Published in final edited form as:

Hisp J Behav Sci. 2011 May ; 33(2): 123–151. doi:10.1177/0739986311403724.

Family Correlates of Adjustment Profiles in Mexican-Origin Female Adolescents

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Abstract

This study used a person-centered approach to examine patterns of adjustment along psychological (i.e., depression, self-esteem, anxiety) and academic (i.e., academic motivation) domains in a sample ($N = 338$) of Mexican-origin female adolescents. Four adjustment profiles were identified. A *High Functioning* ($n = 173$) group, which exhibited high positive adjustment and academic functioning, an *Average Functioning* ($n = 83$) group, who exhibited average psychological and academic functioning, an *Academically Oriented and Stressed* ($n = 19$) group, who exhibited high academic motivation, but poor psychological functioning in anxiety and negative affect, and a *Low Functioning* ($n = 25$) group, who exhibited poor adjustment overall. Further, paternal and maternal parenting characteristics (i.e., autonomy granting, parent-adolescent conflict, and supportive parenting) were differentially related to Mexican-origin female adolescents' profiles, providing further evidence for the existence of the profiles. Results contribute to the current literature on Latino adolescents and highlight the importance of examining psychological and academic domains concurrently to determine how these two domains of adjustment are linked among this population.

Keywords

Latino/Hispanic; Adolescence; Adjustment profiles; parenting

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Adolescence is a period marked by age-graded developmental transitions and stressors that contribute to individual trajectories of well-being. Adolescents' adjustment in psychological domains (e.g. self-esteem, anxiety) and school performance (e.g., grades, motivation) are important proxies that reflect on adolescents' overall well-being (Epstein, Griffin, & Botvin, 2002). Psychological adjustment can be present along behavioral problems (e.g., substance use) and other aspects of psychosocial functioning (King et al., 1996; Paxton, Valois, Watkins, Huebner, & Drane, 2007). As a result, some researchers suggest that mental health can promote or co-occur with adjustment problems such as problem behaviors, academic underachievement, and substance use (Becker & Luthar, 2002; Paxton et al., 2007). Thus, in the current study we examined whether mental health problems co-occurred with academic problems in a sample of Latina adolescents of Mexican origin.

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It is critical to study the adjustment profiles of Latino youth given that Latinos, as a group, are the largest ethnic group in the U.S. (Guzman, 2001), with estimates indicating a threefold increase by 2050 (Bergman, 2004). Further, Latino youth are disproportionately represented in rates of mental health problems (De La Rosa, Holleran, Rugh, & MacMaster, 2005; Wallace et al., 2003) and report less favorable academic outcomes (National Center for Educational Statistics, NCES, 2008), pointing to the salience of studying mental health alongside academic domains. To date, however, most research with Latino youth has examined mental health and academic adjustment outcome variables separately from each other rather than simultaneously. Thus, in the present study, our goal was to explore whether unique profiles of adjustment would emerge along psychological (i.e., depression, self-esteem, anxiety) and academic (i.e., academic motivation) domains in a sample of Mexican-origin female adolescents. Furthermore, we examined whether family factors (e.g., parent-adolescent relationship) would distinguish among the emerging adjustment profiles.

Examining Adjustment Profiles in Mexican-origin Adolescents

The majority of adolescents report being psychologically healthy (Healthy Youth, 2004). Yet, there are a number of youth who are at increased risk for negative outcomes. An important concern within the area of adolescent mental health is the ethnic disproportions in prevalence of mental health and psychological adjustment. In particular, Latino adolescents are disproportionately represented in rates of mental health problems, such as higher rates of depression and substance use, relative to other ethnic groups (De La Rosa et al., 2005; Wallace et al., 2003). In addition, Latinos youth report less favorable academic performance and greater school dropout rates compare to youth from other ethnic groups (National Center for Educational Statistics, NCES, 2008).

There is reason to believe that, for some adolescents, mental health problems are experienced alongside academic problems. For instance, some argue that psychological problems during early adolescence lead to reduced educational attainment (Kessler, Berglund, Foster, Saunders, & Stang, 1995). Few studies have examined the link between psychological and academic adjustment among Latino youth, despite figures pointing to the greater prevalence of both poor mental health and academic success among this population. Some work, however, suggests that mental health and academic problems can coexist among Latino adolescents. Specifically, Alatorre and de los Reyes (1999) found that Latino adolescents who reported more depressive symptoms were also more likely to report lower grades. Therefore, it is possible that Latina female adolescents who experience poor psychological adjustment are also more likely to experience poorer academic functioning.

It is also possible; however, that Latina female adolescents experience poor psychological adjustment in concert with academic functioning. Specifically, research indicates that children of immigrants, including Latino, have better educational outcomes (e.g., GPA, academic aspirations, time spend doing homework), with female adolescents outperforming boys (Qin-Hilliard, 2003; Rumbaut, 1997). This is thought to be due, in part, to the much stricter parental control that Latina female adolescents experience compared to boys (Suárez-Orozco & Qin-Hilliard, 2006). At the same time, research indicates that Latina female adolescents report higher levels of depressive symptoms than their counterparts from other ethnic groups (Eaton et al., 2006; Knopf, Park, & Mulye, 2008; SAMHSA, 2008). Because strict parenting is thought to be linked to more parent-daughter conflict and more psychological distress in female adolescents (Suárez-Orozco & Qin-Hilliard, 2006), Latina female adolescents who experience high levels of control may be likely to report positive academic functioning, but also high levels of depressive symptoms due to the much strict parental control they experience, which may affect their psychological adjustment.

