



Published in final edited form as:

*J Prim Prev.* 2009 July ; 30(3-4): 351–369. doi:10.1007/s10935-009-0181-0.

## Acculturation, Familism and Mother-Daughter Relations Among Suicidal and Non-Suicidal Adolescent Latinas

Luis H. Zayas<sup>1</sup>, Charlotte L. Bright<sup>1</sup>, Thyria Álvarez-Sánchez<sup>1</sup>, and Leopoldo J. Cabassa<sup>2</sup>

<sup>1</sup> Washington University in St. Louis

<sup>2</sup> University of Southern California

### Abstract

We examined the role of acculturation, familism and Latina mother-daughter relations in suicide attempts by comparing 65 adolescents with recent suicide attempts and their mothers to 75 teens without any attempts and their mothers. Attempters and non-attempters were similar in acculturation and familistic attitudes but attempters report significantly less mutuality and communication with their mothers than non-attempters. Mothers of attempters reported lower mutuality and communication with their daughters than mothers of non-attempters. Small increments in mutuality decreased the probability of a suicide attempt by 57%. Acculturation and familism do not appear to play major roles in suicide attempts but relational factors may. Instituting school-based psychoeducational groups for young Latinas, particularly in middle school, and their parents, separately and jointly, and focusing on raising effective communication and mutuality between parents and adolescent daughters are important primary prevention strategies.

### Keywords

Latina/Hispanic adolescents; acculturation; suicide attempts; familism; mother-daughter relations

---

Acculturation among Latino<sup>1</sup> youth has garnered considerable attention in the behavioral and social science literature. Research has associated acculturation with both positive and negative behavioral outcomes (Brayr, Getz, & McQueen, 2003; Ebin, Sneed, Morisky, Rotheram-Borus, Magnusson, & Malotte, 2001; Samaniego & Gonzalez, 1999; Smokowski & Bacallao, 2007). Among Latino youth, symptoms of depression have been directly associated with bicultural stress, particularly with lower levels of acculturation (Mikolajczyk, Bredehorst, Khelaifat, Maier, & Maxwell, 2007; Romero, Carvajal, Volle, & Orduña, 2007). Hovey and King (1996) assert that a quarter of immigrant and second-generation Latino adolescents report levels of depression and suicidal ideation that are positively correlated with acculturative stress.

In families, acculturation discrepancies between adolescents Latinos and their parents are well documented (Fuligni, 2004; Phinney & Vedder, 2006). It has long been found that acculturation differences generate conflicts between adolescents and their parents, usually arising from a higher, more rapid acculturation among children and slower, lower acculturation by parents (Smokowski & Bacallao, 2007). Thus, for instance, substance abuse (Martinez, 2006), conduct disorder (Bird, Canino, Loeber, Duarte, Shrout, Davies, & Shen, 2007), dating violence

---

Correspondence should be sent to Luis H. Zayas, Washington University in St. Louis, Campus Box 1196, One Brookings Drive, St. Louis, MO, 63130-4899. E-mail to E-mail: lzayas@wustl.edu.

<sup>1</sup>We use the terms “Latino” and “Hispanic” interchangeably in this paper (see Lopez & Minushkin, 2008, p. *iv*, for Pew Hispanic Center, Washington, D.C. usage).

(Hokoda, Galvan, Malcarne, Castañeda, & Ulloa, 2007; Sanderson, Coker, Roberts, Tortolero, & Reininger, 2004), and sexual behavior (Guilamo-Ramos, Jaccard, Peña, & Goldberg, 2005) have been linked to different levels of acculturation among youth or between youth and their parents.

But whether these conflicts rise to the level of generating dysfunctional youth behaviors is an overriding question given the divergent findings about the impact of acculturation. Research shows fewer conduct problems when youth are closely aligned with their traditional culture or when both parents and adolescents are highly acculturated (Lau et al., 2005; Pasch, Flores, Penilla, Dearthorff, Tschann, & Pantoja, 2006). The “acculturation gap-distress” hypothesis that associates discrepant levels of parent-youth acculturation with greater conflict and conduct problems has not been supported with Mexican American youth and parents (Lau, McCabe, Yeh, Garland, Wood, & Hough, 2005). This literature calls into question whether high or low levels of acculturation have a specific impact on the type and level of youth problem behaviors. It seems increasingly plausible that the effects of acculturation are mediated by other factors, pushing us to think more about those interactions.

How potent an influence is acculturation when considering suicidal behavior in teenaged Latinas, and what role does acculturation play in the context of suicidal Latinas’ family relationships? In this paper, we examine the relationship of acculturation and familistic beliefs with suicide attempts among adolescent Latinas and with the perceived quality of mother-daughter relationships as one indicator of family relationships. In line with past literature, our exploration is premised on the importance of discrepant levels of acculturation on parent-adolescent conflicts and the role of Hispanic sociocultural factors, such as familism, in understanding the suicide attempts of their daughters. However, because acculturative discrepancies between teenagers and parents often exist in Hispanic families, these disparities do not explain why adolescent Latinas of similar sociodemographic characteristics and generational status become suicidal and others do not. As the mother-daughter bond influences the process of autonomy, intimacy, differentiation and gender identity in unique ways (Miller, 1995), we focus on teenage Latinas. Studying both adolescent attempters and non-attempters and their mothers is a portal toward expanding knowledge on this important public health issue, to find explanations for the high rate of suicidal ideation, plans and attempts of U.S. Latinas.

## Suicidality among Latina adolescents

National surveys and behavioral research have consistently reported that adolescent Latinas outpace adolescents of other ethnic and racial groups by 1.5 to 2 times in their reports of suicidal ideation and attempts (Centers for Disease Control and Prevention [CDC], 1995, 2006; Olvera, 2001; Substance Abuse and Mental Health Services Administration [SAMHSA], 2003; Tortolero & Roberts, 2001). This increased risk often continues even after controlling for gender, age, family structure, maternal education, language use, and depression (Tortolero & Roberts, 2001). English proficiency and U. S. nativity have been reported as common risk factors for suicidal behavior (Fortuna, Perez, Canino, Sribney, & Alegría, 2007; Locke & Newcomb, 2005; O’Donnell, O’Donnell, Wardlaw, & Stueve, 2004). Suicidal behavior seems also to cut across the diversity in national origin and cultural heritage of Latino populations in the United States: the youth surveyed nationally often include the Hispanic groups found in communities across the country and reflect the regional variations in population concentration and mix (i.e., Mexican, Caribbean, Central American, and South American).

