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Trajectories of Familism Values and the Prosocial Tendencies of Mexican American Adolescents

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Abstract

We examined how the development of familism values from 5th to 10th grade relates to 12th grade prosocial tendencies (after controlling for 10th grade prosocial tendencies) using a stratified random sample of 749 Mexican American adolescents (M = 10.42 years of age at 5th grade; 48.9% girls) from 35 culturally and economically diverse neighborhoods. Most of the families (44.3%) were at or below $25,000 in annual income. A second-order linear growth model represented adolescents' familism values in 5th grade (intercepts) and change in familism values from 5th to 10th grade (slopes), with the vast majority of slopes being negative. Higher intercepts predicted greater compliant and emotional prosocial tendencies, and higher (i.e., more positive or less negative) slopes predicted greater dire (girls only) and public prosocial tendencies in 12th grade. The results underscore the important role of familism values in prosocial development among Mexican American adolescents.

Keywords

prosocial development; familism values; Mexican American adolescents

Traditional models of prosocial development often emphasize the predictive roles of sociocognitive and socioemotive traits (Carlo, 2014; Eisenberg, Fabes, & Spinrad, 2006). However, scholars have increasingly emphasized theoretical perspectives focused on how cultural mechanisms may enhance our understanding of the broader socialization processes that impact child development (e.g., Garcia-Coll et al., 1996; Hughes et al., 2006; Knight, Bernal, Garza, & Cota, 1993). Some scholars have suggested that Mexican American cultural values, particularly familism values, promote several types of prosocial behaviors among Mexican American children and adolescents (e.g., Knight, Carlo, Basilio, & Jacobson, 2015). Unfortunately, the studies empirically linking familism values to prosocial behaviors (i.e., actions intended to benefit others; Armenta, et al., 2011; Calderón-Tena et al., 2011; Knight et al., 2015) have generally relied on cross-sectional data that have limited utility in supporting the causal direction of this association. The only longitudinal study we are aware of that examined this association (Knight, Carlo, Mahrer, & Davis, 2016) only had

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a single time point assessment prosocial tendencies available and thus could not control for an earlier assessment. Hence, although familism values have been associated with prosocial tendencies, the temporal ordering of this association is unclear. The purpose of this study is to provide the first longitudinal prospective evidence supporting the temporal precedence of familism values in this association in a relatively representative sample of Mexican American adolescents.

Knight and colleagues (2010) have suggested that familism values are reflected in feelings of obligation to one's family, consideration of one's family as a primary source of social and emotional support, and viewing one's family as an important reference group in decision-making processes. In addition, familism values are reflected in one's respect for parents and other family members. The demands and opportunities created by these familism values likely foster the types of sociocognitive and socioemotional traits (i.e., the awareness, consideration, and responsiveness to the needs of others in addition family members) that foster prosocial development (e.g., Knight et al, 2015) and likely promote prosocial tendencies in compliant, highly emotional and dire circumstances (Armenta, et al., 2011). Familism values that enhance the expectation that children should do household chores when asked, including caregiving of younger siblings, are likely to foster compliant prosocial tendencies. Familism values that enhance the expectation that children should be attuned to the emotional state of family members and provide support, particularly when family members are in crisis or emergency situations, are likely to foster prosocial tendencies in emotionally charged and dire circumstances. In addition, familism values that enhance the expectation that children should respect family members are likely to further foster compliant, emotional, and dire prosocial tendencies and to a lesser degree other types of prosocial actions. Mexican American parents who strongly endorse these types of familism values, and create demands upon their children to adopt these values; are at the same time modeling prosocial tendencies and providing opportunities for their children to behave prosocially, particularly when asked or in emotionally evocative and crisis situations. Once adopted by the youth these familism values and associated prosocial behaviors are likely to be generalized to close friends and frequent acquaintances. Hence, we expect that Mexican American adolescents' endorsement of familism values is primarily associated with compliant, emotional, and dire prosocial tendencies, and less likely to predict anonymous (helping without being recognized), public (helping when observed by others), and altruistic (helping without expectations for rewards) prosocial tendencies.

