

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

---

Faculty Publications from Nebraska Center for  
Research on Children, Youth, Families, and Schools

Children, Youth, Families & Schools, Nebraska  
Center for Research on

---

2014

# Mexican American Adolescents' Gender Role Attitude Development: The Role of Adolescents' Gender and Nativity and Parents' Gender Role Attitudes

Kimberly A. Updegraff

Arizona State University, [kimberly.updegraff@asu.edu](mailto:kimberly.updegraff@asu.edu)

Susan M. McHale

The Pennsylvania State University

Katharine H. Zeiders

Arizona State University


Adriana J. Umana-Taylor

Arizona State University

Norma J. Perez-Brena

Follow this and additional works at: <https://digitalcommons.unl.edu/cyfsfacpub>

Arizona State University

 Part of the [Bilingual, Multilingual, and Multicultural Education Commons](#), [Child Psychology Commons](#), [Counseling Psychology Commons](#), [Developmental Psychology Commons](#), [Early Childhood Education Commons](#), [Educational Psychology Commons](#), [Family, Life Course, and Society Commons](#), and the [Other Social and Behavioral Sciences Commons](#)

---

Updegraff, Kimberly A.; McHale, Susan M.; Zeiders, Katharine H.; Umana-Taylor, Adriana J.; Perez-Brena, Norma J.; Wheeler, Lorey A.; and Rodriguez De Jesus, Sue A., "Mexican American Adolescents' Gender Role Attitude Development: The Role of Adolescents' Gender and Nativity and Parents' Gender Role Attitudes" (2014). *Faculty Publications from Nebraska Center for Research on Children, Youth, Families, and Schools*. 112.

<https://digitalcommons.unl.edu/cyfsfacpub/112>

This Article is brought to you for free and open access by the Children, Youth, Families & Schools, Nebraska Center for Research on at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Faculty Publications from Nebraska Center for Research on Children, Youth, Families, and Schools by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

---

**Authors**

Kimberly A. Updegraff, Susan M. McHale, Katharine H. Zeiders, Adriana J. Umana-Taylor, Norma J. Perez-Brena, Lorey A. Wheeler, and Sue A. Rodriguez De Jesus



Published in final edited form as:

*J Youth Adolesc.* 2014 December ; 43(12): 2041–2053. doi:10.1007/s10964-014-0128-5.

Copyright (c) 2014 Springer; used by permission.

## Mexican American Adolescents' Gender Role Attitude Development: The Role of Adolescents' Gender and Nativity and Parents' Gender Role Attitudes

**Kimberly A. Updegraff,**

Arizona State University

**Susan M. McHale,**

The Pennsylvania State University

**Katharine H. Zeiders,**

Arizona State University

**Adriana J. Umaña-Taylor,**

Arizona State University

**Norma J. Perez-Brena,**

Arizona State University

**Lorey A. Wheeler,** and

Arizona State University

**Sue A. Rodríguez De Jesús**

Arizona State University

### Abstract

Gender development has long term implications for education and career endeavors and family formation behaviors, but we know very little about the role of sociocultural factors in developmental and individual differences. In this study, we investigated one domain of gender development, gender role attitudes, in Mexican American adolescents ( $N = 246$ ; 51% female), using four phases of longitudinal data across eight years. Data were collected when adolescents averaged 12.51 years ( $SD = 0.58$ ), 14.64 years ( $SD = 0.59$ ), 17.72 years ( $SD = 0.57$ ), and 19.60 years of age ( $SD = 0.66$ ). Mothers' and fathers' gender role attitudes also were assessed in Phases 1, 3, and 4. Findings revealed that gender attitude development varied as a function of the interaction between adolescents' nativity and gender. Among Mexico-born adolescents, females

---

Correspondence should be addressed to Kimberly A. Updegraff, T. Denny Sanford School of Social and Family Dynamics, Arizona State University, Tempe, AZ, 85287-3701. Telephone: 480-965-6669. kimberly.updegraff@asu.edu.

#### Authors' Contributions

KU participated in the study's conception, design and coordination, and drafted the manuscript. SM participated in the study's conception, design and coordination, and helped draft the manuscript. KZ performed the analyses, interpreted the data, and helped draft the manuscript. AU participated in the study's conception, design and coordination, and provided feedback on the manuscript. LW participated in the study's coordination, assisted with the analyses and interpretation of the data, and provided feedback on the manuscript. NP participated in the study's coordination, helped with the interpretation of the data and provided feedback. SR participated in the study's coordination, helped with the interpretation of data and provided feedback. All authors have read and approved the final manuscript.

exhibited significant declines in traditional attitudes from early to late adolescence, but males' attitudes were stable over time. U.S.-born females and males, in contrast, did not differ in their gender attitude trajectories. Examining the links between mothers', fathers', and adolescents' gender role attitudes revealed *within-person* associations between mothers' and adolescents' gender role attitudes: on occasions when mothers reported more traditional attitudes relative to their own cross-time average, adolescents also reported more traditional attitudes than usual. In addition, fathers' more traditional gender role attitudes were associated with daughters', but not sons', more traditional gender role attitudes at the between-person level. The discussion focuses on the interpretation of Mexican American adolescents' gender role attitude development from a cultural ecological perspective.

### Keywords

adolescence; gender role attitudes; Mexican American; mothers and fathers; longitudinal; sociocultural context

---

### Introduction

Adolescence is a developmental period when youth are exploring their identities and beginning to form more realistic future goals and plans for education and work (Grotevant, 1998), and the development of gender role attitudes is central to this process (Galambos, Berenbaum, & McHale, 2009). Because traditional gender role attitudes define distinct roles for women and men, they have implications for adolescents' aspirations and choices about educational and occupational pathways (Eccles, 2009). Among females, for example, more traditional gender role attitudes have been associated with lower educational and career aspirations in late adolescence (e.g., Crockett & Beal, 2012; McWhirter, Hackett, & Bandalos, 1998), and lower job earnings in adulthood (Judge & Livingston, 2008). Findings for males are slightly more complex, as more traditional gender attitudes have been linked to lower occupational and educational aspirations in adolescence (Crockett & Beal), but also to higher job earnings in adulthood (Judge & Livingston). Together, these findings underscore the importance of gender role attitudes in adolescents' and young adults' educational and occupational outcomes.

Traditional gender role attitudes refer to beliefs that social roles should be differentiated by gender, including that responsibilities for childrearing and household tasks be designated to women and educational achievement and economic provision be assigned to men (Hoffman & Kloska, 1995). Most research on adolescents' gender role attitudes focuses on European American youth, with longitudinal analyses showcasing adolescence as a time of substantial change, and different trajectories emerging as a function of the interplay among individual, family, and context characteristics (Crouter, Whiteman, McHale, & Osgood, 2007). In contrast to research on European American youth, less is known about the development of gender role attitudes among ethnic minority youth.

The gap in our knowledge about gender attitude development in racial/ethnic minority youth is significant for at least two reasons. First, cultural ecological frameworks (Bronfenbrenner & Crouter, 1983; García Coll et al., 1996) posit that human development unfolds within a

larger sociocultural context and that development influences and is influenced by the characteristics of individuals and the contexts in which their lives are embedded. As such, findings based on studies of European American youth may not generalize to youth from other sociocultural backgrounds, who must be studied directly. Second, research on ethnic/racial minority youth in the U.S. has paid limited attention to normative development (Cabrera & The SRCD Ethnic and Racial Issues Committee, 2013; Umaña-Taylor, 2009), including the development of gender role attitudes. To move the field beyond its current focus on their adjustment problems and dysfunction, it is important to expand our understanding of the normative developmental processes of ethnic/racial minority youth.

