Trajectories of Familism Values Among Mexican American Youth: Family Environment, Economic Hardship, and Perceived Ethnic Discrimination as Predictors

by

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ABSTRACT

Familism values have been shown to have a multitude of benefits for Mexican American youth. Understanding different pathways of the adoption of familism values from adolescence and young adulthood, and predictors of these pathways, is critical. The current study assessed different classes of change in familism values across five waves from fifth grade to young adulthood, and fifth-grade predictors of these profiles, among a sample of 749 Mexican American youth. Univariate and growth mixture modeling was used to determine classes of familism change and found two classes—one class that showed small, insignificant declines across adolescence that accelerated into young adulthood and one class that showed significant declines across adolescence that stabilized and increased into young adulthood. The three-step procedure was then used to examine the following fifth-grade predictors of familism classes: family conflict, family cohesion, harsh parenting, parental acceptance, economic hardship, and perceived ethnic discrimination. Family conflict and perceived ethnic discrimination were significant predictors of familism class membership. Greater family conflict predicted a greater probability of being in the class of significant declines in familism across adolescence that stabilized and increased into young adulthood. Greater perceived ethnic discrimination predicted a greater probability of being in the class of small, insignificant decreases across adolescence that accelerated into young adulthood. Gender moderated the impact of family cohesion. For females, greater father-reported family cohesion predicted a greater probability of being in the class with significant declines during adolescence that stabilized and increased into young adulthood. For males, greater father-reported family cohesion predicted a greater probability of being in the class with slight,

insignificant declines in adolescence that accelerated into young adulthood. Youth nativity moderated the impact of maternal acceptance. For youth born in the U.S., greater mother-reported acceptance predicted a greater probability of being in the class of slight, insignificant declines across adolescence that accelerated into young adulthood. For youth born in Mexico, greater mother-reported acceptance predicted a greater probability of being in the class of significant declines in familism across adolescence that stabilized and increased into young adulthood. Limitations and implications for prevention and future research are discussed.

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Introduction

Due to immigration and high birthrates, Latinos are the fastest growing population, especially among youths, in the United States (U.S.), and individuals of Mexican origin are the largest segment of this population (Ennis, Ríos-Vargas, & Albert, 2011). Latinos, and Latino adolescents in particular, exhibit high rates of physical health conditions (e.g., type 2 diabetes), mental health problems (e.g., internalizing symptoms), and delinquent behaviors (e.g., substance use) compared to their counterparts of other racial and ethnic groups (CDCP, 2005; Choi, Meininger, & Roberts, 2006; Delva et al., 2005). These health risks could be due to the accumulation of stressors related to the turbulence of adolescence, immigration experiences, and marginalized status of ethnic minorities in the U.S. (Compas, Davis, Forsythe, & Wagner, 1987; Gonzales, Knight, Morgan-Lopez, Saenz, & Sirolli, 2002; Breslau, Borges, Hagar, Tancredi, & Gilman, 2009; Gosine & Islam, 2014). In combination, these statistics suggest a critical public health concern for the U.S. and compel the necessity of elucidating protective mechanisms that enhance the resiliency and well-being of Mexican American youth.

One such protective mechanism is familism, which is one of the core values of Mexican culture (Germán, Gonzales, & Dumka, 2009) and emphasizes strong loyalty and reciprocity among family members (Sabogal, Marín, Otero-Sabogal, Marín, & Perez-Stable, 1987). Familism values have been shown to have a widespread protective role, encompassing inverse associations with a multitude of negative outcomes and the promotion of positive youth development (e.g., Zeiders et al., 2013; Gonzales et al., 2008; Perez & Cruess, 2014; Knight, Carlo, Mahrer, & Davis, 2016). Despite this evidence, little is understood about how familism values are internalized by Mexican

American youth. That is, no research to date has examined change in familism values, and what factors might contribute to differential trajectories.

To fill this gap in the literature, the current study uses a sample of Mexican American youth and addresses several aims. First, this study used growth mixture modeling to identify profiles of change in familism values across adolescence and into young adulthood. Second, given the primacy of the family and its role in socializing children to the culture of origin, the family environment is one factor that likely effects the development of familism values. Specifically, this study examined family cohesion, parental acceptance, harsh parenting, and family conflict as predictors of familism trajectories. Third, a low socioeconomic status (SES), and its associated economic hardship, may put undue stress on the family that could lead to its deterioration or cause family members to lean closer to one another; thus, economic hardship was another predictor of familism profiles examined in this study. The final aim of the present study was to explore the impact of perceived ethnic discrimination on familism pathways, as discrimination could precipitate the exploration of or strengthen the identification with a youth's Mexican heritage.

Familism Values

Familism is conceptualized as a value, which refers to desirable end states or modes of conduct that serve as the guiding principles of people's lives (Rokeach, 1973; Fischer & Boer, 2016). Specifically, familism values emphasize strong loyalty, reciprocity, and solidarity among nuclear and extended family members (Sabogal et al., 1987; Calzada, Tamis-LeMonda & Yoshikawa, 2013; Marín & Marín, 1991). Individuals who hold strong familism values prioritize their family's needs above their own

(Schwartz, 2007; Lugo Steidel & Contreras, 2003), which lends itself to strong identification with and attachment to the family (Keefe, Padilla, & Carlos, 1978; Sabogal et al., 1987). It is one of the central tenets of Mexican culture, and typically reigns supreme in an individual's hierarchy of values (Germán et al., 2009; Cooley, 2001; Cauce & Domenech-Rodríguez, 2002).

Familism values provide a guiding principle for behaving that is consistent with familial honor, obligation, and assistance, while avoiding behaviors that would reflect negatively on the family (Gonzales et al., 2008; Suárez-Orozco & Suárez-Orozco, 1995). These supportive, obligation, and referent familism facets were validated in qualitative interviews and a multidimensional measure of familism values (Sabogal et al., 1987; Knight et al., 2010). Supportive familism refers to the perception of close emotional bonds among family members, who are also reliable sources of help. Obligation familism denotes the sense that one has a duty to assist the household and family members. Referent familism is the belief that one's actions should be in line with familial expectations (Sabogal et al., 1987). In addition to these three core dimensions, recent theorization also incorporates respect for parents and other family members as another facet of familism, particularly during childhood and adolescence, as it provides a role for youth within the family to maintain harmony and cohesion (Stein et al., 2014).

These core features of familism may explain its buffering qualities, as well as its promotion of positive youth development. The most prevalent finding has been the negative link between familism and internalizing symptoms, which has been shown cross-sectionally (e.g., Cupito, Stein, Gonzalez, & Supple, 2016; Kline, Killoren, & Alfaro, 2016; Ornelas & Perreira, 2011) and longitudinally (e.g., Lorenzo-Blanco et al.,

2012; Zeiders et al., 2013; Smokowski, Bacallao, & Buchanan, 2009). Familism has also been shown to buffer against depressive symptoms in the face of various stressors in cross-sectional studies (Cheng, Hitter, Adams, & Williams, 2016; Li, 2014; Kennedy & Ceballo, 2013). In addition, several cross-sectional studies have found negative links between familism and externalizing symptoms, such as aggression, conduct problems, and deviant peer association (Gonzales et al., 2008; Smokowski & Bacallao, 2006; Marsiglia, Parsai, & Kulis, 2009; Hurwich-Reiss & Gudiño, 2016). Familism was also found to protect youth who affiliate with deviant peers from engaging in externalizing behaviors, both cross-sectionally (Germán et al., 2009) and longitudinally across the middle-school transition (Roosa et al., 2011).

Externalizing symptoms can often translate into more serious risky behaviors in late adolescence and young adulthood (Hofmann, Richey, Kashdan, & McKnight, 2009). However, Latino adolescents who endorse greater familism values in early adolescence engage in less risky behaviors in late adolescence (Updegraff, Umaña-Taylor, McHale, Wheeler, & Perez-Brena, 2012). Most notably, familism predicted less substance use cross-sectionally (Unger et al., 2002; Telzer, Gonzales, & Fuligni, 2014; DiBello, Gonzales, Young, Rodriguez, & Neighbors, 2016) and across the transition to junior high school (Gil, Wagner, & Vega, 2000). Mexican-origin adolescents who maintain familism values across adolescence had lower substance use risk than those who decreased in familism (Cruz, King, Cauce, Conger, & Robins, 2017). Familism values have also been linked to less sexual risk-taking (Ma et al., 2014; Killoren, Updegraff, & Christopher, 2011; Espinosa-Hernández, Vasilenko, & Bámaca-Colbert, 2015), and less crime, both cross-sectionally and one year later (Sommers, Fagan, & Baskin, 1993; Pabon, 1998).

These early links between familism and risky behaviors may also explain the immediate associations between familism and better health behaviors, better self-rated health, and fewer health conditions in adulthood (Fuller-Iglesias & Antonucci, 2016; Perez & Cruess, 2014).

In addition to protecting against negative outcomes, familism values have been shown to promote positive Latino youth development. Familism has been associated with positive academic outcomes, such as cross-sectionally with grades (Cupito, Stein, & Gonzalez, 2015; Esparza & Sánchez, 2008; Valenzuela & Dornbusch, 1994), cross-sectionally with academic engagement and motivation (Gonzales et al., 2008; Fuligni, Tseng, & Lam, 1999; Aretakis, Ceballo, Suarez, & Camacho, 2015; Fuligni, 2001; Cupito et al., 2015), and longitudinally with educational persistence into young adulthood (Fuligni & Pedersen, 2002; Roche, Ghazarian, & Fernandez-Esquer, 2012). In the same sample as the current study, familism was also found to protect youths' grades against parent-adolescent conflict across the transition to middle school (Vargas, Roosa, Knight, & O'Donnell, 2013).

As well, several studies indicated a positive, cross-sectional link between familism values and prosocial tendencies, or behaviors intended for the benefit of others (Knight, Carlo, Basilio, & Jacobson, 2015; Calderón-Tena, Knight, & Carlo, 2011; Armenta, Knight, Carlo, & Jacobson, 2011). Two studies that used the same sample as the current study also showed familism to prospectively predict prosocial tendencies across the high school transition (Knight et al., 2016; Brittian et al., 2013). Latino youth who endorse greater familism values exhibit higher self-esteem and positive emotions in longitudinal analyses (Smokowski et al., 2009; Fuligni & Pedersen, 2002), as well as

resiliency and overall psychological health in cross-sectional analyses (Morgan Consoli & Llamas, 2013; Campos, Ullman, Aguilera, & Schetter, 2014; Schwartz et al., 2010). This abundant literature on the positive and protective effects of familism justifies the importance of understanding the adoption of these values.

Familism Values Trajectories

Theoretical Background. As a value, familism is incorporated into one's self-concept, which is a broad construct to denote an entire set of embedded identities that correspond with a person's hierarchy of values (Ramarajan, 2014; Hitlin & Piliavin, 2004; Roccas & Sagiv, 2010). These multiple, embedded identities, such as gender, religion, age, socioeconomic status, and even personality traits, can be independent or interdependent from one another, and reinforcing or conflicting (Stryker, 2007), and their relevance and personal importance depend on social contexts (Ashforth, 2001). That is, identities with greater personal importance will be more consistently activated across situations, but any number of identities may reinforce or compete for relevance depending on their salience within any given social context (Ramarajan, 2014; Stryker, 2007). As individuals may hold a hierarchy of values and identities based on their relative internal importance, various values may rise to the top based on how closely it fits with the present context (McConnell, 2011; Stryker & Burke, 2000; Wachter, Ventriglio, & Bhugra, 2015).

Familism values are connected to Mexican American youth's ethnic identity, which refers to the part of one's identity that derives from membership in and emotional attachment to an ethnic group that often share a common heritage and culture (Tajfel & Turner, 1986; Arce, 1981; Phinney & Chavira, 1992; Umaña-Taylor, Gonzales-Backen,

& Guimond, 2009). Familism and other shared cultural values govern the norms and expectations for members of an ethnic group and provide a group identity that is distinguishable from other ethnic groups (Jensen, 2003; Hofstede, 2001; Roccas & Sagiv, 2010; Hitlin & Piliavin, 2004). Indeed, evidence suggests a strong, positive link between ethnic identity constructs and familism among Mexican American youth (Armenta et al., 2011; Umaña-Taylor, Alfaro, Bámaca, & Guimond, 2009; Knight et al., 2011). Despite this social identification, youth must personally internalize and adopt the values of their ethnic group into their own self-concept (Hitlin & Piliavin, 2004; Rohan, 2000), and unique experiences may lead Mexican American youth on different familism trajectories.

One experience that varies among Mexican American youth and influences ethnic identification and related values adoption is acculturation. Current theory suggests that acculturation is a bidimensional, multidomain phenomenon of changes resulting from sustained contact between distinct cultures (LaFromboise, Coleman, & Gerton, 1993; Schwartz et al., 2015; Berry, Trimble, Olmedo, 1986). That is, Mexican American youth can retain or relinquish various elements of their Mexican heritage (the enculturation dimension), while simultaneously acquiring or rejecting elements of their U.S. mainstream culture (the acculturation dimension; Berry & Sam, 1997; Gonzales et al., 2002; Navas et al., 2005; Lopez-Class, Castro, & Ramirez, 2011). Mexican American youth experiencing these dual processes may maintain or strengthen their commitment to familism values and their ethnic identity but may also feel conflicted or challenged to suppress or abandon these heritage values within U.S. mainstream contexts (Phinney, 2003; Burke & Stets, 2009; Benet-Martínez & Haritatos, 2005; LaFromboise et al., 1993).

These acculturation processes may precipitate Mexican American youth to explore the values of their Mexican heritage before internalizing them into their own self-concept. This period of exploration is characteristic of the normative identity development of adolescence (Erikson, 1968; Schwartz, Montgomery, & Briones, 2006; Knight, Jacobson, Gonzales, Roosa, & Saenz, 2009), which involves unexamined, moratorium, and achievement stages (Phinney, 1989). In the unexamined stage, a child has not explored or even realized his/her Mexican ethnicity and may blindly accept the values instilled by their family, which is the transmitter of cultural heritage (Hughes et al., 2006). As Mexican American youth are exposed to contexts outside the family and in mainstream society, such as school and peer contexts (Gonzales et al., 2002; Bernal, Knight, Garza, Ocampo, & Cota, 1990), the acculturation process may lead to a period of exploration, or moratorium. Mexican American youth enter the achievement stage when they gain a clear understanding of the meaning of their ethnicity and commit to a set of values. Although adolescents generally move from unexamined to achievement, this process is not necessarily linear and straightforward, and individuals may fluctuate among the statuses (Bosma & Kunnen, 2001; Phinney & Chavira, 1992; Meeus, Iedema, Helsen, & Vollebergh, 1999), which suggests a divergence of familism pathways. Furthermore, most youth have not reached the achievement stage by the end of adolescence and can continue to experience moratorium and exploration into young adulthood, and throughout the lifespan, with additional exposure to different social contexts and value systems that challenge their familism and other heritage values (Schwartz, Zamboanga, Luyckx, Meca, & Ritchie, 2013; Valde, 1996).

The social gains, as well as biological and cognitive maturation, make adolescence and emerging adulthood ripe for examining these processes that influence familism adoption. Youth are embedded within multiple, interacting ecological contexts, including the distal contexts, such as culture, that govern the more proximal environments, such as family, school, and peers (Bronfenbrenner, 1979; Spencer, 1995; García Coll et al., 1996). Compared to children who are typically limited to the proximal contexts chosen by their families, Mexican American adolescents have greater autonomy in selecting their social settings. Adolescents spend more time with peers and transition into larger, more diverse middle and high schools (Brown, 1990; Knight et al., 2010; French, Seidman, Allen, & Aber, 2006), which exposes them to more U.S. mainstream contexts that precipitate exploration of cultural values (Berry, 1997; Umaña-Taylor, Gonzales-Backen, et al., 2009). At the same time, youth undergo changes in their brain anatomy and function (Blakemore & Choudhury, 2006; Steinberg, 2009), which lead to greater cognitive capabilities, allowing them to understand, evaluate, and reflect on abstract constructs like self-concept, identity, ethnicity, and values (Keating, 2004; Daniel et al., 2012).

This maturation and exploration continues into a developmental period defined by its instability, frequent changes, and evaluation of past and future selves—emerging adulthood (Arnett, 2000; Erikson, 1968; Rindfuss, 1991). The departure from secondary school and the attainment of legal adult status brings about opportunities to try out different educational experiences, vocations, locations, and relationships (Arnett, 2000), which may challenge or reaffirm Mexican American youths' ethnic identity and associated values. Of particular relevance to familism is the re-negotiation of the parent-

child relationship (Aquilino, 2006). Emerging adults gain filial maturity, or the ability to see their parent as an individual outside their role of parent, which leads to increasing reciprocity, communication, warmth, and satisfaction in the relationship (Mayseless & Hai, 1998; Sullivan & Sullivan, 1980). At the same time, parents increasingly allow their emerging adult children to become self-sufficient and independent. If this balance is reached, familism is likely reinforced or strengthened as adult children seek familial support and engender a sense of responsibility to repay their parents for their sacrifices (Steinberg, 1990; Fuligni & Pedersen, 2002). However, youth may also become too independent from their families and embark on this transition with little support from or connection to their family (Arnett, 1998). Alternatively, youth might remain too connected and dependent on their families, which could lead to resentment and conflict, or to little exploration outside the family.

Empirical Support. The theoretical perspectives of acculturation and ethnic identity development within heterogeneous societies and contexts suggest that familism may follow varied trajectories across adolescence for Mexican American youth. Grounded by these perspectives, as well as the advancement of longitudinal growth analytic techniques (Grimm, Ram, & Estabrook, 2017), an emerging field of research over the last decade has examined longitudinal changes in constructs related to acculturation and ethnic identity among Hispanic and Mexican American adolescent samples. Studies have examined these processes from an average change perspective (e.g., Updegraff, Umaña-Taylor, et al., 2012; Pahl & Way, 2006), but have also employed person-centered approaches to identify classes of change (e.g., Schwartz, Des Rosiers, et al., 2013; Knight et al., 2014). The majority of studies have focused on changes in the

dual-axes of acculturation (e.g., Castro, Marsiglia, Kulis, & Kellison, 2010; Cruz et al., 2017) or ethnic identity (e.g., Stoessel, Titzmann, & Silbereisen, 2014; Knight, Vargas-Chanes, et al., 2009). However, a few studies have examined trajectories of cultural values (Knight et al., 2014; Schwartz et al., 2015), including one study that teased out familism from other Mexican values (e.g., Cruz et al., 2017).

Research examining acculturation practices longitudinally suggest Hispanic youth undergo acculturative changes that may vary intraindividually. One study assessed changes in U.S. versus Hispanic cultural practices (i.e., language, food, and holidays) and found that, on average, recent Hispanic adolescent immigrants had initially moderate levels of U.S. practices that converged towards their high and stable Hispanic practices over a two-year span (Schwartz et al., 2016). To determine if there were different classes of change, the same research team used latent class growth analysis and found two profiles of cultural practices—one in which adolescents were initially moderate and increasing in both U.S. and Hispanic practices and one in which adolescents were moderate and stable in both cultural practices (Schwartz et al., 2015). In another sample of Hispanic adolescents, three classes of cultural practices emerged, with some adolescents remaining moderate and stable in both U.S. and Hispanic cultural practices, some starting moderately high and increasing in both dimensions, and some remaining high in U.S. and moderate in Hispanic cultural practices (Schwartz, Des Rosiers, et al., 2013).

Evidence from other examined cultural constructs suggest multiple classes of acculturation among Mexican American adolescents. One study found a group that was moderate and decreasing in English and moderate and stable in Spanish, a group that was

initially high and increasing in English and decreasing in Spanish, and a group that was increasing in both English and Spanish across seven years (Cruz et al., 2017). Another three-year study found one group that was initially high in both languages and increasing in Spanish, one group that was high and stable in English and moderate and stable in Spanish, and a group that was high and slightly declining in English and low and stable in Spanish (Knight, Vargas-Chanes, et al., 2009; Losoya et al., 2008). This same sample also exhibited two classes of ethnic affiliation: one class that primarily affiliated with other Mexicans, and another class that affiliated with both Anglos and Mexicans across the three years of the study (Knight, Vargas-Chanes, et al., 2009; Losoya et al., 2008).

Research on average changes in ethnic identity is consistent with theory that suggests that ethnic identity follows a developmental trend towards achievement across adolescence (Phinney, 1989). In an ethnic heterogeneous sample, esteem for one's ethnic group rose for early and middle adolescents, and ethnic identity exploration increased for middle adolescents (French et al., 2006). Another study of African American and Latino adolescents found an increase in connectedness, or belonging, to one's ethnic group and ethnic identity achievement over a two-year span (Altschul, Oyserman, & Bybee, 2006). Umaña-Taylor, Gonzales-Backen and colleagues (2009) corroborated this trend of increasing ethnic identity, as measured by exploration, resolution, and affirmation (or the emotional attachment to one's ethnic group), across adolescence in an ethnically homogenous Hispanic sample. However, research has been inconsistent as to whether this ethnic identity growth continues on a linear trajectory, stabilizes in adolescence (Pahl & Way, 2006; Kiang, Witkow, Baldelomar, & Fuligni, 2010), or continues to increase into young adulthood.

Beyond the average linear trend towards ethnic identity achievement, studies employing person-centered approaches have identified heterogeneity in ethnic identity trajectories among Mexican American adolescents. In an examination of ethnic identity affirmation and achievement among Mexican American juvenile offenders, three classes of ethnic identity were found; one class was initially moderate in both facets of ethnic identity and increasing in affirmation, another class was high and increasing in both facets, and a third class was moderately low and stable in both facets (Knight, Vargas-Chanes, et al., 2009; Losoya et al., 2008). Another study found that Mexican American adolescents differentially shifted among four profiles of ethnic identity exploration and affirmation across two years, with some maintaining either strong or weak ethnic identity, and some starting with a weak ethnic identity moving toward greater exploration and affirmation (Matsunaga, Hecht, Elek, & Ndiaye, 2010). In another Mexican American sample, Cruz and colleagues (2017) found youth either in high and stable, moderate and increasing, or high and decreasing trajectories of pride in their Mexican identity.

Although familism values are part of acculturation and ethnic identity processes, the current study was better informed by the research examining trajectories of cultural values, specifically, which suggests heterogeneity in pathways. In a sample of recent Hispanic immigrants, two profiles emerged with heritage values consistently higher than mainstream values; however, one profile exhibited high and increasing heritage values and the other profile showed moderately high and stable heritage values over a two-year time period (Schwartz et al., 2015). In the same sample of Mexican American youth as the current study, four cultural values trajectories from fifth to tenth grade emerged (Knight et al., 2014). One group was very high and stable in Mexican heritage values,

and moderate and increasing in U.S. mainstream values. A second group was moderately high in heritage values that were declining over time, and moderate and slightly increasing in mainstream values. A third group had the highest initial heritage values that remained stable and moderately high but declining mainstream values. The fourth group endorsed initially very high levels of heritage values and moderately high levels of mainstream values, both of which declined considerably over time.

Further informing the approach for the current study are studies that teased out familism from other cultural values and examined these pathways into young adulthood. For instance, a recent study isolated familism from other Mexican values, and used latent class growth analysis to identify four classes of familism and U.S. mainstream cultural values among Mexican American adolescents over six years (Cruz et al., 2017). Two groups were moderately high and stable in familism values, but one group was initially low in mainstream values with an accelerating increase and another group was moderately high and stable in mainstream values. Two groups exhibited declines in familism values across adolescence, one with a steep decline and another decreasing slightly, both of which were initially moderate in mainstream values that were decreasing (Cruz et al., 2017).

A couple of studies examined average changes in familism across the emerging adulthood transition. Among a sample of Mexican American youth, familism values were initially high, but decreased from 12 to 17 years old (Updegraff, Umaña-Taylor, et al., 2012). Upon the addition of a third wave in young adulthood, familism values showed a cubic trajectory of familism values that were initially high and then decreasing from ages 12 to 17, before stabilizing and then increasing slightly until age 22 (Padilla, McHale,

Rovine, Updegraff, & Umaña-Taylor, 2016). In an ethnically heterogeneous sample, obligation familism increased from twelfth grade to young adulthood, or one to three years post-high school, and this increase was especially steep for Hispanics (Fuligni & Pedersen, 2002). Together, these studies suggest that Mexican American youth may experience varying pathways of familism values, but, on average, familism values seem to decline across adolescence and then increase again across the transition to young adulthood.

Family Context as a Predictor of Familism Values

Theoretical Background. Given the likelihood that Mexican American youth follow different pathways in the adoption of familism into their personal value systems, the next step would be to consider factors that might lead some youth to maintain or strengthen their familism values and others to wane in familism. Family context is one such factor and is arguably the most critical and proximal context in youth's development (Maccoby, 1992). The family is the first context children experience and is often the only context that endures across adolescence and into adulthood, albeit with shifting makeup and relationships (Harrison, Wilson, Pine, Chan, & Buriel, 1990). For ethnic minority and immigrant youth, such as Mexican Americans, family, particularly parents, is the foremost means of exposure to the values associated with one's ethnicity and cultural heritage, especially in the face of an opposing mainstream society (Umaña-Taylor & Yazedijian, 2006; Cauce & Domenech-Rodríguez, 2002). Indeed, a primary goal of the family is to socialize children to the cultural values that provide behavioral guidance for varying environments (Parke & Buriel, 1998).