Although the acceptance and adoption of familism values through cultural socialization processes may be a developmental precursor to specific types of prosocial tendencies (e.g., Knight et al., 2016), empirical evidence bearing directly on the temporal ordering of this relation has not been presented. Given that the conceptual overlap between familism values and these prosocial tendencies, the absence of evidence bearing on the direction of this association is a serious limitation. The ethnic socialization of familism values is primarily designed to promote positive relations and behaviors within the family, much like the socialization of prosocial tendencies is designed to promote positive relations and behaviors more broadly. Hence, a viable, reverse causal explanation of the empirical links of familism values to prosocial tendencies is that prosocial children and adolescents are more likely to adopt familism values.

To address the limitations in previous studies, we examine the longitudinal prospective association between Mexican American adolescents' familism values measured from 5th to 10th grades and their prosocial tendencies measured at 12th grade controlling for their 10th grade prosocial tendencies. First, two assessments of adolescents' prosocial tendencies were available, thus allowing us to examine whether adolescents' familism values explained variability in their 12th grade prosocial tendencies even after controlling for their 10th grade prosocial tendencies. Residualizing these 12th grade assessments of prosocial tendencies by the adolescents 10th grade prosocial tendencies helps adjust for the time-invariant confounding, which is necessary for establishing the temporal precedence of the association between familism values and prosocial tendencies. Second, the availability of assessments of familism values at several earlier grades allowed us to compute the longitudinal growth trajectories of familism values across this age span; which, in turn, allowed us to directly test the potential impact of both the Mexican American youths' baseline level of familism values (i.e., intercepts representing their 5th grade level) and their changes in familism values from 5th to 10th grades (i.e., their slope) to their 12th grade prosocial tendencies after controlling for their 10th grade prosocial tendencies.

Further, although there is some, albeit inconsistent, evidence that U. S.-born Mexican Americans and those born in Mexico might differ in familism values (Knight et al., 2010, in Study 1 but not Study 2), and evidence that Mexican American boys and girls differ somewhat in prosocial tendencies (Carlo et al., 2012), there is no evidence of nativity or gender differences in the associations between familism values and prosocial tendencies (Armenta et al., 2011; Calderón-Tena et al., 2011; Knight et al., 2015). Hence, we expected that the intercepts and/or slopes of the familism trajectories would be associated with 12th grade compliant, emotional, and dire prosocial tendencies (after controlling for 10th grade levels of these prosocial tendencies) regardless of adolescents' nativity or gender.

Method

Participants

Data for this study came from the first, second, third, and fourth assessments of an ongoing project investigating the role of culture and context in the lives of Mexican American families from a large metropolitan area in the Southwestern United States. Participants were 749 Mexican American adolescents (48.9% girls) and their mothers selected from a stratified random sample of 35 culturally diverse neighborhoods (see Roosa et al, 2008 for more detail). Most of the mothers and fathers were born in Mexico (74.4% and 79.9%, respectively), and most of the adolescents were born in the United States (70.2%). The adolescents were predominantly first- or second-generation (29.4% and 42.9%, respectively). At the first assessment, 499 (66.6%) of the 749 mothers were married and living with their spouse, 40 (5.3%) were married but not living with their spouse, 79 (10.5%) were living with a partner but not married, 58 (7.7%) were never married and not living with a partner, 61 (8.1%) were divorced, and 12 (1.6%) were widowed. Family annual incomes were quite diverse (44.3% at or below $25,000; 38.1% between $25,000 and $50,000; and 17.6% at or above $50,000). Parental educations levels were also quite diverse (among mothers and fathers, respectively, 48.7% and 52.6% less than high school; 23.1% and 20.9%