But are we paying undue attention to acculturation in suicidality and other negative youth outcomes? Possibly, because other known risk factors associated with Latino suicidal ideation and attempts seem to exert more influence when mediated by acculturation, such as female gender, presence of psychiatric disorders (e.g., depression, substance abuse, anxiety disorders),

high family cultural conflict, and emotional and sexual abuse (Fortuna et al., 2007; Locke & Newcomb, 2005; O'Donnell et al., 2004). As to suicidal behavior, Moscicki and Crosby (2003) cite interpersonal difficulties, such as a relationship breakup or multiple arguments or fights with parents or a romantic partner, as playing a central role in ideations and attempts in general, something evident in past literature on suicidal Latinas (Zayas, Lester, Cabassa, & Fortuna, 2005). Family environment and relations with parents seem to be salient factors in adolescent suicidal behaviors and ideation, and other behavioral and emotional disorders (King et al., 2001).

## Adolescent Development, Gender, Culture, Communication, and Conflict

Although acculturation plays a central role in the life of young Latina teens and their families (Perreira, Chapman, & Stein, 2006), it does so within the context of adolescent development and sociocultural experiences. The more rapid acculturation of the young Latina than those of her parents occurs as she experiences developmental advances within the context of the majority culture (Pasch et al., 2006; Razzino, Joseph, & Menvielle, 2003). Because of the interpersonal and psychological nature of the autonomy-relatedness process that characterizes adolescence (Steinberg, 2001) it is placed at the conceptual center of suicidal behaviors of adolescent Latinas (Zayas et al., 2005). After all, this process entails a negotiation with parents and family that can be highly conflictive, but parental support helps protect against affective, mood and conduct problems. Latino youth experience the autonomy-relatedness struggle as do other youth but within a distinct family sociocultural system, traditions, childrearing norms, familism and acculturation (Love & Buriel, 2007).

The *familism* associated with Hispanic cultures emphasizes family loyalty, solidarity, cohesiveness, and parental authority (Sabogal, Marín, Otero-Sabogal, VanOss Marín, & Perez-Stable, 1987; Zayas &alleja, 1988). Cultural traditions in families and parent-child relations press for the maintenance of cohesion, obligation to relatives, and interdependence, thus encouraging close attachments to relatives as well as to traditional parenting and socialization practices (Guilamo-Ramos, Dittus, Jaccard, Johansson, Bouris, & Acosta, 2007; Hardway & Fuligni, 2006). The normal conflicts between parents and young female teens regarding friendships, external mentors, dating, and social activities are charged in the context of Latino families by the deeper struggle between traditional values maintained by parents and new norms that adolescents try to import into their lives. In adolescence, female autonomy-seeking behavior may be perceived by parents as threatening to the family's unity and contrary to traditional gender socialization. Families that maintain some of the core Latino cultural components while also adjusting to needs of the developing adolescent will more successfully navigate their children's growth and acculturation (Fortuna et al., 2007).

Good parental communication, monitoring, and support have positive effects on youth (Ceballo, 2004; Plunkett & Bamaca-Gomez, 2003). Although Latinos may experience greater conflict with parents because of the acculturation experience, Latino adolescents' connections with family are more important than those with peers (Updegraff, Madden-Derdich, Estrada, Sales, & Leonard, 2002). Examining interpersonal transactions between suicide attempters and their environments, especially parents, can give important insights into the course of suicidal thinking and behavior (Davila & Daley, 2000). In this paper we focus on the relationships between girls and mothers. Gender socialization follows gender lines and mothers' roles are instrumental for their daughters. The cultural context is simultaneously matricentric and patriarchal, often requiring mothers to act as conduits for father-daughter communication (for ethnographic illustrations of this process, see Kyriakakis, Fortuna, & Zayas, 2008). Also, Latina mothers are placed in a challenging situation. On one side, they want their daughters to succeed in the new culture, to better themselves in a mainstream cultural system that endows women with greater freedoms. Daughters enjoy experiences not available to their mothers at

the same period in their lives in their traditional cultures. As such mothers lack the experience of “adolescing” in the host culture, diminishing their competency to mentor their daughters adequately, a situation that can influence the daughter to misjudge her mother’s inabilities as lack of empathy, interest, caring, and recognition of her daughter’s needs. On another side, mothers may also want their daughters to observe the traditional family roles that are important to the culture and the family. Not only is the position not very tenable but it can also result in mothers’ ambivalence about their daughters’ growing autonomy.

Traditional patterns of parental control over female teens in the Latino culture can act as a protective factor for girls through which parents can provide positive emotional support and guidance (Guilamo-Ramos et al., 2007; Lefkowitz, Romo, Corona, Au, & Sigman, 2000). O’Donnell and colleagues (2004) reported that family closeness among Latino and African American teenagers is a strong protective factor against suicidal ideation and attempts. Locke and Newcomb (2005) found that problem-solving confidence and having a good relationship with parents were both protective factors against suicidality among Latino adolescent males. Among middle school aged Latina females, low levels of family support and high levels of family conflict were associated with more internalizing and externalizing behaviors (Coatsworth, Pantin, McBride, Briones, Kurtines, & Szapocznik, 2000). This effect was greater in families who spent more time in the U.S.

It is at the intersection of the developmental challenges of adolescence, the clash of conflicting cultural values and practices, and the different paces at which adolescents and parents acculturate, that most family conflicts arise (Pasch et al., 2006; Razzino et al., 2003). Some of these intergenerational struggles are related to the dissonant experience between parents and adolescents (Hardway & Fuligni, 2006; Orellana, 2003). Our conceptual framework is that adolescence represents a similar struggle for adolescent Latinas as it does for other youth. However, it is couched within a unique social, cultural, and family context (Zayas et al., 2005).

## Research Questions

In this paper, we examine the cultural and relational issues of adolescent Latinas—both with and without suicidal histories—and their mothers. Our first research question was, *How do adolescent Latinas who are classified as attempters differ from those classified as non-attempters on cultural and relational variables?* We anticipated that attempters and non-attempters would not differ significantly on acculturation or beliefs about familism. However, we expected that attempters would report lower levels of mutuality, communication, support and affection from their mothers with their mothers than non-attempters.

Our second question was, *What are the relationships between adolescent Latinas and their mothers?* Based on our experience, we anticipated that adolescent Latinas, regardless of classification (suicidal or non-suicidal), would show higher levels of acculturation than their mothers but would not differ significantly from their mothers on beliefs about familism. We also expected that Latina attempters and their mothers would show greater disparity in their report of mutuality, affection, communication and support than non-attempters and their mothers.

Our third question was, *What are the characteristics that distinguish mothers of attempters from mothers of non-attempters, and to what extent do they differ in their reports of their relationships to their daughters?* We expected that mothers of both groups of girls would not differ significantly on levels of acculturation or familism. Inasmuch as our experience with mothers of Latina suicide attempters who often misjudge the strength of their relationships with daughters, we anticipated that mothers of attempters would not differ significantly on

their reports of mutuality, affection, communication, and support from mothers of non-attempters.