This study investigated trajectories of traditional gender role attitudes among Mexican American adolescents, the largest and most rapidly growing subgroup of Latinos in the U.S. (U.S. Census Bureau, 2013). Mexican culture is characterized by an emphasis on traditional gender role socialization (Cauce & Domenich-Rodríguez, 2002), but also by substantial *within-culture variability* (Baca Zinn & Wells, 2000). As such, new insights about adolescents' gender role attitude development-- and insights that may have significant implications for the future of US society-- may emerge from studying this sociocultural group. Some cross sectional research has shown, for example, that Mexican American adolescents' and young adults' traditional gender role attitudes were linked to their educational and career aspirations and attainment (Judge & Livingston, 2008; McWhirter et al., 1998). Such findings are important given that Mexican American youth lag behind other U.S. youth in their educational (National Center for Education Statistics, 2013) and occupational (U.S. Bureau of Labor Statistics, 2012) attainment. A better understanding of gender role attitude development in Mexican American youth may inform efforts to improve this group's educational and occupational outcomes. Toward these ends, the goals of this study were twofold: (a) to examine changes in Mexican American adolescents' gender role attitudes from ages 13 to 20 years, and to test the role of person (i.e., adolescent gender) and context (i.e., nativity) characteristics as moderators of patterns of change; and (b) to investigate how mothers' and fathers' traditional gender role attitudes were linked to adolescents' attitudes across time, and the roles of adolescents' gender and nativity as moderators of these linkages.

### Trajectories of Adolescents' Gender Role Attitudes

Theories of gender development suggest several potential patterns of change in gender role attitudes across adolescence (Galambos et al., 2009). Cognitive developmental perspectives propose that the emergence of more sophisticated and nuanced social cognitive skills in adolescence allows for greater flexibility in the understanding of gender-linked constructs (for reviews, see Galambos et al., 2009). From this perspective comes the prediction of linear declines in traditional gender role attitudes beginning in early adolescence. Longitudinal data on European American youth provide some support for this prediction, with evidence of declines in traditional attitudes over the course of early to middle adolescence for girls (Galambos et al., 1990) and for youth with less traditional parents (Crouter et al., 2007). The gender intensification perspective (Hill & Lynch, 1983), in contrast, emphasizes that the transition to adolescence, and particularly the emergence of secondary sex characteristics, is the impetus for adolescents to experience increased pressure

from socialization agents (e.g., parents, peers, teachers) to conform to gender-typed role expectations and behaviors. As a result of these socialization pressures, girls and boys are expected to endorse increasingly more traditional gender role attitudes beginning in early adolescence (Hill & Lynch). Consistent with a gender intensification hypothesis are findings of increases in traditional gender role attitudes that begin in early adolescence among European American boys (Galambos et al., 1990) and European American youth from families with more traditional parents (Crouter et al., 2007). Taken together and interpreted through an ecological lens, these findings suggest that trajectories of gender role attitude development vary as a function of interactions among individual, family, and contextual characteristics. Below we elaborate on our perspective on Mexican American adolescents' gender role attitude development, as informed by cultural ecological models of development (Bronfenbrenner & Crouter, 1983; García Coll et al., 1996).

### **The Role of Mexican American Adolescents' Individual and Cultural Characteristics**

Cultural ecological models hold that development occurs via interactions between the characteristics of the developing person and of the larger family and sociocultural contexts (Bronfenbrenner & Crouter, 1983; García Coll et al., 1996). As such, how gender role attitude development unfolds across the period of adolescence is likely to depend on the interplay among individual characteristics (e.g., gender), family processes (e.g., parental models and socialization pressures) and context characteristics (e.g., family structure; sociocultural setting)—termed person X process X context interactions (Bronfenbrenner & Crouter, 1983). Illustrating these ideas, longitudinal research on European American youth revealed that different trajectories of gender role attitudes emerged as a function of interactions among gender, parental attitudes and sibling structure (Crouter et al., 2007). The findings revealed, for example, that in families with boy-boy sibling dyads, firstborn sons whose parents displayed more traditional attitudes exhibited a linear increase in traditionality. In contrast, in families with older brother-younger sister sibling dyads, secondborn girls whose parents displayed more traditional attitudes showed stable levels of attitudes in middle adolescence, but increases in traditionality thereafter. These findings highlight the complexity of factors that interact to shape gender role attitude development across adolescence among European American youth.

Scholars who study ethnic minority and immigrant youth also have called for research that takes into account individual, family, and context characteristics that may lead to different patterns of development and adjustment (Fuligni, 2001; Gonzales, Fabrett, & Knight, 2009). In this study, we examined the role of adolescents' gender and nativity in their gender role attitude development as these characteristics may be particularly relevant to trajectories of gender role attitude development among Mexican American youth. Beginning with *gender*, research reveals that boys typically endorse more traditional gender role attitudes than girls (Crouter et al., 2007; McWhirtier et al., 1998). Some research also shows that these gender differences become more pronounced over time, although findings are inconsistent in whether the divergence occurs in early (Galambos et al., 1990) or middle adolescence (Crouter et al., 2007) among European American youth.

In Mexican culture, where there is a strong emphasis on the traditional roles of males and females (Cauce & Domenech-Rodríguez, 2002; Raffaelli & Ontai, 2004), endorsement of traditional gender role attitudes may benefit males but not females because of the privileges that are inherent in the traditional male role (e.g., educational affordances, economic resources, decision-making and authority figure; Hoffman & Kloska, 1995). To address the prediction that gender differences are more pronounced when ties to Mexican culture are strong, the current study tested whether *adolescents' nativity* interacted with their gender to predict trajectories of gender role attitudes (i.e., a person x context interaction). Nativity represents one potential source of within-group variability, as immigrants have stronger ties to Mexican culture relative to those born in the U.S. From a sociocultural perspective, Fuligni (2001) argued for the importance of longitudinal designs to chart trajectories of development as a function of adolescents' cultural background—including nativity-- as a means of disentangling developmental from cultural adaptation processes. Generally, models of cultural adaptation predict overall declines in gender role attitude traditionality across adolescence as a result of exposure to U.S. culture, given that attitudes in the U.S. are generally less traditional than in Mexico (e.g., Valentine & Mosley, 2000). This leads to the expectation that the declines in traditional attitudes observed in European American adolescents may be more likely to characterize the trajectories of U.S.-born than Mexico-born adolescents, given their relatively greater exposure to U.S. culture. We further expected that adolescents' gender and nativity would interact to explain trajectories of gender role attitudes, such that the divergence in males' and females' attitudes would be more pronounced for Mexico-born than for U.S.-born adolescents to the extent that Mexican-born females would have the most to gain, and Mexican-born males, the most to lose.

### **The Role of Parents' Traditional Gender Role Attitudes**

Families are a proximal setting for socialization (Bronfenbrenner & Crouter, 1983), and parents are key gender socialization agents within families (McHale, Crouter, & Whiteman, 2003). In Mexican American families, where there is a strong emphasis on family interdependence and on gender-typed roles (Cauce & Domenich-Rodríguez, 2002), adolescents may be particularly likely to look to their parents as models for gender development. Despite the potential importance of Mexican American parents in their adolescents' gender socialization, we know little about how parents', and particularly *fathers'*, gender role attitudes are linked to Mexican American adolescents' gender role attitude development (Adams, Coltrane, & Parke, 2007). Lack of attention to fathers is surprising given that the majority of Mexican American youth (66%) are living in two-parent households (U.S. Census Bureau, 2013). From a social learning perspective (Mischel, 1966), parents who endorse more traditional gender role attitudes would be expected to provide socialization messages that support the development of more traditional attitudes among their offspring.

A strength of the longitudinal design of the current study, which included four phases of data from adolescents and three phases from mothers and fathers, is that it allowed for a stringent test of how parents' and adolescents' gender role attitudes were linked across adolescence. Specifically, by using a multi-level modeling approach, we were able to test the typically addressed, between-individual question of whether parents' gender role



attitudes were related to adolescents' gender role attitudes, on average; and we also were able to test, at the within-person level, whether controlling for stable individual differences, on occasions when parents reported more traditional attitudes than usual (relative to their own cross-time mean), adolescents also reported more traditional attitudes than usual. Our within-person analysis enabled us to focus on the link between parents' and adolescents' attitudes, ruling out stable characteristics as alternative explanations of this linkage. Because our sample included two parents from each family, we also were able to test the links between the attitudes of both mothers and fathers and those of their adolescents. In the face of substantial within-group variability among Mexican American families, Mexican American mothers are more likely to assume the primary role in caregiving/childrearing than fathers (Umaña-Taylor & Updegraff, 2012). Thus, we expected that mothers' attitudes would be more tightly linked to adolescents' gender role attitudes than fathers'.