In the past, more common statistical approaches (e.g., regression and factor analysis) to study patterns of psychological and academic adjustment were not able to extract particular groups such as those comprising adolescents with good academic functioning, but also exhibiting poor mental health. Advanced person-centered analytic techniques offer an advantage to identifying such groups, if present. Thus, in the present study, we utilized latent profile analyses to determine whether different adjustment profiles would emerge in a group of Mexican-origin female adolescents. In addition, we examined how other constructs (i.e., family functioning) predict membership in these groups.

Family Factors Associated with Mexican-origin Adolescents' Adjustment

One important context that is found to contribute to youth adjustment is the family. In particular, parenting and parent-child relationship characteristics are robust predictors of adolescent functioning across time and cultures (Barber, Stolz, & Olsen, 2005; Steinberg, 2001). Research also suggests that positive parenting processes may be more crucial and protective in Latino populations than in non-Latino populations because of cultural values such as familism (Crunkilton, Paz, & Boyle, 2005; De La Rosa, Vega, & Radisch, 2000).

Parenting and parent-child relationship factors (e.g., parent-adolescent conflict and supportive parenting) have been found to be associated with adolescents' mental health and adjustment (e.g., Greenberger, Chen, Tally, & Dong, 2000; Shek, 1998). Similar findings have been reported with Latino samples. For instance, existing work suggests that the affective quality of the parent-adolescent relationship (e.g., warmth, closeness, and acceptance) is linked to Latino youth adjustment. Particularly, studies with Latino adolescents, including Mexican-origin, have found that supportive parenting is associated with lower levels of depressive symptoms, greater self-esteem, and better academic outcomes (Alfaro, Umaña-Taylor, & Bámaca, 2006; Benjet & Hernandez-Guzman, 2001, Dumka, Roosa, & Jackson, 1997; Hill, Bush, & Roosa, 2003; Ruiz, Roosa, & Gonzalez, 2002).

There is less consistency in how parent-adolescent relationship factors contribute to child and youth anxiety (Wood, McLeod, Sigman, Hwang, & Chu, 2003). The few studies focusing on Latino youth have also reported mixed findings (Luis, Varela, & Moore, 2008; Varela, Sanchez-Sosa, Biggs, & Luis, 2009). For instance, Varela et al. found that less father acceptance was related to higher anxiety symptoms. However, more mother acceptance was related to more anxiety symptoms. More work is necessary that explores the contribution of parenting and parent-adolescent relationship factors on Latino youth anxiety-related problems.

Additionally, parent-adolescent conflict has been found to be associated with adolescents' mental health and adjustment such as self-esteem, hopelessness, psychiatric morbidity, anxiety, and depressive symptoms (e.g., Greenberger and Chen, 1996; Greenberger, Chen, Tally & Dong, 2000; Shek, 1998; Vazsonyi & Belliston, 2006). This association has also been reported in studies with ethnic minority samples, including Latinos. For instance, conflict with parents has been found to be associated with internalizing problems, depressive symptoms, and self-esteem (Crean, 2008; Harker, 2001; Portes & Zady, 2002) and with lower GPA, aspirations, and reading and math achievement (Eamon, 2005; Rumbaut, 1997).

In addition to the affective quality of the parent-adolescent relationship, control-related parenting strategies (e.g., psychological control, restrictive parenting, and autonomy granting) have been linked to adolescent adjustment (Silk, Morris, Kanaya, Steinberg, 2003). The dimension of autonomy granting is often framed as a sub-dimension of control (Halgunseth, Ispa, Rudy, 2006; Silk et al.), yet, recent work indicates that autonomy granting is a distinct construct from control (Silk et al.). Autonomy granting defined as

encouraging adolescents' individual expression and decision making (Silk et al.) is usually linked to positive development and adaptation such as self-esteem, academic achievement, and less anxiety (Allen, Hauser, Bell, & O'Connor, 1994; Kurdek, Fine, & Sinclair, 1995; McLeod, Weisz, & Wood, 2007; Silk et al.).

Autonomy granting may be particularly relevant to Mexican-origin adolescents. Research indicates that Latino parents provide less decision-making power and more rules for adolescents (Halgunseth et al., 2006). Further, Latino youth are less likely than their European-American peers to disagree with their parents on decisions regarding autonomy (Fitzpatrick, Caldera, Pursley, & Wampler, 1999; Fuligni, 1998). In general, research indicates that less decision making and more rule setting either benefit or do not harm Latino youth (Halgunseth et al., 2006). This is especially true for outcomes such as less gang involvement among Latino youth (Walker-Barnes & Mason, 2001). However, Mexican-origin adolescents living in the U.S. may contest parents' more restrictive parenting and harbor negative feelings that may lead to the development of internalizing disorders (Stanton-Salazar, 2001). This may particularly be the case of Latina daughters as they report being granted less freedom and more limits than sons (Raffaelli & Ontai, 2004); despite their desire for autonomy, discovery, and freedom (Ayala, 2006; Gallegos-Castillo, 2006). Thus, given the experience of Latina female adolescents' in terms of autonomy issues, it is likely that autonomy granting may be correlated with both positive and negative adjustment profiles.