## Method

### Overview of Study Procedures

As part of an exploration of sociocultural processes of suicide attempts among adolescent Latinas and the psychological, familial and physical circumstances of the suicide attempts, we conducted a mixed method, multi-informant project in which girls and their parents were invited to complete questionnaires with numerous quantitative measures and in-depth, qualitative interviews to explore the phenomenology of the attempts. Eligible participants were adolescent Latinas between the ages of 11 and 19 and both parents from New York City communities with large concentrations of Hispanics. Girls with a suicide attempt were recruited from a large social service and mental health agency and from the outpatient, inpatient and emergency room services of a general and a psychiatric hospital. A comparison group of Latinas with similar sociodemographic profiles, from the same communities, and no known history of suicide attempts and their parents were recruited from local community agencies (e.g., after-school, prevention, and youth development programs) and primary care clinics. Our focal group consists of self-identified Latina teens who had attempted suicide within the preceding six months and who were cleared by therapists to participate in the study. A suicide attempt was any intentional non-fatal self-injury, no matter how medically lethal, if the girl admitted it immediately after the attempt (O'Carroll et al., 1996), often in an emergency room, to a friend, or teacher. To include as many potential subjects as possible, we did not control for degree of lethality of attempts.

Exclusionary criteria for all participants were being outside the age range, having a diagnosis of mental retardation or major mental illness (e.g., schizophrenia), and being in foster care at the time of the suicide attempt or the research interview. For girls who attempted, a clinical assessment of their capacity to participate was made by a clinician to avoid imminent risk or psychologically fragile participants. No clinical assessment was conducted for non-attempters as there were no indications that they were in danger and no suicide attempts were reported. Adolescents provided assent and consent, and parents also provided consent for their daughters' participation and their own. All questionnaires and interviews were conducted by trained, master's level social workers or doctoral level psychologists, all bilingual Latina females. Procedures used in this study were approved by the Human Research Protections Office of Washington University in St. Louis and each of the participating institutions.

For this report, we selected for examination a subgroup of our sample: adolescent attempters and non-attempters and their mothers. Girls whose mothers did not complete study measures were excluded from the analyses. We focused on acculturation, familistic beliefs, perceived mutuality between daughters and mothers, and maternal affection, communication, and support as reported by the girls and their mothers.

### Participants

For the full study, we recruited 94 Latinas with a history of suicide attempts, 64 of their mothers, and 15 of their fathers. Our full comparison group consisted of 102 adolescents without any suicide attempt reported within the last six months, 75 of their mothers, and 17 of their fathers. For this report, we focus on those adolescents whose mothers also participated ( $N = 140$ ), that is, 65 adolescents who met criteria for a suicide attempt and their mothers, and 75 pairs of Latina adolescents with no history of suicidal behavior and their mothers.

As shown on Table 1, our adolescent Latinas were on average 15.21 years of age ( $SD = 1.93$ ) and had completed an average of 8.63 ( $SD = 1.99$ ) years of formal education. Suicide attempters reported between one and twelve lifetime attempts with an average of 2.74 ( $SD = 2.02$ ). Most adolescents were born in the U.S. (72.14%) and stated that they were Catholic (71.43%). Most girls identified with a Hispanic group or culture: 42 Puerto Rican, 37 Dominican, 20 Mexican, 19 Colombian, 8 Ecuadorian, and one each Honduran, Salvadorian, Peruvian, and Venezuelan. Eight girls identified themselves as “other” (3 Mexican-American, two Puerto Rican-Dominican, one Dominican-American, one Ecuadorian-American, and one Peruvian-Puerto Rican) and two girls identified as “American” but were classified as Hispanic based on their mothers’ Hispanic origin.

Mothers in our subsample were on average 42.28 years old ( $SD = 7.36$ ), completed an average of 10.65 ( $SD = 3.68$ ) years of education, were mostly born outside the U.S. (75.71%), and identified mostly as Catholics (71.43%). All mothers identified themselves as Hispanic: 44 Puerto Rican, 37 Dominican, 20 Colombian, 22 Mexican, 10 Ecuadorian, 2 Peruvian, and one each Honduran, Nicaraguan, Salvadorian, and Venezuelan. One mother did not provide information about her Hispanic group or culture.

Independent samples *t*-test and Pearson chi-square results revealed no significant differences in demographic characteristics between attempters and non-attempters and between mothers of attempters and mothers of non-attempters (see Table 1). Differences in adolescents’ age and education and mothers’ total years of education completed approached statistical significance ( $p < .10$ ).

## Measures

### Cultural Variables

Acculturation was measured by the Bidimensional Acculturation Scale for Hispanics (BAS; Marín & Gamba, 1996). The BAS consists of 24 Likert-scale items that tap different language-related changes associated with the acculturation experiences of Hispanics. Items are divided into three subscales: language use (6 items), linguistic proficiency (12 items), and electronic media (6 items). Half of the items measure a Hispanic domain; the other half measure a non-Hispanic domain. Two scores are obtained for each respondent, one for the Hispanic domain and one for the non-Hispanic domain. Scores range from 1 to 4 for each cultural domain. A 2.5 cutoff point differentiates individuals’ high or low in each of the two cultural domains. Scores of 2.5 or higher in both domains indicate biculturalism. Individuals who score high on the Hispanic domain and low on the Anglo domain are considered to be low acculturated, and a respondent who scores high on the Anglo and low on the Hispanic domain is considered to be highly acculturated. Marín and Gamba report Cronbach alphas of .90 for the Hispanic dimension and .96 for the non-Hispanic dimension for an adult sample; Cronbach alphas were not reported for an adolescent sample. Alphas for the Hispanic dimension in our study were .90 for adolescents and .87 for mothers, and for the non-Hispanic dimensions alphas were .82 for adolescents and .97 for mothers.

To measure the familistic beliefs of family solidarity and obligations, we used an attitudinal familism scale (Lugo, Steidel, & Contreras, 2003). The scale consists of 18 items with four factors: familial support (i.e., belief that family members have a duty to support family in crises and everyday life), familial interconnectedness (i.e., belief that family members must be physically and emotionally close and spend time together), familial honor (i.e., belief that persons must not tarnish the family name and must defend any attacks against the family) and subjugation of self to family (i.e., belief that a person must submit to and respect family rules). These subscales were averaged to create the measure of familism. We only report the overall familism score. Respondents can obtain a minimum score of 18 and a maximum score of 180.

Higher scores indicate stronger values toward familism. Esparza and Sanchez (2008) report a Cronbach alpha of .83 for the adolescent sample, and Lugo et al. report a Cronbach alpha of .83 for the full scale on an adult sample; our alphas were .87 for adolescents and .83 for mothers.