high school graduates; 22.0% and 20.2% some college or vocational school; and 6.2% and 6.2% Bachelor's degree or higher). At the first assessment, the adolescents ranged from 9 to 12 years old (M = 10.42, SD = 0.55), with 97.6% being 10 or 11 years old. Of the 749 families, 710 (94.8%) were re-interviewed at the second assessment (when most of the adolescents were in 7th grade), 640 (85.4%) at the third assessment (when most of the adolescents were in 10th grade), and 636 (84.9%) at the fourth assessment (when most of the adolescents were in 12th grade). To assess the impact of attrition, we conducted a series of t-tests and χ^2 tests on several baseline and demographic variables. Most differences between those adolescents who did and did not complete the second, third, and fourth assessments were nonsignificant (e.g., age, generational status, language of interview, social rejection, internalizing and externalizing problems). Although three comparisons produced statistically significant t- or χ^2-values (i.e., boys were less likely than girls to complete the fourth assessment; and adolescents who did not complete the 7th grade assessment reported less relational aggression and externalizing problems compared to those who completed the 7th grade assessment), none of these comparisons were significant after a Bonferroni correction to control for the probability of Type 1 errors (see supplemental materials for complete details).

Procedure

This research project (Culture, Context, and Mexican American Mental Health) was approved by the Arizona State University Social and Behavioral IRB (protocol # 0905004020). Parents signed consent forms and adolescents signed assent forms prior to their participation. Adolescents completed computer-assisted interviews at their home, scheduled at the family's convenience, which were about 2.5 hours long. The interviewers were 80–90% women; fluent in both English and Spanish; recipients of a master's or bachelor's degree (or the combination of education and at least two years of professional experience in a social services agency); strong in communication, organizational, and computer skills; and completed at least 40 hours of training. Interviewers read each survey question and possible responses aloud in participants' preferred language and responded on a separate keypad. The computer-assisted interviews were programmed to allow interviewers to switch between English and Spanish, but the primary interview language was English for 82.4%, 87.5%, 94.3%, and 92.9% of adolescents in 5th, 7th, 10th, and 12th grades, respectively. Adolescents were compensated $45 for the first, $50 for the second, $55 for the third, and $60 for the fourth assessment.

Measures

Familism values—At each assessment, adolescents completed the Mexican American Cultural Values Scale (MACVS: Knight et al., 2010) to assess familism values. The MACVS was developed based on values that Mexican American mother, father, and adolescent focus groups identified as associated with the Mexican American and mainstream American cultures. We focused on the four familism subscales: support (six items, α = .62, .67, and .75 in 5th, 7th, and 10th grade, respectively; e.g., "Parents should teach their children that the family always comes first"), obligation (five items, α = .53, .63, and .65; e.g., "If a relative is having a hard time financially, one should help them out if possible"), family as referent (five items, α = .61, .67, and .71; e.g., "Children should be taught to always be good because

they represent the family"), and respect (eight items, α = .51, .71, and .77; e.g., "5. No matter what, children should always treat their parents with respect"). Although the respect subscale has not always been to define familism values, all but one of the items on this subscale refer to respect for parents and other family members. The lower values of α seem to be primarily due to age and/or the number of items per subscale. Each of the subscales had reasonable inter-item correlations and the lower reliabilities at 5th grade are likely due to the slightly lower inter-item correlations at this age and the few number of items on each subscale. The reliabilities based upon the 24 items from all of these four subscales were quite good (α = .82, .88, and .90 in 5th, 7th, and 10th grade, respectively). Confirmatory factor analyses supported these four subscales and indicated that they loaded on a second-order factor (see Knight et al., 2010 for details). Adolescents indicated their endorsement of each item using a five-point scale ranging from "not at all" (1) to "completely" (5).