In line with a cultural ecological perspective, we further expected that parents' socialization efforts, and thus the associations between their own and their offspring's gender role attitudes, would vary as a function of adolescents' gender and nativity (i.e., a person x process x context interaction). Given that gender role attitudes are likely to be more traditional in immigrant families, and that an emphasis on traditional attitudes may be more pronounced in families with sons due to the higher status that traditionality imbues in boys and men, we tested for a possible interaction between parents' gender role attitudes, adolescents' gender, and adolescents' nativity in predicting Mexican American adolescents' gender role attitudes.

## Present Study

The first goal was to chart the trajectories of Mexican American adolescents' gender role attitudes from 13 to 20 years of age and, applying a cultural ecological framework, test whether the development of gender role attitudes varied as a function of adolescents' gender and nativity, that is, a person (gender) X context (nativity) interaction. Consistent with results from European American samples and cross sectional data, we expected that girls would endorse less traditional attitudes than boys, and that traditionality would decline across age overall, with declines in girls' traditionality being more pronounced than declines in boys' (e.g., Galambos et al., 1990). Advancing the study of gender role attitude development to incorporate the role of the sociocultural context, we also tested the prediction that the divergence over time between females' versus males' attitudes would be more pronounced for Mexican-born than U.S.-born adolescents.

The second goal was to test the links between parents' and adolescents' gender role attitudes. We expected that, at the between-person level, adolescents whose mothers and fathers reported more traditional attitudes on average, would exhibit more traditional gender role attitudes, on average. We also tested the prediction that, at the within-person level, on occasions when parents reported more traditional attitudes than usual, adolescents would correspondingly report more traditional attitudes than usual. Finally, we explored whether associations between parents' and adolescents' gender role attitudes varied by adolescent gender and nativity and their interaction, which represents a person (gender) x process (parents' gender role attitudes) x context (nativity) interaction.



## Method

### Participants

Data came from a longitudinal study of 246 Mexican American families focused on gender, culture, and family socialization processes in adolescence and emerging adulthood (Updegraff, McHale, Whiteman, Thayer & Delgado, 2005). Participating families were recruited from schools in and around a southwest metropolitan area. Eligible families included those with (a) 7<sup>th</sup> graders and an older sibling living at home with biological mothers and biological or long-term adoptive fathers (i.e., at least 10 years), (b) mothers who were of Mexican origin, and (c) fathers who worked at least 20 hours/week for pay. Ninety-three percent of fathers also were of Mexican descent. The current analyses focused on 7<sup>th</sup> graders (target child in this study) as they participated in four phases of data collection that spanned early to late adolescence (i.e., 13 to 20 years of age).

To recruit families, letters and brochures describing the study (in both English and Spanish) were sent to families, and follow-up telephone calls were made by bilingual staff to determine eligibility and interest in participation. Families' names were obtained from junior high schools in five school districts and from five parochial schools. Schools were selected to represent a range of socioeconomic situations, with the proportion of students receiving free/reduced lunch varying from 8% to 82% across schools. Letters were sent to 1,856 families with a Hispanic 7<sup>th</sup> grader who was not learning disabled. For 396 families (21%), the contact information was incorrect and repeated attempts to find updated information through school personnel or public listings were unsuccessful; 146 families (10%) refused to be screened for eligibility. Eligible families included 421 families (23% of the initial rosters and 32% of those we were able to contact and screen for eligibility). Of those eligible, 284 (67%) agreed to participate, 95 (23%) refused, and we were unable to re-contact the remaining 42 families (10%) who were eligible to schedule an interview. Interviews were completed by 246 families.

At Phase 1, families represented a range of socioeconomic levels. The percentage that met federal poverty guidelines was 18.3%, similar to the 18.6% of two-parent Mexican American families living in poverty in the county from which the sample was drawn (U.S. Census Bureau, 2000). Annual median family income was \$40,000. Parents had completed an average of 10 years of education ( $M = 10.34$ ;  $SD = 3.74$  for mothers, and  $M = 9.88$ ;  $SD = 4.37$  for fathers). Seventy percent of parents had been born outside the US; this subset of parents had lived in the US an average of 12.37 ( $SD = 8.86$ ) and 15.17 ( $SD = 8.77$ ) years for mothers and fathers, respectively. Almost 70% of the interviews with parents were conducted in Spanish. With respect to adolescents, the sample included 125 girls and 121 boys who averaged 12.51 ( $SD = .58$ ) years of age at Phase 1. Adolescents were born in the US (62%) or Mexico (38%) and were primarily interviewed in English (83%).

Two years later, Phase 2 interviews were conducted with target adolescents when they were in the 9<sup>th</sup> grade and averaged 14.64 years of age ( $SD = .59$ ). Phase 3 interviews were completed about three years after Phase 2, when adolescents were 17.72 years of age on average ( $SD = .57$ ), and Phase 4 interviews were conducted two years after Phase 3, when adolescents averaged 19.60 years of age ( $SD = .66$ ). Retention rates were 91%, 75%, and

70% for Phases 2 through 4, respectively. Those who did not participate: could not be located ( $n = 10$  at Phase 2;  $n = 43$  at Phase 3;  $n = 45$  at Phase 4), had moved to Mexico ( $n = 0$  at Phase 2;  $n = 2$  at Phase 3;  $n = 4$  at Phase 4), could not presently participate or were difficult to contact ( $n = 0$  at Phase 2;  $n = 8$  at Phase 3;  $n = 4$  at Phase 4), or refused to participate ( $n = 13$  at Phase 2;  $n = 8$  at Phase 3;  $n = 8$  at Phase 4). Because participating families reported higher maternal education and family income at Phase 1 as compared to non-participating families at Phase 3 (maternal education  $M = 10.62$ ;  $SD = 3.80$  versus  $M = 9.48$ ;  $SD = 3.45$ ; family income  $M = \$59,517$ ;  $SD = \$48,395$  versus  $M = \$37,632$ ;  $SD = \$28,606$ , respectively) and Phase 4 (maternal education  $M = 10.75$ ;  $SD = 3.75$  versus  $M = 9.35$ ;  $SD = 3.53$ ; family income  $M = \$59,136$ ;  $SD = \$46,674$  versus  $M = \$41,635$ ;  $SD = \$39,095$ , respectively), we controlled for parent education and family income in all analyses.

## Procedures

Data were collected via home interviews at Phases 1, 3, and 4, and by phone at Phase 2, using the same procedures as the home interviews. After obtaining informed consent/assent, interviews were conducted separately with adolescents and their parents. Bilingual interviewers read all questions aloud in the language of each participant's choice, and entered responses into laptop computers. Families received \$100 for in-home interviews with all four family members at Phase 1, target adolescents received \$40 at Phase 2, families received \$125 at Phase 3, and each family member received \$75 at Phase 4. The University's Institutional Review Board approved all procedures.

## Measures

The measures were forward-translated to Spanish and back-translated to English by separate individuals for the local Mexican dialect. Final versions were compared and discrepancies were resolved by the research team.

**Traditional Gender Role Attitudes**—Adolescents' ratings of their traditional gender role attitudes at Phases 1 through 4, and mothers' and fathers' reports of their gender role attitudes at Phases 1, 3, and 4 were included in this study. Adolescents and parents completed an adapted version of Hoffman and Kloska's (1995) scale. The original scale was developed for European American and African American samples, but it has since been validated with Mexican Americans (Adams et al., 2007). Psychometric analyses of the current data revealed that three of the original items (all reverse coded items) had low factor loadings. Results of psychometric analyses with this measure in a different sample revealed similar results (Adams et al., 2007). Thus, we omitted these three items and calculated the mean of the remaining 10 items to create the scale score. The ten items (e.g., "Men should make the really important decisions in the family,") were rated on a 4-point scale ranging from 1 (*Strongly Agree*) to 4 (*Strongly Disagree*). Items were reverse coded such that higher scores reflected *more* traditional gender role attitudes. Cronbach's alphas were .84, .90, .92, and .89 for adolescents at Phases 1 through 4, respectively. Cronbach's alphas were .89, .90 and .88 for mothers and .86, .86, and .89 for fathers at Phases 1, 3, and 4, respectively.