Ethnic socialization refers to the messages families relay to their children regarding their ethnic heritage, and cultural values are central to this task (Knight, Bernal, Garza, Cota, & Ocampo, 1993; Hughes et al., 2006). Socialization messages can be direct and overt, such as having verbal conversations about the country of origin, celebrating cultural holidays, and exposing children to cultural artifacts; however, ethnic socialization may be delivered indirectly or covertly, via behaviors and interactions perceived by the child (Hughes et al., 2006; Hughes, Hagelskamp, Way, & Foust, 2009). Furthermore, social learning theory suggests that children learn by direct reinforcement, or via observations of modeled behavior (Bandura, 1977). For example, Mexican American families may transmit familism values to children by directly communicating familial expectations, as well as by emulating these values through familial interactions (e.g., offering assistance to family members; discussing decisions with the family).

The ease with which children internalize familial ethnic socialization messages, including familism values, depends on the family environment. Positive family environments, characterized by acceptance, warmth, and cohesion, facilitate ethnic socialization, whereas risky family environments, characterized by poor parenting, aggression, and conflict, hinder it. Within positive family contexts, youth are more compliant and responsive to family demands (Darling & Steinberg, 1993; Kochanska & Aksan, 1995; Kochanska, Forman, Aksan, & Dunbar, 2005). Children in these positive contexts are also more willing and motivated to accept their family's values as a means to identify with their family and to sustain harmonious family relationships (Grusec & Goodnow, 1994; Kochanska et al., 2005). As well, positive interactions with family members signal to children that they are valued members of a mutually obligatory family

network (Gable & Reis, 2006; Bronstein, 1994). Conversely, adolescents who experience a negative family environment may be more inclined to rebel and reject their family's values (Umaña-Taylor & Guimond, 2010). Youth from risky families may become self-focused (Bronstein, 1994; Steinberg, Lamborn, Darling, Mounts, & Dornbusch, 1994), rather than family-oriented, putting their needs before the family. Thus, positive family environments likely lead Mexican American youth to maintain or increase their familism values, whereas stressful family environments may lead to a devaluation of familism.

Stress and coping processes further inform the influence of the family context in the adoption of familism values among Mexican American youth. Lazarus and Folkman (1984) proposed that individuals identify a situation as stressful based on their appraisals of the situation itself and of the resources available to deal with the situation, and even suggested that culture may play a role in these processes. Sociocultural theory further elaborates that stress and coping responses are the result of many factors related to an individual's proximal social environment and distal cultural context (Aldwin, 2007; Kuo, 2013). Within a positive and supportive family environment, Mexican American youth may be able to rely on their family as a resource to cope with stressful situations, reinforcing familism values. In contrast, negative family environments may be perceived as an unreliable coping resource, as well as a source of stress. Thus, Mexican American youth in these negative family contexts may develop self-reliant coping (Kuo, 2013), or seek external support, such as from teachers or peers, which may lead to the adoption of U.S. mainstream values and the deterioration of familism.

Empirical Support. Research to date has not examined the direct impact of the family context on longitudinal changes in familism, nor the broader processes of ethnic

identity and acculturation among Mexican American youth, with rare exception (Umaña-Taylor & Guimond, 2010). Yet, consistent with the theoretical underpinnings of ethnic socialization and stress and coping within Mexican American family contexts (Knight, Bernal, et al., 1993; Lazarus & Folkman, 1984), the current literature suggests that the family environment does impact familism values. The majority of studies have been cross-sectional (e.g., Supple, Ghazarian, Frabutt, Plunkett, & Sands, 2006), but some studies examined these links longitudinally (e.g., Hernández, Conger, Robins, Bacher, & Widaman, 2014). Family context has been represented by a multitude of variables, most commonly parenting practices, such as harsh parenting, warmth, and monitoring (e.g., Bush, Supple, & Lash, 2004; Hernández et al., 2014), but also variables reflecting the general family setting, such as conflict, cohesion, and support (e.g., Kapke, Grace, Gerdes, & Lawton, 2017; Lorenzo-Blanco et al., 2012), and ethnic socialization (e.g., Knight et al., 2011). Although some studies have specifically examined family contextual influences on familism values (e.g., Tsai, Telzer, Gonzales, & Fuligni, 2015) and cultural values (e.g., Davis, Carlo, & Knight, 2015), much of this literature has concentrated on ethnic identity outcomes (e.g., Knight et al., 2011).

Several cross-sectional and longitudinal studies indicate that familial ethnic socialization is positively linked to ethnic identity, and to familism values specifically. Both in ethnically diverse and Mexican American homogenous samples, ethnic socialization has been shown to positively predict a multitude of ethnic identity variables, such as exploration, affirmation, achievement, ethnic knowledge, ethnic pride and ethnic labeling (Knight, Bernal, et al., 1993; Knight, Cota, & Bernal, 1993; Hughes et al., 2009; Rivas-Drake, Hughes, & Way, 2009; Umaña-Taylor, Bhanot, & Shin, 2006; Umaña-

Taylor & Fine, 2004; Umaña-Taylor, Alfaro, et al., 2009; Quitana & Vera, 1999; Supple et al., 2006; Hernández et al., 2014). The one study that examined longitudinal change in ethnic identity exploration and resolution found that ethnic socialization predicted mean intercepts of exploration and resolution, as well as steeper growth in resolution for boys two to four years later (Umaña-Taylor & Guimond, 2010). Extending this positive link between ethnic socialization and ethnic identity, Knight and colleagues (2011, 2016) found some evidence that ethnic identity, in turn, predicts greater Mexican American values using the same sample as the current study. Two studies also showed that ethnic socialization directly predicts familism cross-sectionally (Tsai et al., 2015), as well as four years later (Umaña-Taylor, Alfaro, et al., 2009).

In line with theory, research has shown that the family environment, defined by parenting practices, moderated the association between ethnic socialization and ethnic identity or familism values, such that positive parenting strengthened these positive links, and poor parenting mollified or reversed them. For instance, at high levels of parental warmth and involvement, ethnic socialization positively predicted ethnic identity, but at low levels, this link became nonsignificant among Mexican American families (Hernández et al., 2014; Supple et al., 2006). Harsh parenting, on the other hand, had an opposing moderation effect, such that at high levels, ethnic socialization was more negatively related to ethnic affirmation (Supple et al., 2006). Examining family obligation values and family assistance behaviors, Tsai and colleagues (2015) did not find the interaction between parental support and ethnic socialization to significantly predict family obligation values; however, this interaction was significant for family assistance behaviors, such that at high and low levels of parental support, ethnic

socialization was related to greater and less family assistance, respectively. The same study found a significant moderation of parent-adolescent conflict, such that at low conflict, ethnic socialization was significantly positively related to both family obligation values and family assistance behaviors, and at high conflict, these associations were nonsignificant (Tsai et al., 2015).

In addition to this moderating role, the family environment has also been shown to directly predict familism values and ethnic identity. To illustrate, general family cohesion and flexibility positively predicted familism values among Latino adolescents (Kapke et al., 2017). Studies examining parenting practices corroborated this trend. Supportive parenting has shown positive associations with ethnic identity and cultural values, including familism specifically, among Mexican origin adolescents (Umaña-Taylor & Guimond, 2010; Davis et al., 2015; Bush et al., 2004). Legitimate authority, parental monitoring, and prosocial parenting were also shown to be significant positive predictors of familism values in Mexican origin youth samples (Bush et al., 2004; Calderón-Tena et al., 2011). Harsh parenting, on the other hand, was not shown to have a significant relation with familism values (Bush et al., 2004), and was shown to negatively associate with ethnic identity affirmation (Supple et al., 2006).

Given that familism is a value the guides family behaviors and dynamics, it is important to recognize that these relations between the family environment and familism values may be bidirectional. Indeed, cross-sectional research has shown that Latino adolescents' familism values impact the family environment. Among Latino adolescents, familism has been shown to negatively predict parent-adolescent conflict (Smokowski & Bacallao, 2006, 2007; Smokowski, Chapman, & Bacallao, 2007; Kuhlberg, Peña, &

Zayas, 2010), and less general family conflict (Lorenzo-Blanco et al., 2012). Conversely, several studies have shown familism to be a positive predictor of family closeness, cohesion, and supportive family relationships among ethnically diverse and ethnically homogenous Mexican American adolescent samples (Campos et al., 2014; Lorenzo-Blanco et al., 2012; Updegraff, McHale, Whiteman, Thayer, & Delgado, 2005). One study of a majority Puerto Rican adolescent sample found different profiles of families defined by cohesion and conflict, and also found that familism significantly predicted the odds of being in a high cohesion and low conflict family over other family types (Peña et al., 2011).

Economic Hardship as a Predictor of Familism Values

Theoretical Background. Although family is considered the most critical proximal context in youth's development (Maccoby, 1992), there are other factors that may influence familism pathways among Mexican American youth. SES is a distal context in which families operate that likely impacts the adoption of familism values. More specifically, it is the perceived economic hardship related to one's SES that may influence family dynamics and familism values. Furthermore, economic hardship, or the perceived ability to pay for necessities and behavioral changes to conserve and expand financial resources (Barrera, Caples, & Tein, 2001; Conger & Elder 1994), may be a better indicator of SES because objective indicators like income and education level are confounded by factors such as inflation, family size, and geographic location, and may not necessarily translate to a subjective appraisal of financial stress (Barrera et al., 2001).

In line with stress and coping theory (Lazarus & Folkman, 1984) and ecological models of development (Bronfenbrenner, 1979; Spencer, 1995), economic hardship may

impact the internalization of familism values via the distress it causes within the family environment. The family stress model posits that parents' appraisals of economic hardship associated with their SES may lead to parental distress. This distress, in turn, may impinge their ability to create a family environment that promotes positive youth development (Conger, Rueter, & Conger, 2000; Conger, Conger, & Martin, 2010). To illustrate, low-income parents may have to work long hours at physically and emotionally demanding jobs, leaving parents stressed and with little time and energy to spend with their children and family to cultivate positive family environments. Beyond the poor emotional and behavioral youth outcomes outlined by the family stress model (Conger et al., 2010), a risky family environment perpetuated by economic hardship may hinder Mexican American parents' ability to socialize and model for their children the values associated with their heritage, such as familism (Grusec & Goodnow, 1994; Gable & Reis, 2006; Umaña-Taylor & Guimond, 2010).

In contrast to the family stress model, ethnic minorities, such as Mexican Americans, may demonstrate resiliency in the face of economic hardship, by cultivating family bonds and familism values. Economic hardship may necessitate a greater reliance on informal kin and family networks for support (Stack, 1974; House, Umberson, & Landis, 1988), possibly because of barriers to formal forms of social assistance (Landale, Orpesa, & Bradatan, 2006). In low-income ethnic minority families, parents may expect greater obedience, respect, and assistance from their children (Bacallao & Smokowski, 2007; Baker, Perilla, & Norris, 2001). Children, sensing their parents' struggle, may assist the family by completing household chores, watching siblings, and/or contributing financially, in order to maintain the well-being of their family, which may reinforce

familism values (Telzer et al., 2014; Gosine & Islam, 2014). Furthermore, ethnic minorities, who are also low SES, may feel marginalized by mainstream society, and, thus, may embrace an oppositional identity that strengthens a sense of loyalty and solidarity with their ethnic group and family (Fordham & Ogbu, 1992; Gosine & Islam, 2014; Holley et al., 2009).

Empirical Support. Given these competing theoretical frameworks to explain the influence of economic hardship on familism, it is not surprising that the limited literature, which lacks assessments of familism trajectories, is also mixed. Some studies supported the resiliency model (e.g., Bush et al., 2004; Simonovits & Kézdi, 2016), and a few studies supported the family stress model (e.g., Padilla et al., 2016). Furthermore, studies linking economic hardship and family environment variables were inconsistent (e.g., Behnke et al., 2008, White, Roosa, Weaver, & Nair, 2009). As well, this research has predominantly used objective measures of SES (e.g., Cansler, Updegraff, & Simpkins, 2012), linking it to familism (e.g., Cortés, 1995), and obligation familism specifically (e.g., Fuligni & Pedersen, 2002), as well as ethnic identity (e.g., Eschbach & Gómez, 1998).

Studies assessing the impact of objective measures of SES and familism values support the resiliency model. For Mexican origin adolescents, parental education was a negative predictor of their familism values (Bush et al., 2004). Similarly, education was negatively related to familism in both parent and child generations of Puerto Rican families (Cortés, 1995). Another study of a majority Mexican origin sample found that U.S.-born youth, who had higher incomes and higher educated parents, exhibited less familism (Smokowski, Rose, & Bacallao, 2008). In a cluster-analysis of Mexican origin

adolescents, SES, as computed by family income and parental education, was negatively linked to being in a family-oriented cluster and positively linked to being in a career-oriented cluster (Cansler et al., 2012). Examining profiles of mother and father involvement among Mexican origin families, another study found that those profiles characterized by incongruent parenting had lower SES (as measured by family income and parental education), but also stronger familism (Updegraff, Perez-Brena, Baril, McHale, & Umaña-Taylor, 2012). That is, although SES was linked to poorer family dynamics, which would be consistent with the family stress model, these families also maintained their familism values in the face of these adversities.

Obligation familism, and the associated family assistance behaviors, may be driving this negative link between SES and familism. In a daily-diary study of an ethnically diverse sample that included Mexican origin adolescents, youth with less educated parents reported more obligation familism values and spending more time assisting the family, but also reported less familial closeness, support, and respect (Hardway & Fuligni, 2006). In another ethnically heterogeneous sample that included Latinos, those from lower income families in the twelfth grade reported larger increases in obligation familism across the transition to young adulthood, compared to those from higher income families (Fuligni & Pedersen, 2002). Mexican children were observed to have much more responsibility for household chores in low compared to middle SES families (Bronstein, 1994). Daily family assistance was more common among Mexican American youth whose mothers reported more fatigue, particularly in families with greater maternal reports of economic hardship (Tsai, Telzer, Gonzales, & Fuligni, 2013).

Further corroborating the resiliency model are studies linking economic hardship or SES with ethnic identity. In a sample of immigrant adolescents, economic hardship was shown to increase the likelihood of identifying with their heritage, rather than host, culture (Simonovits & Kézdi, 2016). Among mixed Hispanic-White adolescents, those of lower income and less parental education were more likely to identify as Hispanic than White (Herman, 2004). Similarly, U.S. Hispanic adolescents from low-income families, as compared to high-income families, were more likely to singularly identify as Hispanic rather than use multiple labels that incorporate mainstream identities (Holley et al., 2009). Hispanic youth who identified as Hispanic in the tenth grade were also less likely to identify as Hispanic in the twelfth grade with increasing family income (Eschbach & Gómez, 1998). Neighborhood poverty was also negatively associated with ethnic identity exploration in a majority Mexican origin adolescent sample (Supple et al., 2006).

Despite this evidence that supports the resiliency model, a few studies showed no relation or supported the family stress model. One study found that education was unrelated to familism among Latina adolescents (Kuhlberg et al., 2010), and two studies involving Mexican origin families suggest there may be a positive link between SES (i.e., income and education) and familism (Romero, Robinson, Haydel, Mendoza, & Killen, 2004; Padilla et al., 2016). Economic hardship either had no impact or a positive impact on parenting practices and family cohesion (Behnke et al., 2008). Objective measures of SES were not predictive of parenting practices or parent-adolescent conflict, but negatively predicted family cohesion and support (Chao & Kanatsu, 2008; Almeida, Molnar, Kawachi, & Subramanian, 2009; Smokowski et al., 2008). An observational

study of parent-child interactions found that families of lower SES exhibited more familial support (Bronstein, 1994).

Other studies assessing the impact of SES and economic hardship on family environment variables also better supported the family stress model. Economic hardship has been linked to poor parenting, such as low warmth, inconsistent discipline, harsh parenting, and parental hostility (Downey & Coyne, 1990; Conger, Ge, Elder, Lorenz, & Simons, 1994; Conger & Conger, 2002), as well as general family distress, such as high conflict and low cohesion (Conger & Conger, 2002; Roosa, Morgan-Lopez, Cree, & Specter, 2002; Simons, Whitbeck, Conger, & Melby, 1990). In a heterogeneous ethnic minority sample that included Latinos, adolescents with less educated mothers reported receiving less cultural socialization and less parental affirmation and belonging (Hughes et al., 2009). Support for the family stress model was also found among Hispanic and Mexican origin samples (Mistry, Vandewater, Huston, & McLoyd, 2002; Parke et al., 2004; Updegraff, Perez-Brena, et al., 2012). For instance, in the same sample of Mexican American families as the current study, economic hardship was shown to lead to poorer parenting via parental depressive symptoms (White et al., 2009; White, Liu, Nair, & Tein, 2015).

Perceived Ethnic Discrimination as a Predictor of Familism Values

Theoretical Background. Considering the unique ecological context of minority youth (García Coll et al., 1996; Spencer, 1995), Mexican American adolescents are likely exposed to another distal factor, perceived ethnic discrimination, that may impact ethnic identity, including the adoption of familism values. Discrimination refers to the beliefs, attitudes, and behaviors that denigrate individuals because of their ethnic group affiliation

(Clark, Anderson, Clark, & Williams, 1998; Pascoe & Richman, 2009). Though some theoretical frameworks suggest that perceived ethnic discrimination would lead to a rejection of familism values (Mead, 1934; Cross, 1991, 1995), more recent models suggest that it would lead to a greater endorsement of familism values (Branscombe, Schmitt, & Harvey, 1999; Cronin, Levin, Branscombe, van Laar, & Tropp, 2012; Stevenson, Cameron, Herrero-Taylor, & Davis, 2002).

In the stage model of ethnic identity development, perceived ethnic discrimination may be considered a crisis, or encounter, which causes an ethnic minority to become aware of their ethnicity, and to reevaluate and explore the meanings and consequences of their ethnic affiliation (Cross, 1991, 1995). This process would likely cause an initial decrease in familism values as Mexican American adolescents explore the meaning of their identity and associated cultural values. However, familism values would then likely increase as these youth make a greater commitment to and resolution of their ethnic identity. An earlier theory of social comparison suggests that ethnic minorities adopt the negative image of their ethnic group associated with discrimination (Mead, 1934; Stryker & Serpe, 1982). In turn, they may disassociate with their ethnic heritage and reject their cultural values, possibly in an attempt to assimilate to U.S. mainstream culture. Indeed, in older generations, U.S. society was more accepting of immigrants who assimilated to mainstream culture.

More recent theorizing suggests that ethnic identity and endorsement of familism values may be a source of resilience in the face of discrimination, particularly in the context of current anti-immigration sentiments towards Mexicans (Viruell-Fuentes, Miranda, & Abdulrahim, 2012). According to the rejection-identification model,

discrimination may motivate minorities like Mexican Americans to become more strongly identified with their ethnic group, and associated cultural values, in order to preserve their well-being (Branscombe et al., 1999; Phinney, 2003; Herman, 2004). In the face of discrimination, Mexican Americans might engage in behaviors that would help raise the status of their group as a whole (Cronin et al., 2012). That is, discrimination may necessitate more intensive intragroup reliance and interaction, thereby strengthening ethnic identity and its associated cultural values (Arce, 1981).

At the familial level too, discrimination may lead to greater reliance on the family for social support and ethnic socialization, reinforcing familism values. The possibility of finding social support external to the family could be thwarted in the face of a discriminatory society; thus, parents might promote familism to ensure their children know they have support (Lorenzo-Blanco et al., 2012). It is also possible that when a family member has experienced discrimination, ethnic socialization, both cultural socialization and preparation for bias, within the family increases (Stevenson et al., 2002; Miller & MacIntosh, 1999). Parents teach their children how to cope with a discriminatory society that devalues their ethnic heritage and culture, while also ensuring youth maintain a positive view of their ethnic group (García Coll et al., 1996; Hughes et al., 2006).

Empirical Support. These theoretical underpinnings strongly suggest a positive link between ethnic discrimination and familism values. Grounded by theory heavily influenced by ethnic identity, the literature has predominantly examined the impact of discrimination on ethnic identity (e.g., Armenta & Hunt, 2009), which has shown mixed evidence. A few studies examined the impact of perceived ethnic discrimination on

Mexican American cultural values (e.g., Berkel et al., 2010), and familism specifically (e.g., Lorenzo-Blanco et al., 2016), which was more in line with the rejection-identification model (Branscombe et al., 1999). The majority of studies were cross-sectional (e.g., Brittian et al., 2015), but some assessed these links longitudinally (e.g., Lorenzo-Blanco et al., 2016), including longitudinal change (e.g., Umaña-Taylor & Guimond, 2010). There is also some evidence suggesting a bidirectional link between discrimination and ethnic identity or cultural values (e.g., Pahl & Way, 2006).

Cross-sectional research testing the impact of discrimination on ethnic identity among Latino adolescents has been mixed. For instance, one study of Latino college students found that perceived discrimination positively predicted ethnic identity (Cronin et al., 2012); however, another study of Mexican-origin adolescents found perceived discrimination to negatively predict ethnic identity (Romero & Roberts, 2003). These mixed effects could be due to the varying impact of group versus personal discrimination, with group-level discrimination supporting the rejection-identification model (Branscombe et al., 1999) and personal-level discrimination more in line with social comparison theory (Mead, 1934). Two studies of Latino youth found group-level discrimination to positively predict ethnic identity (Armenta & Hunt, 2009; Spencer-Rodgers & Collins, 2006), the former of which also found personal discrimination to negatively predict ethnic identity (Armenta & Hunt, 2009). However, both perceived group and personal discrimination were found to be positive predictors of ethnic identity exploration, and, in turn, resolution among Latino youth (Umaña-Taylor & Updegraff, 2007; Brittian et al., 2015).

Findings from longitudinal studies examining this link were also varying. Some studies suggested that the association between discrimination and ethnic identity depends on level of acculturation. For instance, Mexican American adolescent mothers high in Anglo orientation showed a negative relation between perceived ethnic discrimination during their first trimester and ethnic identity ten months postpartum, whereas those low in Anglo orientation showed no association (Derlan et al., 2014). In a sample of Latino college students (83% Mexican origin), perceived discrimination positively predicted ethnic identity across the first year among those low in Anglo orientation, but this relation was weakened among those high in Anglo orientation (Fuller-Rowell, Ong, & Phinney, 2013). Examining longitudinal growth in discrimination and ethnic identity among Latino and Black adolescents over four years, Pahl and Way (2006) found that growth in perceived discrimination was associated with growth in ethnic identity exploration, but not affirmation. Another longitudinal growth study of a majority Mexican origin adolescent sample over three years found perceived discrimination to predict higher mean intercept, but not growth, in ethnic identity exploration for boys; there were no significant effects for girls (Umaña-Taylor & Guimond, 2010).

Only a few studies examined discrimination as a predictor of cultural values, and these studies are more consistent with the rejection-identification model (Branscombe et al., 1999). Among the same sample of Mexican American adolescents as the current study, perceived ethnic discrimination in the fifth grade positively predicted Mexican American cultural values in the seventh grade (Berkel et al., 2010; Brittian et al., 2013). In contrast, Lorenzo-Blanco and colleagues (2016) found that perceived discrimination predicted less familism nine months later, but this study used a sample of Mexican and

Cuban adults, an older generation that might have supported the social comparison theory (Mead, 1934). Another study also found acculturation stress, which included perceived discrimination, but also parent-child cultural conflicts and perception of opportunities in U.S. society, to negatively predict familism among Latino adolescents (Gil et al., 2000).

The Present Study

The current study examined different classes of longitudinal change in familism values among Mexican American youth, extending from late childhood to young adulthood. Furthermore, the present study assessed the impact of family context, economic hardship, and perceived ethnic discrimination on trajectories of familism values. This study contributes significantly to the body of literature on the internalization of cultural values in several important ways. First, the literature on longitudinal change has focused on markers of acculturation, ethnic identity, or a composite of cultural values. Given that familism is one of the core values of Mexican culture and has a pervasive protective function, it is important to understand how it changes among Mexican youth growing up in the U.S, which the current study assessed using sophisticated person-centered analytic techniques (Ram & Grimm, 2009). Second, the literature has predominantly focused on adolescence as the prime developmental period to examine values formation, as well as ethnic identity and acculturation. Yet, theory suggests that emerging adulthood is a unique developmental stage, during which exploration of different roles and value systems intensifies, at least in industrialized societies like the U.S. (Arnett, 2000). As well, little is known about the length of and unique experiences in emerging adulthood among U.S. minorities. The present study was

one of the first to assess pathways of familism across both adolescence and emerging adulthood among Mexican American youth.

Thirdly, the literature of longitudinal trajectories of change in cultural markers has only assessed their outcomes. This novel study explored various factors that might propel Mexican American youth on different pathways of familism, including family environment, economic hardship, and perceived ethnic discrimination. Finally, the current study filled a gap in the literature by examining both mother and father models of the impact of these various factors on youth familism pathways. Parents and their children often have different perspectives of family functioning (Steinberg, 2001; Telzer, 2010; Tein, Roosa, & Michaels, 1994), but the majority of studies fail to include more than one perspective on family life (Collins, 1990; Smetana, 1988). Moreover, the paternal perspective is typically lacking in family systems scholarship, despite the importance of fathers in the lives of children (Marsiglio, Amato, Day, & Lamb, 2000; Cabrera & García Coll, 2004). Mothers and fathers may also respond differently to contextual stressors, such as economic hardship (White et al., 2009), but some evidence suggests that models of economic hardship hold for both mothers and fathers (Conger & Conger, 2002; Conger, Lorenz, Elder, Simons, & Ge, 1993, Conger et al., 1994). Thus, the present study included both parent- and child-reports of family functioning, as well as both parental perspectives of economic hardship in mother- and father-reporter models.