Prosocial tendencies—The Prosocial Tendencies Measure-Revised (PTM-R; Carlo, Hausmann, Christiansen, & Randall, 2003) was administered during 10th and 12th grade to assess adolescents' inclination to engage in six types of prosocial tendencies: compliant (two items, α = .64 and .69 in 10th and 12th grade, respectively; assisting when asked), emotional (five items, α = .86 and .86; helping when the situation is emotionally evocative), dire (three items, α = .76 and .72; assisting in emergency situations), anonymous (four items, α = .76 and .78; helping without being recognized), public (three items, α = .75 and .75; helping when observed by others), and altruistic (four items, α = .75 and .76; helping without the need for anticipated acknowledgments or rewards). Adolescents rated the extent to which each statement described them using a five-point scale ranging from "does not describe me at all" (1) to "describes me greatly" (5). Example items include, "When people ask me to help them, I don't hesitate" (compliant), "It makes me feel good when I can comfort someone who is very upset" (emotional), "I tend to help people who are in a real crisis or need" (dire), "Most of the time, I help others when they do not know who helped them" (anonymous), "I can help others best when people are watching me" (public), and "I think that one of the best things about helping others is that it makes me look good" (altruistic, reverse coded).

Confirmatory factor analysis supported the six-factor structure of the PTM-R, RMSEA = .06, CFI = .93, SRMR = .04. Previous research has supported the convergent and discriminant validity of the PTM (see McGinley, Opal, Richaud, & Mesurado, 2014, for a review) and construct validity of the PTM-R in Mexican American samples (e.g., Carlo, Knight, McGinley, Zamboanga, & Jarvis, 2010).

Adolescents' nativity and gender—Based on mother report, 526 (70.2%) of the 749 adolescents were born in the United States and 223 (29.8%) were born in Mexico. Of the 749 adolescents, 383 (51.1%) self-reported being male and 366 (48.9%) self-reported being female.

Results

Table 1 reports the means, standard deviations, and correlations among the measures. Adolescents reported strong familism values in 5th, 7th, and 10th grade, though the means

decreased slightly over time (M = 4.54, 4.43, and 4.29 in 5th, 7th, and 10th grade, respectively, with a highest possible score of 5). In 10th and 12th grade, adolescents endorsed higher levels of compliant, emotional, dire, and altruistic prosocial tendencies than anonymous or public prosocial tendencies. The correlations in Table 1 indicate positive associations among adolescents' familism values in 5th, 7th, and 10th grade and among five of the six prosocial tendencies (excluding altruistic prosocial tendencies) in 10th and 12th grade.

Data Analytic Strategy

All analyses were conducted in Mplus 7.3 using full information maximum likelihood (FIML) estimation. FIML estimation uses all of the available data, thus increasing accuracy and power relative to excluding participants with missing data. We specified a sandwich estimator for the standard error computations to adjust for non-normality (Muthén & Muthén, 1998–2014). First we fit the second-order linear growth model depicted in the bottom portion of Figure 1. The second-order factors represent adolescents' familism values in 5th grade (intercepts) and change in familism values from 5th to 10th grade (slopes). We assessed the global fit of the second-order linear growth model using the χ^2 test of exact fit, root mean square error of approximation (RMSEA; Steiger, 1989), comparative fit index (CFI; Bentler, 1990), and Tucker-Lewis index (TLI; Tucker & Lewis, 1973). Next we incorporated adolescents' 12th grade prosocial tendencies, controlling for their 10th grade prosocial tendencies, as distal outcomes in the second-order linear growth model one at a time (see Figure 1).

Finally, we fit a series of multiple group models to investigate whether the effects observed for the total sample held across adolescents' nativity and gender. After establishing that the second-order linear growth model was invariant across adolescents' nativity and gender, we fit a model with all possible constraints across U.S. -- and Mexico-born (or male and female) adolescents and models allowing the effects of adolescents' familism intercepts and slopes on their 12th grade prosocial tendencies to differ across the two groups. Because these models were nested, we compared their relative fit using Satorra-Bentler scaled χ^2 difference tests (Satorra, 2000).

Second-Order Linear Growth Model

The second-order linear growth model closely fit the data, χ^2 (62) = 154.82, $p < .001$; RMSEA = .045, 90% CI [.036, .054]; CFI = .971; TLI = .969. Adolescents varied significantly in their 5th grade familism values [intercepts, χ^2 (1) = 36.52, $p < .001$] and change in familism values from 5th to 10th grade [slopes, χ^2 (1) = 18.21, $p < .001$]. The mean familism score at 5th grade was quite high (4.5 on a 5-point scale). Although the slopes ranged from −0.16 to +0.03 points per year, a vast majority of the slopes were negative, and the mean slope indicated a decrease in familism values of 0.04 points per year ($z = -12.76$, $p < .001$).

