DISC-IV; Shaffer, Fisher, Lucas, Dulcan, & Schwab-Stone, 2000). Externalizing symptoms were computed by summing the conduct, attention deficit/hyperactivity, and oppositional defiant disorders symptom counts. Internalizing

Results

Preliminary Analyses

Correlations, means, and standard deviations are presented in Table 1. All correlations were in the expected directions; family instability was positively related to T2 mother-adolescent conflict; T2 mother-adolescent conflict was negatively related to academic self-efficacy, school attachment, and grades; T2 mother-adolescent conflict was positively related to T2 externalizing and internalizing symptoms. Kurtosis and skewness values for all study variables were examined and only two variables were out of the recommended range (i.e., family instability and T2 internalizing symptoms).

To test this study's hypotheses, we first tested the basic prospective mediational model (bolded paths in Figure 1). Next, we tested the basic prospective mediational model *plus* the moderating role of adolescent familism values (bolded and dashed paths in Figure 1). Lastly, we tested this full model to examine whether paths differed by adolescent gender or nativity (all paths in Figure 1).

Prospective Family Instability Mediational Model

The basic model fit well, χ^2 (5, $N = 740$) = 12.98, $p = .02$; CFI = .99; RMSEA = .05; SRMR = .01 (Figure 2). As predicted, several indirect relations between family instability and adolescent outcomes emerged; family instability was positively related to T2 mother-adolescent conflict which in turn, was negatively related to T2 school attachment and positively related to both T2 externalizing and internalizing symptoms. Percentile bootstrapping results indicated that T2 mother-adolescent conflict significantly mediated the relations between family instability and both T2 externalizing (95% CI [.004, .371]) and internalizing symptoms (95% CI [.007, .595]).

Exploration of Moderation

attachment and grades at low familism (95% CI [-.070, -.001]), (95% CI [-.105, -.001]), but not at high familism (95% CI [-.030, .001]), (95% CI [-.020, .035]), respectively.

Differences by Gender, Nativity, and Language

Lastly, we tested whether the full prospective mediational model differed by adolescent gender and nativity (U.S. versus Mexico born) by conducting multigroup SEM analyses. First, we estimated an unconstrained model in which all parameters across groups (i.e., gender, nativity, and language) were free. Next, we estimated a constrained model in which all parameters across groups were equal to one another. Next, we conducted log-likelihood difference tests to examine whether the unconstrained and constrained models fit the data differently (when using analysis type command COMPLEX, it is inappropriate to use chi-square difference tests; Muthén & Muthén, 2005). There were no significant differences by gender, $\Delta \chi 2$ ($df\Delta52$) = 47.65, p = .65, nativity, $\Delta \chi 2$ ($df\Delta52$) = 47.82, p = .64, or language, $\Delta \chi 2$ ($df\Delta52$) = 61.21, p = .18. Thus, pathways in our model did not significantly differ by adolescent gender or nativity and further, provided evidence for cross-language equivalence of all measures.

Discussion

Using a diverse sample, this study examined the prospective relations between family instability and Mexican American adolescent development by examining underlying processes that might explain these relations. This study's results add to the empirical evidence that family instability is a risk factor that threatens adolescent development and more specifically, Mexican American adolescents' academic outcomes and mental health. Aligned with previous research (e.g., Ruschena et al., 2005), this study found that family instability during the transition from elementary to junior high school predicted increased mother-adolescent conflict in the 7th grade (T2). Although the standardized regression coefficient for this relation was small (β = .07), this

and Human Services, 2001), it is especially important that researchers learn of potential modes of intervention in an effort to mitigate and/or prevent the harmful effects that family instability has on these adolescent's development. Because our study found that mother-adolescent conflict during the already stressful transition to junior high school mediated the relations between family instability and negative academic outcomes and poor mental health, this may be one mode of intervention. Engaging in conflict with a parent is a violation of Mexican American adolescents' cultural norms (Marín & Marín, 1991), which may make conflict especially salient in Mexican American families. Our results supported this; although in our study mother-adolescent conflict occurred at low levels ($M = 2.10$, $SD = .59$), the relationships of conflict to adolescent negative academic outcomes and poor mental health were significant. Thus, mitigating and/or preventing the negative effects that conflict has on academic outcomes and mental health may be especially important with Mexican American adolescents specifically. Additionally, our study found that subsequent to family instability, high adolescent familism values buffered the negative influence of mother-adolescent conflict on grades and that adolescent familism values were positively related to academic outcomes and negatively related to externalizing symptoms. Thus, encouraging Mexican American families to maintain and/or increase familism values may be a second mode for intervention. Overall, these findings provide some guidance for researchers who are interested in developing culturally appropriate interventions for Mexican American families.