## Individual Characteristics and Family Socioeconomic Status (SES)—

Adolescents reported on their own gender at Phase 1 (0 = male; 1 = female), and mothers

reported on adolescents' nativity at Phase 1 (0 = Mexico-born; 1 = U.S.-born). Mothers and fathers also reported on their education in years and their annual household income at Phase 1. A log transformation was applied to household income to correct for skewness. We created a composite family SES score by standardizing and averaging mothers' and fathers' education levels and household income ( $\alpha = .76$ ). Family SES was used as a control variable in all analyses to account for differential attrition as a function of parent education and family income.

## Results

### Analytic Plan

To examine trajectories of adolescents' gender role attitudes (our first goal), we conducted growth models in a multilevel modeling (MLM) framework (Raudenbush & Bryk, 2002) using PROC MIXED in SAS 9.2. Growth modeling takes into account the nested nature of the data and allows for an unbalanced design (i.e., assessments can be unequally spaced across time and/or individuals can differ in age at the initial assessment). Maximum likelihood estimation was used to account for missing data (Enders, 2010). For all models, we specified a 2-level growth model with time nested within individuals. Adolescents' age at each assessment was used as the metric of time given interest in development, the precision of the measure, and the unequal spacing across assessments. Individuals' exact age was computed by subtracting the birth date from each of the four interview dates. Time was centered at 13 years old (the average age at Phase 1). Growth models proceeded in the following order. First, a preliminary growth model was run to examine the samples' average growth trajectory in gender role attitudes, controlling for family SES at Phase 1. Next, to test our hypothesis that girls would endorse less traditional attitudes than boys, and that girls' declines in traditionality would be more pronounced over time than boys', we estimated a growth model in which adolescent gender was included (both the main effect and the gender X time interaction). To test our hypothesis that the divergence in girls' versus boys' gender role attitudes over time would be more pronounced for Mexico-born than U.S.-born youth, both nativity and gender were included in the model. Specifically, a three-way interaction (and all possible two-way interactions) between nativity, gender, and time were modeled.

To address our second goal, we examined the role of mothers' and fathers' attitudes in adolescents' gender role attitudes. Given that parents' attitudes were measured at three phases, they were treated as time-varying predictors. The inclusion of time-varying predictors allows for the disaggregation of *within-* and *between-person* effects; within-person effects represent how fluctuations in predictors relate to changes in the dependent variable, controlling for the cross-time mean, whereas between-person effects represent the typically studied aggregate relation between the predictor and the dependent variable across time (Hoffman & Stawski, 2009). We followed recommended centering techniques (Hoffman & Stawski) and group-mean centered mothers' and fathers' gender role attitudes (e.g., mothers' attitude minus mothers' cross-time mean). Thus, a significant positive *within-person* effect of mothers'/fathers' gender role attitudes would suggest that, on occasions when a mother/father reported more traditional gender role attitudes (compared to her/his own cross-time average), her/his adolescent also reported more traditional gender role

attitudes. The *between-person* effect was created by averaging mothers'/fathers' gender role attitudes across all time points and was grand-mean centered (mothers'/fathers' cross-time mean minus overall sample mean). A significant positive *between-person* effect would suggest that, on average, in families with more traditional mother/father gender role attitudes, adolescents reported more traditional gender role attitudes. Given our interest in differences by adolescent gender and nativity in the role of parents' gender role attitudes, we also examined differences in within-person and between-person mother/father effects by adolescents' gender and nativity, and the interaction between gender and nativity. Means, standard deviations, and correlations for all study variables are in Table 1.

### Adolescents' Gender Role Attitude Trajectories

The initial growth model, which accounted for family SES (Phase 1), revealed that on average, adolescents scored slightly under the midpoint of the five-point scale at age 13,  $b_{\text{intercept}} = 2.13$ , standard error ( $SE$ ) = .03,  $p < .001$ , and that attitudes declined across time,  $b_{\text{slope}} = -0.03$ ,  $SE = .01$ ,  $p < .001$  (not shown). An additional analysis was examined in which the variance of *Time* was examined across individuals. The model revealed that the variance was not statistically significant; thus, in line with Hoffman and Templin (2011), the effect was fixed. Our next model (Table 2, Model 1) examined gender differences in adolescents' gender role attitudes and revealed differences at age 13 (intercept) and in the rate of growth by adolescent gender. Specifically, as predicted, boys demonstrated significantly more traditional attitudes at age 13 than girls,  $b = -.14$ ,  $SE = .06$ ,  $p < .05$ , and girls displayed steeper declines in traditionality across time than boys,  $b = -.05$ ,  $SE = .01$ ,  $p < .001$ . Model 2 (Table 2) further revealed significant nativity by gender,  $b = -.37$ ,  $SE = .14$ ,  $p < .01$ , and time by nativity by gender interactions,  $b = .07$ ,  $SE = .03$ ,  $p < .01$ . To follow up on these interactions, we obtained the estimates of gender role attitudes at age 13 (intercept) and of growth in gender role attitudes (slope) by running a series of analyses in which gender and nativity were recoded to allow for each group to serve as the reference group (i.e., Mexico-born females, Mexico-born males, U.S.-born females, U.S.-born males; see Figure 1). The analyses were then conducted to test for gender differences in the intercept and slope separately by nativity (i.e., Mexico-born only model with gender interactions and U.S.-born only model with gender interactions). This approach enabled us to test our hypothesis of greater divergence between males' versus females' trajectories among Mexico-born adolescents as compared to U.S.-born adolescents. For *Mexico-born* adolescents, there was no significant gender difference in gender role attitudes at age 13 (the intercept),  $b = .10$ ,  $SE = .11$ , *ns*, but there was a significant difference in Mexico-born males' versus Mexico-born females' slopes,  $b = -.09$ ,  $SE = .02$ ,  $p < .001$ , such that declines in traditionality were evident for Mexico-born females,  $b_{\text{slope}} = -.08$ ,  $SE = .02$ ,  $p < .001$ , but not for Mexico-born males,  $b_{\text{slope}} = .01$ ,  $SE = .02$ , *ns* (see Figure 1). For *U.S.-born* adolescents, gender differences in the form of boys' greater traditionality were evident at age 13,  $b = -.27$  (.08),  $p < .01$ , females' traditionality declined significantly over time,  $b_{\text{slope}} = -.05$ ,  $SE = .01$ ,  $p < .001$ , and males' declines approached significance,  $b_{\text{slope}} = -.02$ ,  $SE = .01$ ,  $p = .07$ . In the case of U.S.-born adolescents, males' and females' slopes were not significantly different.

## The Role of Mothers' and Fathers' Gender Role Attitudes

To address our second goal, we examined the within- and between-person effects of mothers' and fathers' gender role attitudes on adolescents' gender role attitudes. For mothers' gender role attitudes, there was a significant *within-person* effect (Table 2, Model 3a): controlling for the cross-time average of adolescents' attitudes, on occasions when mothers reported more traditional gender role attitudes, adolescents also reported more traditional gender role attitudes than usual. A significant *between-person* effect also emerged suggesting that, on average, mothers' gender role attitudes were positively related to adolescents' gender role attitudes. Next, we examined if the within- and between-person effect differed by adolescents' gender and nativity, and the interaction between gender and nativity (Table 2, Model 3b). We found no significant differences in the links between mothers' and adolescents' attitudes for males and females and for U.S.-born and Mexico-born adolescents.

For fathers, there were no significant overall within- or between-person effects (Table 2, Model 4a). There was, however, a significant between-person effect X gender interaction. Specifically, among females, there was a positive association between fathers' gender role attitudes and adolescents' gender role attitudes,  $b = .20$ ,  $SE = 1.0$ ,  $p < .05$ . For males, however, there was no significant association,  $b = -.04$  (.09), *ns*.

