



Published in final edited form as:

Hispanic Journal of Behavioral Science. 2008 ; 30(3): 357–378. doi:10.1177/0739986308318713.

Family Cohesion and its Relationship to Psychological Distress among Latino Groups

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Abstract

This paper presents analyses of a representative sample of US Latinos (N=2540) to investigate whether family cohesion moderates the effects of cultural conflict on psychological distress. The results for the aggregated Latino group suggests a significant association between family cohesion and lower psychological distress and the combination of strong family cohesion with presence of family cultural conflict was associated with higher psychological distress. However, this association differed by Latino groups. We found no association for Puerto Ricans, Cuban results were similar to the aggregate group, family cultural conflict in Mexicans was associated with higher psychological distress, while family cohesion in Other Latinos was associated with higher psychological distress. Implications of these findings are discussed to unravel the differences in family dynamics across Latino subethnic groups.

Keywords

Family cohesion; family conflict; psychological distress; Latino ethnic groups

Introduction

Family cohesion has been defined as the emotional bonding that family members have toward one another (Olson, Russell, & Sprenkle, 1982). Within Latino families, cohesion has been identified as a protective factor against external stressors (Hovey & King, 1996; Salgado de

Snyder, 1987). The protective factor of family cohesion against distress has been considered a function of Latino families close knit relations, sharing sense of loyalty, reciprocity and solidarity among its members (Hovey & King, 1996). In general, a high level of perceived family cohesion and support has also been identified as the most distinctive dimension of Hispanic families (Sabogal, Marin, & Otero-Sabogal, 1987). Indeed, there is evidence that perceived social support from families is related to lower levels of psychological distress among Latino groups (Rivera, 2007; Vega, Kolody, Valle, & Weir, 1991). The strong emotional bonds measured by family cohesion are expected to promote family support.

Past literature has also documented the relationship between acculturation and the cohesion levels of Latino families. Acculturation has been defined as “the acquisition of the cultural elements of the dominant society” (Lara, Gamboa, Kahramanian, Morales, & Bautista, 2005, p. 369). Higher acculturation levels have been found to be related to lower family cohesion (Vega, Kolody, & Valle, 1986). Other studies also find that families with low acculturation levels are highly connected in comparison to bicultural and highly acculturated families (Miranda, Estrada, & Firpo-Jimenez, 2000). These studies suggest that acculturation may disrupt the cohesive bonds of the family and limit their protective nature against distress (Hovey & King, 1996). Indeed, the literature suggests that low levels of family cohesion are related to a higher risk of psychological distress (Cohen & Willis, 1985; Dean & Lin, 1977; Turner, 1981).

In addition to family cohesion, the construct of family cultural conflict has also been considered by researchers looking at the acculturation process for immigrant families, including Latinos. Family cultural conflict may be a particular concern for families with members who were born outside the U.S. as these families integrate the values, lifestyles, and norms of the host society. Cultural processes, such as acculturation, may lead to conflict in family relations. Gil and Vega’s (1996) analysis of acculturation and acculturation stress among Cuban and Nicaraguan adolescent males and their parents found that “high levels of acculturation stress experienced by parents and adolescents led to negative effects on parent/child relations by increasing the level of cultural conflicts in the family” (p. 453). Similarly, Portes and Rumbaut (1996) reported that second generation children experience conflict with their parents due to acculturation. These cultural conflicts might exacerbate psychological distress and moderate the possible beneficial effects of family cohesion.