### Relational Variables

The multi-layered nature of adolescent-mother relationships was measured with several instruments. To assess mutuality, or how attuned the girls and mothers felt they were with each others, we used the Mutual Psychological Development Questionnaire (MPDQ; Genero, Miller, Surrey, & Baldwin, 1992). The MPDQ is comprised of 22 Likert-scale items that combine one's perception of self and that of the other person involved in the relationship on six dimensions: (a) empathy (shared flow of thoughts and feelings and attunement with the other's experience); (b) engagement (focusing on one another in meaningful ways); (c) authenticity (coming close to knowing the other's experience); (d) diversity (expressing and working through different perspectives and feelings); (e) empowerment (capacity for reciprocal impact); and (f) zest (energy-releasing quality of the relationship). For the adolescent version, we asked adolescents to rate their relationships with their mothers and for the parent version we asked mothers to rate their relationships with their daughters. We computed average scores for each of the respondents. Higher average scores reflect higher perceived mutuality in close dyadic relationship. Kaplan, Turner, and Badger (2007) reported an alpha coefficient between .84 and .88 for the adolescent sample. Genero et al. (1992) reported an alpha coefficient of .92 for the adult sample. The alpha for our sample was .88 for adolescents and .86 for mothers.

Mothers' capacity to express affection and capacity to communicate with their daughters were measured with items drawn from the Child Report of Parental Behavior (Schaefer, 1965). The adolescent version asked respondents about their mothers' attitudes towards them while the parent version asked respondents to self-report their own attitudes towards their daughters. Affection was tapped by six items (e.g., "almost always speaks to me with a warm and friendly voice") and communication by six items (e.g., "enjoys talking things over with me"). Each item is rated on a 4-point Likert scale ("not at all like my mother" to "very much like my mother"). Mother's capacity to support their daughters was measured with items drawn from the Cornell Parent Behavior (Avgar, Bronfenbrenner, & Henderson, 1977) Maternal support was assessed with seven items tapping nurturance, achievement demands, independence demands, instrumental companionship, consistency, autonomy, and principled discipline (Avgar et al., 1977). Each item is rated on a 5-point Likert scale ("never" to "very often"). We computed average scores for each respondent on each subscale. Wagner and Cohen (1994) report an internal consistency alpha for the composite youth reports of .89. Our composite Cronbach alpha was .86 for adolescents and .68 for mothers.

### Data Analysis

Bivariate and multivariate analyses were used to assess similarities and differences among adolescent Latina suicide attempters and non-attempters and their mothers. Pearson chi-square and independent samples *t*-tests investigated demographic differences between groups of adolescents and between groups of mothers. Independent samples *t*-tests compared attempters and non-attempters and mothers of attempters and non-attempters; paired-samples *t*-tests compared girls and their mothers within each group. Finally, a logistic regression was completed, using backward elimination to construct the most parsimonious possible model due to the relatively small sample size (Steyerberg, Eijkemans, Harrell, & Habbema, 2001). Backward elimination removes covariates one at a time, leaving only those that significantly contribute to model fit (Cody & Smith, 2006). We were unable to make comparisons by Hispanic groups due to the differences in sample size of each group (see Table 1). All analyses were conducted using SAS version 9.1 software (SAS Institute, 2004).

## Results

Table 2 displays results for the bivariate analyses that support our expectations that adolescent suicide attempters and non-attempters would not appear significantly different on acculturation and familism, according to *t*-tests of the acculturation and familism scales.

Also in keeping with our expectations, attempters reported significantly lower mutuality in their relationships with their mothers than non-attempters. Attempters also rated their mothers significantly lower in their capacity for communication, support, and affection (see Table 3).

In comparing adolescents to their mothers, paired-samples *t*-tests showed that both attempters and non-attempters were significantly more acculturated were than their mothers, supporting our expectations. However, although we anticipated that attempters and non-attempters would not differ from their mothers on beliefs about familism, in fact, results showed that both groups of adolescents placed significantly lower value on familism than their mothers.

Attempters and non-attempters rated mutuality with their mothers significantly lower than did mothers in both groups. However, the disparity between attempters and their mothers was slightly larger (a mean difference of 0.49 versus 0.36). Similarly, attempters and non-attempters considered their mothers to be less communicative, supportive, and affectionate than their mothers described themselves as being. Attempters and their mothers showed considerably larger differences in their scores than did non-attempters (communication: mean differences of 4.57 and 2.31 for attempters and non-attempters, respectively; support: mean differences of 4.43 and 2.64, respectively; affection: mean differences of 4.05 and 1.60, respectively).

As we anticipated, mothers did not differ from each other on acculturation and familism, as shown by independent samples *t*-tests. Also as we expected, mothers of attempters rated the relationships with their adolescent daughters similarly to mothers of non-attempters except for in their communication with daughters, where mothers of attempters rated themselves significantly lower than mothers of non-attempters. Contrary to what we anticipated, mothers of attempters rated mutuality with their daughters significantly lower than mothers of non-attempters.

Finally, all demographic scales and subscales completed by adolescents, as described above, were entered into a logistic regression model, using a backward elimination method of variable reduction to predict attempter status. Initially, 12 covariates were entered. With a predetermined alpha of .05, predictors were eliminated in successive iterations of the logistic regression model in the following order: familism, years of education, Hispanic acculturation, non-Hispanic acculturation, resident status, support from mother, affection from mother, religion, communication with mother, and United States versus foreign birth. In the final, most parsimonious model, two covariates were significant at the .05 level, distinguishing attempters and non-attempters: age and perceived mutuality with mothers (see Table 4). Controlling for mutuality, a one-year increase in age is associated with a 21% decrease in odds of being an attempter ( $OR = 0.79$ ). Controlling for age at interview, a one-point increase on the MPDQ, as completed by daughters describing their relationships with their mothers, is associated with a 57% decrease in the probability of being an attempter ( $OR = 0.43$ ). The theoretical range of this measure is one to six, with six indicating the highest level of mutuality. A one point increase, therefore, represents about one-sixth of the degree of mutuality this instrument can capture.

The logistic regression model is more accurate in its classification of non-attempters than attempters, however. In its final, most parsimonious iteration, the model correctly classified 72.5% of non-attempters and 59.0% of attempters.

## Discussion

Adolescence is a critical developmental period, one in which future trajectories can diverge toward healthy adjustment or psychopathology (Rudolph, Lambert, Clark, & Kurlalowsky, 2001). The quality of adolescents' relationships with parents, especially as they negotiate autonomy from and relatedness to family, can protect youth from developing behavioral problems that raise the risk for internalizing disorders such as suicide attempts. In this study, we examined the reported perceptions about the relationship with their mothers of Latina adolescents who had a known suicide attempt and a similar group of Latinas who reported no past history of suicide attempts. Demographically, our Latina attempters did not differ from their non-attempting counterparts. These similarities reflect our sampling strategy of collecting data from adolescents and families recruited in the same urban communities and similar social agencies. It must be recognized that this finding is not conclusive evidence that no demographic differences exist between adolescent Latinas who attempt suicide and those who do not. Expanding this research to other regions in the U.S. may yield more differences. In the multivariate model predicting attempter status, however, age was a significant covariate. This implies that, in the context of other factors, development and maturation may play a role in protection against suicide. Future research will be required to test this hypothesis.