Strengths and Limitations

Our study had several strengths. First, we defined family instability by a sole indicator, maternal relationship transitions, which allowed for a clearer interpretation of the results. Second, in an effort to help explain the relations between family instability and Mexican American adolescent negative academic outcomes and poor mental health, we focused on

Future research should study additional variables that may more thoroughly explain the relations between family instability and Mexican American adolescent development. For example, variables such as the quality of parenting, the amount of time adolescents and parents spend together, and/or adolescent cortisol levels may mediate the relations between family instability and adolescent academic outcomes and mental health. Moreover, the quality of adolescents' social support system from extended family members, peers, and/or siblings may moderate the relations between family instability and adolescent academic outcomes and mental health. The better we understand the processes linking family instability to adolescent outcomes, the more options we have for interventions.

In conclusion, our results suggested that for Mexican American adolescents (youth who were already at high risk for negative developmental outcomes) who experienced family instability during the transition from elementary to junior high school (which is often stressful on its own) experienced increased negative academic outcomes and poor mental health in comparison to their Mexican American peers without this experience. Moreover, mother-adolescent conflict and adolescent familism values helped explain the relations between family instability and Mexican American adolescent negative academic outcomes and poor mental health. First, we learned that mother-adolescent conflict mediated the relations between family instability and school attachment (at low familism levels), grades (at low familism levels), externalizing symptoms, and internalizing symptoms. Second, that adolescent familism values moderated the relations between mother-adolescent conflict and grades in a protective fashion. These results underscored the importance of researchers including tests of mediation, moderation, and moderated mediation in their conceptual models. Lastly, the diversity of our sample provided a more normative prospective of Mexican American families, thus making it

Donahue, K. L., D'Onofrio, B. M., Bates, J. E., Lansford, J. E., Dodge, K. A., & Pettit, G. S. (2010). Early exposure to parents' relationship instability: Implications for sexual behavior and depression in adolescence. *Journal of Adolescent Health, 47*, 547-554. doi:10.1016/j.jadohealth.2010.04.004

Dumka, L. E., Lopez, V. A., & Jacobs Carter, S. (2002). Parenting interventions adapted for Latino families: Progress and prospects. In J.M. Contreras, K.A. Kerns, & A.M. Neal-Barnett (Eds.), *Latino Children and Families in the United States*. Westport, CT: Greenwood.

Eccles, J. S., & Roeser, R. W. (2009) Schools, academic motivation, and stage-environment fit. In R. M. Lerner, L. Steinberg (Eds.), *Handbook of Adolescent Psychology: Third edition* (pp. 404-434). Hoboken, New Jersey: John Wiley & Sons, Inc.

Enders, C. (2010). Applied missing data analysis. New York, NY: Guilford Press.

Enders, C. K., & Tofighi, D. (2007). Centering predictor variables in cross-sectional multilevel models: A new look at an old issue. *Psychological Methods, 12,* 121–138. doi:10.1037/1082-989X.12.2.121

Forman, E. M., & Davies, P. T. (2003). Family instability and young adolescent maladjustment: The mediating effects of parenting quality and adolescent appraisals of family security. *Journal of Clinical Child and Adolescent Psychology, 32*, 94-105. doi:10.1207/S15374424JCCP3201_09

Fuligni, A. J. (1997). The academic achievement of adolescents from immigrant families: The role of family background, attitudes, and behavior. *Child Development, 68*, 351-363. doi:10.1111/j.1467-8624.1997.tb01944.x

MacKinnon, D. P., Lockwood, C. M., &Williams, J. (2004). Confidence limits for the indirect effect: Distribution of the product and resampling methods. *Multivariate Behavioral Research, 39*, 1-24. doi:10.1207/s15327906mbr3901_4

Marcynszyn, L. A., Evans, G. E., & Eckenrode, J. (2008). Family instability during early and middle adolescence. *Journal of Applied Developmental Psychology, 29*, 380-392. doi:10.1016/j.appdev.2008.06.001

Marín, G., & Marín, B.V. (1991). *Research with Hispanic populations*. Thousand Oaks: Sage.