## Discussion

Gender role attitudes shape adolescents' identity and the decisions they make about current and future educational and occupational pursuits, making them an important focus of study (Eccles, 2009). Research on how gender role attitudes change across adolescence has focused on European American youth (Galambos et al., 2009), and we know little about their development in Mexican American youth in the U.S. -- who lag behind in educational and occupational attainment (National Center for Education Statistics, 2013; U.S. Bureau of Labor Statistics, 2012). This study advanced our understanding of the development of gender role attitudes by examining trajectories of gender role attitudes in a sample of Mexican American adolescents. Grounding the study in a cultural ecological perspective (Bronfenbrenner & Crouter, 1983; García Coll et al., 1996), we documented different trajectories as a function of adolescents' gender and nativity, thereby illuminating factors that explained *within-group variability* in the normative process of gender role attitude development within this sociocultural context. Using data from mothers, fathers, and adolescents, our findings further documented links between adolescents' and parents' gender role attitudes across time, advancing research on this domain of gender development by examining both within and between individual differences. Taken together, our results are consistent with ecological tenets in illustrating how interactions among person, process, and context explain gender role attitude development; significant effects involving mothers' and fathers' gender attitudes were consistent with the sociocultural emphasis on illuminating the factors that underlie variability *within* racial/ethnic groups (Updegraff & Umaña-Taylor, 2010; Parke & Buriel, 2006).

## Trajectories of Mexican American Adolescents' Gender Role Attitudes

As predicted, the development of Mexican American adolescents' gender role attitudes varied as a function of gender, nativity, and their combined "person X context" interaction. In line with research on European American youth (Crouter et al., 2007; Galambos et al., 1990) and our first hypothesis, females reported less traditional gender role attitudes than males at age 13 and exhibited significantly greater declines from 13 to 20 years of age. These main effects, however, were qualified by a person X context interaction, such that Mexico-born but not U.S.-born females and males diverged in their levels of traditionality across time. These findings were consistent with our predictions and may be due to Mexico-born adolescents' potentially greater exposure to Mexican culture wherein attitudes about men's and women's roles are generally more traditional (Cauce & Domenich-Rodriguez, 2002). The differences in males' versus females' gender role attitudes are potentially important as they may have implications for future romantic relationship and marital dynamics. Some research shows, for example, that couples with more similar gender-linked attitudes report more satisfying marriages (e.g., Helms, Walls, Crouter, & McHale, 2010), and that when husbands report more traditional attitudes than wives they also report lower quality marriage relationships (e.g., Stanik & Bryant, 2012). Such findings underscore the implications of male-female differences in gender role attitudes for individuals' future romantic relationships.

The findings for Mexican American *females*, both Mexico-born and U.S.-born, conform to the predictions of cognitive developmental perspectives and to prior research on European American females (Galambos et al., 1990) and European American youth from less traditional family contexts (Crouter et al., 2007). Specifically, cognitive developmental theorists argue that advances in social cognitive skills allow for greater flexibility in adolescents' ideas about gender-stereotyped beliefs and attributes (Galambos et al., 2009). The pattern of change for Mexican American females also is consistent with acculturation perspectives, which suggest that, over time, exposure to U.S. culture should lead to declines in traditional attitudes, as U.S. mainstream culture is characterized as less traditional in gender role attitudes than Mexican culture (Cauce & Domenich-Rodriguez, 2002). Given research linking adolescent and young adult females' less traditional gender role attitudes to higher educational and occupational aspirations and attainment (Crockett & Beal, 2012; Judge & Livingston, 2008), less traditional attitudes in late adolescence may be advantageous for Mexican American females as they make important decisions about post-secondary educational pursuits and future occupations. It is also possible, however, that the declines in gender role attitudes, and as a result, the less traditional attitudes of Mexican American girls at age 20 come after important educational decisions have been made (e.g., the decision to attend college). Whether attitudes in early adolescence or changes in attitudes across adolescence are more influential in the choices these young women make about their educations and careers is an important direction of future work.

*Mexico-born males* were the only group of adolescents in this sample whose traditional gender role attitudes were stable from ages 13 to 20. This pattern is consistent with gender scholars' suggestion that boys may be less susceptible to cognitive developmental influences on gender stereotypical thinking (Galambos et al., 2009). In addition, the differences in



Mexico-born males' versus females' trajectories also suggest that males may be less influenced by acculturation processes, which should lead to less traditional gender role attitudes. Why might Mexico-born males maintain their traditional gender role attitudes across adolescence? One possibility is that traditional gender role values in Mexican American families are advantageous for males. Traditional gendered values in Latino culture have been associated with status and privilege (e.g., freedom to spend time outside the home) and fewer responsibilities (e.g., less involvement in housework) for adolescent and young adult males (Raffaelli & Ontai, 2004). Such values may make egalitarianism in gender role attitudes of boys and young men difficult to foster. It is also possible that attitudes will continue to develop into adulthood and that declines in traditional gender role attitudes will emerge later on.

Together, these findings contribute to research on the normative development of ethnic minority youth by documenting changes in gender role attitudes across the period of adolescence in a sample of Mexican American youth and by identifying individual and contextual characteristics that moderate patterns of change. Importantly, our findings revealed that moderators of these trajectories include factors that are consistent across sociocultural contexts (i.e., adolescents' gender) and ones that are specific to Mexican American youth (i.e., adolescents' nativity) and may be relevant to other immigrant groups. It will be important in future research to examine how gender role attitude development unfolds and identify how individual and context characteristics moderate these trajectories in adolescents from diverse ethnic backgrounds.

### **The Role of Mothers' and Fathers' Gender Role Attitudes**

The family is a critical context for the socialization of gender (Galambos et al., 2009; McHale et al., 2003), and may be particularly important for Latino youth given the emphasis on family in this sociocultural context (Cauce & Domenich-Rodríguez, 2002; Parke & Buriel, 2006). Our findings are among the first to document the interrelations between Mexican American adolescents' and both their mothers' and fathers' gender role attitudes across time. Consistent with the idea that mothers are central in the daily caregiving activities of family life in this sociocultural context (Adams et al., 2007; Umaña-Taylor & Updegraff, 2012), we found *within-person* associations between mothers' and adolescents' gender role attitudes. That is, on occasions when mothers reported more traditional attitudes (compared to their cross-time average) adolescents also reported more traditional attitudes than usual. These findings were not moderated by adolescent gender or nativity, suggesting the wide-ranging importance of mothers' attitudes. Identifying the specific mechanisms linking changes in mothers' and adolescents' attitudes will be an important next step. Social learning perspectives (Mischel, 1966) point to modeling and reinforcement as potential processes through which mothers may socialize their adolescents' gender role attitudes and theorists also highlight the potential roles of coaching and direct instruction, which have rarely been studied (McHale et al., 2003).

A different pattern emerged linking fathers' and adolescents' gender role attitudes: fathers with more traditional attitudes had daughters who also reported more traditional attitudes, but there were not significant links between the attitudes of fathers and sons. These findings



are consistent with a person (i.e., adolescent gender) X process (father attitudes) interaction. Because traditional values imply freedom for boys, including for time spent in the world beyond the family, but keeping girls close to home (Raffaelli & Ontai, 2004), paternal influences in this domain may be more salient for girls than for boys. That is, girls' greater involvement within the family context may increase the likelihood of parental influences on gender role attitude development. A next step is to extend these findings into adulthood to determine whether fathers become more influential for Mexican American sons as they transition into adult roles of father and husband. Also important is to learn whether gender differences in fathers' socialization influences extend to other domains. Relative to mothers, fathers are far less often included in studies of family socialization, particularly, among ethnic minority youth (Parke & Buriel, 2006), and as such, our findings stand as an important contribution to the literatures on family socialization and youth development.

More generally, our findings stand in contrast to those with European American families, where mothers' and fathers' gender role attitudes were associated in similar ways with adolescents' trajectories of gender role attitude development (e.g., Crouter et al., 2007). The different roles of Mexican American mothers' versus fathers' attitudes in explaining adolescents' attitudes may be reflective of larger gender dynamics in this sociocultural context. In particular, more traditional socialization practices, including mothers' primary role in caregiving, daughters' greater responsibilities and involvement at home relative to sons', and fathers' roles as authority figures (Adams et al., 2007; Cauce & Domenich-Rodríguez, 2002; Umaña-Taylor & Updegraff, 2012), may help explain the potentially unique roles of mothers and fathers in the socialization of adolescents' gender role attitudes in Mexican American families. Our findings point to the need for further research on how the roles of mothers and fathers in the socialization of gender-related attitudes may differ across sociocultural contexts.