Latino Heterogeneity

Mexican Americans are the largest Latino group in the United States, accounting for about 60% of the Latino population (Guzman, 2001). The proximity of many Mexican Americans to Mexico, combined with their high rates of immigration, enables a strong cultural base that serves to reinforce Mexican cultural identity (Guarnaccia & Martinez, 2005). At the same time, partly due to this proximity, it is common for Mexican men and women to leave their families and go to the U.S. for work. These immigration patterns often create separation of the family nucleus and subsequent reorganization of family ties when the family is reunited. The reunification of the previously absent family member can create tension, comparable to that of a stepparent incorporating into a new family (Suarez-Orozco, Todorova, & Louie, 2002). Even for families who move together to the U.S., relocation disrupts social networks (Pilisuk & Hillier Parks, 1986) and may create more need for companionship and support from immediate family members, potentially increasing the reliance on these few individuals to meet multiple needs for support (Sluzki, 1979).

Migration patterns of Puerto Ricans are unique compared to other Latino groups. Given Puerto Rican’s status as United States citizens, they are able to move freely between the Island of Puerto Rico and the mainland U.S. This back and forth migration may create tension on the family as Puerto Ricans are constantly dismantling and rebuilding their social and communal

networks, and adjustment to new environments can create stress that fuels conflict in family relationships (Ortiz, Simmons, & Hinton, 1999). Further, ties to a unique Puerto Rican culture are weaker than other Latino group's cultural identities, as more than a century of American dominance has transformed their culture (Guarnaccia & Martinez, 2005). This diffusion of cultural identity combined with the ease of movement across the U.S. and Puerto Rico is unique among Latino groups. For the majority of Puerto Rican families in the U.S., socioeconomic factors are a more significant source of family stress. Puerto Ricans have the highest level of unemployment (9.6%) and the highest percentage of people living below the poverty level (26.1%) of all Latino groups (Ramirez & Patricia de la Cruz, 2002).

Cubans, as a group, have high socioeconomic status and while they have the highest retention of Spanish in their everyday life (Portes & Stepick, 1993), by the second and third generation Cubans are more likely to speak only English in the home than Mexicans (Alba, Logan, Lutz, & Stults, 2002). The status of Cubans as political refugees and their strong family ties has not only encouraged their migration to the U.S., but also led to more stable migration patterns with less back and forth transitions between Cuba and the U.S. Loyalty and unity characterize Cuban family relationships; for Cubans, family cohesion has been found to be a protective factor for positive well-being (Bernal & Shapiro, 2005).

Lastly, the Latino community in the U.S. has rapidly diversified, including peoples from the Dominican Republic, Central and South America; these groups make up sizable local populations, such as Dominicans in New York City and Central Americans in Washington, D.C. This group of "Other Latinos" is very heterogeneous, although many Central Americans came to the U.S. escaping civil and military conflicts in their home countries (Guarnaccia & Martinez, 2005). Dominican migration has been termed "transnational" as there is constant movement between the U.S. and the Dominican Republic (Duany, 1994). Even if living in the U.S., Dominicans often keep ties and social relations with family and friends in their home countries. Migration separates parents from their children for a long time and creates tension when the family reunites. Dominicans usually live in extended family formations, mostly due to their low socioeconomic status in the U.S. (Hernandez & Rivera-Batiz, 2003). Similar to the other Latino groups, upon migration, these groups often need to assume unaccustomed roles, such as women working to support the family, which can threaten the traditional hierarchical structure of power within the family.

Present Study

In this paper we explore the relationship between family cohesion, family cultural conflict, and psychological distress, particularly whether family cohesion moderates the effects of family cultural conflict on psychological distress among Latinos. We hypothesize that for Latinos in the aggregate family cultural conflict is associated with greater psychological distress only under circumstances of low family cohesion. However, we also hypothesize that the interaction between family cohesion and family cultural conflict differs across the Latino subethnic groups. As indicated in previous sections of this study, there is a strong indication that although these Latino groups shared a common ancestry, they also shared a plethora of social, historical, and familial differences. For Mexicans, the pattern of separating from one's family to find work in the U.S. may greatly impact the experience of family cohesion, while women working in the U.S. may disrupt traditional family structures and create greater conflict for this group. The Puerto Ricans have unique socioeconomic challenges that may exacerbate psychological distress; Puerto Ricans are also highly mobile between the U.S. and the Island, which may negatively impact the power of family cohesion to buffer family conflict in this population. Cubans have the most tightly knit family structures, suggesting that the experience of family cohesion for this group may be particularly strong. Lastly, the Other Latinos experience high levels of social instability due to poverty, transmigration patterns and, for Central Americans,

a history of political unrest. These experiences may both fuel family conflict and create situations that foster low patterns of cohesion.