In summary, the goal of the current study was to examine patterns and correlates of psychological adjustment profiles in Mexican-origin female adolescents. We employed person-centered analytic techniques to determine the categorical patterns of six continuous adjustment indicators, including negative self-esteem, positive self-esteem, anxiety, somatic symptom, negative affect, and academic motivation. We then examined how parenting factors, maternal and paternal supportive parenting, parent-adolescent conflict, and autonomy granting, were associated with the adjustment profiles for female adolescents. Thus, two questions were addressed with regard to the overall aim of the current study:

- a. Are there distinct profiles of adjustment among Mexican-origin female adolescents given their levels of somatic symptoms, negative affect anxiety, positive self-esteem, negative self-esteem, and academic motivation?
- b. How do maternal and paternal parent-adolescent relationship domains predict membership in the adjustment profiles for Mexican-origin female adolescents?

Method

Participants

Participants for this study ($N = 338$) were part of a study focusing on Mexican-origin female adolescents attending middle schools ($n = 170$ 7th graders) or high schools ($n = 168$ 10th graders) in a large Southwestern, metropolitan area in the U.S. Latinos in each of the participating schools ranged from 67% to 88% of the student body. Of all eligible participants (i.e., female 7th or 10th graders identified by school records as Latina), school rates of participation ranged from 17.1% to 25.9% for the 7th grade sample and from 6.1% to 17.9% for the 10th grade sample. Most female adolescents completed the survey in English (80%).

For the current study, only data from adolescents was used. Data from mother figures were also collected, but information for the variables of interest for this study was only available from adolescent participants. The 7th grade sample consisted of 159 adolescents ranging in age from 11 to 14 years ($M = 12.27$, $SD = .48$). Of these, a majority ($n = 117$, 68.6%)

reported being born in the U.S. The 10th grade sample consisted of 160 adolescents whose ages ranged from 14 to 17 years ($M = 15.21$, $SD = .46$). More than half of the 10th grade participants reported being born in the U.S. (62.5%). A majority of adolescents (59.8%), lived in households with their biological mother and father, but other family constellations (e.g., mother and stepfather and mother-only) were reported as well.

Design and Procedures

School district and principal approval was obtained for all participating schools. Teachers in homeroom and social science classrooms introduced the study to their students and distributed recruitment letters. All documents that were not originally available in Spanish were translated by the first author and back-translated by a researcher of Mexican-origin to ensure that the translation was consistent with the Spanish dialect of Mexican-origin families (Umaña-Taylor & Bámaca, 2004). Adolescents completed a self-administered questionnaire, which took approximately one hour to complete. Research staff was available to answer potential questions from adolescent participants. Please see Bámaca-Colbert and Gayles (2010) for a detail description of the design and procedure.

Measures

Supportive parenting—Adolescents completed a 9-item version of the *Inventory of Parent and Peer Attachment* (Armsden & Greenberg, 1987) to assess daughters' perceptions of their mothers' and fathers' supportive parenting (e.g., "I can count on my mother/father when I need to talk"). Items were rated on a 4-point Likert scale with end points of *almost never or never* (1) to *almost always or always* (4). The 9-item scale obtained an alpha coefficient of .92 with a Mexican-origin sample of adolescents (Gonzales, Deardorff, Formoso, Barr, & Barrera, 2006). In the current sample, internal consistency was $\alpha = .94$ and $\alpha = .93$ for adolescent reports of mothers and fathers, respectively.

Autonomy granting—Autonomy granting from parents was assessed with a revised 10-item scale (Peterson, Bush, & Supple, 1999) that was created based on previous conceptions of autonomy (Douván & Adelson, 1966; Sessa & Steinberg, 1991). These items measure the extent to which youth perceive their parents allow them to make their own decisions and engage in activities without excessive parental intrusion regarding choices about friendships, life-style preferences, clothing selection, educational goals, and career plans (e.g., This parent allows me to decide what clothes I should wear without interfering too much). Adolescents indicated the extent to which they agreed or disagreed with each statement using a 4-point Likert scale (1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Agree*, and 4 = *Strongly Agree*). Each question was asked for mothers and fathers separately. All items were averaged into a total score to represent adolescents' perception of autonomy granting from each parent, with higher scores indicating higher levels of autonomy granting from their mother/father. In the current sample, internal consistency was $\alpha = .84$ and $\alpha = .83$ for adolescent reports of mothers and fathers, respectively.

Parent-adolescent conflict—Frequency of conflict was assessed with an adapted version of the Parent-Adolescent Conflict Scale, originally developed by Smetana (1988). This measure was adapted to include items believed to be specific to Mexican-American families, including issues such as putting family first and talking back to parents (Updegraff, Delgado, & Wheeler, 2009). Adolescents responded to 15 items on conflicts within the parent-adolescent relationship across several domains (e.g., physical appearance, friends, and romantic relationships). Adolescents responded using a 5-point Likert scale, with end points of *never* (1) to *most of the time* (5). Items were averaged, with higher values indicating more frequent conflict. In the current sample, internal consistency was $\alpha = .86$ and $\alpha = .85$ for adolescent reports of mothers and fathers, respectively.

Depressive symptoms—Adolescents' depressive symptoms (i.e., somatic symptoms, negative affect, and positive affect, interpersonal) were assessed with 13 items from the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977). This measure asked adolescents how often in the past week they have felt a certain way (e.g., "I could not get "going"). Items were rated on a 4-point Likert scale, with end points of *rarely or none of the time* (0; less than 1 day) and *mostly or almost all the time* (3; 5–7 days). This scale has demonstrated high internal consistency in studies with Latino adolescents (Roberts & Chen, 1995; Umaña-Taylor & Updegraff, 2007). With the current sample, confirmatory factor analyses (CFA) revealed that only the negative affect and somatic symptoms subscales were reliable measures. The CFA for the somatic symptoms subscale yielded 6 items, internal consistency was $\alpha = .70$. The CFA for the negative affect subscale yielded 7 items, internal consistency was $\alpha = .88$.