The attempters and non-attempters in the sample tended to be bicultural with similar familistic beliefs. The fact that our sample of attempters represented several Latino cultural groups supports past research showing that the high rates of adolescent female suicide attempts may be a pan-Latino phenomenon (see Zayas et al., 2005). However, this must also be viewed cautiously, inasmuch as 80% of attempters and 65.33% of non-attempters self-identified as being of Puerto Rican, Dominican and Mexican heritage. Unlike previous reports that indicate that U.S.-born Latinas are more apt to attempt suicide (SAMSHA, 2003), there was no statistical difference between attempters and non-attempters on birthplace. Based on demographic and acculturation-scale results, no distinct cultural profile of Latina suicide attempters appears; that is, attempters and non-attempters were similarly acculturated. Levels of acculturation among Latina attempters and non-attempters could differ in other geographical regions and different Hispanic subgroups. According to the measure of familism, attempters and non-attempters also have similar beliefs about family. Thus, our intra-ethnic comparison shows that the sociocultural context is quite similar for Latinas who attempt suicide and those who do not, as we postulated.

Although acculturation has received a great deal of attention with respect to its influence on internalizing and externalizing disorders, it did not appear to play a significant role in suicidal behavior. That acculturation disparities between the suicide attempters and non-attempters did not differ may indicate, as we stated earlier, that acculturation does not play as prime a role in adolescent problem behaviors as has been previously believed, but rather that it may gain its potency in interaction with or mediation by other factors, such as parent-adolescent relationship, parental monitoring and support, and family functioning. Our findings support Lau and colleagues' (2005) findings that parent-youth acculturation discrepancies are not specifically related to increased conflict or youth conduct problems. Future research can illuminate these mediations.

Familistic beliefs among our adolescents were lower than those of their mothers. This may be a function of acculturational processes. The higher acculturation and lower familism reported by the girls compared to their mothers suggests an inverse relationship over time. Still, research needs to trace this process of declining familism with increasing acculturation as Hispanics assimilate into U.S. society across generations. In particular, research can show to what extent the decline in familism occurs and at what point do conditions such as family crises escalate from quiescence to activation (Zayas & Palleja, 1988).

The principal differences between Latinas who attempted suicide and those who had never attempted were in the perceived quality of their relationships with mothers. Daughter-mother mutuality is conceptualized as the reciprocity of bidirectional feelings, thoughts, and activities between them and which encompasses mothers' capacity to be caring, inspiring mentors (Genero et al., 1992). These mutual interchanges in intimate relations foster self-disclosure, emotional resiliency, empowerment, energy, coping, and support while diminishing social isolation (Rhodes et al., 1994). Our Latinas with suicide attempt histories felt significantly less mutuality with their mothers than non-suicidal girls did. Furthermore, suicidal Latinas in our sample felt their mothers to be more distant and less communicative than did the non-suicidal group. Together, low mutuality with mothers and poor communication may combine to diminish the sense that mothers were reliable, supportive, caring and inspirational (Rhodes, Contreras, & Mangelsdorf, 1994), setting the conditions for the attempts. Low parent-daughter mutuality has been hypothesized to play a part in suicidal Latinas (Razin et al., 1991; Zimmerman, 1991). Whether similar perceptions hold for attempters and their mothers of other ethnorracial groups is an important endeavor for future research. Our findings support the hypothesis advanced by Zayas et al. (2005) that mentoring and mutuality may be lacking in the lives of suicidal Latinas. Future research can explore other variables that could interact with mutuality and parental communication to better understand parent-adolescent conflict among attempters. For example, a future research question that merits attention is whether the low mutuality and high conflict between parents and adolescents is a matter of the absence of a positive synergy between them or a consequence of active conflict.

Contrary to our expectation that mothers of attempters would not be attuned to their daughters in recognizing the lack of communication and mutuality with their daughters, mothers of attempters reported lower levels of communication and perceived mutuality with their daughters than mothers of non-attempters. Although we expected that mothers of attempters would misjudge how attuned they were with their daughters, mothers displayed more insight about their abilities to engage in reciprocal interaction with daughters. Clinicians may want to explore mothers' and fathers' insights about how they relate to their adolescents.

There are several limitations that restrict the conclusiveness and generalizability of our findings. Ours was, after all, a convenience sample confined to one geographic location (New York City) and recruited in a non-random manner. The cross-sectional design of our study also prevented us from making causal inferences. Because no measures of autonomy development were included, we can only make theoretical connections to this aspect of adolescence and the cultural and relational variables we targeted. Although self-reports from multiple informants are useful, direct observational measures of mother-daughter relations can provide more objective data.

In future efforts, reports from adolescents, mothers and fathers regarding their perceptions of their relationships will augment our knowledge of the familial context of suicidal behaviors among Latinas. Although intriguing and limited, our findings are preliminary and suggestive of issues surrounding the suicide attempts of adolescent Latinas. Greater attention to potential group differences that may affect mutuality is needed in future research. For example, a family's experience of a suicide attempt may impact their reports of mutuality. A mother may perceive that she is connected to her daughter before the suicide attempt but may change in this perception following this traumatic family event, thereby influencing the report that was collected after the attempt; that is, it becomes a result of the attempt rather than being an indicator. Other issues, such as daughters' and mothers' perceptions of connection and communication, may be altered by girls' treatment following the attempt when data are collected. Mothers' mental health can also be related, and attention is needed given the known correlation between parental mental health and suicide attempts and similar child difficulties. Another area that holds considerable promise is examining peer-adolescent relationship and

especially peer-parent-adolescent interpersonal relationships. We still need to answer the question of why the rates are higher among Latinas than among other groups. By beginning to explore their similarities and differences, this study is a step in that direction.

The findings that attempters rate their relationships with their mothers significantly lower than non-attempters have implications for prevention and intervention, especially calling for the use of family rather than individual therapies. Latino mothers with relatively traditional approaches to parenting can lower their daughters' risks of suicidal behaviors through positive emotional support and guidance (Guilamo-Ramos et al., 2007; Lefkowitz et al., 2000; O'Donnell et al., 2004). For primary prevention, we encourage groups for young Latinas, as early as middle school, and their parents, either together or separately, in which parents can understand the developing adolescent's needs and the adolescents can understand their parents' reasons for their beliefs. Specifically, helping low acculturated parents appreciate the forces of development and how they can respond flexibly and firmly while maintaining their strongly held beliefs can go a long way to reducing the risk of suicide attempts. Young, acculturating Latinas who seek more autonomy and want to establish a separate identity from their parents can also appreciate the cultural and social values that are important to their parents. There is also no substitute for behavioral interventions that enhance parent-adolescent communication.