Study Aims and Hypotheses

The current study used recommended analytic guidelines (Ram & Grimm, 2007, 2009) to assess longitudinal change in familism values and whether there are different classes of change, across multiple waves from adolescence to young adulthood (i.e.,

Wave 1=5th grade, Wave 2=7th grade, Wave 3=10th grade, Wave 4=12th grade, and Wave 6=four years post-high school) in a sample of Mexican American youth. Furthermore, this study used three-step specification (Nylund-Gibson, Grimm, Quirk, & Furlong, 2014) to examine the impact of Wave 1 (5th grade) family functioning (i.e., parent-report of acceptance, harsh parenting, and family cohesion; youth-report of family conflict), economic hardship (parent-report), and perceived ethnic discrimination (youth-report) on trajectories of youth familism values across Waves 1-6 in both a mother-report and father-report model. Specific aims and hypotheses are:

1. To assess the average change in familism values in univariate models of growth. I hypothesize that Mexican American youth, on average, will show a decrease in familism values across adolescence (Waves 1-4), but then increase in familism values into young adulthood (Waves 4-6).
2. To examine whether there are multiple classes of change in familism values using growth mixture modeling. Based on theory and the current literature examining longitudinal trajectories of acculturation, ethnic identity, and Mexican cultural and familism values, and given the exploratory nature of growth mixture modeling, I first hypothesize that there will be multiple classes of familism values. In particular, I cautiously hypothesize that all of the classes will have high initial levels of familism values, but that there will be at a minimum, one class that remains stable in familism values, and one class declining in familism values.
3. To test the impact of family context, as measured by parent-report of acceptance, harsh parenting, and cohesion, and youth-report of family conflict, on trajectories of youth familism values. Based on theories of social learning, ethnic

socialization, and coping, as well as the literature showing links between family functioning and familism values, I hypothesize that positive family environments (i.e., high parental acceptance and family cohesion) will predict high and stable or increasing familism values profiles, whereas negative family environments (i.e., high harsh parenting and family conflict) will predict classes of decreasing familism values.

4. To analyze the impact of parent report of economic hardship on trajectories of youth familism values. There are competing theories and mixed empirical evidence regarding the impact of economic hardship on familism values. Thus, a directional prediction was not made, and economic hardship was included to test the competing theories and inconsistent evidence in the literature regarding its role in the adoption of familism values.
5. To assess the influence of youths' perceived ethnic discrimination on their familism pathways. Though there was some competing theories and evidence, the more recent rejection-identification model and studies using the same sample as the current study would suggest that perceived ethnic discrimination leads to stronger familism values. Thus, I hypothesize that greater perceived ethnic discrimination will predict high and stable or increasing familism values profiles.

In addition, final models controlled for gender and nativity of adolescent and parent, and included any interactions between these covariates and the predictors that were significant in isolation to ensure consistency across these groups. Nativity is often used as a proxy for acculturation, but has been criticized in its ability to capture the dynamic nuances of this process (Lara, Gamboa, Kahramanian, Morales, & Bautista, 2005;

Thomson & Hoffman-Goetz, 2009). Although the evidence is mixed as to a link between nativity and familism values (Fuligni & Pedersen, 2002; Zeiders et al., 2013), studies examining various predictors of familism values remained consistent, regardless of nativity (Kiang et al., 2010; Calderón-Tena et al., 2011; Brittian et al., 2013). Gender has also not been shown to be a moderator of familism trajectories (Cruz et al., 2017; Fuligni & Pedersen, 2002). Some evidence suggests gender differences in the link between discrimination and ethnic identity (Umaña-Taylor & Guimond, 2010), but other studies have shown no differences for boys and girls in the link between family context variables and familism values (Calderón-Tena et al., 2011; Umaña-Taylor, Alfaro, et al., 2009).

Methods

Participants

Data were from an ongoing longitudinal study investigating the role of culture and context in the lives of Mexican American families in a large southwestern metropolitan area (Roosa et al., 2008). Participants were recruited when they were in the 5th grade, selected from school rosters that served diverse communities. To be eligible: a) families had to have a child in the fifth grade in a sampled school; b) both mother and child agreed to participate; c) the mother was the child's biological mother, lived with the child, and self-identified as Mexican or Mexican American; d) the child's biological father was of Mexican origin; e) the child was not severely learning disabled; and f) no step-father or mother's boyfriend was living with the child (unless the boyfriend was the biological father of the target child).

The original sample included 749 youths and their mothers, as well as 466 of their fathers who were eligible to participate. At Wave 1 (5th grade), the mean age of youths

(48.1% female) was 10.4 (*SD* = .6) years old. The mean age for mothers and fathers was 35.7 (*SD* = 5.6) and 38.1 (*SD* = 6.3), respectively. The majority of youths were interviewed in English (81.8%) and were born in the U.S. (66.9%), while the majority of mothers and fathers were interviewed in Spanish (72.7% and 76.6%, respectively) and born in Mexico (78.6% and 79.9%, respectively). Family incomes ranged from less than US$5,000 to over US$95,000, with an average income of between US$35,001 - US$40,000. Mothers reported completing an average of 10.3 (*SD* = 3.7) years of education, and fathers reported completing an average of 10.1 (*SD* = 3.9) years of education. Ninety-one percent of fathers and 46% of mothers indicated they were employed full-time.

Procedures

Using a combination of random and purposive sampling, the research team identified communities served by 47 public, religious, and charter schools that represented the economic, cultural, and social diversity of the metropolitan area (see Roosa et al., 2008 for a full description of sampling methods). These schools were chosen from 237 potential schools with at least 20 Latino students in the fifth grade. These potential schools were identified based on the cultural context of the communities for which they serve. Cultural context was operationalized based on: a) the Mexican American population density; b) the percentage of elected and appointed Latino office holders; c) the number of churches providing services in Spanish; d) the number of locally owned stores selling traditional Latino foods, medicines, and household items; and e) the presence of traditional Mexican-style stores (e.g., *carnicerias*). The score from each indicator was standardized and summed to create a community cultural context

score (i.e., level of support for Mexican culture). The 237 school communities were then arranged from lowest to highest. Five "outliers" on the high end of the scale were selected because they represented Mexican ethnic enclaves. An additional 25 schools were systematically selected from the remainder of this list by choosing a random starting point within the 10 lowest scores and selecting every 9th score (school) thereafter to represent the complete spectrum of community contexts. In total, 47 schools from 18 public school districts, the Catholic Diocese, and alternative schools were selected and organized into 42 distinct, noncontiguous communities. The schools sampled were categorized as 44.7% large urban, 6.4% midsize urban, 36.2% large suburb, 6.4% small suburb, 2.1% rural fringe, and 4.3% rural distant (National Center for Education Statistics, 2006). The percent of students eligible for free/reduced lunch at these schools ranged from 7.5% to 100% (M = 67.3%; *SD* = 27.1). The proportion of Latinos ranged from 15% to 98% (M = 70%; SD = .237).

Recruitment materials in Spanish and English were sent home with all 5th grade children in the selected schools. These materials explained the project and asked parents to provide contact information if interested in participating in the study. Over 85% of those who returned contact information were eligible for screening (e.g., Mexican-origin) and 1,028 met eligibility criteria. In-home computer-assisted personal interviews lasting about 2.5 hours were completed by 749 families (mother and youth required, father optional), 73% of the 1,028 families who were eligible. These interviews were conducted by interviewers who received 40 hours of training that included information on project goals and characteristics of the target population. Interviewers read each question and possible responses aloud in the participants' preferred language to reduce problems

related to variations in literacy levels. Interviews were completed between Fall 2004 and Spring 2006 at Wave 1, Fall 2006 and Spring 2008 at Wave 2, Fall 2009 and Spring 2011 at Wave 3, Fall 2011 and Spring 2013 at Wave 4, and Fall 2016 to Fall 2017 at Wave 6. Each participant was paid $45 at Wave 1 (5th grade), which was increased by $5 at each subsequent Wave 2-4. Only youths participated in Wave 6 and were paid $100 for the interview.

Measures

All measures in the present study were obtained from a larger interview battery and were translated from English to Spanish using translation/back translation procedures. Each measure used in the current study is included in the appendices.

Familism Values. Youth completed the Mexican American Cultural Values Scale (MACVS; Appendix A; Knight et al., 2010) at Wave 1 (5th grade), Wave 2 (7th grade), Wave 3 (10th grade), Wave 4 (12th grade), and Wave 6 (four years post-high school). The MACVS was developed out of mainstream and Mexican American values that were identified by focus groups of Mexican American mothers, fathers, and adolescents. The original validation study showed familism to operate equivalently across adult and adolescent reporters, providing some approximation of equivalence for longitudinal assessments; however, due to procedural demands of the projects, measure invariance by language could not be evaluated (Knight et al., 2010). Familism was comprised of 24 items representing four facets of familism: support (6 items; e.g., "Family provides a sense of security because they will always be there for you"), obligations (5 items; e.g., "If a relative is having a hard time financially, one should help them out if possible"), referent (5 items; e.g., "Children should always do things to make their parents happy"),

and respect (8 items; e.g., "No matter what, children should always treat their parents with respect"). Although respect has not always been used in constructs of familism, it was included here because all but one of the items on this subscale refer to respect for parents or other family members. Furthermore, confirmatory factor analyses supported these four subscales as loading onto a second-order factor (Knight et al., 2010). A confirmatory factor analysis that included these four subscales loading onto a second-order familism factor at each wave was modeled. The estimated factor scores were then exported and used to reflect familism values, with higher scores indicating greater familism. Youths reported how much they believed each statement using a 5-point Likert scale, ranging from 1 (*not at all*) to 5 (*completely*). Cronbach's alphas were .82 at Wave 1, .88 at Wave 2, .90 at Wave 3, .91 at Wave 4, and .91 at Wave 6.

Family Cohesion. The family cohesion subscale of the Family Adaptability and Cohesion Evaluation Scales II (FACES II; Appendix B; Olson, Portner, & Bell, 1982) was used to assess the degree of connectedness among family members at Wave 1 (child in the 5th grade). Mothers and fathers responded to this 16-item scale (e.g., "Family members share interests and hobbies with each other" and "Family members feel very close to each other"), on a 5-point Likert scale, ranging from 1 (*almost never or never*) to 5 (*almost always or always*). The family cohesion score was calculated by recoding negatively-valenced items, and then averaging responses from the sixteen items. Higher scores indicated greater family cohesion. The cohesion subscale has been shown to relate to family and individual functioning (Roosa, Dumka, & Tein, 1996), and has shown good internal consistency (Franklin, Streeter, & Springer, 2001) and test-retest reliability over three weeks (Marsac & Alderfer, 2010). The FACES II has demonstrated evidence of

culture and language equivalence (Knight & Hill, 1998). Chronbach's alpha for the current sample was .81 for both mothers and fathers.

Parent Acceptance. When their child was in the fifth grade (Wave 1), mother and father reported on their respective perceptions of their acceptance using the 8-item Acceptance subscale adapted from the Children's Report of Parent Behavior Inventory—Revised (CRPBI—R; Appendix C; Knight, Virdin, & Roosa, 1994; Schaefer, 1965). The items assessed parents' perspectives of their acceptance of their child in the last three months. Sample items included, "You told or showed your child that you like him/her just the way s/he is" and "You made your child feel better after talking over his/her worries with him/her." Response choices were based on a 5-point Likert scale from 1 (*almost never or never*) to 5 (*almost always or always*). The acceptance score for each parent was computed by averaging responses from the eight items, with higher scores indicating higher acceptance. The CRPBI has demonstrated cross-cultural and cross-language equivalence (Knight, Tein, Shell, & Roosa, 1992; Knight et al., 1994; Nair, White, Knight, & Roosa, 2009). Chronbach's alpha for the current sample was .78 for mothers and .74 for fathers.

Harsh Parenting. Also using the CRPBI-R adapted for parents, both mothers and fathers reported on the 8-item Harsh Parenting subscale at Wave 1 when their child was in the fifth grade (Appendix D; Knight et al., 1994; Schaefer, 1965). The items assessed parent's perception of their use of physical discipline and sharp verbal reprimands as a disciplinary technique in the last three months. Sample items included, "You screamed at your child when he/she did something wrong" and "You spanked or slapped your child when he/she did something wrong." Parents responded to items using a 5-point Likert

scale ranging from 1 (*almost never or never*) to 5 (*almost always or always).* The harsh parenting score for each parent was computed by averaging responses from the eight items, with higher scores indicating higher harsh parenting. Again, the CRPBI has demonstrated cross-cultural and cross-language equivalence (Knight et al., 1992; Knight et al., 1994; Nair et al., 2009). Chronbach's alpha for the current sample was .70 for both mothers and fathers.

Family Conflict. The 9-item family conflict subscale of the Multicultural Events Scale for Adolescents (MESA; Appendix E; Gonzales, Tein, Sandler, & Friedman, 2001) was used to assess disagreements and discord at the family level. At Wave 1 (5^{th} grade), youths responded with "happened" or "did not happen" to items relating to cultural conflict (e.g., "People in your family accused you of not being proud of your Mexican background") and general conflict (e.g., "Members of your family hit or hurt each other"). Items that youth indicated as "happened" were summed, with higher scores indicating higher family conflict. The MESA was developed from focus groups with inner city high school students to specifically fit the lifestyle and experiences of culturally diverse, urban adolescents. Gonzales and colleagues (2001) provided evidence for validity in general and for cross-language validity. The family conflict subscale of the MESA has shown adequate test-retest reliability (r = .71 over a two-week span; Samaniego & Gonzales, 1999). Chronbach's alpha in the current sample was .66.

Economic Hardship. Parent report of economic hardship was assessed when their child was in the 5^{th} grade (Wave 1). Mothers and fathers responded to four scales: inability to make ends meet (2 items; "Think back over the past 3 months and tell us how much difficulty you had with paying your bills"), not enough money for necessities (7

items; “Your family had enough money to afford the kind of home you needed”), economic adjustments and cutbacks (9 items; “In the last 3 months, has your family changed food shopping or eating habits a lot to save money?”) and financial strain (2 items; “In the next 3 months, how often do you expect that you and your family will experience bad times such as poor housing or not having enough food?”; Conger & Elder, 1994; Appendix F). Prior psychometric analyses provided support for an overall economic hardship scale based on these four subscales, and also show that it operated equivalently across ethnicities (Anglo vs. Mexican American) and language use (English vs. Spanish; Barrera et al., 2001). Zeiders, Roosa, and Tein (2011) provided support for this economic hardship structure with the current sample. A two-score composite of the four scales was computed with higher scores representing greater economic hardship.

Perceived Ethnic Discrimination. Youths’ perceptions of ethnic discrimination from their teachers and peers were measured as a mean of ten items assessing ethnic discrimination in the form of personal experiences and public regard (Appendix G), with higher scores indicating greater discrimination. At the time of this study’s development, no measure of ethnic discrimination for Mexican Americans was available. Thus, the Adolescent Experiences with Perceptions of Discrimination scale was developed using items adapted from the Racism in the Workplace Scale (Hughes & Dodge, 1997), the Schedule of Racist Events (Landrine, Klonoff, Gibbs, Manning, & Lund, 1995), and the Schedule of Sexist Events (Klonoff & Landrine, 1995), all of which have been validated for other groups. The three items of public regard (e.g., “Kids at school think bad things about Mexicans or Mexican Americans”) used Likert-type response scales ranging from 1 (*not at all true*) to 5 (*very true*), and the two items of personal experiences (e.g., “How

often have kids at school excluded you from their activities, like not inviting you to go out with them, not inviting you to their houses, or not letting you join their games, because you are Mexican or Mexican American?") used Likert-type response scales ranging from 1 (*almost never or never*) to 5 (*almost always or always*). The measure has demonstrated good psychometric properties in samples of Mexican-origin youths (Delgado, Updegraff, Roosa, & Umaña-Taylor, 2011). Cronbach's alpha in the current sample was .74.

Data Analytic Plan

The aims of this study were: 1) to assess average change in familism values; 2) to examine whether there are multiple classes of change in familism; and 3) to test the impact of family context, economic hardship, and perceived ethnic discrimination on the probability of being in different classes of familism trajectories. Analyses were conducted in Mplus 7.4 (Muthén & Muthén, 2015) using the structural equation modeling (SEM) framework.

Missingness. The dataset contained missing data at subsequent waves after baseline due to attrition. To handle missing data, full-information maximum likelihood (FIML; Enders, 2010) was used as it assumes data is missing at random (i.e., missing data is related to other measured variables). Based on attrition analyses that compared participants who had dropped out with those that completed interviews at each subsequent wave on baseline demographic and study variables, several auxiliary variables were included in univariate growth models. These baseline Wave 1 auxiliaries included youth-reported familism support, familism obligation, familism referent, *respeto*, and perceived ethnic discrimination, mother-reported family cohesion, parental

acceptance, harsh parenting, economic hardship, and family income, father-reported family cohesion, economic hardship, and family income, and youth gender, mother nativity, and mother and father language of interview. Univariate growth models of familism values with and without the inclusion of these auxiliaries were compared. These models produced similar parameter estimates and led to the same conclusion as to the best single representation of change in familism. Thus, analyses proceeded without the inclusion of auxiliaries.

Time Metric. Determining the best time metric is a critical component of growth analyses. While discrete time metrics, such as grade, are less computationally intense, they are also less accurate than continuous time metrics, such as age, because they assume every participant was assessed at the exact same moment in time. Univariate growth models using grade as time metric (grades 5^{th}, 7^{th}, 10^{th}, 12^{th}, and 4 years post-high school) centered at 5^{th} grade were fit to the data. These models were then compared to models with age as time metric using the definition variable approach (Grimm et al., 2017). These models produced similar parameter estimates and led to the same conclusion as to the best single representation of change in familism. Thus, analyses proceeded using grade as time metric.

Aim 1. A univariate model was identified in order to determine the best single representation of change in familism values and to ensure there was significant variability in parameter estimates that would warrant class exploration. No-growth, linear, latent basis, quadratic, and spline models with 7^{th}, 10^{th}, and 12^{th} grades and estimated knot points were fitted to the data. Fit criteria included the Bayesian Information Criterion (BIC: the lower, the better fit), the Akaike Information Criterion (AIC: the lower, the

better fit), the chi-square test of model fit (the lower, the better fit), and the parsimony of the model based on the number of parameters (Ram & Grimm, 2007).

Aim 2. After determining the best univariate growth model, growth mixture modeling was used to identify different classes of change in familism values using a step-by-step model-building process (Ram & Grimm, 2009; see Figure 1). In this process, several models were fitted to the data with increasing number of classes. In Model 2, or means models, the variances, covariances, and residual variances were constrained to be equal across classes. In Model 3, or means and covariance models, only the residual variances were constrained to be equal across classes. In Model 4, or means, covariances, and residual variances models, there were no equality constraints. Models that did not converge normally were dropped. Model assessment took a heuristic approach, including: 1) the BIC, the sample size adjusted Bayesian Information Criterion (saBIC), and the AIC (the lower, the better fit); 2) the Vuong-Lo-Mendell-Rubin, Lo-Mendell-Rubin Adjusted, and Bootstrap likelihood ratio tests (VLMR, LMR, and Bootstrap: a small *p*-value indicates better fit); 3) entropy (the higher, the better the classification or distinction among classes); 4) all classes consist of at least 5% of the sample; and 5) the interpretability of the classes.

Aim 3. Predictors of class membership were then assessed through the three-step method (Vermunt, 2010; R3STEP in MPlus). This analytic approach is similar to multinomial logistic regression, but accounts for the classification uncertainty rate in the independent evaluation of the relation between the latent class variable and the predictor variables (Asparouhov & Muthén, 2013). That is, a categorical variable representing the most probable familism class for each observation was created, and then this class

variable was regressed on the predictors (Kim, Vermunt, Bakk, Jaki, & Lee Van Horn, 2016). The fifth-grade continuous predictor variables were centered, as suggested by Aiken and West (1991). Because the three-step method uses listwise deletion, the predictors were centered based on participants with all data available at Wave 1—467 participants in the father model and 745 participants in the mother model. Then, separate mother and father models were tested. In the mother model, mother-report of Wave 1 parent-reported variables, including family cohesion, parental acceptance, harsh parenting, and economic hardship were included as predictors. In the father model, father-report of these variables were used. Wave 1 youth-report of family conflict and perceived ethnic discrimination were included in both mother and father models (see Figure 1).

Covariates included youth gender, youth nativity, and parent nativity. Prior to running the full mother- and father-models, simpler three-step models that included the main and interactive effects between these categorical covariates, coded as 0 or 1, and each continuous predictor centered to the mean were examined in isolation. Any significant interactions were then included in the full mother- and father-models. If these interactions remained significant in the full models, the predicted probabilities of familism class membership at high (one and two standard deviations above the mean), mean, and low (one and two standard deviations below the mean) levels of the continuous predictor variable were calculated for each level of the categorical covariate.

The three-step method has many advantages over the traditional method of conducting a latent class regression analysis, which combines the latent class and the regression analyses into one model (Vermunt, 2010; Asparouhov & Muthén, 2013; Kim

et al., 2016). In the traditional method, the inclusion of the observed predictors can result in a substantial change in the latent classes. Additionally, the inclusion of a large number of predictor variables, such as in the current study, can make the traditional method impractical because the addition and removal of each predictor requires model re-estimation. Finally, the traditional method introduces challenges to the model building logic, which assumes researchers make class decisions before the introduction of predictors.

Results

Preliminary Analyses

Attrition Analyses. Of the initial sample of 749 families at Wave 1, 710 (94.8%) were re-interviewed at Wave 2, 640 (85.4%) at Wave 3, 636 (84.9%) at Wave 4, and 394 at Wave 6 (52.7%). Those families that dropped out at each subsequent Waves 2-6 were compared with those that completed the interview at that wave. Variables tested included all study variables at baseline (familism support, familism obligation, familism referent, *respeto*, family cohesion, parent acceptance, harsh parenting, family conflict, economic hardship, perceived ethnic discrimination) and demographic characteristics (youth gender, income, household structure, youth and parent nativity, language of interview).

Of the 24 baseline variables tested for Waves 2-4 comparisons, only the following significant differences emerged: 1) youth who dropped out of the study at Wave 3 were significantly lower on familism support values than those who were retained ($t(746) = -2.13$, $p < .05$); 2) families who dropped out of the study at Wave 3 were significantly lower on baseline mother-reported family cohesion than those who were retained ($t(747) = -2.28$, $p < .05$); 3) families who dropped out of the study at Waves 3 had significantly

less baseline mother-reported income than those who were retained ($t(730) = -2.96$, $p < .01$); 4) youth who dropped out of the study at Wave 3 were more likely to be born in Mexico than the United States ($\chi^2(1) = 4.68$, $p < .05$); 5) youth who dropped out of the study at Wave 4 were more likely to be male than female ($\chi^2(1) = 8.41$, $p < .01$); 6) families who dropped out of the study at Wave 4 had significantly less baseline income than those who were retained (mother-reported: $t(730) = -3.25$, $p < .001$; father-reported $t(465) = -2.12$, $p < .05$).

For the Wave 6 comparisons, the following significant differences emerged: 1) youth who dropped out were significantly lower on baseline familism support than those who were retained ($t(746) = -2.44$, $p < .05$); 2) youth who dropped out were significantly lower on baseline familism obligation than those who were retained ($t(747) = -2.62$, $p < .01$); 3) youth who dropped out were significantly lower on baseline *respeto* than those who were retained ($t(747) = -2.36$, $p < .05$); 4) youth who dropped out had mothers who reported significantly less baseline family cohesion than those who were retained ($t_{mom}(747) = -2.11$, $p < .05$); 5) youth who dropped out had mothers who reported significantly less baseline acceptance than those who were retained ($t(746) = -2.67$, $p < .01$); 6) youth who dropped out had mothers who reported significantly more baseline harsh parenting than those who were retained ($t(746) = 2.73$, $p < .01$); 7) youth who dropped out had mothers and fathers who reported significantly more baseline economic hardship than those who were retained ($t_{mom}(743) = 3.65$, $p < .001$; $t_{dad}(465) = 2.70$, $p < .01$); 8) youth who dropped out reported significantly more baseline perceived ethnic discrimination than those who were retained ($t(747) = 2.56$, $p < .01$); 9) youth who dropped out were more likely to be male ($\chi^2(1) = 8.98$, $p < .01$); 10) youth who dropped

out came from families whose mothers and fathers reported significantly less baseline income than those who were retained ($t_{mom}(730)=-4.53$, $p < .001$; $t_{dad}(465) = -4.03$, $p < .001$); 11) youth who dropped out had mothers who were significantly more likely to have been born in Mexico than those who were retained (χ^2 (1) = 9.10, $p < .01$); 12) youth who dropped out had mothers and fathers who were significantly more likely to complete baseline interviews in Spanish (χ^2_{mom} (1) = 6.93, $p < .01$; χ^2_{dad} (1) = 4.99, $p < .05$).