Anxiety—Female adolescents reported on their general frequency (hardly ever, sometimes, often) of various anxiety states (e.g., worry, sweat) by completing the 20-item State-Trait Anxiety Inventory for Children-Trait Version (STAIC-T; Spielberger, Edwards, Montouri, & Lushene, 1973). Items were averaged, with higher values indicating more frequency of anxiety states. With a sample of Latino and European-American youth, this scale obtained an alpha coefficient of .87 (Pina & Silverman, 2004). In the current sample, internal consistency was $\alpha = .87$ for adolescents' report of anxiety.

Self-esteem—Adolescents' self-esteem (positive and negative self-esteem) was assessed with 7 items of the Rosenberg Self-Esteem Scale (Rosenberg, 1979). Responses were scored on a 4-point Likert scale, with end points of *Strongly Disagree* (1) and *Strongly Agree* (4); lower scores indicated lower self-esteem. This measure has demonstrated adequate to moderately strong reliability scores with various Latino samples with coefficient alphas ranging from .71 to .85 (Portes & Zady, 2002; Umaña-Taylor & Fine, 2001). Results from two separate CFAs yielded two distinct factors, positive (4 items) and negative self-esteem (3 items). In the current sample, internal consistency was $\alpha = .83$ and $\alpha = .80$ for positive and negative self-esteem, respectively.

Academic motivation—Adolescents' academic motivation was examined utilizing the Academic Motivation Scale (Plunkett & Bámaca-Gómez, 2003). The five items (e.g., "I try hard in school," "Grades are very important to me") were scored on a 4-point Likert scale with anchors of *Strongly Disagree* (1) and *Strongly Agree* (4). Higher scores indicated higher levels of academic motivation. With a sample of Mexican origin adolescents, the measure obtained a coefficient alpha of .71 (Plunkett & Bámaca-Gómez, 2003). In the current sample, internal consistency was $\alpha = .79$ for the adolescent academic motivation.

Analytic Strategy

Preliminary analyses included scale reliability analyses for all study variables. In addition, exploratory factor analyses and CFAs were employed for the self-esteem and depressive symptoms measures. Previous research examining these two measures with Latino adolescents indicates that there may be different factor structures for depressive symptoms (Crockett, Randall, Shen, Russell, & Driscoll, 2005) and self-esteem (Bámaca & Umaña-Taylor, 2006) than for other groups. Following scale creation, we ran descriptive statistics to obtain the mean, standard deviation, and correlations among all study variables. All preliminary analyses were employed using SPSS v17 and the CFA were employed using LISREL v8.8 (Joreskog & Sorbom, 2005). Following the preliminary analyses, we employed latent profile analysis (LPA) and LPA with covariates using *Mplus* (Muthén & Muthén, 2001) to address the two questions of the current study.

Latent profile analysis (LPA) is a person-centered statistical method used to answer questions about underlying patterns among individuals who are similar on a group of variables. More specifically, LPA identifies categorical latent variables (i.e., classes) among a set of continuous indicator variables (B. O. Muthén, 1989; B. O. Muthén & Shedden, 1999). It is a person-centered method, which identifies subpopulations of individuals that share common characteristics. It captures the heterogeneity within a population and classifies individuals into groups in order to provide better parameter estimates, standard errors, and tests of model fit (Lubke & Muthén, 2005; L. K. Muthén & Muthén, 2001). Starting with a one-profile solution, a series of models were sequentially tested with each subsequent model estimating one more profile than the previous. The LPA model included six adjustment indicator variables.

The optimal number of profiles was determined investigating and comparing model fit indices and interpretability of the profile solutions. The indices of fit we examined were the Akaike Information Criteria (AIC), Bayesian Information Criteria (BIC), Sample-size Adjusted Bayesian Information Criteria (A-BIC), and the Vuong-Lo-Mendell-Rueben (VLMR) value for the Ho test of significance. Lower values for the AIC, BIC and A-BIC indicate a better fitting model and a value less than .05 on the VLMR indicates that the fit of a profile solution is significantly better compared to a solution with one less profile. We also examined whether the class solutions had an adequate amount of individuals classified into each profile (e.g., at least 5% of the sample in each profile; see Nylund, Asparouhov, & Muthén, 2007). Following the identification of a suitable profile solution, we estimated the best fit solution with multiple random start values.

In addition, we observed the posterior probabilities for profile membership given the latent profiles. Posterior probabilities are the conditional probabilities of being assigned to a certain profile given membership in that group. They represent the misspecification of individual into their corresponding profiles (Nylund et al., 2007). Once the best profile solution was estimated, we added the family correlates as predictors of latent class membership. These data were then exported to an SPSS data file in order to run additional multinomial logistic regression models with parenting correlates predicting likelihood of belonging to a specific profile. The profile solution entropy (<.90) and average item class probabilities (<.90) were observed in order to determine whether exporting data was a viable option. Because both maternal and paternal parenting characteristics were reported by adolescents and were highly correlated, separate models were estimated for the paternal correlates and the maternal correlates.

Results

Preliminary Analyses

Descriptive statistics and inter-item correlations for all study variables are included in Table 1. Observation of descriptive information showed that all variables were within the assumptions of normality. Observation of the zero-order correlations show that variables were correlated in the expected directions. Additionally, there were some variables that were strongly correlated. For example, paternal autonomy granting and maternal autonomy granting had a strong positive correlation. This was also evident for paternal conflict and maternal conflict as well as negative affect and somatic symptoms. Notably, all parenting correlate were adolescent reports of the relationship with their parents.