Methods

Description of the Study

The National Latino and Asian American Study (Alegria et al., 2004) is one of the largest population-based surveys of Latinos and Asian Americans ever conducted in the United States. The NLAAS provides national information on the similarities and differences in mental illness and service use of Latinos and Asian Americans. Accordingly, the NLAAS is more than another psychiatric disorder prevalence study of separate Latino and Asian American populations. Rather, this study seeks to assess the role of ethnicity/race, socioeconomic status and environmental context in explaining potential mental health and service use differences (Alegria et al., 2004). It brings a renewed focus to social and environmental determinants of disease that may shed light on how to intervene at the population or regional level, rather than only at the individual level. The aims are: (a) to estimate the lifetime and 12-month prevalence of psychiatric disorders and the rates of mental health services use for Latino and Asian American populations and (b) to examine the association of social position, environmental context, and psychosocial factors with mental disorders and service use among Latinos and Asian Americans.

Sample Design

The NLAAS is based on a stratified area probability sample design that is briefly described here (for more details please see Heeringa et al., 2004). The survey populations for the NLAAS study included all Latino and Asian American adults, 18 years of age and older, in the non-institutionalized population of the coterminous United States. This paper reports only on the Latino sample. Latinos were divided into four strata of interest based on eligible adults' ancestry or national origin: Mexican, Puerto Rican, Cuban and all Other Latinos. This stratification of the NLAAS survey populations relied on self-reports by household members at the time of the household screening. The final sample consists of 2554 Latino respondents: 868 Mexican, 577 Cuban, 495 Puerto Ricans and 614 Other Latinos. The response rate for the combined Latino NLAAS sample of primary and secondary adult respondents was: 75.5%. To provide a nationally-representative sample of all Latino origin groups regardless of geographic residential patterns, the sampling strategy included both an NLAAS Core sample, as well as high density (HD) supplements which were designed to over sample geographic areas with moderate to high density ($\geq 5\%$) Latino households. Weighting reflects the joint probability of selection from the pooled Core and HD samples, providing sample-based coverage of the full national Latino population.

Procedures for Data Collection

The University of Michigan's Institute for Social Research (ISR) conducted data collection between May 2002 and November 2003 (see Pennell et al., 2004, for a detailed description of the data collection procedures). Eligibility criteria for the Latino sample of the NLAAS included age (persons 18 years or older), ethnicity (persons who were of Latino, Hispanic or Spanish origin, specifically, Cuban, Puerto Rican, Mexican or Other Latino), and language (persons who spoke English or Spanish). Recruitment into the initial NLAAS interview began with an introductory letter and study brochure mailed to the sample households. All study materials were translated into Spanish for the substantial proportion of non-English speaking respondents. Interviewers then conducted screening procedures, scheduled, and conducted interviews with eligible respondents. Professional lay interviewers administered the NLAAS battery averaging 2.6 hours. As a measure of quality control, a 10% random sample of each interviewer's completed interviews was re-contacted for validation.

Measures

Family cohesion—This is assessed by three questions, including whether family members like to spend free time with each other; family members feel very close to each other; and family togetherness is very important. The possible response options ranged from (1) Strongly Agree to (4) Strongly Disagree. A higher scale value means higher family cohesion ($\alpha=0.822$ for total Latino sample, with scores ranging from 3–12).