McElhaney, K. B., Allen, J. P., Stephenson, C., & Hare, A. L. (2009). Attachment and autonomy during adolescence. In R. M. Lerner, L. Steinberg (Eds.), *Handbook of Adolescent Psychology: Third edition* (pp. 358-403). Hoboken, New Jersey: John Wiley & Sons.

Motel, S., & Patten, E. (2012). *The 10 Largest Hispanic Origin Groups: Characteristics, Rankings, Top Counties.* Pew Research Center: Pew Hispanic Center. Retrieved from http://www.pewhispanic.org/files/2012/06/The-10-Largest-Hispanic-Origin-Groups.pdf

Muthén, L. K., & Muthén, B. O. (1998 –2011). Mplus user's guide. Los Angeles, CA: Muthén and Muthén.

Parke, R. D., Coltrane, S., Duffy, S., Buriel, R., Dennis, J., Powers, J., French, S., & Widaman, K. (2004). Economic stress, parenting, and child adjustment in Mexican American and European American families. *Child Development, 75*, 1632-1656. doi:10.1111/j.1467-8624.2004.00807.x

Pew Hispanic Center. (2004). Latino teens staying in high school: A challenge for all generations. Retrieved from http://www.pewtrusts.org/uploadedFiles/wwwpewtrustsorg/Fact_Sheets/Hispanics_in_America/pew_hispanic_education_fact_sheet_persistence.pdf

Table 1

Correlation matrix, means, and standard deviations for study variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Family instability	--														
2. T2 Economic hardship	.13**	--													
3. T1 Mother-adol. con.	.08*	-.10*	--												
4. T2 Mother-adol. con.	.10**	-.02	.36**	--											
5. T2 Adol. fam. values	.07	-.02	-.07	-.03	--										
6. T1 Academic self-eff.	.01	-.09*	.00	-.03	.28**	--									
7. T2 Academic self-eff.	-.01	-.09*	-.13**	-.10*	.41**	.40**	--								
8. T1 School attachment	-.00	-.01	-.10**	-.02	.11**	.40**	.24**	--							
9. T2 School attachment	.01	-.05	-.11**	-.20**	.25**	.18**	.48**	.33**	--						
10. T1 Grades	-.05	-.18**	.00	.06	-.06	.18**	.21**	.16**	.05	--					
11. T2 Grades	-.06	-.14**	-.04	-.05	.01	.17**	.27**	.15**	.21**	.51**	--				
12. T1 Ext. symptoms	.18**	.06	.20**	.15**	-.02	-.17**	-.15**	-.25**	-.16**	.17**	-.25**	--			
13. T2 Ext. symptoms	.16**	.09*	.17**	.28**	-.14**	-.12**	-.22**	-.18**	-.27**	.10*	-.29**	.54**	--		
14. T1 Int. symptoms	.14**	.21**	.19**	.13**	.01	-.12**	-.10**	-.08*	-.05	.16**	-.10*	.50**	.25**	--	
15. T2 Int. symptoms	.18**	.18**	.10*	.24**	-.04	-.08*	-.13**	-.10**	-.06	.09*	-.13**	.32**	.53**	.45**	--
Sample means	.16	0.0	2.00	2.10	4.44	4.38	4.22	4.64	4.43	3.21	3.44	5.11	5.77	16.10	13.23
Standard deviations	.41	3.18	.56	.59	.40	.56	.64	.42	.53	1.31	1.15	4.74	4.98	9.13	8.02

Note. Sample size ranges from 664 to 740 for variables; T1 = 5th grade; T2 = 7th grade; adol. = adolescent; fam. = familism; con. = conflict; eff. = efficacy; ext. = externalizing; int. = internalizing; * $p < .05$, ** $p < .01$, *** $p < .001$