Confirmatory Factor Analysis of Familism. A longitudinal confirmatory factor analysis that included the four underlying indicators of support, obligation, referent, and *respeto* as loading onto a second-order familism factor at each wave was fitted to the entire data. The model fit the data well [χ^2 (144) = 275.79, $p < .001$; RMSEA = .035, 90% CI [.029, .041]; CFI = .977; TLI = .970; SRMR = .077]. The standardized estimated familism factor scores for support, obligation, referent, and respect were, respectively, .684, .667, .792, .692 at Wave 1 (5th grade); .775, .771, .834, .722 at Wave 2 (7th grade); .742, .776, .842, .741 at Wave 3 (10th grade); .783, .796, .845, .757 at Wave 4 (12th grade); and .763, .792, .859, .751 at Wave 6 (young adulthood, YA). These standardized factor loadings were all significant at the .001 level, and suggest that the four subscales are reasonable indicators for familism at each wave. These factor scores were then exported to create a familism variable at each wave, which were used in the larger growth models.

Descriptive Statistics. Descriptive statistics on all available study variables, including means, variances, skewness, and kurtosis, before missing data were handled are presented in Table 2. Skewness and kurtosis were assessed to ensure study variables were

normally distributed. None of the variables exceeded conventional cutoffs of two for skewness and seven for kurtosis (West, Finch, & Curran, 1995). Youth reported strong familism values in 5th, 7th, 10th, and 12th grade, and in young adulthood, though the means decreased slightly over time (M = 4.67, 4.58, 4.46, 4.43, and 4.28 in 5th, 7th, 10th, 12th, and YA, respectively, with a highest possible score of 5).

Correlations Among Study Variables. Correlations between study variables were assessed and presented in Table 3. Familism values were significantly and positively correlated across Waves 1-6 (r_{range} = .17 to .70, p < .01*)*. None of the predictor variables at Wave 1 were significantly correlated with familism values at any wave, except the following: a) youth-reported perceived ethnic discrimination was significantly and positively associated with their familism values at Waves 2-6 (r_{wave2} = .10, p < .05; r_{wave3} = .14, p < .01; r_{wave4} = .11, p < .05; r_{wave6} = .08, p < .05); b) mother-reported harsh parenting was significantly and positively related to Wave 4 familism values (r = .09, p < .05); c) mother-reported family cohesion was significantly and negatively correlated with Wave 3 familism (r = -.07, p < .05); d) youth-reported family conflict was significantly and negatively correlated with Wave 2 familism (r = -.08, p < .05). A few of the predictor variables were significantly correlated with each other. Mother- and father-reports of economic hardship and family cohesions were all significantly, negatively related to each other (r_{range} = -.32 to -.13, p < .01). Mother-reports of acceptance and family cohesion (r = .25, p < .01) and father-reports of acceptance and family cohesion (r = .37, p < .01) were significantly and positively associated. Overall, these correlations were not very strong, suggesting they were not measuring the same construct; thus, each of the predictors will remain in the models.

Hypothesis Testing

Aim 1. Table 4 presents the estimated parameters and fit criteria from the no-growth, linear, latent basis, quadratic, and spline univariate growth models of familism values. Based on the fit criteria, the quadratic model was chosen as the best fitting univariate, or average, model of change in familism values (χ^2 = 98.83, AIC = 272.48, BIC = 318.66, saBIC = 286.91), which is represented in Figure 3. The quadratic growth model had a significant mean intercept (b_0 = 4.668, *SE* = .009, $p < .001$), mean linear slope (b_1 = -.042, *SE* = .004, $p < .001$), and mean quadratic slope (b_2 = .00068, *SE* = .00029, $p < .05$). The quadratic model showed a high level of familism in the fifth grade that was decreasing across adolescence and young adulthood, which was slowing down. The variances of the intercept (Ψ_{11} = .027, $p < .001$), linear slope (Ψ_{22} = .0041, $p < .001$), and quadratic slope (Ψ_{33} = .000019, $p < .001$) were also significant, warranting growth mixture modeling to explore classes of familism trajectories.

Aim 2. The step-by-step model building process for growth mixture modeling was carried out (see Figure 3). Due to non-convergence problems related to the small variance in the quadratic term, this parameter was fixed at zero. Table 5 presents proportions, fit statistics, entropy, and likelihood ratio tests of the univariate Model 1, and the Model 2, Model 3, and Model 4 for the two- and three-class solutions. The two-class solution of Model 2, in which the variances, covariances, and residual variances were constrained to be equal across classes, was identified as the best representation of familism trajectories based on the assessment criteria of fit statistics (AIC = 269.24; BIC = 320.05; saBIC = 285.12), likelihood ratio tests (VLMR, LMR, and Bootstrap all $p < .001$), entropy (.63), class proportions (79% and 21%), and interpretability. On the

surface, some of the 3-class models looked promising because of lower information criteria compared to the 2-class solutions, and low *p*-values for the approximate likelihood ratio tests; however, these models were found to be extremely sensitive to starting values (different starting values yielded different solutions). In an attempt to stabilize the models, starting values for the means of the latent variables were provided and 100 sets of random starting values were used for other model parameters. The results of these steps indicated that minor changes in the provided starting values led to different model solutions. Thus, we concluded that the 3-class models were too unstable for them to be supported. In the chosen 2-class model, the entropy score was weaker than desired; however, the other assessment criteria were strong, and the interpretation of the two-class solution aligned with theoretical underpinnings and, thus, determined to better represent variability in familism trajectories than random variability.

Table 6 includes the parameter estimates for the two classes, which are also presented in Figure 4. Both classes had high mean intercepts of familism values (Class 1: b_0 = 4.672, *SE* = .012, $p < .001$; Class 2: b_0 = 4.649, *SE* = .025, $p < .001$). However, Class 1 was decreasing slightly and insignificantly, but this decrease was significantly speeding up across time (79% of the sample; b_1 = -.0136, *SE* = .007, $p = .068$; b_2 = -.00152, *SE* = .0006, $p < .01$). In contrast, Class 2 was significantly decreasing in familism values across adolescence, which was significantly slowing down before increasing into young adulthood (21% of the sample; b_1 = -.1464, *SE* = .022, $p < .001$; b_2 = .0088, *SE* = .0012, $p < .001$). These two classes were labeled based on the shape of the curve ("initial /linear /quadratic" values); thus, Class 1 was labeled "high/stable/

accelerating decline" and Class 2 was labeled "high/decreasing/decelerating to increasing."

Aim 3. The simple isolated three-step models of the main and interactive effects between each of the six centered Wave 1 (5th grade) predictors—parent-reported family cohesion, acceptance, harsh parenting, and economic hardship, and youth-reported family conflict and perceived ethnic discrimination—and each of the three covariates—youth gender, youth nativity, and parent nativity—only revealed that mother-reported acceptance by child nativity was significant (β = -1.31, *SE* = .59, $p < .05$). Father-reported family cohesion by gender was close to significant (β = 1.10, *SE* = .51, $p = .057$). Thus, father-reported family cohesion by gender interaction was then included in the full father-model and mother-reported acceptance by child nativity interaction was included in the full mother-model.

Table 7 presents the mother- and father-models of the three-step method including the six centered Wave 1 (5th grade) predictors of class membership, the three covariates, and the two significant interactions. Parameters are in the logit metric, or the natural logarithm of the odds, of being in Class 1 ("high/stable/accelerating decline") versus Class 2 ("high/decreasing/decelerating to increasing"). In both the mother- and father-models, only youth-reported family conflict and perceived ethnic discrimination were significant predictors of class membership, even after controlling for youth gender, youth nativity, and parent nativity. Greater family conflict significantly predicted a greater probability of membership in Class 2 ("high/decreasing/decelerating to increasing") versus Class 1 ("high/stable/accelerating decline"; β_{mom} = .25, *SE* = .10, $p < .05$; β_{dad} = .33, *SE* = .14, $p < .05$). Greater perceived ethnic discrimination significantly predicted a

greater probability of membership in Class 1 (“high/stable/accelerating decline”) versus Class 2 (“high/ decreasing/decelerating to increasing”; $\beta_{mom} = 1.0$, $SE = .40$, $p < .05$; $\beta_{dad} = .94$, $SE = .36$, $p < .01$).

In addition, the two interactions were significant in their respective models. First, the father-reported family cohesion by gender interaction was significant in the full father-model ($\beta = 2.0$, $SE = .98$, $p < .05$). Thus, the predicted probability of being in Class 1 (“high/stable/accelerating decline”) versus Class 2 (“high/decreasing/decelerating to increasing”) at one and two standard deviations above the mean, at the mean, and one and two standard deviations below the mean of father-reported family cohesion were calculated for males and females (see Figure 5). For females, as father-reported family cohesion increased, the probability of being in Class 1 (“high/stable/accelerating decline”) versus Class 2 (“high/decreasing/decelerating to increasing”) increased slightly from .19 to .32. This suggests that across levels of father-reported family cohesion, females had a greater probability of being in Class 2 (“high/decreasing/decelerating to increasing”) versus Class 1 (“high/stable/accelerating decline”), regardless of level of father-reported family cohesion. For males, as father-reported family cohesion increased, the probability of being in Class 1 (“high/stable/ accelerating decline”) versus Class 2 (“high/decreasing/decelerating to increasing”) decreased from .78 to .11. This suggests that at low levels of father-reported family cohesion, males had a greater probability of being in Class 1 (“high/stable/accelerating decline”) versus Class 2 (“high/decreasing/ decelerating to increasing”); however, at high levels of father-reported family cohesion, males had a greater probability of being in Class 2 (“high/decreasing/decelerating to increasing”) versus Class 1 (“high/stable/accelerating decline”).

Second, the mother-reported acceptance by youth nativity interaction was significant (β = 1.49, *SE* = .66, $p < .05$). Thus, the predicted probability of being in Class 1 ("high/stable/accelerating decline") versus Class 2 ("high/decreasing/decelerating to increasing") at one and two standard deviations above the mean, at the mean, and one and two standard deviations below the mean of mother-reported acceptance were calculated for U.S.-born and Mexican-born youth (see Figure 6). For U.S.-born youth, as mother-reported acceptance increased, the probability of being in Class 1 ("high/stable/ accelerating decline") versus Class 2 ("high/decreasing/decelerating to increasing") decreased slightly from .29 to 21. This suggests that across levels of mother-reported acceptance, U.S.-born youth had a greater probability of being in Class 2 ("high/ decreasing/decelerating to increasing") versus Class 1 ("high/stable/accelerating decline"). For Mexican-born youth, as mother-reported acceptance increased, the probability of being in Class 1 ("high/stable/accelerating decline") versus Class 2 ("high/decreasing/decelerating to increasing") increased from .09 to .65. This suggests that at low levels of mother-reported acceptance, Mexican-born youth had a greater probability of being in Class 2 ("high/decreasing/decelerating to increasing") versus Class 1 ("high/stable/accelerating decline"); however, at high levels of mother-reported acceptance, Mexican-born youth had a greater probability of being in Class 1 ("high/ stable/accelerating decline") versus Class 2 ("high/decreasing/decelerating to increasing").

To account for potential collinearity among the predictors, I ran a series of follow-up analyses which isolated each predictor's impact on class membership. As in the larger mother- and father- models, these simpler models did not show any significant effects of

the mother- or father-reported predictors—family cohesion, acceptance, harsh parenting, and economic hardship—on class membership. In addition, youth-reported family conflict did not significantly predict class membership in the isolated model, but youth-reported perceived ethnic discrimination continued to significantly predict a greater probability of being in Class 1 ("high/stable/accelerating decline") versus Class 2 ("high/decreasing/decelerating to increasing"; $\beta = .65$, $SE = .32$, $p < .05$).

Discussion

Familism values are one of the central tenets of Mexican culture and comprise strong loyalty, reciprocity, and solidarity among family members (e.g., Sabogal et al., 1987; Calzada et al., 2013; Germán et al., 2009). These values have been linked to a multitude of benefits, including inverse associations with internalizing and externalizing symptoms (e.g., Cupito et al., 2016; Zeiders et al., 2013; Gonzales et al., 2008), substance use (e.g., Unger et al., 2002; Telzer et al., 2014; Gil et al., 2000), and other risky behaviors (Killoren et al., 2011; Sommers et al., 1993), as well as positive links to academic outcomes (e.g., Gonzales et al., 2008; Cupito et al., 2015), prosocial tendencies (e.g., Knight et al., 2016; Calderón-Tena et al., 2001), and psychological wellbeing (Smokowski et al., 2009; Schwartz et al., 2010). Given these considerable benefits, the current study sought to examine differing pathways of the adoption of familism values across five waves from fifth grade to young adulthood, as well as fifth-grade factors that predict these pathways, in a large longitudinal sample of Mexican American youth.

Generally, it was expected that familism values would decrease across adolescence and then increase again into young adulthood, but that there would be variability in this pathway, with at least one class that was high and stable in familism

values, and one class that was decreasing in familism values. Further, positive family contexts in the fifth grade, as measured by family cohesion and parental acceptance, were expected to be predictors of a high and stable familism pathway, whereas negative family environments in the fifth grade, as measured by family conflict and harsh parenting, were expected to be predictors of a decreasing familism pathway. Economic hardship was examined as a fifth-grade predictor of familism trajectories to test competing theories and inconsistent findings in the literature regarding its role in the adoption of familism values. Perceived ethnic discrimination in the fifth grade was expected to predict a trajectory of familism values that was high and stable.

Univariate and growth mixture models were tested to determine the best fitting model of change in familism values, and then fifth grade predictors of familism classes were examined using the three-step method. A quadratic model was found to be the best representation of average change in familism values, such that there was an initially extremely high level of familism in the fifth grade that was decreasing, but slowing down and stabilizing, across adolescence and young adulthood. Given the significant variability in this univariate model, growth mixture modeling was employed, and a two-class solution was found to be the best fitting model. Although both groups started at similarly extremely high levels in the extent to which they endorsed familism values in the fifth grade, Class 1 (labeled "high/stable/accelerating decline") showed a pattern of small decline across time that was nonsignificant in middle school with slight, but significant, acceleration as youth moved from high school into young adulthood, and that remained generally higher over time than Class 2. In contrast, Class 2 (labeled "high/decreasing/ decelerating to increasing") showed significant, albeit small, declines as youth moved

into adolescence; these declines stabilized and began to increase as youth moved from high school into young adulthood, but stayed generally lower over time than Class 1. Thus, although both classes showed a pattern of decreasing familism, as hypothesized, Class 2 declines were most pronounced in the middle adolescent years and Class 1 declines were most pronounced in the transition from late adolescence to young adulthood. It should be noted, however, that familism values still remained high for both groups over time (i.e., above 4 = *very much*, on a scale from 1 to 5, where 5 = *completely*).

A set of variables assessed when youth were in the fifth grade were then tested to determine whether they predicted these familism pathway profiles across adolescence and young adulthood. Among fifth grade family context variables, only family conflict had a significant main effect on class membership, such that greater family conflict in the fifth grade predicted a greater probability of being in Class 2 (high/decreasing/decelerating to increasing). Although family cohesion in the fifth grade did not predict class membership overall, gender moderated this association. For males, lower levels of father-reported family cohesion predicted a greater probability of being in Class 1 (high/stable/ accelerating decline), whereas higher levels of family cohesion predicted a greater probability of being in Class 2 (high/decreasing/decelerating to increasing). Across levels of father-reported family cohesion, females had a greater probability of being in Class 2 (high/decreasing/decelerating to increasing).

Among fifth grade parenting practices, harsh parenting and parental acceptance had no impact on familism class membership overall. However, youth nativity moderated the relation between maternal acceptance and familism class. For Mexican-born youth,

lower levels of mother-reported acceptance predicted a greater probability of being in Class 2 (high/decreasing/decelerating to increasing) and higher levels of mother-reported acceptance predicted a greater probability of being in Class 1 (high/stable/accelerating decline). Across levels of mother-reported acceptance, U.S.-born youth had a greater probability of being in Class 2 (high/decreasing/decelerating to increasing).

Familism Values Trajectories

Consistent with expectations, familism values, on average, were initially high and decreasing across adolescence; however, inconsistent with expectations, familism values then stabilized, rather than increased, into young adulthood, which was an average of 22 years in the current sample (see Table 8). There was variability in this trajectory, such that two classes of familism values emerged, which was also in alignment with hypotheses. Class 1 showed a slight and insignificant decline in familism values across middle adolescence that steepened from high school to young adulthood. Class 2, on the other hand, showed a steeper and significant decrease in familism values across middle adolescence that stabilized and then increased into young adulthood, but still remained lower than Class 1 across time.

Since familism is one of the central tenets of Mexican culture (e.g., Germán et al., 2009), it was not surprising that these values were endorsed very highly when youth were in the fifth grade, both in the average trajectory and two change classes, and generally remained high with some decline across adolescence and young adulthood. The absolute endorsement of familism values among Mexican American fifth grade children has consistently been documented in the literature (e.g., Romero & Ruiz, 2007; Berkel et al., 2010). At this stage of development, Mexican American children are less likely to have

examined or challenged their heritage values (Hughes et al., 2006). They are typically limited to their proximal contexts chosen by their families and, thus, generally spend most of their time with family (Brown, 1990; French et al., 2006). As well, they have not developed the cognitive abilities to evaluate abstract constructs, such as values (Keating, 2004). Given these limitations and that families are the transmitter of heritage values through ethnic socialization (Knight, Bernal, et al., 1993; Hughes et al., 2006), Mexican American children may blindly accept the value messages associated with their cultural group and relayed to them by their families, and, thus, endorse familism at extremely high levels.

During middle adolescence, it was expected that Mexican American youth's endorsement of familism values would decrease, which was evidenced in the average change model and both classes of familism, albeit with variation in the rate of the decline. These declines in familism values is also evidenced in the limited literature assessing average familism pathways (Updegraff, Umaña-Taylor, et al., 2012; Padilla et al., 2016). Adolescents broadly transition into larger, more diverse middle and high schools, and into spending more time with peers than with family (e.g., Bernal et al., 1990; Brown, 1990; Knight et al., 2010). As well, they are making cognitive gains that allow them the capacity to assess abstract constructs like values (Keating, 2004). These developmental shifts also expose Mexican American youth to U.S. perspectives, which might precipitate acculturation processes that challenge the values instilled by their families (Hughes et al., 2006). During this period of exploration, Mexican American adolescents might feel conflicted or challenged to suppress or abandon their heritage values within U.S. mainstream contexts as they try to reconcile the opposing cultural values of their dual

ethnic identities (e.g., Phinney, 2003; Burke & Stets, 2009, Gonzales et al., 2002; Umaña-Taylor, Gonzales-Backen, et al., 2009). Supporting this identity exploration underpinning of the decline in familism values are several person-centered longitudinal studies showing increases in ethnic identity exploration across adolescence (French et al., 2006; Altschul et al., 2006; Umaña-Taylor, Gonzales-Backen, et al., 2009).

Consistent with hypotheses, there were variations in the rate of decline across adolescence, with Class 1 showing a slight and insignificant decline and Class 2 showing a steeper and significant decline. These differences in the rate of decline in familism values between these two classes may be due to varying environmental factors. As found in this study, Mexican American youth in Class 1 had less family conflict, which may have given them less reason to challenge their families, prompting them to retain their familism values. These youth also perceived greater ethnic discrimination, which may have prompted them to rely more on their family and cultural group, reinforcing their familism values. In contrast, Mexican American youth in Class 2 experienced greater family conflict, which may have pushed them to challenge familism values earlier in adolescence. They also perceived less ethnic discrimination, which may have allowed them greater comfort in exploring U.S. contexts outside the family, thereby exposing them to ideologies that challenge their familism values.

In line with the finding of Class 1 remaining relatively more stable and higher in familism values compared to Class 2 during middle adolescence are several studies examining longitudinal change in Mexican American cultural values during this same developmental period. Two prior studies that assessed parallel processes of Mexican and American of cultural values found similar stable and decreasing patterns of familism

values; one study of familism values among Mexican-origin adolescents from ages 10 to 16 (Cruz et al., 2017) and another study of broad Mexican cultural values, which included familism, in the same sample as the current study from fifth to tenth grade (Knight et al., 2014). Cruz and colleagues (2017) further found a profile of stable and a profile of decreasing positive feelings in Mexican background from age 10 to 16, but this construct of ethnic pride was also increasing in a third profile. In comparison, another study found a profile that was stable and another profile that was increasing in heritage values; however, this study used a sample of recent Hispanic immigrants, measured values with a general collectivism/individualism scale, and only assessed over 2.5 years of high school (Schwartz et al., 2015).

As this study is one of the first to examine familism pathways into young adulthood, what occurs at this stage of development is less clear. In the current study, the average decline in familism values across adolescence slowed down and stabilized into young adulthood. This pattern might suggest that the Mexican American youth in this study generally attained ethnic identity achievement in young adulthood (Phinney, 1989). That is, following the normative period of exploration during adolescence, Mexican American youth might gain a clearer understanding of the meaning of their ethnicity and commit to a set of values as they enter young adulthood (Phinney, 1989). However, it was hypothesized that familism values would begin to increase into young adulthood, which was based on the findings from two prior studies showing this trend (Padilla et al., 2016; Fuligni & Pedersen, 2002).

It is difficult to compare the current study to these two prior studies, as they used different measurement, statistical approaches, and recruitment procedures. First, Fuligni

and Pedersen (2002) focused solely on obligation familism, and Padilla and colleagues (2016) used the established three facets of familism without the inclusion of *respeto* as in the current study. Second, each study used different cohort designs which affected statistical approaches. Fuligni & Pedersen (2002) collected data at two time points, 12th grade and one or three years post-high school, thus, only within-person mean differences in familism values could be assessed. Padilla and colleagues (2016) used the multilevel modeling and age as the time metric because they used data from sibling dyads nested within families, which represented two different samples at each age cluster. Finally, each study utilized varying inclusion criteria and recruitment procedures, which impacted the sample makeup. Padilla and colleagues (2016) only used youth from two-parent households, and Fuligni and Pedersen (2002) used an ethnically heterogeneous sample with a subset of Hispanic, rather than Mexican-origin, youth.

Despite these study distinctions, demographic differences in the samples at young adulthood in each study likely reflect the great variability that occurs during this developmental period, making it difficult to characterize. Fuligni and Pedersen (2002) initially collected data when youth were in the 12th grade; thus, they did not capture youth who may have dropped out of high school before 12th grade, which is reflected in the fact that nearly the entire sample had received their high school diploma or GED by the second assessment when youth were an average of 20 years old. This is in contrast to Padilla and colleagues (2016) and the current study, which began data collection at 5th and 7th grades, respectively, and were able to follow youth whether they dropped out of school or not; this study strength is reflected in the variability in education levels by young adulthood when youth were an average of 22 years in both studies (see Table 8 for

Wave 6 demographics of the current study). Even two years of age can make a great difference during this emerging adulthood period, as evidenced by only 3% of the Fuligni and Pedersen (2002) sample being married, compared to 11.4% of the current sample. The wide range of paths one can take following grade school, such as marriage, children, higher education, and/or entering the workforce or military, is representative of this period of emerging adulthood which is difficult to define except for its instability (Arnett, 2000; Rindfuss, 1991).

Reflective of this variability are the differential quadratic trends in familism pathways that were found across the transition to young adulthood. The Class 2 decline in familism values began to increase into young adulthood, like in the studies by Fuligni and Pedersen (2002) and Padilla and colleagues (2016), whereas Class 1 exhibited an accelerating decline in familism values that remained relatively higher than Class 2. The increases in familism into young adulthood exhibited by Class 2 may represent a group of individuals who begin to re-negotiate the parent-child relationship to one of equals (Aquilino, 2006). These youth may begin to view their parents as individuals outside their role of parent, and this filial maturity has been linked to increased reciprocity, communication, warmth, and satisfaction in the relationship (Mayseless & Hai, 1998; Sullivan & Sullivan, 1980). With this maturity and perspective, these youth might engender a sense of responsibility to repay their parents and families for their sacrifices (Steinberg, 1990; Fuligni & Pedersen, 2002), which they are better positioned to do as they take on greater responsibilities, find work, and become self-sufficient. Thus, these youth may begin to re-adopt and/or strengthen their commitment to familism values.

In contrast, the Mexican American youth in Class 1 that exhibited an accelerating decline in familism values into young adulthood may be increasingly independent and disconnected from their families of origin (Arnett, 1998), or may be viewing their parents in a negative light, which could lead to resentment and conflict. These shifts in the family dynamic, in turn, could lead these young adults to question and challenge their familism values. Another explanation could be that the normative exploration of identity and challenging of cultural values that occurs during adolescence continues, and even heightens, during emerging adulthood. Indeed, the varying changes in social contexts that can occur during emerging adulthood, such as the departure from secondary school, moving out of the family home, and attainment of legal adult status, can bring about a multitude of opportunities for exploration (Arnett, 2000), as well as opportunities for cultural values to be challenged. Thus, for the youth in Class 1, contextual shifts that occur during young adulthood could call their familism values into question, which may explain their accelerating decline.

Family Context as a Predictor of Familism Values Trajectories

As predicted, youth-reported family conflict in the fifth grade predicted a greater probability of being in Class 2 (labeled "high/decreasing/decelerating to increasing"), the trajectory of steeper declines in familism values during middle adolescence that stabilized and reversed into young adulthood, in both mother and father models. As an indicator of positive family environment, parent-reports of family cohesion when youth were in the fifth grade were expected to predict membership in a high and stable or increasing familism pathway had such a pathway been identified. Inconsistent with this hypothesis, family cohesion did not predict familism class membership for the overall sample.