### Limitations and Future Directions

In the face of its contributions, the limitations of this study point to important directions for future research. First, our sample was drawn from one geographic region, characterized by a strong and established presence of Latinos (of predominantly Mexican heritage) and by close proximity to Mexico. Both of these factors may have implications for the strength of the effects of nativity on gender role attitude development that we observed. It will be important to test the role of nativity on gender role attitude development using a larger, nationally representative sample that includes geographic regions that are both established and new immigrant destinations and that vary in their proximity to Mexico. Second, our findings document how mothers' and fathers' gender role attitudes in two-parent Mexican American families were linked to adolescents' gender role attitudes. Although the majority of Mexican American households in the U.S. include two parents (66%; U.S. Census Bureau, 2013), it will be important to extend this work to examine the role of parents in gender role attitude development within different family structures (e.g., single-parent, divorced). The roles of mothers and fathers in their offspring's gender role attitude development may differ across these different family structures (Galambos et al., 2009). Future research also is needed to document the mechanisms through which mothers and fathers transmit—or fail to transmit-- their attitudes to their offspring. Possible mechanisms

to test include parents' modeling of work and family roles, rewarding children for gendered behavior, or providing instruction and advice. Together, these kinds of studies will increase our understanding of family influences on the development of gender role attitudes in different sociocultural contexts.

Extending the study of gender role attitude development into young adulthood and beyond also will be important in illuminating how gender role attitude development may shape key transitions in work, education, and family formation among Mexican American youth. Trajectories characterized by increases in traditional gender role attitudes in late adolescence among females, for example, may be associated with early transitions into family roles (e.g., marriage, parenthood) and less emphasis on the pursuit of post-secondary education. Less traditional gender role attitudes at critical points in adolescent and young adult development, such as the transition out of high school, may be associated with the greater likelihood of pursuing educational and career goals. Understanding the implications of different trajectories of gender role attitudes for the pursuit of education, family, and career goals will contribute to research on the transition to adulthood by identifying processes that may inform important decisions during this developmental transition.

## Conclusion

This study advanced research on gender development in adolescence, specifically gender role attitude development, in three key ways. First, extending this area of research to ethnic minority youth, our study documented trajectories of gender role attitudes among Mexican American adolescents, a large and rapidly growing subgroup of U.S. youth (U.S. Census Bureau, 2013). Studying Mexican American adolescents provides insights about gender role attitude development in a sociocultural context that has been characterized by an emphasis on the socialization of traditional gender roles (Cauce & Domenich-Rodríguez, 2002), and illuminates sources of within-group differences (Baca Zinn & Wells, 2000). Second, our findings provided support for cultural ecological models (Bronfenbrenner & Crouter, 1983; Garcia Coll et al., 1996), and were consistent with research on European American youth (Crouter et al., 2007), in documenting the interplay among individual and contextual factors in shaping trajectories of gender role attitudes. Notably, it was the combination of adolescents' gender and nativity status that predicted Mexican American adolescents' trajectories, with Mexico-born males exhibiting the most stable and traditional attitudes across adolescence. Third, our findings demonstrated the potentially unique roles of mothers and fathers in the socialization of adolescents' gender role attitudes, and suggested that parental influences on gender development may differ across sociocultural contexts. Future efforts seeking to examine trajectories of gender role attitudes and their implications for development in adolescence and young adulthood will require attention to individual and contextual characteristics as these interact across time and within distinct sociocultural contexts.

## Acknowledgments

We are grateful to the families and youth who participated in this project, and to the following schools and districts who collaborated: Osborn, Mesa, and Gilbert school districts, Willis Junior High School, Supai and Ingleside Middle Schools, St. Catherine of Siena, St. Gregory, St. Francis Xavier, St. Mary-Basha, and St. John Bosco. We

thank Ann Crouter, Mark Roosa, Nancy Gonzales, Roger Millsap, Jennifer Kennedy, Leticia Gelhard, Melissa Delgado, Emily Cansler, Shawna Thayer, Devon Hageman, Ji-Yeon Kim, Lilly Shanahan, Chun Bun Lam, Megan Baril, Anna Solmeyer, and Shawn Whiteman for their assistance in conducting this investigation. Funding was provided by NICHD grants R01HD39666 (Kimberly A. Updegraff, PI) and R01-HD32336 (Ann C. Crouter & Susan M. McHale, Co-PIs) and by the Cowden Fund to the T. Denny Sanford School of Social and Family Dynamics at ASU.

## Biographies

**Kimberly A. Updegraff** earned her Ph.D. in Human Development and Family Studies at the Pennsylvania State University. She is a Professor in the T. Denny Sanford School of Social and Family Dynamics at Arizona State University. Her research focuses on family, gender, and cultural socialization processes in Mexican American families.

**Susan M. McHale** received her Ph.D. in Developmental Psychology from the University of North Carolina at Chapel Hill. She is Professor of Human Development and Director of the Social Science Research at the Pennsylvania State University. Her research focuses on family relationships, roles, and activities, how these are linked to the broader ecology of the family, and their implications for youth adjustment and development.

**Katharine H. Zeiders** earned her Ph.D. in Family and Human Development at Arizona State University. She is a postdoctoral scholar in the T. Denny Sanford School of Social and Family Dynamics at Arizona State University. Her research focuses on sociocultural stressors, physiological processes and cultural values in the lives of Mexican-origin youth.

**Adriana J. Umaña-Taylor** is a Professor of Family and Human Development at Arizona State University in the T. Denny Sanford School of Social and Family Dynamics. She received her PhD in Human Development and Family Studies from the University of Missouri-Columbia. Her work has focused largely on ethnic identity formation, familial socialization processes, culturally informed risk and protective factors, and psychosocial functioning.

**Lorey A. Wheeler** earned her Ph.D. in Family and Human Development at Arizona State University. She is currently an Assistant Research Professor at the University of Nebraska-Lincoln in the Nebraska Center for Research on Children, Youth, Families and Schools. Her research focuses on the interplay among extra-familial contexts, family dynamics and adolescent and young adult development.

**Norma J. Perez-Brena** earned her Ph.D. in the Family and Human Development Department of the T. Denny Sanford School of Social and Family Dynamics at Arizona State University, and she received her M.A. in Developmental Psychology from the San Francisco State University. Her primary interests lie in Latino family dynamics and adolescent development, with a particular focus on immigration and acculturation.

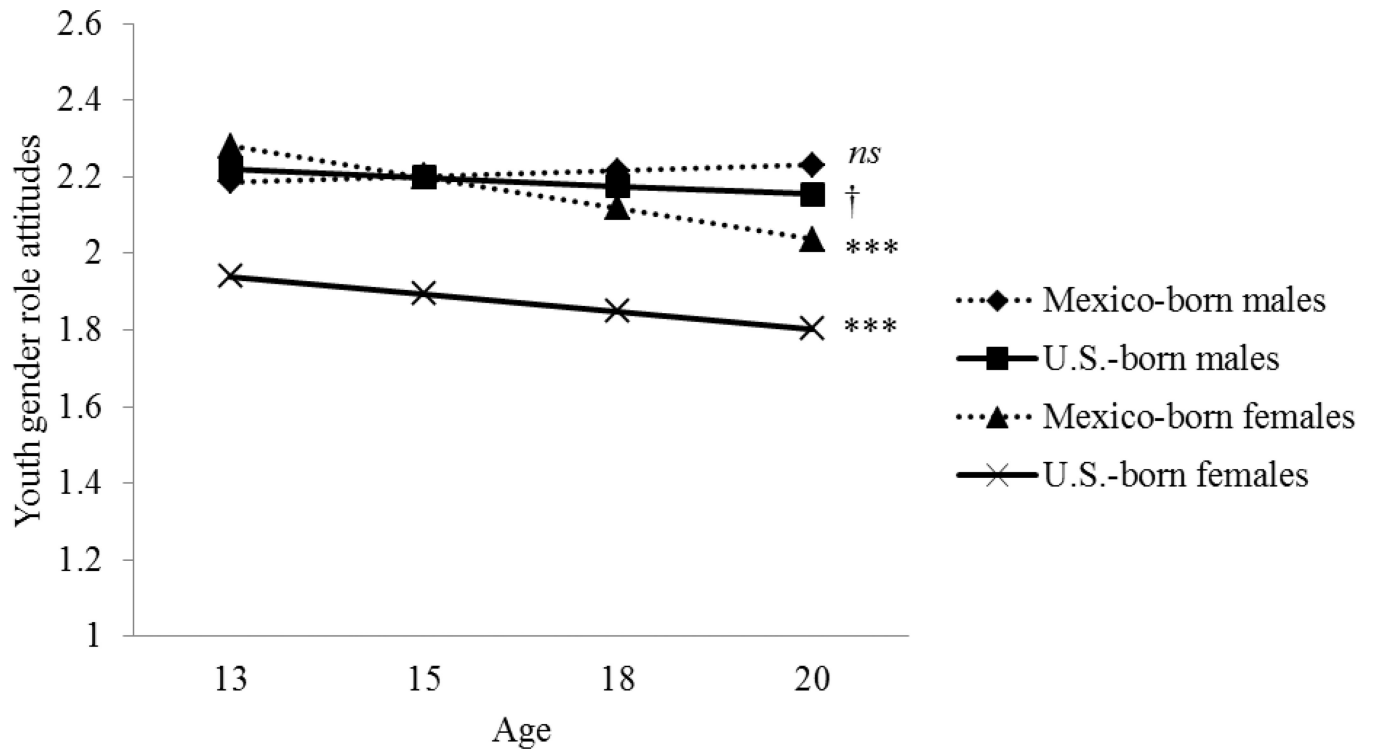
**Sue A. Rodríguez De Jesús** earned her M.S. in the Family and Human Development Department of the T. Denny Sanford School of Social and Family Dynamics at Arizona State University. Her main area of research focuses on family processes, adolescent and