Family cultural conflict—This is a measure that includes five questions drawing from a subscale of the Hispanic Stress Inventory (HSI) that tap into conflict that might arise because of the tension of fitting into the cultural norms of strong family ties and achieving more personal goals. This scale demonstrated good psychometric properties for Latinos, with an alpha of 0.787 for the Latino sample. Some items included are as follows: You have felt that being too close to your family interfered with your own goals; because you have different customs, you have had arguments with other members of your family; your personal goals have been in conflict with your family. Response options were: (1) Hardly Ever, (2) Sometimes and (3) Often. Higher scale values indicate more cultural conflict, with a score range of 5–15.

Psychological distress—This scale, referred to as the K-10 (Kessler et al., 2002), was constructed using the answers to the following ten questions: During the last thirty days, how often did you feel depressed; did you feel so depressed that nothing could cheer you up; did you feel hopeless; did you feel restless or fidgety; did you feel so restless that you could not sit still; did you feel tired out for no good reason; did you feel that everything was an effort; did you feel worthless; did you feel nervous; and did you feel so nervous that nothing could calm you down. Scoring options ranged from (1) none of the time to (5) all of the time. The raw variables were reverse coded so that a higher score on the K-10 scale indicates greater levels of psychological distress ($\alpha=0.921$ for Latino sample, with scores ranging from 10–50).

Ethnicity—The study participants were divided into four subethnicities: Mexicans, Puerto Ricans, Cubans and Other Latinos. This last category included people from different Caribbean, Central and South American ethnicities.

Other Covariates—We decided to include other covariates known to have an impact on distress including: *Sex* coded (1) for males and (0) for females as females have been found to be at a higher risk of suffering distress (Mirowsky, 1989), especially among Latino groups (Vega & Rumbaut, 1991). *Education* was measured as years of education. *Income* was divided into four dummy variable categories (less than \$15,000, \$15,000 to \$34,999, \$35,000 to \$74,999, and over \$75,000). These socioeconomic indicators are of vital importance since past literature suggests a relation between low SES and higher psychological distress (Aneshensel, 1992; Robert, 1999). *Marital Status* includes two dummy variables, never married or divorced, with married status as the reference category since it has been shown to be linked with lower psychological distress (Ross, Mirowsky, & Goldstein, 1990). *Nativity* was measured by whether the respondent was foreign born (1) or born in the U.S. (0). *Age of arrival into U.S.* was coded into four age categories: 0–6 years, 7–17 years, 18–24 years and over 25 years, with U.S. born included under the 0–6 years category. These acculturation proxies are of special interest to Latinos since high acculturation levels have been found to be related to higher psychological distress (Cervantes, Padilla, & Salgado de Snyder, 1991; Hovey & King, 1996) and as suggested in the literature, might influence family cohesion and family cultural conflict (Miranda & Matheny, 2000; Vega, Patterson et al., 1986).

Analytic Strategy

We began our analysis with descriptive statistics of the study variables by Latino subethnicity. Significance tests for differences in the weighted proportions across the subethnic groups were

conducted using Rao–Scott statistic for the Pearson chi-squared test for contingency tables (Rao & Scott, 1984; Rao & Thomas, 1989; StataCorp, 2004). Then we examine the effect of family cohesion and family cultural conflict on psychological distress while adjusting for other socio-demographics factors (i.e. gender, education, income, marital status, and nativity) that have been related to psychological distress using weighted multivariate regression analyses adjusting for the sampling design through a first-order Taylor series approximation. Significance tests were performed using design-adjusted Wald tests (StataCorp, 2004). We include an interaction term between family cohesion and family cultural conflict to examine whether family cohesion moderates the effect of family cultural conflict on distress. We fit separate models for each Latino subethnic group to allow us to examine potential subethnic group differences in the effect of family cohesion and family cultural conflict on psychological distress. We also present a model that looks at Latinos as an aggregate group to demonstrate how results could be misleading when subethnicity is not considered.