Furthermore, though gender moderated this association in the father model, the opposite of the hypothesis was found for males. That is, it was lower levels of father-reported family cohesion when youth were in the fifth grade that predicted a greater probability of being in Class 1 (high/stable/accelerating decline), the profile of slight and insignificant declines in familism across middle adolescence that accelerated into young adulthood; higher levels of father-reported family cohesion, on the other hand, predicted a greater probability of being in Class 2 (high/decreasing/ decelerating to increasing), or the class of steeper decreases in familism values over the middle school years that stabilized and increased into young adulthood. Females had a greater probability of being in Class 2 (high/decreasing/decelerating to increasing) across levels of father-reported family cohesion.

Parent reports of their acceptance was also considered an indicator of a positive family environment, and, thus, expected to predict a trajectory of familism that was high and stable or increasing in adolescence. This hypothesis was not supported for the overall sample as parental acceptance did not predict familism class membership. However, youth nativity moderated this association in the mother model, such that the hypothesis was supported for youth born in Mexico. That is, lower levels of mother-reported acceptance when youth were in the fifth grade predicted a greater probability of being in Class 2 (high/decreasing/decelerating to increasing), whereas higher levels of mother-reported acceptance predicted a greater probability of being in Class 1 (high/stable/ accelerating decline). Youth who were born in the U.S. had a greater probability of being in Class 2 (high/decreasing/decelerating to increasing) across levels of mother-reported acceptance. In contrast to parental acceptance, parent reports of their harsh parenting

were expected to predict a greater likelihood of being in a profile of decreasing familism values across adolescence, yet harsh parenting did not predict familism class membership.

Ethnic identity development is a normative process which leads Mexican American youth to show declines in familism as they question or challenge their traditional cultural values (Phinney,1989). However, the rate and timing of this normative process is influenced by nuances within the family context, which is the most critical and proximal context in youth's development (Maccoby, 1992), as well as the principal carrier of heritage culture (Cauce & Domenech-Rodríguez, 2002). Given this central role of the family environment in normative identity processes, it is not surprising that Mexican American fifth-graders who perceived higher levels of conflict in their families were more likely to be part of a trajectory of relatively steeper decreases in familism values across their middle adolescent years. Family conflict could impact parent's ability to discuss and model familism values to their children, which was evidenced by one study of Mexican American families that showed high parent-child conflict to lead to a nonsignificant link between ethnic socialization and family obligation values (Tsai et al., 2015). In addition, family conflict may cause youth to spend more time with and seek support from individuals external to the family, increasing their exposure to U.S. mainstream culture. These processes may cause adolescents to begin questioning their heritage values (Umaña-Taylor & Guimond, 2010), precipitating the negative link between family conflict and familism values, as evidenced in prior cross-sectional studies (e.g., Smokowski & Bacallao, 2006; Kuhlberg et al., 2010; Peña et al., 2011). For these

reasons, family conflict could have pushed Mexican American youth towards identity exploration and challenging of heritage values earlier in adolescence.

While family conflict may propel youth on a path of relatively steeper decreases in familism values across middle adolescence, this class also began to increase in familism values into young adulthood. This increase could be an indicator of ethnic identity achievement with a commitment to their cultural values after the normative period of exploration during adolescence (Phinney, 1989). In the context of family conflict, another possibility for this increase is that as these Mexican American adolescents become young adults, and potentially move out of their family homes, they gain some distance from the family conflict, which may, in turn, improve their familial relations and connection to their heritage values. The re-negotiation of the parent-child relationship during this developmental period (Aquilino, 2006) may be particularly relevant for youth coming from homes with higher levels of conflict, as these young adults gain greater understanding and perspective as to the causes of conflict and poor family dynamics. This filial maturity may improve conflict resolution strategies, communication, and connection within the parent-child relationship (Mayseless & Hai, 1998; Sullivan & Sullivan,1980), and family as a whole, thereby increasing the endorsement of familism values.

In contrast to family conflict, it was expected that family cohesion would predict a greater probability of being in a class of high and stable or increasing familism values in adolescence. However, this profile was not found in the current study and family cohesion was not a significant predictor of class membership for the overall sample, neither in the full model that included the other predictors nor when examined on its own.

Though family cohesion was moderated by adolescent gender in the father model, this moderation was also inconsistent with expectations. For males, rather than predicting a profile of high and stable familism values, higher levels of father-reported family cohesion in the fifth grade predicted a greater probability of being in Class 2, the profile of relatively steeper declines in familism values in middle adolescence that stabilized and then increased in to young adulthood. In contrast, lower levels of father-reported family cohesion predicted a greater probability of being in Class 1, the profile of slight decreases in familism values in middle adolescence that accelerated into young adulthood. Females had a greater probability of being in Class 2 across all levels of father-reported family cohesion when youth were in the fifth grade.

Regardless of how much fathers perceive family cohesion, or feel strongly that family bonds are maintained, despite their being potentially high levels of conflict at the same time, the normative identity exploration processes may be allowed to unfold for Mexican American girls during adolescence. On average, girls, particularly Mexican American girls, enter puberty earlier than boys (Patton & Viner, 2007; Sun et al., 2005), and includes many biological changes, such as brain maturation and associated increases in cognitive capabilities (Patton & Viner, 2007; Spear, 2004). These changes may precipitate Mexican American girls to enter the normative identity exploration involving a questioning of their traditional values earlier in adolescence, regardless of the level of family cohesion perceived by their fathers. Furthermore, within U.S. contexts, Mexican American girls may be exposed to gender ideologies of equality and autonomy, which may further facilitate the questioning of their familism values across adolescence (Santisteban, Muir-Malcolm, Mitrani, & Szapocznik, 2002).

Generally, Mexican American boys may show greater questioning of heritage values later in adolescence and into young adulthood as boys enter puberty later and show continuing brain maturation into early adulthood (Patton & Viner, 2007; Koolschijn & Crone, 2013). However, it may be that in the context of a family in which fathers perceive high levels of family cohesion, the normative identity exploration processes are allowed to unfold for Mexican American boys earlier in adolescence. Indeed, within the security of strong familial connection, boys may even be encouraged to experience some separation and exploration outside of the family as they are given access to greater autonomy and social freedoms (Raffaelli & Ontai, 2004; Domenech-Rodríguez, Donovick, & Crowley, 2009).

As with family cohesion, parental acceptance was considered to be representative of a positive family environment and was expected to predict a greater likelihood of being in a class that was high and stable or increasing in familism values. This hypothesis was not supported for the overall sample as both mother- and father-reported acceptance were not significant fifth-grade predictors of familism class membership, both in the full models that included family conflict and on its own. Mother-reported acceptance, though, was moderated by youth nativity, such that this hypothesis was supported among youth born in Mexico. That is, higher levels of mother-reported acceptance in the fifth grade predicted a greater probability of being in Class 1, the profile of slight familism declines in adolescence that accelerated into young adulthood; lower levels of mother-reported acceptance predicted a greater probability of being in Class 2, the class of steeper declines in familism during adolescence that stabilized and increased into young

adulthood. U.S.-born youth had a greater probability of being in Class 2, regardless of the level of mother-reported acceptance.

To explain this youth nativity moderation, it is possible that high levels of maternal acceptance serve as a strong sense of attachment to the family for adolescents born in Mexico, making them less likely to challenge familism values. Furthermore, staying close to families is normative among immigrant youth, and this norm is supported in the context of greater maternal acceptance. Perhaps when Mexican-born youth experience less maternal acceptance, they begin to question this familial norm, and begin to seek this acceptance outside of the family, precipitating identity exploration processes and challenging of familial values earlier in adolescence. Mexican American youth born in the U.S. tend to be more oriented to U.S. culture and to spend more time with peers (Schwartz, Pantin, Sullivan, Prado, & Szapocznik, 2006; Moon & Hofferth, 2015), which may make them more inclined to enter the normative processes of familial separation and identity exploration, challenging their parents, including their heritage values messages, earlier in adolescence, regardless of the level mother-reported acceptance. As positive family environments, such as greater maternal acceptance, facilitate ethnic socialization (Kochanka et al., 2005), it may be that Mexican- and U.S.-born youth are receiving varying socialization messages. That is, Mexican-born youth may be socialized more to family closeness and harmony, whereas U.S.-born youth may be socialized more to U.S. culture, and these messages are better received within strong parent-child bonds characterized by greater maternal acceptance.

Finally, harsh parenting was conceptualized as an indicator of a negative family environment and was hypothesized to predict a greater likelihood of being in a class of

decreasing familism values across adolescence. As with the other family context variables, this hypothesis was largely driven by the theoretical frameworks of ethnic socialization, social learning, and stress and coping (Hughes et al., 2006; Bandura, 1977; Kuo, 2013). That is, higher levels of harsh parenting were expected to make relaying and modeling messages of familism more difficult and may push Mexican American youth to spend more time and seek support outside the family, thereby precipitating exploration and challenging of heritage values. However, after controlling for family conflict, which may be a more robust indicator of a poor family environment, harsh parenting had no effect on familism class membership. As well, the prior evidence was limited to two cross-sectional studies, which found inconsistent effects of harsh parenting. Bush and colleagues (2004) found that harsh parenting did not have a significant relation with familism values among adolescents in Mexico. In another study, harsh parenting was found to be negatively associated with ethnic identity affirmation among Latino immigrants (Supple et al., 2006).

The conceptualization of harsh parenting as a poor parenting practice largely stems from research using middle-class, European American samples (e.g., Repetti, Taylor, & Seeman, 2002; Conger et al., 1994). Research on parenting practices among Mexican American and Latino samples have taken more nuanced approaches, examining harsh parenting in combination with other parenting dimensions, including parental acceptance. This research has found that Mexican American parents use greater harsh parenting in combination with greater acceptance (Hill, Bush, & Roosa, 2003; Domenech-Rodríguez, Donovick, & Crowley, 2009). This parenting combination may serve to ensure children's safety and to enhance *respeto* among children (Bush, Peterson,

Cobas, & Supple, 2002; Chao, 1994), which then may promote familial harmony and familism values. Thus, it is possibly the combination of harsh parenting with other parenting dimensions, rather than harsh parenting in isolation, that may impact the adoption of familism values among Mexican American youth. This parenting package method, though, was outside the scope of this study.

Economic Hardship as a Predictor of Familism Values Trajectories

Both mother- and father-reported economic hardship when youth were in the fifth grade failed to predict familism class membership. That is, the varying processes of familism values adoption across adolescence and young adulthood for Mexican American youth did not appear to be influenced by the financial strain and adjustments experienced by their parents. Given the competing theoretical frameworks of the family stress model (Conger et al., 2000, 2010) and resiliency model (Stack, 1974; House et al., 1988), and inconsistent literature, this finding confirms the challenges in uncovering potential nuances in the effects of economic hardship on longitudinal changes in familism values among Mexican American youth across adolescence and young adulthood.

Part of the difficulty in understanding the link between economic hardship and the adoption of familism values is due to inconsistencies in the literature, with some studies supporting the family stress model and other studies supporting the resiliency model. The family stress model posits that parents' appraisals of economic hardship might impede their ability to create positive family environments and socialize their children to familism values (Conger et al., 2000, 2010; Grusec & Goodnow, 1994; Gable & Reis, 2006). This mediation model has not been fully tested before. However, several prior studies have shown that greater economic hardship is linked to negative family

environments, (e.g., Behnke et al., 2008; Tsai et al., 2013; Downey & Coyne, 1990; Conger & Conger, 2002). As well, two studies found a positive link between objective measures of SES and familism values (Romero et al., 2004; Padilla et al., 2016). In contrast, the resiliency model suggests that economic hardship might necessitate a greater reliance on the family for support and assistance, which reinforces familism values (Stack, 1974; House et al., 1988). In support of this model, studies examining objective indicators of SES have predominantly shown a negative link with familism values (Bush et al., 2004; Cortés, 1995; Smokowski et al., 2008).

The current study did not support either of these theoretical frameworks, perhaps indicating that the role of economic hardship is difficult to tease out because aspects of both processes may be operating. For example, it is likely that economic hardship is a source of stress, but families may respond in different ways. For some families, economic hardship may prompt stronger ties to and reliance on family members, supporting the resiliency model. However, other families may not be able to respond to economic hardship in this way, particularly families who do not have outside social networks that provide support and cultural resilience. Another possibility is that the family stress and resiliency models simultaneously work for different facets of familism. Specifically, the stress caused by economic hardship may cause a deterioration of supportive familism values in line with the family stress model. At the same time, the financial necessity that comes from this hardship may lead to greater instrumental assistance from youth, thereby reinforcing familism obligation values in line with the resiliency model. In support of this nuance, one study found youth of less educated parents to spend more time assisting the

family and to endorse more obligation familism, but at the same time, these youth reported lower levels of familial support (Hardway & Fuligni, 2006).

A further challenge in understanding this insignificant effect is reconciling findings with prior studies, which represented a wide range of designs, samples, and measurement. The majority of prior studies were cross-sectional (e.g., Cortés, 1995; Smokowski et al., 2008), with additional designs including observations (Bronstein, 1994), daily diaries (Hardway & Fuligni, 2006; Tsai et al., 2013), cluster analyses (Cansler et al., 2012; Updegraff et al., 2012), and two-wave longitudinal designs (Fuligni & Pedersen, 2002; Eschbach & Gómez, 1998). Though some studies used samples of Mexican American youth like the current study (e.g., Cansler et al., 2012; Updegraff et al., 2012), the majority of studies either used broad Latino samples (e.g., Smokowski et al., 2008; Supple et al., 2006) or ethnically heterogeneous samples (e.g., Behnke et al., 2008; Almeida et al., 2009). A final incongruity is that the majority of prior studies examined objective measures of SES, such as parental education level and family income (e.g., Bush et al., 2004; Smokowski et al., 2008). In contrast, the current study, as well as a few prior studies (e.g., Tsai et al., 2013; Behnke et al., 2008), tested economic hardship, or the subjective perception of the capacity to pay for necessities, behavioral adjustments to conserve financial resources, and financial strain (Barrera et al., 2001; Conger & Elder, 1994).

Perceived Ethnic Discrimination as a Predictor of Familism Values Trajectories

Greater perceived ethnic discrimination among Mexican American fifth-graders predicted a greater probability of being in Class 1, the profile of slight and insignificant decreases in familism values across middle adolescence that accelerated into young

adulthood. As expected, this finding supports the group-level rejection-identification model. This model suggests that Mexican American youth who perceive greater ethnic discrimination may turn to their families or their connection to their cultural group for support, thereby reinforcing familism values across adolescence. Within a discriminatory environment, extrafamilial sources of support may be limited and parents may increase their ethnic socialization to help children maintain a positive view of their heritage (Lorenzo-Blanco et al., 2012; García Coll et al., 1996; Hughes et al., 2006). As a result, youth may engage in more intragroup reliance and may identify more with their Mexican heritage to help raise the status and wellbeing of their families and ethnic group (Cronin et al., 2012; Arce, 1981; Branscombe et al., 1999; Phinney, 2003; Herman, 2004). This model is supported by prior studies that have shown perceived ethnic discrimination, particularly at the group versus personal level, to positively predict ethnic identification among Latinos (Cronin et al., 2012; Armenta & Hunt, 2009; Spencer-Rodgers & Collins, 2006). As well, two studies using the same sample as the current study showed that perceived ethnic discrimination in the fifth grade predicted greater endorsement of Mexican American cultural values, including familism, in the seventh grade (Berkel et al., 2010; Brittian et al., 2013).

In contrast, social comparison theory posits that ethnic minorities may adopt the negative valuation of their ethnic group associated with discrimination (Mead, 1934; Stryker & Serpe, 1982), and, thus, reject their heritage values. In support of this model are two longitudinal studies that found perceived ethnic discrimination to negatively predict familism values (Lorenzo-Blanco et al., 2016; Gil et al., 2000). Historical contexts may explain the discrepancies between these models. The social comparison

model may have been true for older generations and certain Latino subgroups. For older generations, such as the adult sample used in the study by Lorenzo-Blanco and colleagues (2016), familism values were more likely to be abandoned in the face of discrimination because U.S. society was more accepting of immigrants who assimilated to mainstream culture. Furthermore, both studies used samples that were largely of Cuban descent (Lorenzo-Blanco et al., 2016; Gil et al., 2000). Americans had greater sympathy towards Cubans fleeing the Castro regime, which may explain their greater assimilation to U.S. society than other Latino subgroups (Vega & Amaro, 1994). In contrast, the more recent anti-immigration sentiments towards Mexicans may prompt the group-level rejection-identification stance (Viruell-Fuentes et al., 2012). Indeed, Mexican Americans of the millennial generation have been found to cultivate a sense of optimism and empowerment when confronting negative stereotypes and discriminatory barriers (Gonzales, Doane, Sladek, Jenchura, & Kennedy, 2017).

One final framework to consider is the stage model of ethnic identity development. This model suggests that perceived ethnic discrimination may be an encounter by which a Mexican American becomes aware of their ethnicity for the first time, precipitating greater exploration of ethnic identity during adolescence (Cross, 1991, 1995), including the questioning of heritage values like familism. In support of this model, a cross-sectional study found a positive link between perceived ethnic discrimination and ethnic identity exploration (Brittian et al., 2015), and a study of Latino and Black adolescents found that growth in perceived ethnic discrimination was associated with growth in ethnic identity exploration, but not affirmation, over four years (Pahl & Way, 2006). A strength of the current study, compared to these prior studies, is

that the stage model was actually tested by examining whether one point of perceived ethnic discrimination in the fifth grade, the encounter, would propel youth on a trajectory of greater ethnic identity exploration and challenging of heritage values. This study did not find this fifth-grade discrimination encounter to propel youth on a path of steeper declines in familism values, suggesting that the stage model is not supported.

Limitations and Future Directions

Although this study had many strengths, the findings should be viewed in light of several limitations. First, this study used multiple reporters, including mothers, fathers, and youth. Few studies include more than one perspective of family life and typically leave out the paternal perspective (Collins, 1990; Smetana, 1988; Marsiglio et al., 2000; Cabrera & García Coll, 2004). As well, parents and youth, and even mothers and fathers, often have different perspectives of family functioning and other environmental stressors (Steinberg, 2001; Tein et al. 1994; Demo, Small, & Savin-Williams, 1987; White et al., 2009). Given these discrepancies, this multiple reporter approach was considered a study strength because any cross-reporter effect would have been considered more robust than same-reporter effects. However, only youth-reported variables of perceived ethnic discrimination and family conflict were significant predictors of youth-reported familism values classes for the overall sample. It may be that youth's perceptions of environmental contexts may be the best measure in predicting their own internal states and functioning (Gecas & Schwalbe, 1986; De Los Reyes et al., 2012). This study may have also benefited from observational methods, which can eliminate response bias and provide objective and comprehensive assessments of environmental contexts.

Second, this study used secondary data from an ongoing longitudinal study examining the role of culture and context in the lives of Mexican American families (Roosa et al., 2008). There were many advantages to this data set, including a large sample size, extensive procedures for recruitment and retainment of participants, and five waves of data from fifth grade to young adulthood. However, there were several limitations as well. The sample consisted of Mexican American adolescents originally from a southwestern metropolitan area, and, thus, findings may not generalize to Mexican American youth living in other geographical locales. Although this data set had the advantage of father reports, fathers were not required for participation, and, thus, data for father-reported variables were not available for the entire sample. Data were also missing due to attrition, particularly in young adulthood. Despite much effort to track down participants, this task proved difficult in the most recent wave given the great variability of paths participants can take in young adulthood; thus, only a little over half of the original sample were retained. A conservative approach to handling missing data was taken, but inclusion and retention of the full sample would have strengthened this study.

Finally, this study used growth mixture modeling, which is an advanced person-centered analytic technique (Ram & Grimm, 2009) that can capture longitudinal change processes like acculturation and ethnic identity development. This study was also one of the first to examine predictors of change classes using the three-step method (Vermunt, 2010; Asparouhov & Muthén, 2013). Despite these strengths, this study faced several limitations using this approach. The entropy score, or the distinctiveness between classes, was below current suggested cut-offs for determining good-fitting models (Greenbaum, Del Boca, Darkes, Wang, & Goldman,2005; Muthén, 2004). Furthermore, the three-step

method for examining predictors of class membership is limited in its use of listwise deletion of missing data, its inability to test mediation models, and its incapacity to assess stacked models to determine patterns of associations for different groups.

Despite novel contributions of the current study, there are several avenues for future research that will advance our understanding of acculturation and ethnic identity processes. As this study was one of the first to examine longitudinal change into emerging adulthood among Mexican American youth, more person-centered research is needed to better determine the paths young adults can take with regards to acculturation and ethnic identity development. This research would also help to clarify parameters for emerging adulthood among Mexican Americans, as well as the length of this developmental period given Western social trends of older marrying ages, difficulties achieving work and financial stabilization, and the "failure to launch" phenomenon (Kins & Beyers, 2010). Rather than specific parenting practices, research that examines unique parenting packages, such as harsh parenting and acceptance, would help elucidate family environments that serve to promote familism values and positive youth development among Mexican American families. Future research should also assess the impact of different environmental contexts on specific facets of familism. For instance, research might examine the differential impact of economic hardship on obligation familism versus supportive familism, how *respeto* changes across the transition from adolescence to young adulthood, and the effect of school and peer contexts on familism values. Finally, more prospective analyses of family context and familism values is needed to help clarify causal directions of this association.

Conclusion

In summary, this study adds to the literature on acculturation and ethnic identity processes in adolescence and young adulthood among Mexican Americans by assessing different classes of change in a specific element of culture—familism values. Utilizing the advanced person-centered statistical approach of growth mixture modeling, this study identified two patterns of change in familism values across adolescence and young adulthood. One group of Mexican American youth maintained high levels of familism values across adolescence with more rapid declines into young adulthood, and another group exhibited declines in familism across adolescence before increasing again into young adulthood. The findings also demonstrated specific environmental factors that propel Mexican American youth on different familism pathways. Youth in high conflict families were more likely to be on the path of declining familism values across adolescence, whereas youth who perceived more ethnic discrimination were more likely to maintain their familism values across adolescence. Mexican American female adolescents specifically were found to take a path of decreasing familism values in the context of high paternal perceptions of family cohesion, and U.S.-born youth were found to retain their familism values in adolescence if their mothers were more accepting.

These patterns of findings have implications for intervention and prevention programs. Given that the maintenance of high levels of familism values is protective for Mexican American youth, particularly in adolescence when extrafamilial risks (i.e., deviant peers, alcohol and drug use) can derail positive developmental trajectories, programs should aim to alleviate family conflict and promote familial cohesion, particularly for males. Maternal acceptance might also be a focus of intervention for U.S.-born youth as a means to maintain connection to the family and heritage values. As

well, programs might aim to harness youth empowerment in the face of ethnic discrimination. Overall, parents, clinicians, school staff, policy-makers, and other stakeholders in Mexican American youth development would benefit from understanding the variety of paths, timing, and nuances of cultural change across adolescence and young adulthood, so as to better serve this fast-growing minority population in the promotion of positive youth development and well-being.

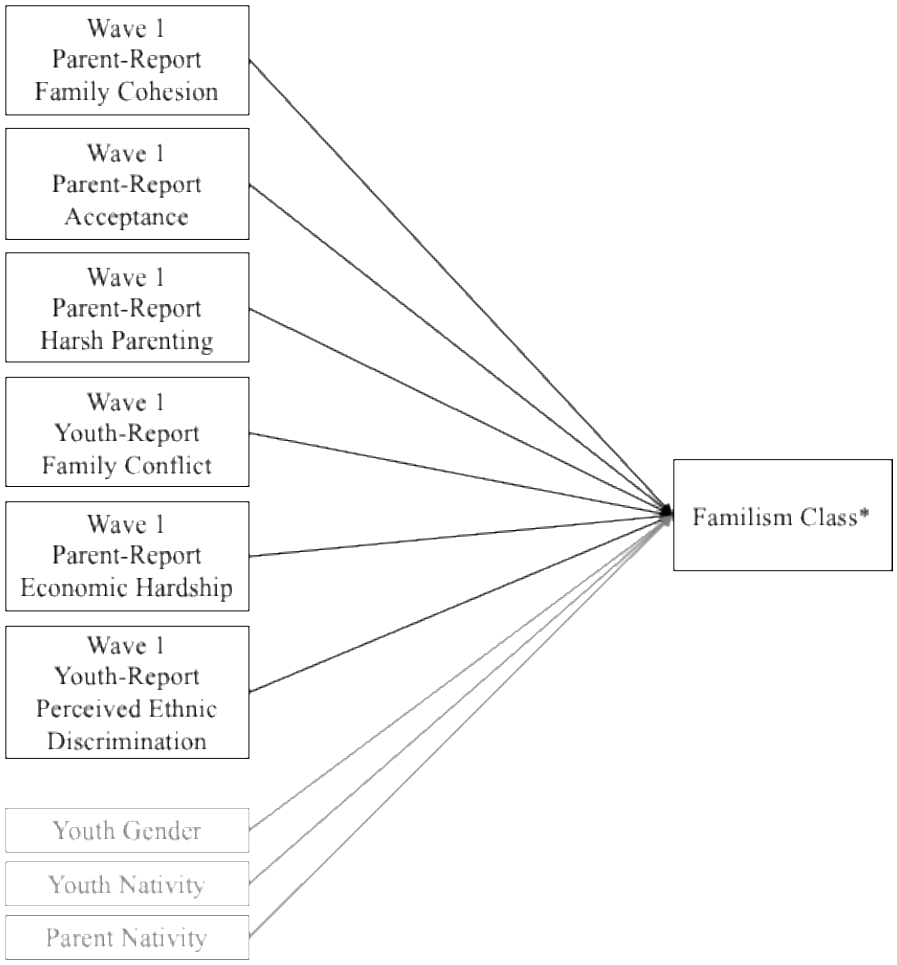

Figure 1. Three-step method to latent class regression model *Note:* Two models will be tested separately for mothers and fathers. Variables in gray denote covariates. Significant interactions between predictors and covariates in simpler, isolated models will also be included in these full models. *Categorical variable created representing most probable class.