young adult development, with an emphasis on gender and cultural socialization among ethnic minority youth.

## References

- Adams M, Coltrane S, Parke R. Cross-ethnic applicability of the gender-based attitudes toward marriage and child rearing scales. *Sex Roles*. 2007; 56:325–339.
- Baca Zinn, M.; Wells, B. Diversity within Latino families: New lessons for family social science. In: Demo, DH.; Allen, KR.; Fine, MA., editors. *Handbook of family diversity*. New York: Oxford University Press; 2000. p. 252-273.
- Bronfenbrenner, U.; Crouter, AC. The evolution of environment modes in development research. In: Mussen, PH., editor. *Handbook of Child Psychology*. Vol. 1. New York: John Wiley; 1983. p. 358-414.
- Cabrera NJ. The SRCED Ethnic and Racial Issues Committee. Positive development of minority children. *Social Policy Report*. 2013; 27:1–30. Retrieved January 8<sup>th</sup>, 2014 from [http://www.srcd.org/sites/default/files/documents/washington/spr\\_272\\_final.pdf](http://www.srcd.org/sites/default/files/documents/washington/spr_272_final.pdf).
- Cauce, AM.; Domenech-Rodríguez, M. Latino families: Myths and realities. In: Contreras, JM.; Kerns, KA.; Neal-Barnett, AM., editors. *Latino children and families in the United States*. Westport, CT: Praeger Press; 2002. p. 5-25.
- Crockett LJ, Beal SJ. The life course in the making: Gender and the development of adolescents' expected timing of adult role transitions. *Developmental Psychology*. 2012; 48:1727–1738. [PubMed: 22448985]
- Crouter AC, Whiteman SD, McHale SM, Osgood DW. Development of gender attitude traditionality across middle childhood and adolescence. *Child Development*. 2007; 78:911–926. [PubMed: 17517012]
- Eccles J. Who am I and what am I going to do with my life? Personal and collective identities as motivators of action. *Educational Psychologist*. 2009; 44:78–89.
- Enders, CK. *Applied missing data*. New York: The Guilford Press; 2010.
- Fulgini AJ. A comparative longitudinal approach to acculturation among children from immigrant families. *Harvard Educational Review*. 2001; 71:566–578.
- Galambos NL, Almeida DM, Petersen AC. Masculinity, femininity, and sex role attitudes in early adolescence: Exploring gender intensification. *Child Development*. 1990; 61:1905–1914. [PubMed: 2083504]
- Galambos, NL.; Berenbaum, SA.; McHale, SM. Gender development in adolescence. In: Lerner, RM.; Steinberg, L., editors. *Handbook of Adolescent Psychology*. 3rd edition. Hoboken, NJ: John Wiley & Sons Inc; 2009. p. 305-357.
- García Coll CG, Crnic K, Lamberty G, Wasik BH, Jenkins R, Garcia HV, et al. An integrative model for the study of developmental competencies in minority children. *Child Development*. 1996; 67:1891–1914. [PubMed: 9022222]
- Gonzales, NA.; Fabrett, F.; Knight, GP. Acculturation, enculturation, and the psychosocial adaptation of Latino youth. In: Villarruel, FA.; Carlo, G.; Grau, JM.; Azmitia, MJ.; Cabrera; Chahin, TJ., editors. *Handbook of U.S. Latino Psychology: Developmental and community-based perspectives*. Thousand Oaks, CA: Sage Publications; 2009. p. 115-134.
- Grotevant, HD. Adolescent development in family contexts. In: Damon, W., editor. *Handbook of child psychology. Social, emotional, and personality development*. Hoboken, NJ: Wiley; 1998.
- Helms H, Walls JK, Crouter AC, McHale SM. Provider role attitudes, marital satisfaction, role overload, and housework: A dyadic approach. *Journal of Family Psychology*. 2010; 24:568–577. [PubMed: 20954767]
- Hill, J.; Lynch, ME. The intensification of gender-related role expectations in early adolescence. In: Brooks-Gunn, J.; Petersen, A., editors. *Girls at puberty: Biological and psychosocial perspectives*. New York: Plenum; 1983. p. 201-228.
- Hoffman LW, Kloska DD. Parents' gender-based attitudes toward marital roles and child rearing: Development and validation of new measures. *Sex Roles*. 1995; 32:273–295.

- Hoffman L, Stawski RS. Persons as contexts: Evaluating between-person and within-person effects in longitudinal analysis. *Research in Human Development*. 2009; 6:97–120.
- Hoffman, L.; Templin, J. Systematically varying effects in multilevel models: Permissible or Problematic?. Paper session presented at the annual meeting of the Society of Multivariate Experimental Psychology; Norman, OK: Oct. 2011
- Judge T, Livingston B. Is the gap more than gender? A longitudinal analysis of gender, gender role orientation and earnings. *Journal of Applied Psychology*. 2008; 93:994–1012. [PubMed: 18808221]
- McHale S, Crouter A, Whiteman S. The family contexts of gender development in childhood and adolescence. *Social Development*. 2003; 12:125–148.
- McWhirter EH, Hackett G, Bandalos DL. A causal model of the educational plans and career expectations of Mexican American high school girls. *Journal of Counseling Psychology*. 1998; 45:166–181.
- Mischel, W. A social learning view of sex differences in behavior. In: Maccoby, EE., editor. *The development of sex differences*. Palo Alto, CA: Stanford University Press; 1966. p. 57-81.
- National Center for Education Statistics. [Accessed December 18, 2013] Percentage of persons age 25 and over with high school completion or higher and a bachelor's or higher degree, by race/ethnicity and state: 2008-10. 2013. [http://nces.ed.gov/programs/digest/d12/tables/dt12\\_015.asp](http://nces.ed.gov/programs/digest/d12/tables/dt12_015.asp)
- Parke, RD.; Buriel, R. Socialization in the family: Ethnic and ecological perspectives. In: Eisenberg, N.; Damon, W.; Lerner, R., editors. *Handbook of child psychology: Vol. 3: Social, emotional, and personality development*. 6th edn.. New York, NY: Wiley; 2006. p. 429-504.
- Raudenbush, SW.; Bryk, AS. *Hierarchical linear models: Applications and data analysis methods*. 2nd ed.. Thousand Oaks, CA: Sage; 2002.
- Raffaelli M, Ontai LL. Gender socialization in Latino/a families: Results from two retrospective studies. *A Journal of Research*. 2004; 50:287–299.
- Stanik CE, Bryant CM. Marital quality of newlywed African American couples: Implications of egalitarian gender role dynamics. *Sex Roles*. 2012; 66:256–267.
- Umaña-Taylor AJ. Research with Latino early adolescents: Strengths, challenges, and directions for future research. *The Journal of Early Adolescence*. 2009; 29:5–15.
- Umaña-Taylor, AJ.; Updegraff, KA. Latino families in the United States. In: Peterson, GW.; Bush, KR., editors. *Handbook of marriage and family*. 3rd ed.. New York, NY: Springer; 2012. p. 723-747.
- Updegraff KA, McHale SM, Whiteman SD, Thayer SM, Delgado MY. Adolescents' sibling relationships in Mexican American families: Exploring the role of familism. *Journal of Family Psychology*. 2005; 19:512–522. [PubMed: 16402866]
- Updegraff, KA.; Umaña-Taylor, A. Structure and process in Mexican-origin families and their implications for youth development. In: Lansdale, N.; McHale, SM.; Booth, A., editors. *Growing up Hispanic: Health and development of children of immigrants*. Washington, DC: Urban Institute; 2010. p. 97-144.
- U.S. Census Bureau. Hispanic Heritage Month 2013. U.S. Census Bureau News. 2013. Retrieved 3/26/14 from [www.census.gov/.../releases/pdf/cb13ff-19\\_hispanicheritage.pdf](http://www.census.gov/.../releases/pdf/cb13ff-19_hispanicheritage.pdf)
- U.S. Census Bureau. Projections of the total resident population by 5-year age groups, race, and Hispanic origin with special age categories: Middle series, 2001 to 2005. Washington, D.C.: U.S. Census Bureau, Population Division; 2000.
- U. S. Bureau of Labor Statistics. Labor Force Characteristics by Race and Ethnicity. 2012 Aug. p. 2011 Retrieved 1/8/2014 from [www.bls.gov/cps/cpsrace2011.pdf](http://www.bls.gov/cps/cpsrace2011.pdf)
- Valentine S, Mosley G. Acculturation and sex-role attitudes among Mexican Americans: A longitudinal analysis. *Hispanic Journal of Behavioral Sciences*. 2000; 22:104–113.