Results

Descriptive

The weighted mean and standard errors for all study variables appear in Table 1. There was considerable variation in level of education, marital status, nativity and age of arrival into the U.S. across Latino subethnic groups (all $p < 0.01$). We see trends of Cubans having higher levels of education, Mexicans and Cubans having higher percentage of married individuals, and more Cubans entering the U.S. after age 25. There were significant differences in family cohesion ($p < 0.01$) and family cultural conflict ($p < 0.01$) by Latino subethnicity with Puerto Ricans having lower levels of family cohesion and higher levels of family cultural conflict. We also found differences in psychological distress among Latino subethnic groups ($p < .001$) with Puerto Ricans reporting higher levels.

Multivariate Analyses

Table 2 presents results of the weighted multivariate regression models for psychological distress with sociodemographic variables, family variables, and family variable interaction as covariates. The results for the aggregated Latino sample indicated family cohesion was significantly associated with lower psychological distress ($B = -0.43$, $p < 0.05$). There was a significant interaction between family cohesion and family cultural conflict ($B = 0.06$, $p < 0.05$) suggesting that although strong family cohesion was associated with lower psychological distress, having strong family cohesion in the face of family cultural conflict relates to greater psychological distress. To understand the effects of family cohesion and family cultural conflict on psychological distress and how they can vary by Latino subethnic group, we discuss the results by different Latino group membership (Puerto Rican, Mexicans, Cubans, and Other Latinos).

Puerto Ricans

The results of the regression model for Puerto Ricans revealed no significant associations between the family variables and psychological distress, including the interaction term. The socioeconomic covariates, on the other hand, are significant correlates as expected for Puerto Ricans, with those reporting a household income of less than \$15,000 associated with greater psychological distress when compared to those reporting a household income greater than \$75,000 ($B = 2.72$, $p < 0.01$), and those with higher education reporting lower psychological distress approaching significance ($B = -0.20$, $p < 0.10$). There were also marginally significant differences in age of arrival into U.S. with those arriving between ages 7 and 17 reporting greater psychological distress compared to those who were 0–6 years of age at arrival and the U.S. born ($B = 2.94$, $p < 0.10$).

Cubans

Surprisingly, strong family cohesion ($B= 1.48, p<0.10$) and high levels of family cultural conflict ($B= 3.20, p<0.05$) were both associated with greater psychological distress. However, consistent with our hypothesis, the negative coefficient of the interaction term showed that strong family cohesion in the event of family cultural conflict helped diminish the negative impact on psychological distress ($B= -0.24, p<0.05$). In contrast to the Puerto Ricans, gender and marital status were significant correlates with females reporting greater distress than males ($B= 1.56, p<0.01$), and those who were divorced marginally associated with higher distress than those who were married ($B= 1.20, p<0.10$). Cubans who were never married had marginally lower distress ($B= -0.97, p<0.10$). Socioeconomic characteristics functioned similarly to Puerto Ricans with higher education associated with lower distress ($B= -0.34, p<0.01$) and those in the lower income brackets more likely to report distress than those who make more than \$75,000 per year ($B= 2.55, p<0.05$; $B= 2.51, p<0.01$, $B= 0.79, p<0.10$).

Mexicans

For Mexicans higher levels of family cultural conflict were related to greater psychological distress ($B= 1.13, p<0.01$). However, neither the main effect of family cohesion nor the interaction between family cohesion and family cultural conflict were significant correlates of psychological distress; for Mexicans, family cohesion neither decreases nor increases psychiatric distress, nor does it moderate the negative effects of family cultural conflict. Socioeconomic covariates were not significantly associated with psychological distress for the Mexicans; except that being female compared to being male ($B= 1.02, p<0.01$) and being divorced compared to being married ($B= 1.06, p<0.05$) were related to greater psychological distress.