Table 1

Comparisons on wave 1 variables between responders and non-responders

	Responder	Nonresp.	Statistics	
	M(SD)	*M(SD)*	*t(df)*	$\chi^2(df)$
Wave 2				
Familism Support	4.63(.40)	4.58(.45)	-.74(746)	
Familism Obligation	4.53(.46)	4.52(.42)	-.10(747)	
Familism Referent	4.45(.47)	4.37(.48)	-1.03(746)	
Familism *Respeto*	4.54(.37)	4.53(.35)	-.28(747)	
Family Cohesion (Mom)	4.01(.56)	3.86(.62)	-1.66(747)	
Family Cohesion (Dad)	3.95(.51)	3.87(.50)	-.82(465)	
Parent Acceptance (Mom)	4.44(.50)	4.49(.45)	.67(746)	
Parent Acceptance (Dad)	4.21(.54)	4.25(.54)	.47(465)	
Harsh Parenting (Mom)	2.19(.65)	2.02(.58)	-1.57(746)	
Harsh Parenting (Dad)	1.96(.59)	1.76(.51)	-1.72(465)	
Family Conflict	1.18(1.51)	.97(1.27)	-.83(747)	
Economic Hardship (Mom)	.009(3.25)	-.204(3.05)	-.40(743)	
Economic Hardship (Dad)	-.04(3.19)	.63(3.67)	1.05(465)	
Perceived Ethnic Discrimination	1.80(.63)	1.82(.59)	.26(747)	
Gender (Male/Female)	361/349	22/17		.46(1)
Income (Mom)	6.79(4.40)	5.53(4.35)	-1.73(730)	
Income (Dad)	7.81(4.65)	6.41(3.77)	-1.54(465)	
Household Structure (Sing./Dual)	165/545	5/34		2.29(1)
Youth Nativity (Mexico/US)	213/497	10/29		.34(1)
Mother Nativity (Mexico/US)	524/186	33/6		2.27(1)
Father Nativity (Mexico/US)	351/88	22/5		.10(1)
Youth Language (Span./Eng.)	124/586	8/31		.24(1)
Mother Language (Span./Eng.)	494/215	29/10		.39(1)
Father Language (Span./Eng.)	337/102	21/6		.02(1)

$^{*}p<.05$, $^{**}p<.01$, $^{***}p<.001$

	Responder	Nonresp.	Statistics	
	M(SD)	*M(SD)*	*t(df)*	$\chi^2(df)$
Wave 3				
Familism Support	4.64(.40)	4.55(.43)	-2.13(746)*	
Familism Obligation	4.53(.45)	4.49(.46)	-.92(747)	
Familism Referent	4.45(.48)	4.40(.44)	-.98(746)	
Familism *Respeto*	4.54(.37)	4.51(.38)	-.86(747)	
Family Cohesion (Mom)	4.02(.56)	3.89(.54)	-2.28(747)*	
Family Cohesion (Dad)	3.95(.51)	3.91(.52)	-.66(465)	
Parent Acceptance (Mom)	4.44(.49)	4.43(.51)	-.24(746)	
Parent Acceptance (Dad)	4.21(.52)	4.20(.62)	-.21(465)	
Harsh Parenting (Mom)	2.18(.65)	2.16(.64)	-.38(746)	
Harsh Parenting (Dad)	1.95(.59)	1.91(.57)	-.50(465)	
Family Conflict	1.17(1.51)	1.16(1.44)	-.09(747)	
Economic Hardship (Mom)	-.008(3.25)	.03(3.20)	.116(743)	
Economic Hardship (Dad)	-.04(3.17)	.22(3.52)	.60(465)	
Perceived Ethnic Discrimination	1.79(.63)	1.89(.61)	1.53(747)	
Gender (Male/Female)	323/317	60/49		.78(1)
Income (Mom)	6.93(4.41)	5.57(4.15)	-2.96(730)**	
Income (Dad)	7.89(4.67)	6.83(4.15)	-1.77(465)	
Household Structure (Sing./Dual)	493/147	86/23		.19(1)
Youth Nativity (Mexico/US)	181/459	42/67		4.68(1)*
Mother Nativity (Mexico/US)	470/170	87/22		1.99(1)
Father Nativity (Mexico/US)	315/82	58/11		.99(1)
Youth Language (Span./Eng.)	107/533	25/84		2.48(1)
Mother Language (Span./Eng.)	439/200	84/25		3.10(1)
Father Language (Span./Eng.)	302/95	56/13		.86(1)

*p<.05, **p<.01, ***p<.001

	Responder	Nonresp.	Statistics	
	M(SD)	*M(SD)*	*t(df)*	$\chi^2(df)$
Wave 4				
Familism Support	4.64(.41)	4.59(.40)	-1.09(746)	
Familism Obligation	4.54(.45)	4.45(.45)	-1.79(747)	
Familism Referent	4.45(.48)	4.42(.43)	-.57(746)	
Familism *Respeto*	4.54(.37)	4.52(.38)	-.55(747)	
Family Cohesion (Mom)	4.01(.57)	3.96(.52)	-.83(747)	
Family Cohesion (Dad)	3.95(.51)	3.92(.54)	-.45(465)	
Parent Acceptance (Mom)	4.44(.50)	4.43(.48)	-.19(746)	
Parent Acceptance (Dad)	4.20(.52)	4.24(.62)	.49(465)	
Harsh Parenting (Mom)	2.19(.64)	2.14(.65)	-.82(746)	
Harsh Parenting (Dad)	1.95(.59)	1.92(.59)	-.44(465)	
Family Conflict	1.20(1.51)	.97(1.44)	-1.50(747)	
Economic Hardship (Mom)	-.04(3.22)	.19(3.37)	.69(743)	
Economic Hardship (Dad)	-.06(3.19)	.34(3.38)	.99(465)	
Perceived Ethnic Discrimination	1.79(.63)	1.85(.60)	.87(747)	
Gender (Male/Female)	311/325	72/41		8.41(1)**
Income (Mom)	6.95(4.40)	5.49(4.20)	-3.25(730)***	
Income (Dad)	7.92(4.61)	6.68(4.47)	-2.12(465)*	
Household Structure (Sing./Dual)	491/145	88/25		.03(1)
Youth Nativity (Mexico/US)	183/453	40/73		2.01(1)
Mother Nativity (Mexico/US)	469/167	88/25		.86(1)
Father Nativity (Mexico/US)	315/78	58/15		.21(1)
Youth Language (Span./Eng.)	105/531	27/86		3.60(1)
Mother Language (Span./Eng.)	437/198	86/27		2.42(1)
Father Language (Span./Eng.)	301/92	57/16		.08(1)

$^{*}p<.05$, $^{**}p<.01$, $^{***}p<.001$

	Responder	Nonresp.	Statistics	
	M(SD)	*M(SD)*	*t(df)*	$\chi^2(df)$
Wave 6				
Familism Support	4.66(.39)	4.59(.42)	-2.44(746)*	
Familism Obligation	4.57(.42)	4.48(.49)	-2.62(747)**	
Familism Referent	4.47(.46)	4.41(.49)	-1.74(746)	
Familism *Respeto*	4.57(.35)	4.51(.40)	-2.36(747)*	
Family Cohesion (Mom)	4.04(.55)	3.95(.57)	-2.11(747)*	
Family Cohesion (Dad)	3.99(.51)	3.90(.52)	-1.91(465)	
Parent Acceptance (Mom)	4.48(.46)	4.39(.52)	-2.67(746)**	
Parent Acceptance (Dad)	4.21(.50)	4.21(.58)	-.01(465)	
Harsh Parenting (Mom)	2.12(.62)	2.25(.67)	2.73(746)**	
Harsh Parenting (Dad)	1.93(.55)	1.96(.63)	.58(465)	
Family Conflict	1.19(1.47)	1.14(1.53)	-.43(747)	
Economic Hardship (Mom)	-.41(3.20)	.45(3.23)	3.65(743)***	
Economic Hardship (Dad)	-.37(3.17)	.44(3.24)	2.70(465)**	
Perceived Ethnic Discrimination	1.75(.61)	1.86(.63)	2.56(747)**	
Gender (Male/Female)	181/213	202/153)		8.98(1)**
Income (Mom)	7.42(4.65)	5.96(4.00)	-4.53(730)***	
Income (Dad)	8.50(5.00)	6.81(3.91)	-4.03(465)***	
Household Structure (Sing./Dual)	310/84	269/86		.90(1)
Youth Nativity (Mexico/US)	106/288	117/238		3.27(1)
Mother Nativity (Mexico/US)	275/119	282/73		9.10(1)**
Father Nativity (Mexico/US)	195/59	178/34		4.93(1)
Youth Language (Span./Eng.)	60/334	72/283		3.29(1)
Mother Language (Span./Eng.)	259/135	264/90		6.93(1)**
Father Language (Span./Eng.)	185/69	173/39		4.99(1)*

*p<.05, **p<.01, ***p<.001

Table 2

Means, standard deviations, skewness, kurtosis of study variables

	N	Min.	Max.	Mean	SD	Skewness	Kurtosis
Familism	749	1	5	4.67	.24	-1.14	1.60
Familism (Wave 2)	749	1	5	4.58	.29	-.91	.84
Familism (Wave 3)	749	1	5	4.46	.30	-.60	.61
Familism (Wave 4)	749	1	5	4.43	.33	-.64	.72
Familism (Wave 6)	749	1	5	4.28	.32	-.80	2.31
Family Cohesion (M)	749	1	5	4.00	.56	-.75	.49
Family Cohesion (D)	467	1	5	3.95	.51	-.32	-.52
Parent Acceptance (M)	748	1	5	4.44	.49	-.97	.73
Parent Acceptance (D)	467	1	5	4.21	.54	-.61	.03
Harsh Parenting (M)	748	1	5	2.18	.64	.47	.03
Harsh Parenting (D)	467	1	5	1.95	.59	.51	-.10
Family Conflict	749	1	9	1.17	1.50	1.44	1.80
Econ. Hardship (M)	745			0.00	3.24	.37	-.55
Econ. Hardship (D)	467			0.00	3.22	.65	-.21
Perceived Ethnic Discrimination	749	1	5	1.80	.62	1.08	1.21

Variables are from Wave 1 (5^{th} grade) unless otherwise specified.
Variables are youth report, unless otherwise specified, M = Mom report, D = Dad report.
Min. and Max. represent possible range
Familism factor scores are reported.

Table 3

Correlations among study variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Familism	--														
2. Familism (W2)	.35**	--													
3. Familism (W3)	.23**	.55**	--												
4. Familism (W4)	.24**	.41**	.70**	--											
5. Familism (W6)	.17**	.40**	.60**	.58**	--										
6. Fam. Cohesion (M)	.04	-.03	-.07*	-.03	-.06	--									
7. Fam. Cohesion (D)	.002	0	0	.01	.06	.19**	--								
8. Acceptance (M)	-.03	.02	-.01	-.05	-.01	.25**	.09	--							
9. Acceptance (D)	.03	.02	.06	.04	.04	.08	.37**	.15**	--						
10. Harsh Parenting (M)	.01	.05	.01	.09*	.02	-.10**	-.12**	-.15**	-.06	--					
11. Harsh Parenting (D)	-.02	.04	.03	.06	-.03	-.003	-.12*	-.08	-.07	.26**	--				
12. Fam. Conflict	-.04	-.08*	-.07	-.04	-.05	-.08*	-.10*	-.10**	-.03	.01	.06	--			
13. Eco. Hardship (M)	-.04	.01	-.02	-.01	.03	-.31**	-.21**	-.08*	-.09*	.12**	.05	.05	--		
14. Eco. Hardship (D)	.02	.06	.04	.03	-.01	-.13**	-.32**	-.02	-.15**	.04	.10*	.09	.53**	--	
15. Perceived Ethnic Discrimination	.04	.10*	.14**	.11*	.08*	-.11**	-.13**	-.04	-.14**	.05	.07	.21**	.18**	.16**	--

Variables are from Wave 1 (5th grade) unless otherwise specified.
Variables are youth report, unless otherwise specified; M=Mom report, D=Dad report.
Familism factor scores are reported.
*Correlation is significant at the .05 level (2-tailed).
**Correlation is significant at the .01 level (2-tailed).

Table 4.1

Parameter estimates and fit statistics for univariate models

	No-Growth	Linear	Latent Basis	Quadratic
Intraindividual change parameters				
Slope loadings (basis coefficients)				
$g_0 \rightarrow c_0$	=1	=1	=1	=1
$g_0 \rightarrow c_1$	=1	=1	=1	=1
$g_0 \rightarrow c_2$	=1	=1	=1	=1
$g_0 \rightarrow c_3$	=1	=1	=1	=1
$g_0 \rightarrow c_4$	=1	=1	=1	=1
$g_1 \rightarrow c_0$	-	=0	=0	=0
$g_1 \rightarrow c_1$	-	=2	.278***	=2
$g_1 \rightarrow c_2$	-	=5	.613***	=5
$g_1 \rightarrow c_3$	-	=7	.703***	=7
$g_1 \rightarrow c_4$	-	=11	=1	=11
$g_2 \rightarrow c_0$	-	-	-	=0
$g_2 \rightarrow c_1$	-	-	-	=4
$g_2 \rightarrow c_2$	-	-	-	=25
$g_2 \rightarrow c_3$	-	-	-	=49
$g_2 \rightarrow c_4$	-	-	-	=121
Interindividual difference parameters				
Means (fixed effects)				
$1 \rightarrow g_0$	4.485***	4.657***	4.684***	4.668***
$1 \rightarrow g_1$	-	-.034***	-.383***	-.042***
$1 \rightarrow g_2$	-	-	-	.00068*
(Co)variances (random effects)				
$g_0 \leftrightarrow g_0$	.034***	.028***	.028***	.027***
$g_1 \leftrightarrow g_1$	-	0***	.062***	.0041***
$g_2 \leftrightarrow g_2$	-	-	-	.000019***
$e \leftrightarrow e$	.072***	.042***	.041***	.036***
$g_0 \leftrightarrow g_1$	-	0	-.004	-.0012
$g_0 \leftrightarrow g_2$	-	-	-	0
$g_1 \leftrightarrow g_2$	-	-	-	-.00027***
Fit statistics				
χ^2	1519.41	243.12	186.61	98.83
# of parameters	3	6	9	10
AIC	1679.06	408.77	358.26	272.48
BIC	1692.92	436.48	399.82	318.66
saBIC	1683.39	417.43	371.25	286.91

Notes. c_0- c_4 represent the five measures of familism from Waves 1 through 6; g_0, g_1, g_2 represent the latent intercept, first, and second slopes, respectively; →, directional relationships or fixed-effects parameters such as factor loadings and means; ↔, symmetric relationships or random-effects parameters such as variances and covariances; -, parameter was not part of the specified model; $^{*}p<.05$, $^{**}p<.01$, $^{***}p<.001$. AIC = Aikake's Information Criteria, BIC = Bayes Information Criteria, and sa= sample-size adjusted, lower scores indicate better statistical fit.

Table 4.2

Parameter estimates and fit statistics for univariate models

	Spline (7^{th})	Spline (10^{th})	Spline (12^{th})	Spline Est.
Intraindividual change parameters				
Slope loadings (basis coefficients)				
$g_0 \rightarrow c_0$	=1	=1	=1	=1
$g_0 \rightarrow c_1$	=1	=1	=1	=1
$g_0 \rightarrow c_2$	=1	=1	=1	=1
$g_0 \rightarrow c_3$	=1	=1	=1	=1
$g_0 \rightarrow c_4$	=1	=1	=1	=1
$g_1 \rightarrow c_0$	=0	=0	=0	=0
$g_1 \rightarrow c_1$	=2	=2	=2	=2
$g_1 \rightarrow c_2$	=2	=5	=5	=5
$g_1 \rightarrow c_3$	=2	=5	=7	=7
$g_1 \rightarrow c_4$	=2	=5	=7	=11
$g_2 \rightarrow c_0$	=0	=0	=0	=0
$g_2 \rightarrow c_1$	=0	=0	=0	=-.271
$g_2 \rightarrow c_2$	=3	=0	=0	$=-.546^{*}$
$g_2 \rightarrow c_3$	=5	=2	=0	$=-.669^{**}$
$g_2 \rightarrow c_4$	=9	=6	=4	$=-.824^{***}$
Interindividual difference parameters				
Means (fixed effects)				
$1 \rightarrow g_0$	4.674^{***}	4.668^{***}	4.661^{***}	4.67^{***}
$1 \rightarrow g_1$	$-.05^{***}$	$-.04^{***}$	$-.036^{***}$	$-.024^{***}$
$1 \rightarrow g_2$	$-.032^{***}$	$-.03^{***}$	$-.031^{***}$	.138
(Co)variances (random effects)				
$g_0 \leftrightarrow g_0$	$.022^{***}$	$.027^{***}$	$.028^{***}$	$.026^{***}$
$g_1 \leftrightarrow g_1$	$.006^{***}$	$.002^{***}$	$.001^{***}$	.002
$g_2 \leftrightarrow g_2$	0^{***}	0^{*}	$.001^{***}$	.604
$e \leftrightarrow e$	$.038^{***}$	$.037^{***}$	$.037^{***}$	$.036^{***}$
$g_0 \leftrightarrow g_1$	.001	-.001	-.001	-.001
$g_0 \leftrightarrow g_2$	$-.001^{***}$	$-.001^{**}$	$-.001^{*}$	.001
$g_1 \leftrightarrow g_2$	0	0	0^{**}	.035
Fit statistics				
χ^2	140.35	109.45	126.58	96.56
# of parameters	10	10	10	11
AIC	314.00	283.10	300.22	272.21
BIC	360.19	329.28	346.41	323.01
saBIC	328.43	297.53	314.66	288.09

Notes. c_0- c_4 represent the five measures of familism from Waves 1 through 6; g_0, g_1, g_2 represent the latent intercept, first, and second slopes, respectively; →, directional relationships or fixed-effects parameters such as factor loadings and means; ↔, symmetric relationships or random-effects parameters such as variances and covariances; -, parameter was not part of the specified model; $^{*}p<.05$, $^{**}p<.01$, $^{***}p<.001$. AIC = Aikake's Information Criteria, BIC = Bayes Information Criteria, and sa= sample-size adjusted, lower scores indicate better statistical fit.

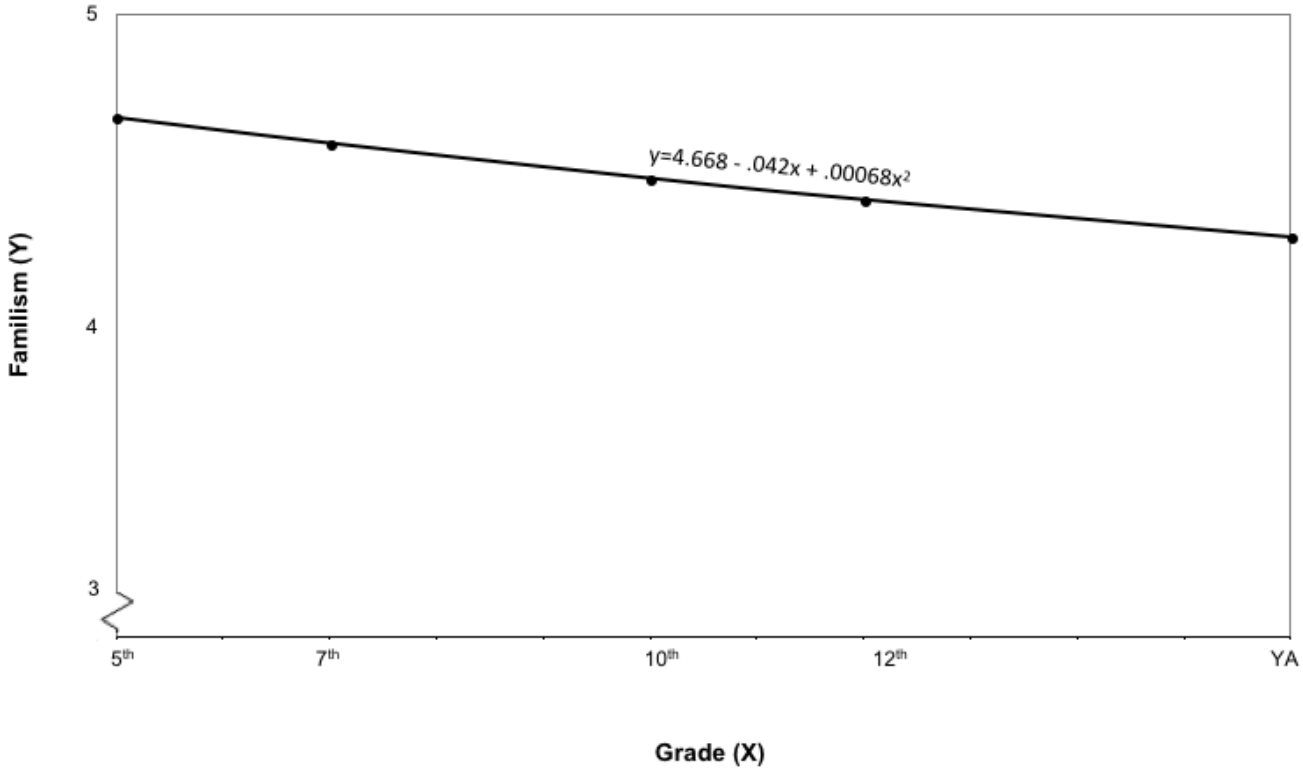

Figure 2. Univariate quadratic growth model of familism values centered at 5th grade

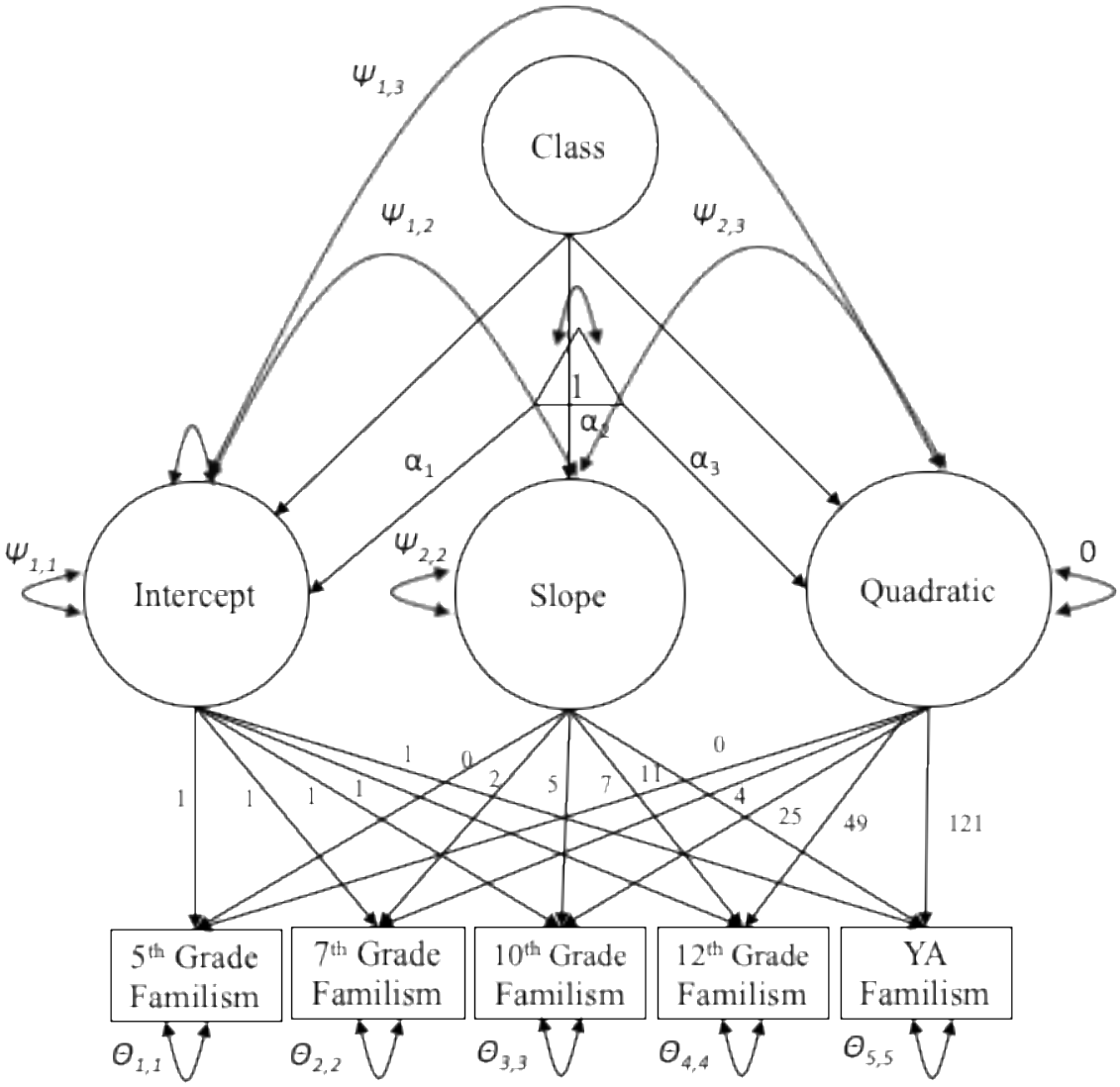

Figure 3. Growth mixture statistical model

Table 5

Model assessment of quadratic growth mixture modeling

Assessment Criteria	Model 1	Model 2		Model 3		Model 4	
		2-class	3-class[a]	2-class	3-class[a]	2-class	3-class[a]
Class Proportions	-	.21/.79	0/.79/.21	.24/.76	0/.76/.24	.50/.50	.50/.50/0
AIC	403.64	269.24	277.24	268.65	282.65	-8.90	7.103
BIC	435.98	320.05	346.52	333.31	379.64	60.38	113.33
saBIC	413.74	285.12	298.89	288.59	312.96	12.75	40.301
Entropy	-	.629	.766	.596	.745	.597	.746
VLMR *p*	-	<.001	-	=.036	-	<.001	-
LMR *p*	-	<.001	-	=.038	-	<.001	-
Bootstrap *p*	-	<.001	-	<.001[b]	-	<.001[b]	-

Note: The quadratic slope in all models was constrained to zero. Model 1: Univariate quadratic model. Model 2: Variances, covariances and residual variances constrained to be equal. Model 3: Residual variances constrained to be equal. Model 4: No equality constraints. –, criterion was not computed.
[a]Empty class, thus VLMR LMR and Bootstrap could not be computed
[b] *p*-value may not be trustworthy.