Latent Profiles of Psychological Adjustment

To address the first research question, latent profiles were estimate to determine an interpretable class solution that best fit these data. Model fit statistics for the latent profile

analyses are presented in Table 2. Results from the LPA showed that a four profile solution provided the best fitting model for the data based on conventional fit indices. Although the five profile solution had a lower BIC than the four profile solution, the VLMR value did not indicate that the five profile solution was significantly better than a four profile solution for these data. Further, investigation of this solution showed that the five profile solution had a group with less than 5% of the sample and the profile groups were less interpretable than in the four profile solution. Average profile posterior probabilities of most likely class membership given the latent profile for the four profile solution were .96, .93, .92, and .95 for the four profiles, respectively. The lowest item specific posterior probability for the latent profiles was .88, .90, .89, and .92 respectively for the four profiles.

Profile prevalence and descriptives for the indicator variables given their class membership is presented in Table 3. The four profiles identified were labeled as “*High Functioning*” ($n = 173$), “*Average Functioning*” ($n = 83$), “*Academically Oriented and Stressed*” ($n = 19$), and “*Low Functioning*” ($n = 25$). The *High Functioning* group consisted female adolescents who, on average, scored at or above the sample mean on self-esteem and academic motivation and were below the sample mean on negative self-esteem, anxiety, somatic symptoms, and negative affect. The *Average Functioning* group consisted female adolescents who, on average, were similar to the sample mean on academic motivation and positive self-esteem, but were above the sample mean on negative self-esteem, anxiety, somatic symptoms, and negative affect. However, the values for negative self-esteem, anxiety, somatic symptoms, and negative affect were still toward the lower to mid end of the range for these scales. The *Academically Oriented and Stressed* group consisted of female adolescents who, on average, scored above the sample mean on positive self-esteem, academic motivation, somatic symptoms, negative affect, and anxiety and scored below the sample mean on negative self-esteem. The *Low Functioning* group consisted of female adolescents who, on average, scored above the sample mean on anxiety, somatic symptoms, negative affect, and negative self-esteem and scored below the sample mean on positive self-esteem and academic motivation.

Linking Family Correlates to Latent Profile Membership

To address the second research question, the previous chosen LPA solution was extended to include the three family factors for mothers and fathers separately (i.e., supportive parenting, parent-child conflict, and autonomy granting) as covariates of profile membership. These data were then exported to SPSS where multinomial logistic regressions were estimated. The categorical latent variable (profiles) was regressed on the adolescent’s reports of maternal and paternal family correlates. For both mother’s and father’s predictors, the *High Functioning* group was the reference. The multinomial logistic model parameters with *High Functioning* as the reference group are presented in Table 4. The odds of belonging to a certain adjustment profile given the family factor covariates is presented in Figure 1 for maternal and paternal correlates, respectively. Only the significant odd ratios are reported here. Additionally, multinomial logistic models were examined using the *Average Functioning* group as the reference group to further examine how the family correlates distinguished among class membership. The multinomial logistic model parameters with *Average Functioning* as the reference group are presented in Table 5. The following results are from four separate logistical regression analyses; one for mothers and one for fathers, with High Functioning as the reference group and one for mothers and one for fathers, with Average Functioning as the reference group.

For maternal correlates, results indicated that, maternal autonomy granting did not significantly distinguish between the *High Functioning* and the *Average Functioning*, *Academically Oriented and Stressed* or *Low Functioning* groups. Results also showed that, relative to the *High Functioning* group, a one unit increase in mother-child conflict

significantly increased the odds of belonging to the *Low Functioning* group by a value of 5.53. This indicated that female adolescents who reported higher levels of mother-child conflict were more than five times likely to be in the *Low Functioning* group than in the *High Functioning* group. Mother-child conflict did not significantly distinguish between the *High Functioning* group and the *Average Functioning* or *Academically Oriented and Stressed* groups. Additionally, results showed that a one unit increase in supportive parenting significantly decreased the odds of belonging to the *Average Functioning* by a value of .51 and the odds of belonging to the *Low Functioning* group by a value of .43. Taking the inverse of these odds ratios indicated that female adolescents who reported higher supportive parenting from mothers were 1.94 times more likely to be in the *High Functioning* group than in the *Average Functioning* and 2.33 times more likely to be in the *High Functioning* group than in the *Low Functioning* group. Supportive parenting did not significantly distinguish between the *High Functioning* group and the *Academically Oriented and Stressed* group.

For paternal correlates, results indicated that, relative to the *High Functioning* group, a one unit increase in autonomy granting behaviors significantly decreased the odds of belonging to the *Average Functioning* group by a value of .45. Taking the inverse of this odds ratio indicated that adolescent who reported higher paternal autonomy granting were 2.22 times more likely to be in the *High Functioning* group than in the *Average Functioning* group. Paternal autonomy granting did not significantly distinguish between the *High Functioning* and *Academically Oriented and Stressed* or *Low Functioning* groups. Results also showed that, relative to the *High Functioning* group, a one unit increase in parent-child conflict significantly increased the odds of belonging to the *Academically Oriented and Stressed* group by a value of 2.06 and the odds of belonging to the *Low Functioning* group by a value of 3.35. This indicated that female adolescents who reported higher levels of father-child conflict were more than two times more likely to be in the *Academically Oriented and Stressed* or *Low Functioning* groups than in the *High Functioning* group. Father-child conflict did not significantly distinguish between the *Average Functioning* and *High Functioning* groups. Additionally, a one unit increase in supportive parenting significantly decreased the odds of belonging to the *Average Functioning* by a value of .37 and the odds of belonging to the *Low Functioning* group by a value of .27. Taking the inverse of these odds ratios indicated that female adolescents who reported higher supportive parenting from fathers were 2.70 times more likely to be in the *High Functioning* group than in the *Average Functioning* and 3.70 times more likely to be in the *High Functioning* group than in the *Low Functioning* group. Supportive parenting did not significantly distinguish between the *High Functioning* group and *Academically Oriented and Stressed* group.