Other Latinos

For other Latinos, family cohesion was significantly associated with lower psychological distress ($B= -0.90, p<0.05$). The interaction between family cohesion and family cultural conflict was also significant and positive ($B= 0.18, p<0.01$), showing that strong family cohesion in the event of family cultural conflict could actually exacerbate psychological distress. These findings suggest that for Other Latinos, family cohesion may not have the same moderating effects on conflict and distress as was the case with Cubans. Similar to Cubans and Mexicans, we found that females had significantly higher distress compared to males ($B= 1.55, p<0.01$). Also consistent with Cubans, reporting a household income between \$15,000 and \$34,999 was significantly associated with greater psychological distress when compared to those reporting household incomes of \$75,000 or more ($B= 1.74, p<0.05$). Higher education was related to lower psychological distress ($B= -0.16, p<0.05$).

Additional Analysis

In order to gain more power in detecting subethnic differences in the moderating effect of family cohesion on the effect of family cultural conflict on psychological distress, we pooled all four Latino subethnic groups and ran a regression model that included 3-way interactions between Latino subethnicity, family cohesion, and family cultural conflict with Mexicans as the reference group. We found that the interactions between family cohesion and family cultural conflict were significantly different between Cubans and Mexicans, between Other Latinos and Mexicans, but not significantly different between Puerto Ricans and Mexicans (results not shown, but available from authors). These results suggest that the interaction between family cohesion and family cultural conflict on psychological distress differs between Latino subethnicities. Further, they add a layer of confidence, as the results are similar to ones discussed above, with the interaction terms showing both significant and unique patterns for Cubans and other Latinos.

Discussion

The findings in this study show that the effects of family cohesion, family cultural conflict, and the interaction between family cohesion and family cultural conflict on psychological distress differ by Latino subethnicity. However, the cross-sectional nature of the data used in this study poses limitations in making causal inferences. It could well be the case that persons with higher psychological distress have an increased risk of interpreting the actions of other family members as non-cohesive. Similar arguments could be made for the perceptions of family cultural conflict, with those reporting more conflict also reporting lower rates of family cohesion.

The data also restrain us from making further analyses for sub-group variations on the Other Latino category. We could not test if the differences found were related to the Latino experience or the experience of being a minority within the social hierarchy of the U.S. Further tests should extend our analyses to other minority groups as well. In spite of those limitations, our findings contribute to unraveling the differences in family dynamics across Latino subethnic groups. When looking at the aggregated Latino group, family cohesion was associated with lower psychological distress. This result is consistent with previous research (Gil & Vega, 1996; Gil, 1996; Vega, Kolody et al., 1986). When we examined each Latino subethnic group, we found that family cohesion was significantly associated with lower distress for Other Latinos, consistent with Latinos as a whole. However, for Cubans, family cohesion appeared to function differently from the sample as a whole, with higher levels of cohesion associated with increased psychological distress. Previous literature (Olson et al., 1989), has indicated that high levels of family cohesion, in comparison to moderate levels, might produce potentially harmful effects on distress by entailing high levels of family demand. It is possible that the more stable migratory patterns for Cubans may foster an experience of family cohesion where Cubans are less able to escape negative family patterns in the U.S. by moving back to their country of origin or separating from the family, as might be the case for other groups, such as Puerto Ricans.

The fact that family cohesion and family culture conflict do not appear to be significant factors in distress levels for Puerto Ricans, after adjusting for household income and education, suggest that family dynamics might be strongly influenced by the socioeconomic conditions of the family. It might also be explained by Puerto Rican's greater socialization into U.S. society which might imply the rejection of strong family norms and values that ensure family cohesion and the dilution of relationships where there is family culture conflict. As such, this might be related to why Puerto Rican women are substantially more likely to be single heads of household than their other Latina counterparts, and why psychological distress might be higher for Puerto Ricans as compared to the other Latino subgroups.