Table 6

Parameter estimates of the two-class solution of model 2

Parameter	Class 1	Class 2
n_c	588.82 (79%)	160.18 (21%)
b_0	4.672^{***}	4.649^{***}
b_1	-.0136	$-.1464^{***}$
b_2	$-.00152^{**}$	$.0088^{***}$
Ψ_{11}	$.026^{***}$	$.026^{***}$
Ψ_{22}	$.004^{***}$	$.004^{***}$
r_{21}	$-.259^{***}$	$-.259^{***}$
θ_{tt}	$.037^{***}$	$.037^{***}$

$^{*}p<.05$, $^{**}p<.01$, $^{***}p<.001$

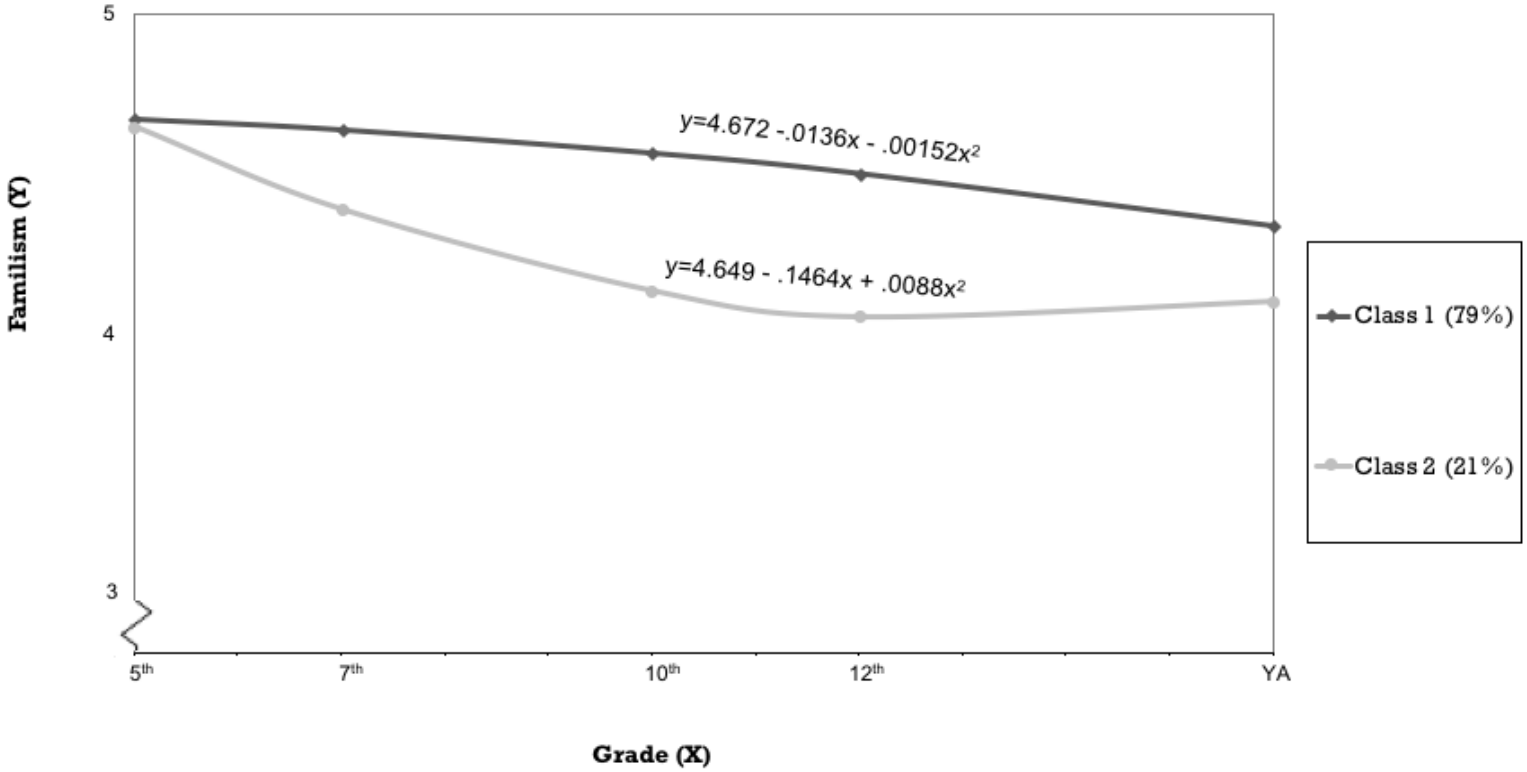

Figure 4. Graph of two-class solution of familism values centered at 5th grade

Table 7

Mother and father model results of the three-step method

	Mother Model	Father Model
Wave 1 (5th Grade) Predictors	Probability of Being in Class 1 versus Class 2 *β (SE)*	
Family Cohesion	-.18 (.33)	.35 (.53)
Acceptance	-.40 (.46)	.71 (.53)
Harsh Parenting	.10 (.25)	.20 (.35)
Family Conflict (Y)	-.25* (.10)	-.33* (.14)
Economic Hardship	-.03 (.05)	.12 (.09)
Perceived Ethnic Discrimination (Y)	1.0* (.40)	.94** (.36)
Covariates		
Youth Gender	.27 (.31)	.69 (.45)
Youth Nativity	-.50 (.38)	-.73 (.46)
Parent Nativity	-.33 (.39)	-.80 (.53)
Interactions		
Family Cohesion x Gender	--	-1.99* (.98)
Acceptance x Youth Nativity	1.49* (.66)	--

Y=Youth-report; -- not applicable to model

* $p < .05$, ** $p < .01$

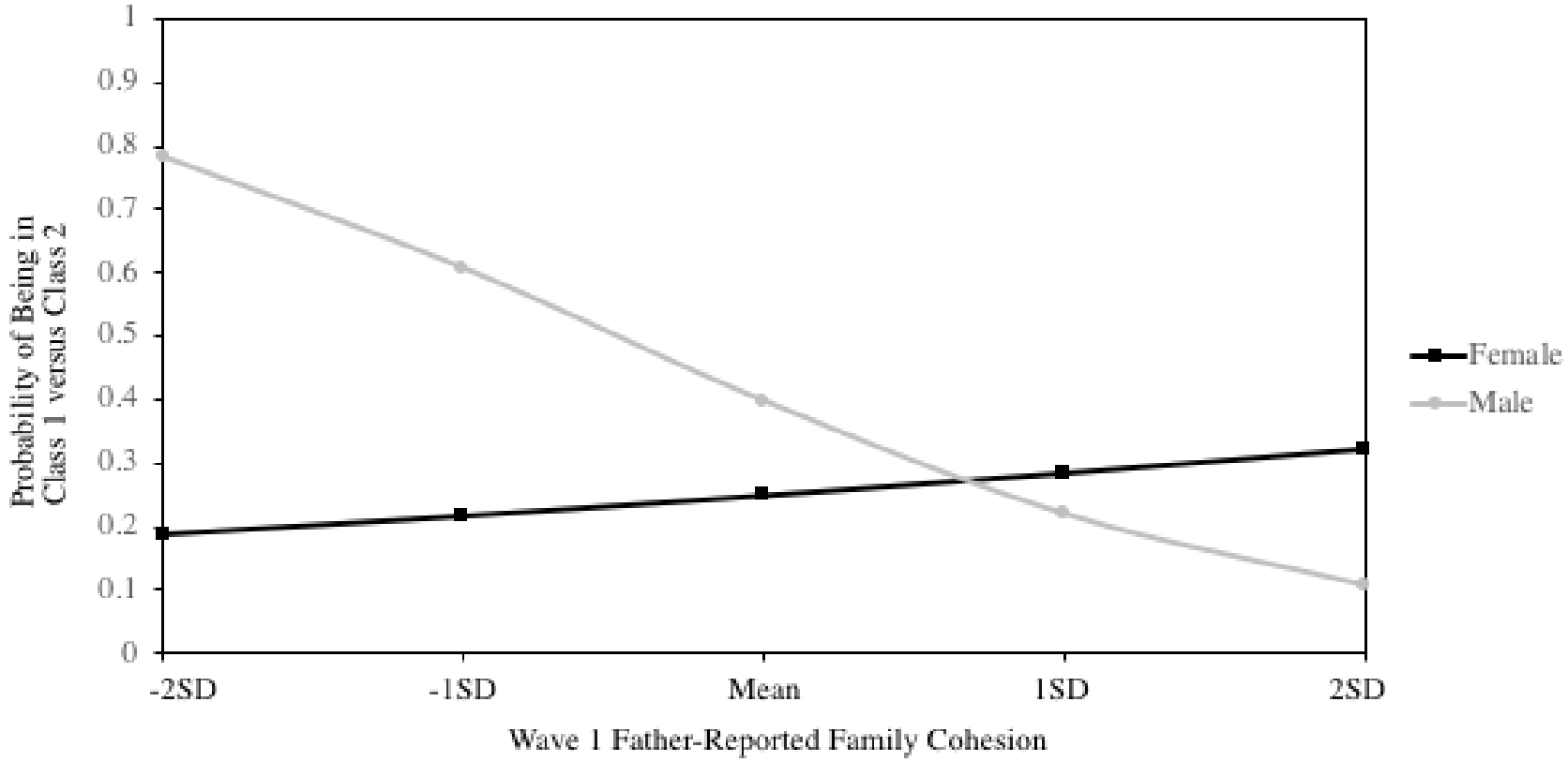

Figure 5. Graph of Probability of Familism Class Membership for Females and Males at Low, Medium, and High Levels of Father-Reported Family Cohesion

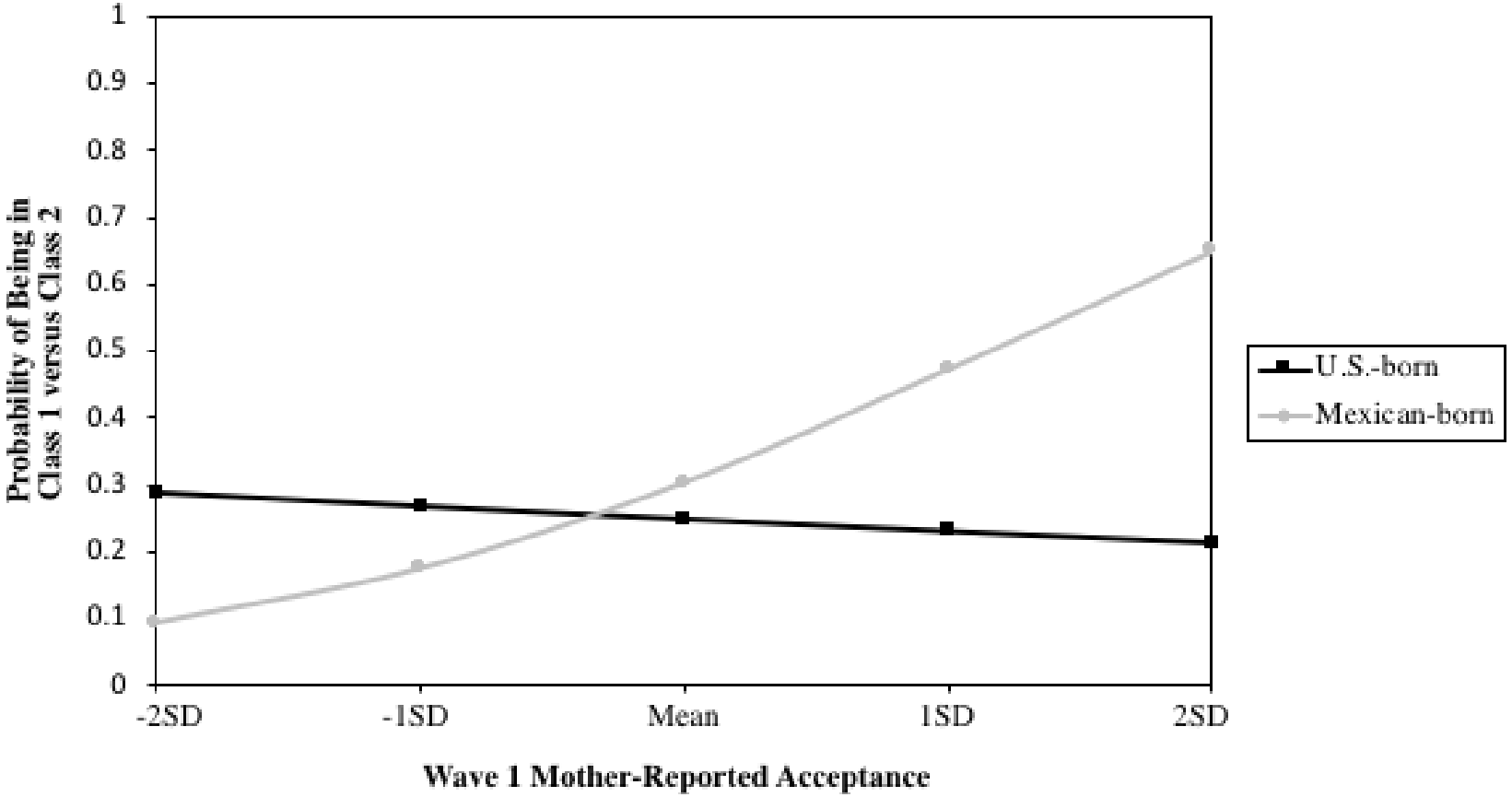

Figure 6. Graph of Probability of Familism Class Membership for U.S.-Born and Mexican-Born Youth at Low, Medium, and High Levels of Mother-Reported Acceptance

Table 8

Descriptives of wave 6 (N=395, 52.7% of original sample)

	Mean (SD)	n (%)
Age	22.02 (.68)	
Female		216 (54.7)
Marital Status		
Married		45 (11.4)
Separated or divorced		9 (2.3)
Never Married		332 (84.1)
Other		9 (2.3)
Serious Romantic Partner		176 (44.6)
Have Biological Child		103 (26.1)
Education (N=394)		
< High School		30 (7.6)
High School/GED		83 (21.1)
Some College		164 (41.6)
Diploma/Certificate		54 (13.7)
Associate's		37 (9.4)
Bachelor's		26 (6.6)
Currently Working (N=360)		307 (85.3)

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APPENDIX A

FAMILISM VALUES

Interviewer: These next statements are about what people may think or believe. Remember, there are no right or wrong answers. Tell me how much you believe the following statements.
Entrevistador: Las siguientes frases son acerca de lo que la gente puede pensar o creer. Recuerde, no hay respuestas correctas o incorrectas. Dígame con cuanta firmeza usted cree en las siguientes frases.

1. Parents should teach their children that the family always comes first.
Los padres deberían enseñarle a sus hijos que la familia siempre es primero.

1. Not at all	1. Nada
2. A little	2. Poquito
3. Somewhat	3. Algo
4. Very much	4. Bastante
5. Completely	5. Completamente

2. Children should be taught that it is their duty to care for their parents when their parents get old.
Se les debería enseñar a los niños que es su obligación cuidar a sus padres cuando ellos envejezcan.

3. Children should always do things to make their parents happy.
Los niños siempre deberían hacer las cosas que hagan a sus padres felices.

4. No matter what, children should always treat their parents with respect.
Sea lo que sea, los niños siempre deberían tratar a sus padres con respeto.

5. Family provides a sense of security because they will always be there for you.
La familia provee un sentido de seguridad, porque ellos siempre estarán allí para usted.

6. Children should respect adult relatives as if they were parents.
Con cuánta firmeza cree que los niños deberían respetar a familiares adultos como si fueran sus padres.

7. If a relative is having a hard time financially, one should help them out if possible.
Si un pariente está teniendo dificultades económicas, uno debería ayudarlo si puede.

8. When it comes to important decisions, the family should ask for advice from close relatives.
La familia debería pedir consejos a sus parientes más cercanos cuando se trata de decisiones importantes.

9. Children should never question their parents' decisions.
Con cuánta firmeza cree que los hijos nunca deberían cuestionar las decisiones de los padres.

10. It is always important to be united as a family.
Siempre es importante estar unidos como familia.

11. A person should share their home with relatives if they need a place to stay.
Con cuánta firmeza cree que uno debería compartir su casa con parientes si ellos necesitan donde quedarse.

12. Children should be on their best behavior when visiting the homes of Friends or relatives.
Los niños deberían portarse de la mejor manera cuando visitan las casas de amigos o familiares.

13. Children should always honor their parents and never say bad things about them.
Con cuánta firmeza cree que los niños siempre deberían honrar a sus padres y nunca decir cosas malas de ellos.

14. It is important to have close relationships with aunts/uncles, grandparents and cousins.
Es importante mantener relaciones cercanas con tíos, abuelos y primos.

15. Older kids should take care of and be role models for their younger brothers and sisters.
Los hermanos grandes deberían cuidar y darles el buen ejemplo a los hermanos y hermanas menores.

16. Children should be taught to always be good because they represent the family.
Con cuánta firmeza cree que se le debería enseñar a los niños a que siempre sean buenos porque ellos representan a la familia.

17. Children should follow their parents' rules, even if they think the rules are unfair.
Los niños deberían seguir las reglas de sus padres, aún cuando piensen que no son justas.

18. Holidays and celebrations are important because the whole family comes together.
Los días festivos y las celebraciones son importantes porque se reúne toda la familia.

19. Parents should be willing to make great sacrifices to make sure their children have a better life.
Los padres deberían estar dispuestos a hacer grandes sacrificios para asegurarse que sus hijos tengan una vida mejor.

20. A person should always think about their family when making important decisions.
Uno siempre debería considerar a su familia cuando toma decisiones importantes.

21. It is important for children to understand that their parents should have the final say when decisions are made in the family.
Con cuánta firmeza cree que es importante que los niños entiendan que sus padres deberían tener la última palabra cuando se toman decisiones en la familia.

22. It is important for family members to show their love and affection to one another.
Es importante que los miembros de la familia muestren su amor y afecto unos a los otros.

23. It is important to work hard and do one's best because this work reflects on the family.
Es importante trabajar duro y hacer lo mejor que uno pueda porque el trabajo de uno se refleja en la familia.

24. Children should always be polite when speaking to any adult.
Los niños siempre deberían ser amables cuando hablan con cualquier adulto.

APPENDIX B

FAMILY COHESION

Interviewer: Now I am going to read some statements that describe things that some families do. Tell me how often these things happen in your family.
Entrevistador: Ahora, voy a leer algunas frases que describen cosas que algunas familias hacen. Dígame con que frequencia suceden estas cosas en su familia.

1. Family members are supportive of each other during difficult times.
Qué tan seguido los miembros de la familia se apoyan durante tiempos difíciles.

1. Almost never or never	1. Casi nunca o nunca
2. Once in a while	2. De vez en cuando
3. Sometimes	3. A veces
4. A lof the time (frequently)	4. Muchas veces (frequentemente)
5. Almost always or always	5. Casi siempre or siempre

2. It is easier to discuss problems with people outside the family than with other family members.
Qué tan seguido es más fácil hablar con gente fuera de la familia que con otros miembros de la familia.

3. Your family gets together in same the room.
Qué tan seguido su familia se reúne en el mismo cuarto.

4. Your family does things together.
Su familia hace cosas juntas.

5. In your family, everyone goes his/her own way.
En su familia cada quien se va por su lado.

6. Family members know each other's close friends.
Los miembros de la familia conocen a los amigos cercanos de los otros.

7. Family members consult other family members on their decisions.
Los miembros de la familia hablan con otros miembros de la familia acerca de sus decisiones.

8. You have difficulty thinking of things to do as a family.
Les hace difícil pensar en cosas que hacer con la familia.

9. Family members feel very close to each other.
Qué tan seguido los miembros de la familia se sienten muy unidos.

10. Family members feel closer to people outside the family than to other family members.
Los miembros de la familia se sienten más unidos con gente de afuera que con miembros de la familia.

11. Family members go along with what the family decides to do.
Los miembros de la familia siguen lo que la familia decide hacer.

12. Family members like to spend their free time with each other.
A los miembros de la familia les gusta pasar su tiempo libre juntos.

13. Family members avoid each other at home.
Los miembros de la familia se evitan entre ellos en la casa.

14. You approve of each other's friends.
Ustedes aprueban de las amistades de los otros.

15. Family members pair up rather than do things as a total family.
Qué tan seguido los miembros de la familia hacen cosas en parejas, en lugar de hacerlas en familia.

16. Family members share interests and hobbies with each other.
Los miembros de la familia comparten intereses y pasatiempos unos con otros.

APPENDIX C

PARENT ACCEPTANCE

Interviewer: I would like you to think about the past three months. While I ask you some questions about your experiences with [child's name], please tell me how often each of these statements was true for you, that is: how often each statement describes your experiences with [child's name] during the past three months.
Entrevistador: Me gustaría que pensaras en tu vida durante los últimos tres meses. Primero te voy a preguntar acerca de [el nombre de tu hijo]. Por favor dime que tan seguido cada una de estas frases fue cierta durante los últimos tres meses.

1. You made [child's name] feel better after talking over his/her worries with him/her.
Usted hizo sentir mejor a [el nombre de hijo] después de platicar con él/ella sobre sus preocupaciones.

1. Almost never or never	1. Casi nunca o nunca
2. Once in a while	2. De vez en cuando
3. Sometimes	3. A veces
4. A lot of the time (frequently)	4. Muchas veces (frequentemente)
5. Almost always or always	5. Casi siempre o siempre

2. You saw [child's name]'s good points more than his/her faults.
Usted se fijó más en los puntos buenos de [el nombre de hijo], que en sus fallas.

3. You spoke to [child's name] in a warm and friendly voice.
Usted habló con [el nombre de hijo] con una voz amigable y templada.

4. You understood [child's name]'s problems and worries.
Usted comprendió los problemas y preocupaciones de [el nombre de hijo].

5. You were able to make [child's name] feel better when s/he was upset.
Usted fue capaz de hacer sentir mejor a [el nombre de hijo] cuando él/ella se sentía mal.

6. You cheered [child's name] up when s/he was sad.
Animó a [el nombre de hijo] cuando él/ella estaba triste.

7. You had a good time with [child's name].
Usted tuvo un buen tiempo con [el nombre de hijo].

8. You told or showed [child's name] that you liked him/her just the way s/he was.
Usted le dijo o le mostró a [el nombre de hijo] que lo/a quería tal como es.

APPENDIX D

HARSH PARENTING

Interviewer: I would like you to think about the past three months. While I ask you some questions about your experiences with [child's name], please tell me how often each of these statements was true for you, that is: how often each statement describes your experiences with [child's name] during the past three months.
Entrevistador: Me gustaría que pensaras en tu vida durante los últimos tres meses. Primero te voy a preguntar acerca de [el nombre de hijo]. Por favor dime que tan seguido cada una de estas frases fue cierta durante los últimos tres meses.

1. You spanked or slapped [child's name] when s/he did something wrong.
Usted le pegó o le dio cachetadas a [el nombre de hijo] cuando él/ella hizo algo mal.

1. Almost never or never	1. Casi nunca o nunca
2. Once in a while	2. De vez en cuando
3. Sometimes	3. A veces
4. A lot of the time (frequently)	4. Muchas veces (frequentemente)
5. Almost always or always	5. Casi siempre o siempre

2. You got angry when [child's name] was noisy around the house.
Usted se enojó con [el nombre de hijo] cuando él/ella fue ruidoso(a) en la casa.

3. You got so mad at [child's name] you called him/her names.
Se enojó tanto con [el nombre de hijo] que lo/la llamó por apodos.

4. You screamed at [child's name] when s/he did something wrong.
Le gritó a [el nombre de hijo] cuando él/ella hizo algo mal.

5. You lost your temper with [child's name] when s/he didn't help around the house.
Usted perdió el temperamento con [el nombre de hijo], cuando no le ayudó en casa.