Predicting Prosocial Tendencies

Table 2 reports the effects of adolescents' 5th grade familism values (intercepts) and change in familism values from 5th to 10th grade (slopes) on their 12th grade compliant, emotional,

dire, anonymous, public, and altruistic prosocial tendencies, controlling for their 10th grade prosocial tendencies, and the global fit of each model. Higher familism intercepts predicted greater compliant ($z = 3.06$, $p = .002$) and emotional ($z = 2.35$, $p = .019$) prosocial tendencies in 12th grade. However, the familism slopes did not predict adolescents' compliant or emotional prosocial tendencies in 12th grade. Familism intercepts and slopes also did not predict adolescents' dire, anonymous, or altruistic prosocial tendencies in 12th grade. In addition, higher (i.e., more positive or less negative) familism slopes, but not intercepts, predicted greater public prosocial tendencies in 12th grade ($z = 2.29$, $p = .022$).

Adolescents' nativity—Multiple group models revealed no significant differences across adolescents born in the U.S. and Mexico for the effects of their familism intercepts and slopes on compliant [χ^2 (2) = 1.48, $p = .478$], emotional [χ^2 (2) = 1.07, $p = .585$], dire [χ^2 (2) = 0.20, $p = .905$], anonymous [χ^2 (2) = 2.80, $p = .246$], public [χ^2 (2) = 0.43, $p = .806$], or altruistic [χ^2 (2) = 0.48, $p = .788$] prosocial tendencies in 12th grade.

Adolescents' gender—Multiple group models indicated that boys exhibited greater stability in their familism values over time ($z = 2.86$, $p = .004$) compared to girls. Thus, although girls reported higher familism values in 5th grade than did boys ($M = 4.56$ versus 4.51, $z = 2.16$, $p = .031$), boys reported higher familism values in 10th grade than did girls ($M = 4.26$ versus 4.33, $z = 2.05$, $p = .040$).

Significant differences across boys and girls were also found for the effects of their familism intercepts and slopes on compliant [χ^2 (2) = 13.94, $p = .001$], emotional [χ^2 (2) = 10.17, $p = .006$], and dire [χ^2 (2) = 10.95, $p = .004$], prosocial tendencies in 12th grade. For girls, higher familism intercepts predicted greater compliant ($z = 3.65$, $p < .001$), emotional ($z = 3.54$, $p < .001$), and dire ($z = 2.52$, $p = .012$) prosocial tendencies. For boys, higher (i.e., more positive and less negative) familism slopes predicted greater compliant ($z = 2.62$, $p = .009$) and emotional ($z = 1.99$, $p = .047$) prosocial tendencies. No other significant differences across boys and girls were found.

Discussion

The longitudinal prospective findings are generally consistent with our hypotheses and the present study is the first to provide evidence that familism values predict specific types of prosocial tendencies, even after controlling for an earlier assessments of these prosocial tendencies, consistent with the theoretical notion that familism values foster the development of specific types of prosocial tendencies in Mexican American youth. Mexican American adolescents' who were higher in familism values at 5th grade (i.e., higher intercepts) or in some cases those who increased more or decreased less in familism values from 5th to 10th grade (i.e., higher slopes), reported more compliant, emotional, and public prosocial tendencies at 12th grade after controlling for 10th grade levels of these prosocial tendencies. In addition, girls who were higher in 5th grade familism values were also higher in dire prosocial tendencies at 12th grade after controlling for 10th grade dire prosocial tendencies. Further, these findings were similar among those adolescents born in Mexico and those born in the United States. The longitudinal prospective analyses presented in this paper provide evidence of the temporal precedence of familism values. These findings are consistent with

the theory that the internalization and endorsement of familism values among Mexican American adolescents may be a developmental precursor to specific types of prosocial tendencies (Knight, & Carlo, 2012).