For Mexicans, there are several explanations for why family cohesion neither decreases nor increases distress, nor does it moderate the negative effects of family cultural conflict. For one, family cohesion might go beyond the immediate to the extended multigenerational family. There are many family structures that can be considered among Mexicans as forming the family cohesion, allowing for incredible variation across Mexicans and no definitive association to psychological distress. A second alternative explanation is that Mexican families have typically remained concentrated in Mexican enclaves that reinforce the traditional family structure with gender roles designated by chores to be able to survive. This rigid family cohesion is not related to distress but more to task performance. Therefore, it does not protect against family cultural conflict.

Our other aim was to assess the interaction between family cohesion and family cultural conflict on psychological distress. We hypothesized that family cohesion would moderate the negative

effect of family culture conflict on psychological distress. Surprisingly, we found that the interaction between family cohesion and family cultural conflict was positively associated with distress when looking at Latinos as an aggregate. Thus, at high levels of family cohesion and family cultural conflict, distress increases, and family cohesion loses its protective character. These findings underscore the importance of looking closely at the specific nature of family cohesion for Latinos and how it interacts with other characteristics, in order to avoid cultural generalizations that may not apply universally.

Across each subethnic group, the relationships among these variables also varied. We found that strong family cohesion moderated the negative effect of family culture conflict on distress for Cubans, consistent with our hypothesis. In contrast, elevated levels of family cultural conflict and family cohesion were related to increased distress levels of psychological distress for Other Latinos. This finding is counterintuitive to our proposed hypotheses. It appears as if strong family cohesion might lose its potential protective character with the Other Latino group. We speculate that in these cases, the intense family bonds may only serve to increase the negative impact of the family cultural conflict. There is no significant interaction effect of family cultural conflict and family cohesion for Puerto Ricans. The mobility of Puerto Ricans due to their status as U.S. citizens may well diffuse the experience of family cohesion, and mitigate its ability to moderate the negative effects of family cultural conflict.

Although being female was related to greater psychological distress in the sample as a whole, for Puerto Ricans, neither of these variables was significantly related to distress. This finding has been shown in other studies, where the high number of men underemployed and out of the labor force having high psychological distress may eliminate the gender gap observed in other groups. Being divorced was also significant for the sample as a whole, but not for Puerto Ricans. With Cubans, we find being female related to psychological distress. At the same time, being divorced increased distress, while being never married decreased it. We speculate that cultural constructions of women's roles in the Cuban community might account for these elevated levels of distress experienced by Cuban women (Koss-Chioino, 1999).

For Mexicans and Other Latinos, we also found that female gender was related to greater psychological distress. We hypothesized that changing cultural constructions of women's roles might create conflict with traditional roles and play a significant part in the elevated distress experienced by Cuban, Mexican and Other Latina females. Given that Puerto Ricans are more integrated culturally with the U.S., they may be less vulnerable to cultural tensions due to more flexible gender roles. For Puerto Ricans, Cubans and Other Latinos, however, low education and low income were associated with increased distress.

These robust and consistent findings in regards to the socioeconomic variables across these three groups warrant attention given the overrepresentation of Latinos in lower levels of the social hierarchy in the U.S. Here, the results for Mexicans paint a different picture. For this group, socioeconomic factors were not significantly related to low psychological distress. Further investigation of the unique effects of socioeconomic markers and psychological distress across distinct Latino subgroups is required.

The findings from this study illustrate the complex nature of the relationships among family cohesion, family cultural conflict, and psychological distress across Latino subethnicities. Given the distinct migration patterns and sociocultural composition of each of these groups, we recommend continued research and analysis of the differences in family dynamics among them, and how these differences impact psychological distress.

Acknowledgements

The NLAAS data used in this analysis was provided by the Center for Multicultural Meal Health Research at the Cambridge Health Alliance. The project was supported by NIH Research Grant # U01 MH62209 funded by the National Institute of Mental Health as well as the Substance Abuse & Mental Health Services Administration/Center for Mental Health Services and the Office of Behavioral and Social Science Research. This publication was also made possible by Grant # P20 MD000537 from the National Center on Minority Health and Health Disparities (NCMHD) and Grant #P50 MH073469-02 from the National Institute of Mental Health.