Therapeutic modalities that improve mother-daughter mutuality, support, affection and communication are important future directions for interventions (see Rotherum-Borus et al., 2000). The problem-solving confidence and positive personal relationships that comes about as part of mutual interchange between parents and daughters can buffer against suicidality (Locke & Newcomb, 2005). Our finding that a one-point increase in the measure of mutuality was associated with a 61% decrease in the likelihood of a suicide attempt confirms the importance of family or parent-adolescent therapy. Although we do not dismiss the conflicts that can arise from discrepant acculturation levels between Latinas and their parents, other relational factors, such as the capacity for daughters to understand their parents' beliefs and values and parents' capacity to acknowledge the developmental pressures their daughters face, deserve greater consideration. Attention should be paid to strengthening the quality of the mother-daughter relationship to allow for a healthy degree of mutuality, reciprocity, supervision, and support. Helping parents become more involved and inspiring mentors can also improve the situation of young Latinas.

## Acknowledgments

Support for this paper was provided by grant R01 MH070689 from the National Institute of Mental Health to Luis H. Zayas. Additional support was provided by the Center for Latino Family Research. We are grateful to the girls and mothers who participated in this study.

## References

- Avgar A, Bronfenbrenner U, Henderson CR Jr. Socialization practices of parents, teachers, and peers in Israel: Kibbutz, moshav, and city. *Child Development* 1977;48:1219–1227.
- Bird HR, Canino G, Loeber R, Duarte CS, Shrout PE, Davies M, Shen S. Longitudinal development of antisocial behaviors in young and early adolescent Puerto Rican children at two sites. *Journal of the American Academy of Child & Adolescent Psychiatry* 2007;46:5–14. [PubMed: 17195724]
- Brayr JH, Getz JG, McQueen A. Acculturation, substance use, and deviant behavior: Examining separation and family conflict as mediators. *Child Development* 2003;74:1737–1750. [PubMed: 14669893]
- Ceballos R. From barrios to Yale: The role of parenting strategies in the Latino families. *Hispanic Journal of Behavioral Sciences* 2004;26:171–186.

- Centers for Disease Control and Prevention. Suicide among children, adolescents, and young adults—United States, 1980–1992. *Morbidity and Mortality Weekly Report* 1995;44:289–291. [PubMed: 7708038]
- Centers for Disease Control and Prevention. Youth risk behavior surveillance – United States, 2005. *MMWR Surveillance Summary* 2006;55(SS5):1–108.
- Coatsworth JD, Pantin H, McBride C, Briones E, Kurtines W, Szapocznik J. Ecodevelopmental correlates of behavior problems in young Hispanic females. *Applied Developmental Science* 2000;6:126–143.
- Cody, RP.; Smith, JK. *Applied statistics and the SAS programming language*. Vol. 5. Upper Saddle River, NJ: Pearson Prentice Hall; 2006.
- Christenson OD, Zabriskie RB, Eggett DL, Freeman PA. Family acculturation, family leisure involvement, and family functioning among Mexican-Americans. *Journal of Leisure Research* 2006;38:475–495.
- Davila, J.; Daley, SE. Studying interpersonal factors in suicide: Perspectives from depression research. In: Joiner, T.; Rudd, MD., editors. *Suicide science: Expanding the boundaries*. New York: Springer; 2000. p. 175-200.
- Ebin VJ, Sneed CD, Morisky DE, Rotheram-Borus MJ, Magnusson AM, Malotte CK. Acculturation and interrelationships between problem and health-promoting behaviors among Latino adolescents. *Journal of Adolescent Health* 2001;28:62–72. [PubMed: 11137908]
- Esparza P, Sánchez B. The role of attitudinal familism in academic outcomes: A study of urban, Latino high school seniors. *Cultural Diversity and Ethnic Minority Psychology* 2008;14:193–200. [PubMed: 18624583]
- Fortuna L, Perez JD, Canino G, Sribney W, Alegría M. Prevalence and correlates of lifetime suicidal ideation and suicide attempts among Latino subgroups in the United States. *Journal of Clinical Psychiatry* 2007;68:572–581. [PubMed: 17474813]
- Fuligni, AJ. The adaptation and acculturation of children from immigrant families. In: Gielen, UP.; Roopnarine, J., editors. *Childhood and adolescence: Cross-cultural perspectives and applications*. Westport, CT: Greenwood; 2004. p. 297-318.
- Genero NP, Miller JB, Surrey J, Baldwin LM. Measuring perceived mutuality in close relationships: Validation of the Mutual Psychological Development Questionnaire. *Journal of Family Psychology* 1992;6:36–48.
- Guilamo-Ramos V, Dittus P, Jaccard J, Johansson M, Bouris A, Acosta N. Parenting practices among Dominican and Puerto Rican mothers. *Social Work* 2007;52:17–30. [PubMed: 17388080]
- Guilamo-Ramos V, Jaccard J, Peña J, Goldberg V. Acculturation-related variables, sexual initiation, and subsequent sexual behavior among Puerto Rican, Mexican, and Cuban youth. *Health psychology* 2005;24:88–95. [PubMed: 15631566]
- Hardway C, Fuligni AJ. Dimensions of family connectedness among adolescents with Mexican, Chinese, and European background. *Developmental Psychology* 2006;42:1246–1258. [PubMed: 17087556]
- Hokoda A, Galvan DB, Malcarne VL, Castañeda DM, Ulloa EC. An exploratory study examining teen dating violence, acculturation and acculturative stress in Mexican-American adolescents. *Journal of Aggression, Maltreatment & Trauma* 2007;14(3):33–49.
- Kaplan CP, Turner SG, Badger LW. Hispanic adolescent girls' attitudes towards school. *Child and Adolescent Social Work* 2007;24:173–193.
- King RA, Schwab-Stone M, Flisher AJ, Greenwald S, Kramer RA, Goodman, et al. Psychosocial and Risk Behavior Correlates of Youth Suicide Attempts and Suicidal Ideation. *Journal of American Academy of Child & Adolescent Psychiatry* 2001;40(7):837–846.
- Kyriakakis S, Fortuna LR, Zayas LH. The role of dating and sexuality in Latina adolescent suicide attempts. 2008Manuscript submitted for publication
- Lau AS, McCabe KM, Yeh M, Garland AF, Wood PA, Hough RL. The acculturation gap-distress hypothesis among high-risk Mexican American families. *Journal of Family Psychology* 2005;19:367–375. [PubMed: 16221017]
- Lefkowitz ES, Romo LF, Corona R, Au TK, Sigman M. How Latino American and European American adolescents discuss conflicts, sexuality, and AIDS with their mothers. *Developmental Psychology* 2000;36:315–25. [PubMed: 10830976]