As noted, Mexican American adolescents who increased most or decreased less in familism values from 5th to 10th grade reported higher levels of public prosocial tendencies. Although not as theoretically linked to familism values, a positive association between public prosocial tendencies and familism values has been observed in two different samples of Mexican American adolescents (Knight, et al., 2015; Knight et al., 2016). Because public prosocial tendencies are linked to gaining the approval of others (Carlo, 2014), these associations may result from familial socialization processes (Knight, et al., 2011; Umaña-Taylor, Alfaro, Bámaca, & Guimond, 2009) that encourage actions aimed at gaining the approval of parents and family members.

Importantly, the intercepts or slopes of the adolescents' familism values were not associated with their 12th grade anonymous or altruistic prosocial tendencies. These findings suggest that some forms of prosocial behaviors may be more susceptible to influence from specific cultural values but not others. As other scholars and prior evidence have suggested, altruistic and anonymous prosocial behaviors are likely more strongly linked to internalized norms or principles, sympathy, or moral identity processes rather than culture-specific processes (see Carlo, 2014; Eisenberg et al., 2006). Future research could examine the predictive effects of both traditional sociocognitive and socioemotive influences, as well as culture-specific influences, to better account for prosocial development in Mexican American youth.

Among the girls, higher 5th grade levels of familism were associated with higher compliant, emotional, and dire prosocial tendencies. However, among the boys, increases or smaller decreases in familism values from 5th to 10th grade were associated with higher compliant and emotional prosocial tendencies. Both the pattern of findings for the girls and the boys are consistent with our broader theory that Mexican American parents' socialization efforts foster familism values in their youths. However, the novel differential timing of these effects may reflect stronger gender role socialization expectations for Mexican American girls and expectations for girls to conform to gender-typed behaviors (i.e., family and care-oriented actions such as compliant, emotional, and dire prosocial behaviors) at a young age (Carlo, 2014). Hence, gender role expectations may have enhanced girls' pace of acceptance and adoption of the familism values fostered by ethnic socialization, and in turn their prosocial tendencies. For boys, the ethnic socialization associated with the transmission of familism values may be slower to result in boys' acceptance and adoption of these values, and in-turn the associated prosocial tendencies. Further research is need to determine if these differential timing effects are truly reliable and to empirically evaluate this speculative explanation.

The present study has several limitations. First, all of the data used in this report were based on adolescents' reports which raises shared method variance (e.g., acquiescence or social desirability responding) concerns. However, if this were the case we would expect these associations to be highly similar across all types of prosocial tendencies rather than conforming reasonably closely to the theoretical expectations. In addition, concerns about shared method variance are further reduced by controlling for 10th grade prosocial