**Figure 1.**

Trajectories gender role attitudes by adolescents' gender and nativity status. *p*-values for slopes: *ns* = non-significant, † *p* < .10, \*\*\* *p* < .001.

Table 1

Correlations, means, and standard deviations (*SD*) for study variables.

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1. AGRAP1												
2. AGRAP2	.54***											
3. AGRAP3	.34***	.43***										
4. AGRAP4	.49***	.63***	.63***									
5. MGRAP1	.28***	.16*	.18*	.13								
6. MGRAP3	.26**	.28***	.30***	.22*	.65***							
7. MGRAP4	.12	.17*	.18	.15	.52***	.64***						
8. FGRA P1	.27***	.19**	.08	.05	.33***	.36***	.22**					
9. FGRA P3	.23**	.18*	.12	-.03	.29**	.32***	.24*	.61***				
10. FGRA P4	.29**	.10	.10	-.02	.34***	.26**	.23*	.55***	.66***			
11. A Gender	-.14*	-.22	-.34***	-.39***	-.09	-.04	-.06	-.01	-.01	-.08		
12. A Nativity	-.25***	-.19**	-.20*	-.27***	-.32***	-.35**	-.15	-.22**	-.22**	-.22**	.04	
13. Fam SES P1	-.35***	-.27***	-.11	-.05	-.43***	-.43***	-.35***	-.49***	-.45***	-.43***	.09	.39***

	AGRA P1	AGRA P2	AGRA P3	AGRA P4	MGRA P1	MGRA P3	MGRA P4	FGRA P1	FGRA P3	FGRA P4
Overall sample	2.21 (.50)	1.90 (.62)	2.02 (.72)	1.81 (.56)	2.02 (.66)	1.97 (.61)	1.99 (.55)	2.06 (.57)	2.04 (.51)	2.01 (.53)
Males (Mexico)	2.29 (.41)	2.10 (.62)	2.48 (.44)	2.26 (.53)	2.36 (.62)	2.24 (.50)	2.14 (.45)	2.14 (.58)	2.17 (.53)	2.16 (.54)
Males (U.S.)	2.28 (.42)	2.00 (.59)	2.19 (.76)	1.89 (.50)	1.90 (.59)	1.88 (.57)	1.96 (.57)	2.00 (.57)	1.98 (.56)	2.00 (.57)
Females (Mexico)	2.46 (.50)	1.99 (.65)	1.99 (.67)	1.70 (.58)	2.24 (.55)	2.32 (.62)	2.06 (.66)	2.29 (.47)	2.23 (.51)	2.17 (.44)
Females (U.S.)	1.97 (.52)	1.63 (.56)	1.71 (.67)	1.57 (.48)	1.82 (.70)	1.76 (.59)	1.91 (.53)	1.92 (.56)	1.95 (.45)	1.88 (.49)

Note. A = Adolescent, M = Mother, F = Father, Fam = Family; GRA = gender role attitudes; SES = Socioeconomic status. P1 = Phase 1; P2 = Phase 2; P3 = Phase 3; P4 = Phase 4. Gender coded as 0 = male and 1 = female. Nativity coded as 0 = Mexico-born and 1 = U.S.-born.

\*  $p < .05$ ,

\*\*  $p < .01$ ,

\*\*\*  $p < .001$ .



**Table 2**  
 Growth models of adolescents' gender role attitudes and the role of parents' gender role attitudes ( $N = 246$ )

	<i>Mothers<sup>a</sup></i>				<i>Fathers<sup>b</sup></i>			
	<i>Model 1</i> B (SE)	<i>Model 2</i> B (SE)	<i>Model 3a</i> B (SE)	<i>Model 3b</i> B (SE)	<i>Model 4a</i> B (SE)	<i>Model 4b</i> B (SE)	<i>Model 4c</i> B (SE)	<i>Model 4d</i> B (SE)
Intercept	2.20 (.04)	2.19 (.08)***	2.24 (.08)***	2.26 (.08)	2.26 (.08)***	2.29 (.08)		
Family income	-0.18 (.03)***	-0.12 (.04)**	-0.05 (.04)	-0.05 (.04)	-0.08 (.04)	-0.08 (.04)		
Gender	-0.14 (.06)*	0.09 (.11)	0.13 (.11)	0.11 (.12)	0.14 (.11)	0.11 (.11)		
Nativity		0.03 (.10)	0.06 (.10)	0.03 (.11)	0.02 (.10)	-0.01 (.10)		
Nativity X Gender		-0.37 (.14)**	-0.40 (.14)**	-0.36 (.15)*	-0.41 (.14)**	-0.35 (.14)*		
Time	-0.01 (.01)	0.01 (.02)	0.01 (.02)	0.01 (.02)	0.01 (.02)	0.01 (.02)		
Time X Gender	-0.05 (.01)***	-0.10 (.02)***	-0.10 (.02)***	-0.10 (.02)***	-0.10 (.02)***	-0.09 (.02)***		
Time X Nativity		-0.04 (.02)	-0.04 (.02)*	-0.04 (.02)*	-0.04 (.02)	-0.04 (.02)		
Time X Gender X Nativity		0.07 (.03)**	0.08 (.03)**	0.08 (.03)**	0.07 (.03)*	0.07 (.03)*		
Parents' GRA WP			0.15 (.07)*	0.01 (.13)	0.07 (.09)	0.05 (.17)		
Parents' GRA BP			0.19 (.06)**	0.13 (.11)	0.07 (.07)	-0.19 (.12)		
Parents' GRA WP X Nativity				0.18 (.14)		-0.02 (.19)		
Parents' GRA BP X Nativity				-0.01 (.12)		0.21 (.12)		
Parents' GRA WP X Gender				0.06 (.13)		0.08 (.17)		
Parents' GRA BP X Gender				0.12 (.11)		0.27 (.12)*		

\*  $p < .05$ ,

\*\*  $p < .01$ ,

\*\*\*  $p < .001$ .

WP = within-person; BP = between-person; Gender is coded 0 = Male, 1 = female; Nativity is coded 0 = Mexico-born, 1 = U.S.-born.

<sup>a</sup> Sample size is 243 for Models 3a and 3b

<sup>b</sup> Sample size is 244 for Models 4a and 4b

NIH-PA Author Manuscript

NIH-PA Author Manuscript

NIH-PA Author Manuscript