- Locke TF, Newcomb MD. Psychosocial predictors and correlates in teenage Latino males. *Hispanic Journal of Behavioral Sciences* 2005;27:319–336.
- Love JA, Buriel R. Language brokering, autonomy, parent-child bonding, biculturalism, and depression: A study of Mexican American adolescents from immigrant families. *Hispanic Journal of Behavioral Sciences* 2007;29:472–491.
- Lugo Steidel A, Contreras JM. A new familism scale for use with Latino populations. *Hispanic Journal of Behavioral Sciences* 2003;25:312–330.
- Marin GS, Gamba RJ. A new measurement of acculturation for Hispanics: The bidimensional acculturation scale for Hispanics (BAS). *Hispanic Journal of Behavioral Sciences* 1996;18:297–316.
- Mason CA, Walker-Barnes CJ, Tu S, Simons J, Martinez-Arrue R. Ethnic differences in the affective meaning of parental control behaviors. *The Journal of Primary Prevention* 2004;25:59–79.
- Miller M. An intergenerational case study of suicidal tradition and mother-daughter communication. *Journal of Applied Communication Research* 1995;23:247–270.
- Martinez CR Jr. Effects of differential family acculturation on Latino adolescent substance use. *Family Relations* 2006;55:306–317.
- Mikolajczyk RT, Bredehorst M, Khelaifat N, Maier C, Maxwell AE. Correlates of depressive symptoms among Latino and Non-Latino White adolescents: Findings from the 2003 California Health Interview Survey. *BMC Public Health* 2007;7(21):1–9. [PubMed: 17199891]
- Moscicki EK, Crosby A. Epidemiology of attempted suicide in adolescents: Issues for prevention. *Trends in Evidence-Based Neuropsychiatry* 2003;5:36–44.
- O'Carroll PW, Berman AL, Maris RW, Moscicki EK, Tanney BL. Beyond the tower of Babel: A nomenclature for suicidology. *Suicide and Life-Threatening Behavior* 1996;26:237–252. [PubMed: 8897663]
- O'Donnell L, O'Donnell C, Wardlaw DM, Stueve A. Risk and resiliency factors influencing suicidality among urban African American and Latino youth. *American Journal of Community Psychology* 2004;33:37–49. [PubMed: 15055753]
- Olvera RL. Suicidal ideation in Hispanic and mixed-ancestry adolescents. *Suicide & Life-Threatening Behavior* 2001;31:416–427. [PubMed: 11775717]
- Orellana MF. Responsibilities of children in Latino immigrant homes. *New Directions for Youth Development* 2003;100:25–39. [PubMed: 14750267]
- Pasch LA, Deardorff J, Tschann JM, Flores E, Penilla C, Pantoja P. Acculturation, parent-adolescent conflict, and adolescent adjustment in Mexican American families. *Family Process* 2006;45:75–86. [PubMed: 16615254]
- Perreira KM, Chapman MV, Stein GL. Becoming an American parent. *Journal of Family Issues* 2006;27:1383–1414.
- Lopez, MH.; Minushkin, S. 2008 National Survey of Latinos: Hispanics See Their Situation in the U.S. Deteriorating; Oppose Key Immigration Enforcement Measures. Washington, DC: Pew Hispanic Center, September 2008; 2008.
- Phinney, JS.; Vedder, P. Family relationship values of adolescents and parents: Intergenerational discrepancies and adaptation. In: Berry, JW.; Phinney, JS.; Sam, DL.; Vedder, P., editors. *Immigrant youth in cultural transition: Acculturation, identity and adaptation across national contexts*. Mahwah, NJ: Lawrence Erlbaum; 2006. p. 167-184.
- Plunkett SW, Bamaca-Gomez MY. The relationship between parenting, acculturation, and adolescent academics in Mexican-origin immigrant families in Los Angeles. *Hispanic Journal of Behavioral Sciences* 2003;25:222–239.
- Razzino B, Joseph J, Menvielle E. Central American adolescent acculturation and parental distress: Relationship to ratings of adolescent behavior problems. *Psychological Reports* 2003;92:1255–1267. [PubMed: 12931945]
- Rhodes JE, Contreras JM, Mangelsdorf SC. Natural mentor relationships among Latina adolescent mothers: Psychological adjustment, moderating processes, and the role of early parental acceptance. *American Journal of Community Psychology* 1994;22:211–227. [PubMed: 7977178]
- Romero AJ, Carvajal SC, Volle F, Orduña M. Adolescent bicultural stress and its impact on mental well-being among Latinos, Asian Americans, and European Americans. *Journal of Community Psychology* 2007;35:519–534.

- Rudolph KD, Lambert SF, Clark AG, Kurlalowsky KD. Negotiating the transition to middle school: The role of self-regulatory processes. *Child Development* 2001;72:929–946. [PubMed: 11405592]
- Pew Hispanic Center. U.S. Population Projections: 2005–2050 (Pew Research Center Social & Demographic Trends). Washington, DC: Passel, J.S. & D’Vera, C; 2008 Feb.
- Sabogal F, Marín G, Otero-Sabogal R, VanOss Marín B, Perez-Stable EJ. Hispanic familism and acculturation: What changes and what doesn’t? *Hispanic Journal of Behavioral Sciences* 1987;9:397–412.
- Samaniego RY, Gonzales NA. Multiple mediators of the effects of acculturation status on delinquency for Mexican American adolescents. *American Journal of Community Psychology* 1999;27:189–210. [PubMed: 10425699]
- Sanderson M, Coker AL, Roberts RE, Tortolero SR, Reininger BM. Acculturation, ethnic identity, and dating violence among Latino ninth-grade students. *Preventive Medicine* 2004;39:373–383. [PubMed: 15226049]
- SAS Institute. Base SAS 9.1 procedures guide. Cary, NC: Author; 2004.
- Schaefer ES. Children’s report of parental behavior: An inventory. *Child Development* 1965;36:413–424. [PubMed: 14300862]
- Smokowski PR, Bacallao ML. Acculturation, internalizing mental health symptoms, and self-esteem: Cultural experiences of Latino adolescents in North Carolina. *Child Psychiatry and Human Development* 2007;37:273–292. [PubMed: 17103301]
- Steinberg L. We know some things: Parent - Adolescent Relationships in Retrospect and Prospect. *Journal of Research on Adolescence* 2001;11:1–19.
- Steyerberg EW, Eijkemans MJC, Harrell FE Jr, Habbema JDF. Prognostic modeling with logistic regression analysis: In search of a sensible strategy in small data sets. *Medical Decision Making* 2001;21:45–56. [PubMed: 11206946]
- Substance Abuse and Mental Health Services Administration. Results from the 2002 National Survey on Drug Use and Health: National findings (Office of Applied Studies, NHSDA Series H-22, DHHS Publication No. SMA 03–3836). Rockville, MD: Author; 2003.
- Tortolero SR, Roberts RE. Differences in nonfatal suicide behaviors among Mexican and European American Middle School Children. *Suicide & Life-Threatening Behavior* 2001;31:214–223. [PubMed: 11459254]
- Updegraff KA, Madden-Derdich DA, Estrada AU, Sales LJ, Leonard SA. Young adolescents’ experiences with parents and friends: Exploring the connections. *Family Relations* 2002;51:72–80.
- Wagner BM, Cohen P. Adolescent sibling differences in suicidal symptoms: The role of parent-child relationships. *Journal of Abnormal Child Psychology* 1994;22:321–337. [PubMed: 8064036]
- Zayas LH, Lester RJ, Cabassa LJ, Fortuna LR. “Why do so many Latina teens attempt suicide?” A conceptual model for research. *American Journal of Orthopsychiatry* 2005;75:275–287. [PubMed: 15839764]
- Zayas LH, Palleja J. Puerto Rican familism: Considerations for family therapy. *Family Relations* 1988;37:260–264.
- Zimmerman, JK. Crossing the desert alone: An etiological model of female adolescent suicidality. In: Gilligan, C.; Rogers, AG.; Tolman, DL., editors. *Women, girls, and psychotherapy*. New York: Haworth Press; 1991. p. 223-240.