tendencies, assuming stability of method effects across time. Second, the present analyses do not directly address the possibility of reciprocal causality between familism values and specific prosocial tendencies. The longitudinal prospective analyses reported herein clearly support the temporal precedence of higher levels of familism values with higher levels of specific types of prosocial tendencies. Unfortunately, these analyses do not evaluate the possibility that higher levels of prosocial tendencies could also result in higher levels of familism values. However, preliminary cross-lagged panel analyses (reported in supplemental material) support the expectation of a unidirectional temporal relation from familism values to prosocial tendencies by finding significant (or marginally significant) cross-lagged paths from 10^{th} grade familism values to 12^{th} grade compliant, emotional, and public prosocial tendencies, while none of the cross-lagged paths from 10^{th} grade prosocial tendencies to 12^{th} grade familism values approached significance. Finally, peer influences were not examined, even though the unspecified recipients of youths' prosocial behavior are likely often peers. Future research could examine the influence of peers' cultural values and the specific recipient of prosocial tendencies. Despite these limitations, the present findings yield the strongest supportive evidence to date for the notion that familism values in early adolescence are a precursor to Mexican American youths' prosocial development. This finding supports the perspective that the socialization of familism values in Mexican American families is a cultural mechanism that fosters the prosocial development of the youth in these families. Hence, the support and maintenance of familism values in these ethnic minority adolescents may be quite desirable from a societal perspective.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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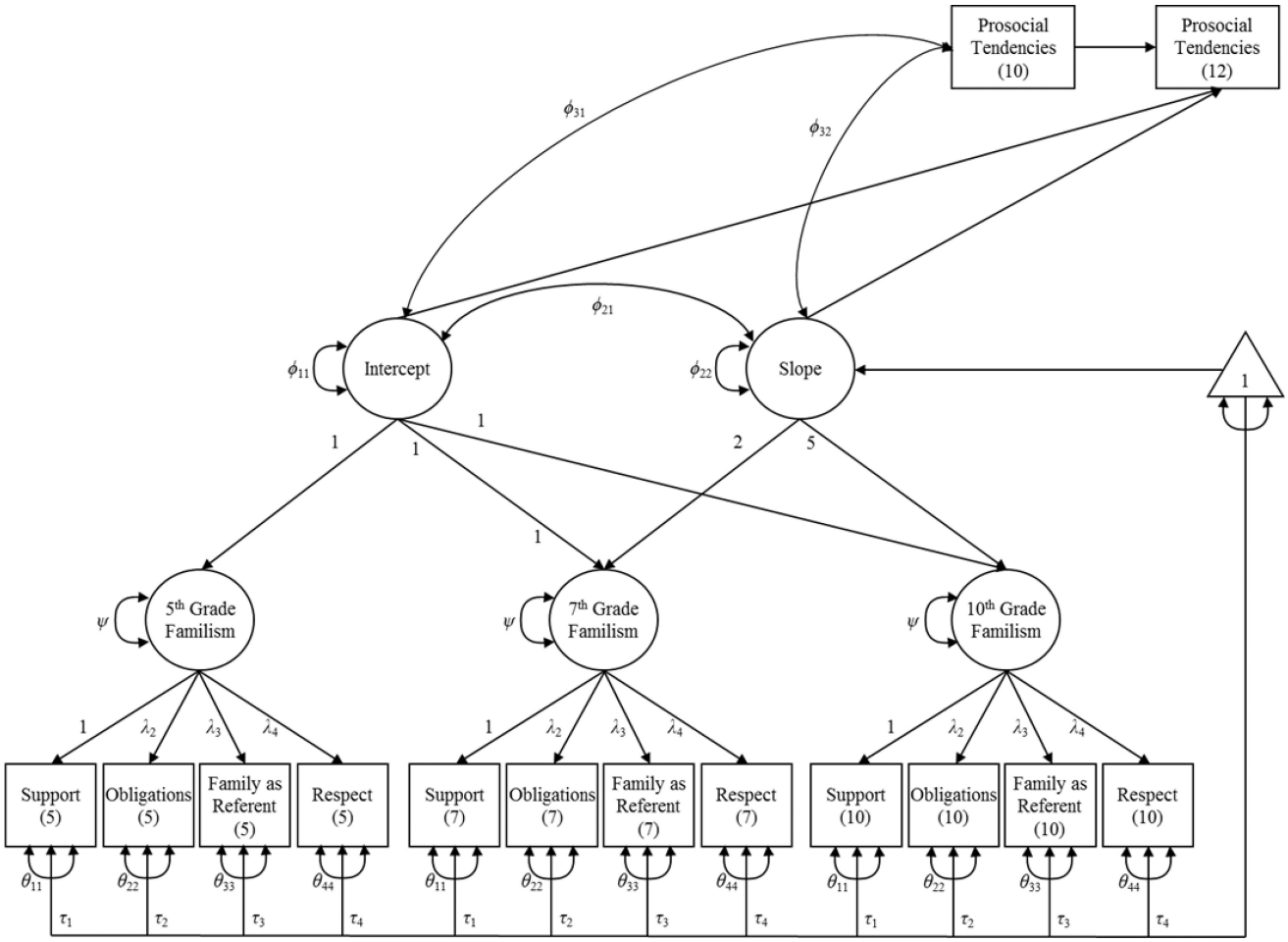

Figure 1.