6. You bothered [child's name] until s/he did what you wanted her/him to do.
Fastidió a [el nombre de hijo] hasta que hizo lo que usted quería que hiciera.

7. When [child's name] did something wrong, you said you were disgusted with her/him.
Cuando [el nombre de hijo] hizo algo mal, usted le dijo que estaba disgustada con él/ella.

8. When [child's name] did something wrong, you punished her/him in front of her/his friends.
Cuando [el nombre de hijo] hizo algo mal, lo/la castigó en frente de sus amigos.

APPENDIX E

FAMILY CONFLICT

Interviewer: Now I'm going to read a list of events that sometimes happen to children. Please tell me whether or not each of the following events happened to you during the past 3 months.
Entrevistador: Ahora voy a leer una lista de eventos que algunas veces le suceden a los niños. Por favor dime si cada uno de estos eventos te sucedió durante los últimos tres meses.

1. A family member got upset at you for not participating in the family‘s cultural or religious traditions.
Un miembro de la familia se disgustó contigo por no participar en las tradiciones culturales o religiosas de la familia.

1. Happened	1. Sucedió
2. Did not happen	2. No sucedió

2. A family member criticized you for hanging out with people of a different race or culture.
Un miembro de la familia te criticó por juntarte con personas de diferente cultura o raza.

3. People in your family accused you of not being proud of your Mexican background.
Durante los últimos tres meses, personas en tu familia te acusaron de no estar orgulloso/a de herencia Mexicana.

4. You disagreed with family members because they want you to do things the Mexican / Latino way.
Estuviste en desacuerdo con tus familiares debido a que ellos querian que hicieras las cosas al estilo Mexicano o Latino.

5. You had a serious disagreement or fight with a parent.
Tuviste un desacuerdo serio o pelea con uno de tus padres.

6. Your parents had a serious disagreement or fight with each other.
Tus padres tuvieron un desacuerdo serio o una pelea entre ellos.

7. Other members of your family or people you live with had a serious disagreement or fight.
Otros miembros de tu familia o las personas con las que vives tuvieron un desacuerdo serio o pelea.

8. Members of your family hit or hurt each other.
Miembros de tu familia se golpearon o lastimaron entre ellos.

9. Members of your family refused to speak to each other.
Durante los últimos tres meses, miembros de tu familia se negaron a hablarse unos a otros.

APPENDIX F

ECONOMIC HARDSHIP

Interviewer: I am interested in learning about how often you expect that you and your family will experience the following in the next 3 months.
Entrevistador: Estoy interesado(a) en aprender que tan seguido usted y su familia piensan que van a experimentar estos eventos en los próximos 3 meses.

1. Think back over the past 3 months and tell us how much difficulty you had with paying your bills. Would you say you had:
Ahora, piense en los últimos tres meses y digame cuánta dificultad usted tuvo en pagar sus cuentas. Diría usted que tuvo:

1. A great deal of difficulty	1. Muchísima dificultad
2. Quite a bit of difficulty	2. Bastante dificultad
3. Some difficulty	3. Algo de dificultad
4. A little difficulty	4. Un poco de dificultad
5. No difficulty at all	5. Nada de dificultad

2. Think again over the past 3 months. Generally, at the end of each month did you end up with:
Piense otra vez en los últimos tres meses. Generalmente al final del mes usted se quedo con:

1. More than enough money left	1. Más que suficiente dinero de sobra
2. Some money left	2. Algo de dinero de sobra
3. Just enough money left	3. Apenas suficiente dinero
4. Somewhat short of money	4. Algo corta de dinero
5. Very short of money	5. Muy corta de dinero

Interviewer: Please think about how you felt about your family's economic situation over the past 3 months. Indicate how true each statement is for your family.
Entrevistador: Por favor piense en como se ha sentido en relación a la situación económica de su familia, en los últimos tres meses, y dígame que tan cierto es para usted, y su familia cada una de las siguientes frases.

3. Your family had enough money to afford the kind of home you needed.
Su familia tuvo suficiente dinero para proporcionar el tipo de hogar que necesitaron.

1. Not at all true	1. Nada cierto
2. A little true	2. Un poco cierto
3. Somewhat true	3. Algo cierto
4. Mostly true	4. Cierto
5. Very true	5. Muy cierto

4. You had enough money to afford the kind of clothing you needed.
Ustedes tuvieron suficiente dinero para proporcionar el tipo de ropa que necesitaron.

5. You had enough money to afford the kind of furniture or household appliances you needed.
Ustedes tuvieron suficiente dinero para proporcionar el tipo de muebles o aparatos del hogar que necesitaron.

6. You had enough money to afford the kind of car you needed.
Ustedes tuvieron suficiente dinero para proporcionar el tipo de automóvil que necesitaron.

7. You had enough money to afford the kind of food you needed.
Ustedes tuvieron suficiente dinero para proporcionar el tipo de comida que necesitaron.

8. You had enough money to afford the kind of medical care you needed.
Ustedes tuvieron suficiente dinero para proporcionar el tipo de servicios médicos que necesitaron.

9. Your family had enough money to afford leisure and recreational activities.
Su familia tuvo suficiente dinero para proporcionarse actividades recreativas y de diversion.

Interviewer: In the last 3 months, has your family made any of the following adjustments because of financial difficulties?
Entrevistador: En los últimos tres meses, ¿Ha realizado su familia alguno de los siguientes ajustes, debido a una necesidad financiera?

10. …changed food shopping or eating habits a lot to save money?
¿…cambiaron mucho su manera de comer o hacer compras para ahorrar dinero?

1. Yes	1. Sí
2. No	2. No

11. …shut down the heat or air conditioning to save money even though it made the house uncomfortable?
¿…apagaron el calenton o aire acondicionado para ahorrar dinero aunque la casa se sintiera incomoda?

12. …did not go to see the doctor or dentist because you did not have the money?
¿...no fueron a ver al doctor o dentista debido a que no tenían dinero?

13. …fell far behind in paying bills?
¿...se atrazaron en sus pagos de las cuentas?

14. …asked relative or friends for money or food to help you get by?
¿...le pidieron a sus parientes o amigos dinero o comida para ayudarse?

15. …added another job to help make ends meet?
¿...consiguieron otro trabajo para que les alcanzara?

16. …received government assistance?
¿…recibieron ayuda del gobierno?

17. …sold some possessions because you needed the money (even though you really wanted to keep them)?

¿...vendieron algunas cosas porque ustedes necesitaron el dinero (aunque ustedes deveras querían quedarse con ellas)?

18. …moved to another house or apartment to save some money?
¿…se mudaron a otra casa o apartamento para ahorrar dinero?

19. 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?
¿En los próximos tres meses, que tan seguido espera que usted y su familia pasen por tiempos difíciles como no tener una vivienda adecuada o no tener suficiente comida?

1. Almost never or never	1. Casi nunca o nunca
2. Once in awhile	2. De vez en cuando
3. Sometimes	3. Aveces
4. A lot of the time (frequently)	4. Muchas veces (frequentemente)
5. Almost always or always	5. Casi siempre o siempre

20. In the next three months, how often do you expect that you will have to do without the basic things that your family needs?
¿En los próximos tres meses, que tan seguido espera que ustedes tendrán que vérselas sin las cosas básicas que su familia necesita?

APPENDIX G

PERCEIVED ETHNIC DISCRIMINATION

Interviewer: For the next set of questions, I am interested in your experiences with other people in your neighborhood and at school. Thinking of these people, please tell me how true the following statements are true for you.
Entrevistador: Para las siguientes preguntas estoy interesado/a en tus experiencias con otras personas, en tu vecindario y en tu escuela. Pensando en estas personas dime que tan ciertas son para ti las siguientes frases.

1. Your teachers think all Mexicans or Mexican Americans are alike.
Tus maestros piensan que todos los Mexicanos o Mexicanos Americanos son iguales.

1. Not at all true	1. Nada cierto
2. A little true	2. Un poco cierto
3. Somewhat true	3. Algo cierto
4. Mostly true	4. Cierto
5. Very true	5. Muy cierto

2. You have heard kids at school making jokes or saying bad things about Mexicans or Mexican Americans.
Has oído a niños en tu escuela haciendo bromas o diciendo cosas malas de los Mexicanos o Mexicanos Americanos.

3. Kids at school think bad things about Mexicans or Mexican Americans.
Niños en la escuela piensan mal sobre los Mexicanos o Mexicanos Americanos.

4. Your teachers dislike Mexicans or Mexican Americans.
A tus maestros no les gustan los Mexicanos o Mexicanos Americanos.

5. Kids at school dislike Mexicans or Mexican Americans.
A los niños de la escuela no les gustan los Mexicanos o Mexicanos Americanos.

6. You have heard your teachers at school making jokes or saying bad things about Mexicans or Mexican Americans
Has oído a tus maestros en tu escuela haciendo bromas o diciendo cosas malas de los Mexicanos o Mexicanos Americanos.

Interviewer: Tell me in the past three months, how often has each of the following statements been true.
Entrevistador: Piensa sobre cuántas veces en el último 3 meses has pensado que cada uno de lo siguiente ha sido cierto.

7. How often have kids at school excluded you from their activities, like not inviting you to go out with them, not inviting you to their houses, or not letting you join their games, because you are Mexican or Mexican American?
En los ultimos tres meses, te excluyeron los niños en tu escuela de sus actividades como juegos o fiestas porque eres Mexicano(a) o Mexicanos Americano(a).

1. Almost never or never	1. Casi nunca o nunca
2. Once in a while	2. De vez en cuando
3. Sometimes	3. A veces
4. A lot of the time (frequently)	4. Muchas veces (frecuentemente)
5. Almost always or always	5. Casi siempre o siempre

8. How often have you had to work harder in school than White kids to get the same praise or the same grades from your teachers because you are Mexican or Mexican American?
En los últimos tres meses, tuviste que trabajar más que los niños anglosajones en la escuela para que tu maestro/a te dijera cosas buenas o para recibir las mismas calificaciones, porque eres Mexicano(a) o Mexicanos Americano(a).

9. How often have kids at school called you names because you are Mexican or Mexican American?
En los últimos tres meses, que tan seguido los niños de la escuela te llamaron por apodos, porque eres Mexicano(a) o Mexicanos Americano(a).

10. How often have your teachers expected you to misbehave more than other kids or punished you more harshly because you are Mexican or Mexican American?
Tus maestros esperaban que te ibas a portar más mal que otros niños, o te castigaron más fuerte porque eres Mexicano(a) o Mexicanos Americano(a).

APPENDIX H

PARAMETER ESTIMATES AND FIT STATISTICS FOR UNIVARIATE MODELS WITH GRADE AS TIME METRIC AND WITH AUXILIARIES

Table 9.1

Parameter estimates and fit statistics for univariate models with grade as time metric and with auxiliaries

	No-Growth	Linear	Latent Basis	Quadratic
Intraindividual change parameters				
Slope loadings (basis coefficients)				
$g_0 \rightarrow c_0$	=1	=1	=1	=1
$g_0 \rightarrow c_1$	=1	=1	=1	=1
$g_0 \rightarrow c_2$	=1	=1	=1	=1
$g_0 \rightarrow c_3$	=1	=1	=1	=1
$g_0 \rightarrow c_4$	=1	=1	=1	=1
$g_1 \rightarrow c_0$	-	=0	=0	=0
$g_1 \rightarrow c_1$	-	=2	.278***	=2
$g_1 \rightarrow c_2$	-	=5	.613***	=5
$g_1 \rightarrow c_3$	-	=7	.703***	=7
$g_1 \rightarrow c_4$	-	=11	=1	=11
$g_2 \rightarrow c_0$	-	-	-	=0
$g_2 \rightarrow c_1$	-	-	-	=4
$g_2 \rightarrow c_2$	-	-	-	=25
$g_2 \rightarrow c_3$	-	-	-	=49
$g_2 \rightarrow c_4$	-	-	-	=121
Interindividual difference parameters				
Means (fixed effects)				
$1 \rightarrow g_0$	4.485***	4.66***	4.684***	4.668***
$1 \rightarrow g_1$	-	-.034***	-.383***	-.042***
$1 \rightarrow g_2$	-	-	-	.00068*
(Co)variances (random effects)				
$g_0 \leftrightarrow g_0$	.034***	.028***	.028***	.027***
$g_1 \leftrightarrow g_1$	-	0***	.062***	.0408***
$g_2 \leftrightarrow g_2$	-	-	-	.00193***
$e \leftrightarrow e$	.072***	.042***	.041***	.036***
$g_0 \leftrightarrow g_1$	-	0	-.004	-.0012
$g_0 \leftrightarrow g_2$	-	-	-	0
$g_1 \leftrightarrow g_2$	-	-	-	-.000269***
Fit statistics				
χ^2	1519.41	243.12	186.61	98.83
# of parameters	3	6	9	10
AIC	19017.00	17746.71	17696.20	17610.42
BIC	20208.64	18952.20	18915.55	18834.39
saBIC	19389.39	18123.43	18077.24	17992.91

Notes. c_0- c_3 represent the four measures of familism from waves 1 through 4; g_0, g_1, g_2 represent the latent intercept, first, and second slopes, respectively; →, directional relationships or fixed-effects parameters such as factor loadings and means; ↔, symmetric relationships or random-effects parameters such as variances and covariances; -, parameter was not part of the specified model; *p<.05, **p<.01, *** p<.001. AIC = Aikake's Information Criteria, BIC = Bayes Information Criteria, and sa= sample-size adjusted, lower scores indicate better statistical fit.

[a] Model did not converge

Table 9.2

Parameter estimates and fit statistics for univariate models with grade as time metric and with auxiliaries

	Spline (7^{th})	Spline (10^{th})	Spline (12^{th})	Spline Est[a]
Intraindividual change parameters				
Slope loadings (basis coefficients)				
$g_0 \rightarrow c_0$	=1	=1	=1	
$g_0 \rightarrow c_1$	=1	=1	=1	
$g_0 \rightarrow c_2$	=1	=1	=1	
$g_0 \rightarrow c_3$	=1	=1	=1	
$g_0 \rightarrow c_4$	=1	=1	=1	
$g_1 \rightarrow c_0$	=0	=0	=0	
$g_1 \rightarrow c_1$	=2	=2	=2	
$g_1 \rightarrow c_2$	=2	=5	=5	
$g_1 \rightarrow c_3$	=2	=5	=7	
$g_1 \rightarrow c_4$	=2	=5	=7	
$g_2 \rightarrow c_0$	=0	=0	=0	
$g_2 \rightarrow c_1$	=0	=0	=0	
$g_2 \rightarrow c_2$	=3	=0	=0	
$g_2 \rightarrow c_3$	=5	=2	=0	
$g_2 \rightarrow c_4$	=9	=6	=4	
Interindividual difference parameters				
Means (fixed effects)				
$1 \rightarrow g_0$	4.674^{***}	4.668^{***}	4.661^{***}	
$1 \rightarrow g_1$	$-.05^{***}$	$-.04^{***}$	$-.036^{***}$	
$1 \rightarrow g_2$	$-.032^{***}$	$-.03^{***}$	$-.031^{***}$	
(Co)variances (random effects)				
$g_0 \leftrightarrow g_0$	$.022^{***}$	$.027^{***}$	$.028^{***}$	
$g_1 \leftrightarrow g_1$	$.006^{***}$	$.002^{***}$	$.001^{***}$	
$g_2 \leftrightarrow g_2$	0^{***}	0^{*}	$.001^{***}$	
$e \leftrightarrow e$	$.038^{***}$	.037	$.037^{***}$	
$g_0 \leftrightarrow g_1$	.001	-.001	-.001	
$g_0 \leftrightarrow g_2$	$-.001^{***}$	$-.001^{**}$	$-.001^{*}$	
$g_1 \leftrightarrow g_2$	0	0	0^{**}	
Fit statistics				
χ^2	140.35	109.45	126.58	
# of parameters	10	10	10	
AIC	17651.94	17621.04	17638.17	
BIC	18875.90	18845.01	18862.13	
saBIC	18034.43	18003.53	18020.66	

Notes. c_0- c_3 represent the four measures of familism from waves 1 through 4; g_0, g_1, g_2 represent the latent intercept, first, and second slopes, respectively; →, directional relationships or fixed-effects parameters such as factor loadings and means; ↔, symmetric relationships or random-effects parameters such as variances and covariances; -, parameter was not part of the specified model; $^{*}p<.05$, $^{**}p<.01$, $^{***}p<.001$. AIC = Aikake's Information Criteria, BIC = Bayes Information Criteria, and sa= sample-size adjusted, lower scores indicate better statistical fit.

[a] Model did not converge

APPENDIX I

PARAMETER ESTIMATES AND FIT STATISTICS FOR UNIVARIATE MODELS WITH AGE AS TIME METRIC USING DEFINITION VARIABLE APPROACH

Table 10.1

Parameter estimates and fit statistics for univariate models with age as time metric using definition variable approach

	No-Growth	Linear	Latent Basis	Quadratic
Intraindividual change parameters				
Slope loadings (basis coefficients)				
$g_0 \rightarrow c_0$	=1	=1	=1	=1
$g_0 \rightarrow c_1$	=1	=1	=1	=1
$g_0 \rightarrow c_2$	=1	=1	=1	=1
$g_0 \rightarrow c_3$	=1	=1	=1	=1
$g_0 \rightarrow c_4$	=1	=1	=1	=1
$g_1 \rightarrow c_0$	-	$=L_1$	=0	$=L_1$
$g_1 \rightarrow c_1$	-	$=L_2$	$.278^{***}$	$=L_2$
$g_1 \rightarrow c_2$	-	$=L_3$	$.613^{***}$	$=L_3$
$g_1 \rightarrow c_3$	-	$=L_4$	$.703^{***}$	$=L_4$
$g_1 \rightarrow c_4$	-	$=L_5$	=1	$=L_5$
$g_2 \rightarrow c_0$	-	-	-	$=L_1^2$
$g_2 \rightarrow c_1$	-	-	-	$=L_2^2$
$g_2 \rightarrow c_2$	-	-	-	$=L_3^2$
$g_2 \rightarrow c_3$	-	-	-	$=L_4^2$
$g_2 \rightarrow c_4$	-	-	-	$=L_5^2$
Interindividual difference parameters				
Means (fixed effects)				
$1 \rightarrow g_0$	4.485^{***}	4.66^{***}	4.684^{***}	4.668^{***}
$1 \rightarrow g_1$	-	$-.033^{***}$	$-.383^{***}$	$-.0389^{***}$
$1 \rightarrow g_2$	-	-	-	$.00053^{*}$
(Co)variances (random effects)				
$g_0 \leftrightarrow g_0$	$.034^{***}$	$.028^{***}$	$.028^{***}$	$.026^{***}$
$g_1 \leftrightarrow g_1$	-	0^{***}	$.062^{***}$	$.0338^{***}$
$g_2 \leftrightarrow g_2$	-	-	-	$.00147^{***}$
$e \leftrightarrow e$	$.072^{***}$	$.042^{***}$	$.041^{***}$	$.036^{***}$
$g_0 \leftrightarrow g_1$	-	0	-.004	-.0008
$g_0 \leftrightarrow g_2$	-	-	-	-.00002
$g_1 \leftrightarrow g_2$	-	-	-	$-.000211^{***}$
Fit statistics				
χ^2	1519.41	DNC	186.61	DNC
# of parameters	3	6	9	10
AIC	1679.06	407.72	358.26	282.52
BIC	1692.92	435.44	399.82	328.71
saBIC	1683.39	416.38	371.25	296.95

Notes. c_0- c_4 represent the four measures of familism from waves 1 through 5; g_0, g_1, g_2 represent the latent intercept, first, and second slopes, respectively; →, directional relationships or fixed-effects parameters such as factor loadings and means; ↔, symmetric relationships or random-effects parameters such as variances and covariances; -, parameter was not part of the specified model; $^{*}p<.05$, $^{**}p<.01$, $^{***}p<.001$. AIC = Aikake's Information Criteria, BIC = Bayes Information Criteria, and sa= sample-size adjusted, lower scores indicate better statistical fit. DNC = Did Not Compute. $L_{1\text{-}5}$ = (cXage/12-10.43).

[a] $L_{11\text{-}15}$ = (cXage/12 – 13), but if cXage/12 > 13 then $L_{11\text{-}15}$ = 0. $L_{21\text{-}25}$ = (cXage/12 – 13), but if cXage/12 <= 13 then $L_{21\text{-}25}$ = 0.

[b] $L_{11\text{-}15}$ = (cXage/12 – 16), but if cXage/12 > 16 then $L_{11\text{-}15}$ = 0. $L_{21\text{-}25}$ = (cXage/12 – 16), but if cXage/12 <= 16 then $L_{21\text{-}25}$ = 0.

[c] $L_{11\text{-}15}$ = (cXage/12 – 18), but if cXage/12 > 18 then $L_{11\text{-}15}$ = 0. $L_{21\text{-}25}$ = (cXage/12 – 18), but if cXage/12 <= 18 then $L_{21\text{-}25}$ = 0.

Table 10.2

Parameter estimates and fit statistics for univariate models with age as time metric using definition variable approach

	Spline[a] (13 yo)	Spline[b] (16 yo)	Spline[c] (18 yo)
Intraindividual change parameters			
Slope loadings (basis coefficients)			
$g_0 \rightarrow c_0$	=1	=1	=1
$g_0 \rightarrow c_1$	=1	=1	=1
$g_0 \rightarrow c_2$	=1	=1	=1
$g_0 \rightarrow c_3$	=1	=1	=1
$g_0 \rightarrow c_4$	=1	=1	=1
$g_1 \rightarrow c_0$	$=L_{11}$	$=L_{11}$	$=L_{11}$
$g_1 \rightarrow c_1$	$=L_{12}$	$=L_{12}$	$=L_{12}$
$g_1 \rightarrow c_2$	$=L_{13}$	$=L_{13}$	$=L_{13}$
$g_1 \rightarrow c_3$	$=L_{14}$	$=L_{14}$	$=L_{14}$
$g_1 \rightarrow c_4$	$=L_{15}$	$=L_{15}$	$=L_{15}$
$g_2 \rightarrow c_0$	$=L_{21}$	$=L_{21}$	$=L_{21}$
$g_2 \rightarrow c_1$	$=L_{22}$	$=L_{22}$	$=L_{22}$
$g_2 \rightarrow c_2$	$=L_{23}$	$=L_{23}$	$=L_{23}$
$g_2 \rightarrow c_3$	$=L_{24}$	$=L_{24}$	$=L_{24}$
$g_2 \rightarrow c_4$	$=L_{25}$	$=L_{25}$	$=L_{25}$
Interindividual difference parameters			
Means (fixed effects)			
$1 \rightarrow g_0$	4.561^{***}	4.462^{***}	4.404^{***}
$1 \rightarrow g_1$	$-.043^{***}$	$-.037^{***}$	$-.034^{***}$
$1 \rightarrow g_2$	$-.03^{***}$	$-.029^{***}$	$-.03^{***}$
(Co)variances (random effects)			
$g_0 \leftrightarrow g_0$	$.053^{***}$	$.071^{***}$	$.085^{***}$
$g_1 \leftrightarrow g_1$	$.004^{***}$	$.002^{***}$	$.001^{***}$
$g_2 \leftrightarrow g_2$	0^{***}	0^{**}	$.001^{***}$
$e \leftrightarrow e$	$.038^{***}$	$.037^{***}$	$.036^{***}$
$g_0 \leftrightarrow g_1$	$.011^{***}$	$.009^{***}$	$.008^{***}$
$g_0 \leftrightarrow g_2$	-.001	$-.002^{**}$	$-.005^{***}$
$g_1 \leftrightarrow g_2$	0	0	0^{**}
Fit statistics			
χ^2	DNC	DNC	DNC
# of parameters	10	10	10
AIC	318.92	284.48	298.66
BIC	365.11	330.67	344.85
saBIC	333.36	298.91	313.09

Notes. c_0- c_4 represent the four measures of familism from waves 1 through 5; g_0, g_1, g_2 represent the latent intercept, first, and second slopes, respectively; →, directional relationships or fixed-effects parameters such as factor loadings and means; ↔, symmetric relationships or random-effects parameters such as variances and covariances; -, parameter was not part of the specified model; $^{*}p<.05$, $^{**}p<.01$, $^{***}p<.001$. AIC = Aikake's Information Criteria, BIC = Bayes Information Criteria, and sa= sample-size adjusted, lower scores indicate better statistical fit. DNC = Did Not Compute. $L_{1\text{-}5}$ = (cXage/12-10.43).

[a] $L_{11\text{-}15}$ = (cXage/12 – 13), but if cXage/12 > 13 then $L_{11\text{-}15} = 0$. $L_{21\text{-}25}$ = (cXage/12 – 13), but if cXage/12 <= 13 then $L_{21\text{-}25} = 0$.

[b] $L_{11\text{-}15}$ = (cXage/12 – 16), but if cXage/12 > 16 then $L_{11\text{-}15} = 0$. $L_{21\text{-}25}$ = (cXage/12 – 16), but if cXage/12 <= 16 then $L_{21\text{-}25} = 0$.

[c] $L_{11\text{-}15}$ = (cXage/12 – 18), but if cXage/12 > 18 then $L_{11\text{-}15} = 0$. $L_{21\text{-}25}$ = (cXage/12 – 18), but if cXage/12 <= 18 then $L_{21\text{-}25} = 0$.