	Adolescents												<i>t</i> / $\chi^2$ Values	
	Attempters						Non-Attempters							
	n	%	M	SD	n	%	M	SD	n	%	M	SD		
Colombia	4	6.15			16	21.62								
Dominican Rep	20	30.77			16	21.61								
Ecuador	5	7.69			5	6.76								
El Salvador					1	1.35								
Honduras	1	1.54												
México	13	20.00			9	12.16								
Nicaragua	1	1.54												
Perú					2	2.70								
Puerto Rico	19	29.23			25	33.78								
Venezuela	1	1.54												
Missing	1	1.54												

<sup>a</sup> Note. In our sample 20 adolescent attempters, 18 adolescent non-attempters, 50 mothers of attempters, and 57 mothers of non-attempters were born outside US.

<sup>b</sup> Self-identified Hispanic group or culture was collapsed into four categories: Puerto Rico, Dominican Republic, Mexico, and other for  $\chi^2$  analysis of demographic differences. Results were not statistically significant.

**Table 2**  
Scores of Latina Suicide Attempters and Non-Attempters and their Mothers on Cultural Variables <sup>1</sup>

Measures	Attempters (n=65)		Non-Attempters (n=75)		t-values
	M	SD	M	SD	
<b>Acculturation</b>					
Adolescents					
Hispanic Acculturation	2.90	0.67	2.90	0.55	t(138) = -0.04
Non-Hispanic Acculturation	3.58	0.42	3.58	0.37	t(138) = 0.05
Mothers					
Hispanic Acculturation	3.30	0.60	3.38	0.47	t(121) = 0.80
Non-Hispanic Acculturation	2.41	1.02	2.46	0.87	t(138) = 0.28
Paired Samples					
Attempters and Mothers					t(64) = 5.78 ****
Hispanic Acculturation					t(64) = -9.90 ****
Non-Hispanic Acculturation					t(74) = 7.21 ****
Non-Attempters and Mothers					t(74) = -10.56 ****
Hispanic Acculturation					
Non-Hispanic Acculturation					
<b>Familism</b>					
Adolescents					
Hispanic Acculturation	7.23	1.35	7.49	0.99	t(116) = 1.25
Non-Hispanic Acculturation	7.86	1.08	8.07	1.02	t(138) = 1.21
Mothers					
Hispanic Acculturation					t(64) = 3.03 **
Non-Hispanic Acculturation					t(74) = 3.66 ****

<sup>1</sup>Note. Acculturation measured by Bidimensional Acculturation Scale (Marín & Gamba, 1996) and familism with an attitudinal scale (Lugo Steidel & Contreras, 2003).

\*  $p < .05$ ;

\*\*  $p < .01$ ;

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

NIH-PA Author Manuscript

NIH-PA Author Manuscript

NIH-PA Author Manuscript

1000  
*p* < .0001  
\*\*\*

**Table 3**  
Scores of Latina Suicide Attempters and Non-Attempters and their Mothers on Relational Variables <sup>1</sup>

Measures	Attempters (n=65)		Non-Attempters (n=75)		t-values
	M	SD	M	SD	
Mutuality					
Adolescents	3.92	0.84	4.44	0.76	t(138)=3.80***
Mothers	4.39	0.69	4.80	0.67	t(137)=3.52***
Paired Samples					
Attempters and Mothers					t(63) = 4.13***
Non-Attempters and Mothers					t(74) = 3.93***
Parental Affection, Communication, and Support					
Adolescents					
Affection	17.55	5.41	20.34	4.38	t(137) = 3.35**
Communication	15.86	5.49	19.23	4.40	t(137) = 4.01***
Support	25.09	5.56	27.64	4.61	t(137)=2.95**
Mothers					
Affection	21.60	2.51	21.90	2.91	t(137) = 0.66
Communication	20.43	3.09	21.49	2.60	t(138) = 2.21*
Support	29.52	3.80	30.19	3.35	t(138) = -1.15
Paired Samples					
Attempters and Mothers					
Affection					t(64) = 6.16***
Communication					t(64) = 5.93***
Support					t(64) = 6.04***
Non-Attempters and Mothers					
Affection					t(72) = 3.26**
Communication					t(73) = 4.96***
Support					t(73)=4.41***

<sup>1</sup>Note. Mutual Psychological Development Questionnaire (Genero, Miller, Surrey, & Baldwin, 1992); and parental affection, communication and support (Avgar, Bronfenbrenner, & Henderson, 1977; Schaefer, 1965).

- \*  $p < .05$ ;
- \*\*  $p < .01$ ;
- \*\*\*  $p < .001$ ;
- \*\*\*\*  $p < .0001$

**Table 4**

Logistic Regression Predicting Attempter Status (following backward selection; N = 130)

Variable	b	Wald $\chi^2$	Odds Ratio
Intercept	7.0268	12.8440 ***	
Age at Interview	-0.2372	5.4868 *	0.79
MPDQ <sup>1</sup>	-0.8407	12.5461 ***	0.43

Note. Likelihood-ratio  $\chi^2 = 19.1465$ ,  $df = 2$ ,  $p < .0001$ ;

<sup>1</sup>MPDQ: Mutual Psychological Development Questionnaire (Genero, Miller, Surrey, & Baldwin, 1992).

\*  
 $p < .05$ ;

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