Path diagram for the second-order linear growth model of familism with a distal outcome (prosocial tendencies).

Table 1

Descriptive Statistics and Correlations for Familism and Prosocial Tendencies at 5th, 7th, 10th, and 12th Grades

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
1. Familism (5)	1														
2. Familism (7)	.28**	1													
3. Familism (10)	.18**	.46**	1												
4. PTM-R Compliant (10)	.14**	.14**	.26**	1											
5. PTM-R Compliant (12)	.14**	.19**	.18**	.36**	1										
6. PTM-R Emotional (10)	.14**	.24**	.35**	.60**	.36**	1									
7. PTM-R Emotional (12)	.15**	.19**	.24**	.39**	.61**	.53**	1								
8. PTM-R Dire (10)	.16**	.24**	.35**	.62**	.35**	.76**	.47**	1							
9. PTM-R Dire (12)	.13**	.14**	.16**	.42**	.66**	.48**	.76**	.47**	1						
10. PTM-R Anonymous (10)	.08*	.17**	.23**	.42**	.24**	.48**	.28**	.51**	.30**	1					
11. PTM-R Anonymous (12)	.05	.09*	.07	.22**	.40**	.27**	.42**	.27**	.43**	.46**	1				
12. PTM-R Public (10)	.04	.18**	.26**	.20**	.05	.33**	.19**	.31**	.16**	.22**	.14**	1			
13. PTM-R Public (12)	.01	.13**	.21**	.13**	.12**	.15**	.27**	.20**	.21**	.12**	.16**	.46**	1		
14. PTM-R Altruistic (10)	.06	−.14**	−.22**	−.02	.03	−.13**	−.05	−.13**	−.01	−.19**	−.06	−.53**	−.39**	1	
15. PTM-R Altruistic (12)	.08	−.12**	−.13**	.09*	.04	.04	−.04	.03	−.03	−.03	−.03	−.33**	−.50**	.64**	1
Mean	4.54	4.43	4.29	3.69	3.84	3.81	3.80	3.86	3.82	3.01	3.08	2.88	2.68	3.57	3.71
Standard Deviation	.34	.38	.42	.92	.88	.78	.79	.78	.79	.90	.93	.89	.94	.89	.91
Skewness	−1.20	−.94	−.62	−.34	−.42	−.40	−.28	−.35	−.20	.14	.03	.03	.07	−.41	−.53
Kurtosis	1.97	.82	.39	−.32	−.50	−.18	−.62	−.54	−.68	−.34	−.36	−.27	−.27	−.38	−.19

Note. Familism scores reflects the mean of the four familism subscales from the Mexican American Cultural Values Scale. PTM-R = Prosocial Tendencies Measure-Revised. Grades for each measure are reported in parentheses.

** $p < .01$,

* $p < .05$.

Table 2

Path Coefficients for the Effects of Familism Values on 12th Grade Prosocial Tendencies and Global Fit

Prosocial Tendencies	Path Coefficient (Standard Error)		Global Fit			
	Intercept	Slope	χ^2 Test of Exact Fit (Degrees of Freedom)	RMSEA	CFI	TLI
Compliant	1.15 (.38)**	.64 (1.47)	181.34 (82)	.040	.971	.967
Emotional	.71 (.30)*	.06 (1.33)	175.68 (82)	.039	.973	.970
Dire	.43 (.33)	−1.38 (1.39)	182.37 (82)	.040	.971	.968
Anonymous	.20 (.36)	−2.04 (1.64)	181.35 (82)	.040	.971	.968
Public	.04 (.37)	4.25 (1.85)*	201.60 (82)	.044	.966	.962
Altruistic	.13 (.30)	−.89 (1.54)	230.78 (82)	.049	.960	.955

Note. RMSEA = root mean square error of approximation, CFI = comparative fit index, TLI = Tucker-Lewis index.

** $p < .01$,

* $p < .05$