The next results represent those yielded from the multinomial logistic regression using the *Average Functioning* group as the reference group. Model statistics and odds ratios can be found in Table 5. The results predicting the likelihood of being in the *High Functioning* group when *Average Functioning* was the reference group were synonymous to when predicting the *Average Functioning* group when *High Functioning* was the reference group, but they were the opposite direction of the above findings. Thus, those results are not presented here. Only the results distinguishing the *Average Functioning* group from the *Academically Oriented and Stressed* and the *Low Functioning* groups are presented here. For maternal correlates, results indicated that, maternal autonomy granting did not significantly distinguish between the *Average Functioning* and the *Academically Oriented and Stressed* or *Low Functioning* groups. Likewise, results also indicated that supportive parenting from mothers did not significantly distinguish between the *Average Functioning* and the *Academically Oriented and Stressed* or *Low Functioning* groups. Yet, results indicated that, relative to the *Average Functioning* group, a one unit increase in mother-child conflict significantly increased the odds of belonging to the *Low Functioning* group by a

value of 4.31. This indicated that female adolescents who reported higher mother-child conflict were more than four times more likely to be in the *Low Functioning* group than in the *Average Functioning* group.

For paternal correlates, results indicated that, relative to the *Average Functioning* group, a one unit increase in autonomy granting behaviors significantly increased the odds of belonging to the *Academically Oriented and Stressed* group by a value of 5.01. This indicated that female adolescents who reported higher autonomy granting from fathers were more 5 times more likely to be in the *Academically Oriented and Stressed* group than in the *Average Functioning* group. Results also showed that, relative to the *Average Functioning* group, a one unit increase in father-child conflict significantly increased the odds of belonging to the *Low Functioning* group by a value of 3.32. This indicated that female adolescents who reported higher father-child conflict were more than three times more likely to be in the *Low Functioning* group than in the *Average Functioning* group. Lastly, a one unit increase in supportive parenting significantly increased the odds of being to the *Academically Oriented and Stressed* by a value of 2.14. This indicated that female adolescents who reported higher supportive parenting from fathers were more than three times more likely to be in the *Academically Oriented and Stressed* group than in the *Average Functioning* group. No other significant associations were evident.

Discussion

The current study examined patterns of adolescent adjustment and their links to parenting in a group of Mexican-origin female adolescents. By using a person-oriented methodological approach, we were able to examine the multidimensional nature of psychological and academic adjustment among female adolescents.

Before addressing the contribution of this study, it is important to note some of the limitations. First, female adolescents' self reports were used to assess all of the variables in the study, contributing to shared method variance. Furthermore, female adolescents were not asked to specify which male and female figure served as their father (e.g. birth father, stepfather, grandfather, brother) or mother (e.g., birth mother, aunt, grandma) when completing the parenting measures. The majority (97%) of the sample reported that they lived with their birth mother (i.e., living with birth mother and father, birth mother and stepfather, or birth mother only), but only 61% indicated living with their birth father (i.e., living with birth father and birth mother or living with father and stepmother). Thus, we cannot determine if the associations between paternal and maternal parenting variables and profiles differ across different father and mother figures.

Nevertheless the above noted limitations, findings from the current study provided evidence for different patterns of psychological and academic adjustment in this group of Mexican-origin female adolescents and illustrated how parenting factors were differentially associated with the adolescents' chances of being in a certain profiles of adjustment. Specifically, results showed four different patterns of psychological and academic adjustment among the Mexican-origin female adolescents in the sample. There was a group of female adolescents who exhibited poor overall adjustment (i.e., *Low Functioning* group), a group who exhibited average psychological and academic functioning (i.e., *Average Functioning* group) and a group that showed high positive adjustment and academic functioning (i.e., *High Functioning* group). Most notably, our analyses revealed a group of female adolescents who exhibited high positive self-esteem and academic motivation, but also higher than average levels of anxiety and negative affect (i.e., *Academically Oriented and Stressed* group). This finding is consistent with previous research that indicates that female adolescents can exhibit

high academic achievement (Qin-Hilliard, 2003; Rumbaut, 1997) and also be more likely to show negative psychological adjustment (Eaton et al., 2006; Knopf, Park, & Mulye, 2008).

This group may not appear to be at risk academically or with respect to self-esteem, but this group is at risk in terms of psychological distress. Although female adolescents in this group only comprised 6% of the total sample, without examining overall profiles of adjustment that include both academic and psychological factors and without using the advance statistical techniques that allowed us to examine overall profiles, groups like this could go unnoticed. This, of course, has implications for prevention and intervention, especially in school settings. Female adolescents who fit this profile are probably doing well academically and, as a result, may not be identified to participate in programs that help students to deal with the challenges of school. Yet, as evident from our results, these girls struggle with psychological distress, which may lead to more serious mental health problems and could eventually compromise their academics. Thus, determining profiles of overall adjustment could identify participants that would benefit from preventive interventions, but who may be overlooked when programs focus on combating academic failure.

We also examined whether parenting characteristics would distinguish among adjustment profiles and our findings provided evidence that paternal and maternal parenting characteristics were differentially related to Mexican-origin female adolescents' profiles, providing further evidence for the existence of the profiles. Although maternal autonomy granting did not distinguish across profiles, autonomy granting from fathers did. Specifically, when compared to the average functioning group, higher levels of autonomy granting from fathers increased the likelihood of being in the high functioning group and the *Academically Oriented and Stressed* group. Thus, autonomy granting from fathers is not only related to high functioning, but also to poor psychological functioning in the context of high academic motivation. This contradicts the idea that for some Latina girls, high academic motivation may be experienced alongside poor psychological adjustment because of parents' stricter parenting styles towards girls. Our findings suggest that for those girls who report more autonomy granting from their fathers, some are more likely to be academically oriented, but also have psychological distress. More research is necessary to better understand the role that autonomy granting from parents, especially fathers, has in Latina female adolescents' lives.

As expected, we also found that conflict with mothers and fathers distinguished among the profiles such that more conflict with parents increased the likelihood of belonging to the lower functioning groups. For example, we found that more frequent conflict with fathers was associated with a greater likelihood of being in the Low Functioning or Academically Oriented and Stressed groups, specifically when High Functioning was the reference group. Additionally, the fact that conflict with fathers, similarly to paternal autonomy granting, predicted a greater likelihood of being in the Academically Oriented and Stressed group may suggest that conflict may stem from pressure to do well academically, rather than from lack of autonomy granting. Interestingly female adolescents' frequent conflict with mothers distinguished only between the High Functioning and Low Functioning groups.

Finally, paternal supportive parenting significantly distinguished all the other three groups from the High Functioning group whereas maternal supportive parenting only distinguished between the High Functioning and Low Functioning groups. Interestingly, reporting higher levels of parental support increased the likelihood of belonging to the Academically Oriented and Stressed group. This may suggest that the emotional stress that these adolescents experience may not only be due to the father-daughter relationship, but may also be due to the demands of school. This could also mean that an adolescent can experience conflict with fathers, within a supportive and autonomy-granting relationship.

Altogether, our findings suggest paternal parenting characteristics were better at distinguishing across Mexican-origin female adolescent adjustment profiles than maternal parenting characteristics were, pointing to the importance of examining the role of mothers and fathers, separately. Scholars have noted that experiences within the family differ depending on the sex of the adolescent and sex of the parent. More specifically, different parent-adolescent constellations (e.g., mother-daughter and father-daughter) may exhibit different experiences within the family (Crouter, Manke, & McHale, 1995; Russell & Saebel, 1997), which may affect female adolescents differently, as suggested by the current findings.

In sum, our study contributes to the current literature on Latino youth adjustment by pointing to the importance of examining psychological and academic domains concurrently when studying adjustment patterns among Latino youth. Because Latino youth are far more likely to experience mental health problems and poor academic outcomes, it is critical that future research focusing on Latino adolescents examines patterns of overall adjustment along these two domains.

Acknowledgments

This work was supported by an R36MH077425 dissertation grant from the National Institute of Mental Health and a research grant from the Graduate and Professional Student Association at Arizona State University awarded to the first author. The authors wish to thank the undergraduate students for their assistance in conducting this investigation, and the girls and mothers for their participation.

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Maternal Parenting

Paternal Parenting

Figure 1.

The Odds Ratio values for Profile Membership given Paternal and Maternal Parenting Characteristics

Note. "High Functioning" is the reference group for Maternal Correlates and Paternal Correlates. * indicates a significant odds ratio; the maternal parenting characteristic was significant in likelihood of belonging to that group versus the reference group.

Table 1
Means, Standard Deviations, and Inter-Item Correlations for all Variables included in the Study

Variables	Inter-Item Correlations											
	1	2	3	4	5	6	7	8	9	10	11	12
1. Negative Esteem	--											
2. Positive Esteem	-.25**	--										
3. Anxiety	.47**	.04	--									
4. Somatic Symptoms	.40**	-.09	.49**	--								
5. Negative Affect	.43**	-.16**	.47**	.75**	--							
6. Academic Motivation	-.13*	.20**	-.09	-.18**	-.20**	--						
7. Maternal Autonomy	-.16**	.15*	-.19**	-.19**	-.15*	.29**	--					
8. Maternal Conflict	.27**	-.16**	.28**	.39**	.34**	-.24**	-.26**	--				
9. Maternal Support	-.22**	.13*	-.21**	-.28**	-.32**	.24**	.32**	-.37**	--			
10. Paternal Autonomy	-.20**	.15**	-.25**	-.22**	-.14*	.26**	.75**	-.26**	.14*	--		
11. Paternal Conflict	.26**	-.15*	.30**	.33**	.29**	-.15**	-.18**	.83**	-.23**	-.26**	--	
12. Paternal Support	-.23**	.20**	-.26**	-.31**	-.34**	.25**	.14*	-.33**	.56**	.32**	-.30**	--
Descriptives												
Mean	1.80	3.12	1.80	.91	.79	3.22	3.05	2.39	3.28	2.97	2.27	2.89
St. Dev.	.77	.64	.36	.60	.78	.56	.50	.74	.79	.50	.74	.83
Skewness	.71	-.84	.19	.59	1.01	-.84	-.60	.51	-1.15	-.56	.54	-.59
Kurtosis	-.29	1.42	-.24	-.02	.02	1.10	1.02	.08	.39	1.09	.04	-.57

Table 2

Model Fit Statistics for Profile Solutions

# of Profiles	# of Free Parameters	AIC	BIC	A-BIC	VLMR <i>p</i> value	Entropy
1	12	3694.82	3740.66	3702.59		
2	19	3263.28	3335.86	3275.59	< .001	0.89
3	26	3120.07	3219.39	3136.92	0.002	0.88
4	33	3054.43	3180.50	3075.82	0.02	0.90
5	40	3024.55	3177.36	3050.47	0.17	0.91

Table 3

Descriptive Statistics for Indicator Variables used in Latent Profile Analysis

	Latent Profiles											
	Total Sample		“High Functioning”		“Average Functioning”		“Academically Oriented and Stressed”		“Low Functioning”			
	<i>M</i>	<i>S.E.</i>	<i>M</i>	<i>S.E.</i>	<i>M</i>	<i>S.E.</i>	<i>M</i>	<i>S.E.</i>	<i>M</i>	<i>S.E.</i>		
Prevalence			57.7% (<i>n</i> = 173)		27.7% (<i>n</i> = 83)		6.3% (<i>n</i> = 19)		8.3% (<i>n</i> = 25)			
Indicator Variables	<i>M</i>	<i>S.E.</i>	<i>M</i>	<i>S.E.</i>	<i>M</i>	<i>S.E.</i>	<i>M</i>	<i>S.E.</i>	<i>M</i>	<i>S.E.</i>		
Negative Self-Esteem	1.80	.77	1.51	.63	2.06	.62	1.51	.59	3.11	.46		
Positive Self-Esteem	3.11	.64	3.21	.65	3.03	.57	3.32	.70	2.65	.54		
Anxiety	1.80	.36	1.64	.30	1.97	.28	1.91	.36	2.21	.33		
Somatic Symptoms	0.91	.60	0.55	.37	1.20	.38	1.57	.46	1.91	.39		
Negative Affect	0.79	.78	0.24	.24	1.11	.35	2.24	.33	2.32	.35		
Academic Motivation	3.22	.56	3.30	.53	3.17	.53	3.31	.63	2.73	.70		

Table 4

Multinomial Logistic Regression Parameter Estimates for Maternal and Paternal Correlates Models (“*High Functioning*” as the Reference Group)

Variable	Categorical Outcome					
	Well Adjusted			Academically Oriented and Stressed		
	B (St.Err.)	Exp(B) (95% CI)	B (St.Err.)	Exp(B) (95% CI)	B (St.Err.)	Exp(B) (95% CI)
<i>Maternal Correlates</i>						
Autonomy Granting	-.44 (.30)	.65 (.36 – 1.16)	.44 (.56)	1.56 (.52 – 4.62)	-.34 (.51)	.71 (.26 – 1.93)
Conflict Frequency	.25 (.22)	1.28 (.84 – 1.97)	.55 (.37)	1.74 (.85 – 3.56)	1.71 (.37)	5.53 (2.67 – 11.46)
Supportive Parenting	-.67 (.19)	.51 (.35 – .75)	-.52 (.33)	.59 (.31 – 1.14)	-.85 (.31)	.43 (.23 – .79)
<i>Paternal Correlates</i>						
Autonomy Granting	-.80 (.32)	.45 (.24 – .85)	.81 (.59)	2.25 (.71 – 7.08)	-.32 (.53)	.72 (.26 – 2.05)
Conflict Frequency	.01 (.23)	1.01 (.65 – 1.57)	.72 (.36)	2.06 (1.02 – 4.17)	1.21 (.34)	3.35 (1.71 – 6.53)
Supportive Parenting	-1.01 (.19)	.37 (.25 – .54)	-.24 (.36)	.78 (.39 – 1.57)	-1.29 (.33)	.27 (.14 – .52)

Multinomial Logistic Regression Parameter Estimates for Maternal and Paternal Correlates Models ("Average Functioning" as the Reference Group)

Table 5

Variable	Categorical Outcome					
	High Functioning			Academically Oriented and Stressed		
	B (St.Err.)	Exp(B) (95% CI)	B (St.Err.)	Exp(B) (95% CI)	B (St.Err.)	Exp(B) (95% CI)
<i>Maternal Correlates</i>						
Autonomy Granting	.44 (.30)	1.55 (.86 – 2.77)	.88 (.58)	2.41 (.78 – 7.45)	.10 (.51)	1.10 (.41 – 2.98)
Conflict Frequency	-.25 (.22)	.78 (.51 – 1.20)	.31 (.38)	1.36 (.64 – 2.87)	1.46 (.37)	4.31 (2.07 – 8.97)
Supportive Parenting	.67 (.19)	1.95 (1.34 – 2.84)	.15 (.34)	1.16 (.60 – 2.24)	-.19 (.31)	.83 (.45 – 1.52)
<i>Paternal Correlates</i>						
Autonomy Granting	.80 (.32)	2.23 (1.18 – 4.19)	1.61 (.62)	5.01 (1.48 – 16.95)	.48 (.53)	1.61 (.58 – 4.52)
Conflict Frequency	-.01 (.23)	.99 (.64 – 1.55)	.72 (.39)	2.05 (.96 – 4.37)	1.20 (.34)	3.32 (1.70 – 6.50)
Supportive Parenting	1.01 (.19)	2.73 (1.87 – 4.00)	.76 (.37)	2.14 (1.04 – 4.41)	-.29 (.33)	.75 (.40 – 1.42)