References

- Alba R, Logan J, Lutz A, Stults B. Only English by the third generation? Loss and preservation of the mother tongue among the grandchildren of contemporary immigrants. *Demography* 2002;39:467–484. [PubMed: 12205753]
- Alegría M, Takeuchi D, Canino G, Duan N, Shrout P, Meng XL, et al. Considering context, place and culture: the National Latino and Asian American Study. *International Journal of Methods in Psychiatric Research* 2004;13:208–220. [PubMed: 15719529]
- Aneshensel C. Social stress: theory and research. *Annual Review of Sociology* 1992;18:15–38.
- Bernal, G.; Shapiro, E. Cuban families. In: McGoldrick, M.; Giordano, J.; Garcia-Preto, N., editors. *Ethnicity and Family Therapy*. Vol. 3. New York, NY: The Guilford Press; 2005. p. 202-215.
- Cervantes RC, Padilla AM, Salgado de Snyder N. The Hispanic Stress Inventory: A culturally relevant approach to psychosocial assessment. *Psychological Assessment* 1991;3:438–447.
- Cohen S, Willis TA. Stress, social support, and the buffering hypothesis. *Psychological Bulletin* 1985;98:310–357. [PubMed: 3901065]
- Dean A, Lin N. The stress buffering role of social support. *Journal of Nervous and Mental Disease* 1977;165:403–417. [PubMed: 591939]
- Duany, J. *Quisqueya on the Hudson: The transnational identity of Dominicans in Washington Heights*. New York: CUNY Dominican Studies Institute; 1994.
- Gil AG, Vega WA. Two different worlds: Acculturation stress and adaptation among Cuban and Nicaraguan families. *Journal of Social and Personal Relationships* 1996;13:435–456.
- Gil R. Hispanic women and mental health. *Annals of the New York Academy of Sciences* 1996;789:147–159. [PubMed: 8669781]
- Guarnaccia P, Martinez I. Mental health in the Hispanic immigrant community: An overview. *Journal of Immigrant and Refugee Services* 2005;3:21–46.
- Guzman, B. *The Hispanic Population: Census 2000 Brief*. Washington: U.S. Department of Commerce; 2001.
- Heeringa SG, Wagner J, Torres M, Duan N, Adams T, Berglund P. Sample designs and sampling methods for the Collaborative Psychiatric Epidemiology Studies (CPES). *International Journal of Methods in Psychiatric Research* 2004;13:221–240. [PubMed: 15719530]
- Hernandez, R.; Rivera-Batiz, F. *Dominicans in the United States: A socioeconomic profile*. New York: CUNY Dominican Studies Institute; 2003.
- Hovey JD, King CA. Acculturative stress, depression, and suicidal ideation among immigrant and second-generation Latino adolescents. *Journal of the American Academy of Child Adolescent Psychiatry* 1996;35:1183–1192.
- Kessler RC, Andrews G, Colpe LJ, Hiripi E, Mroczek DK, Normand SL, et al. Short screening scales to monitor population prevalences and trends in non-specific psychological distress. *Psychological Medicine* 2002;32:959–976. [PubMed: 12214795]
- Koss-Chioino J. Depression among Puerto Rican women: Culture, etiology and diagnosis. *Hispanic Journal of Behavioral Sciences* 1999;21:330–350.
- Lara M, Gamboa C, Kahramanian MI, Morales LS, Bautista DE. Acculturation and Latino health in the United States: a review of the literature and its sociopolitical context. *Annual Review of Public Health* 2005;26:367–397.
- Miranda AO, Estrada D, Firpo-Jimenez M. Differences in family cohesion, adaptability, and environment among Latino families in dissimilar stages of acculturation. *The Family Journal: Counseling and Therapies for Couples and Families* 2000;8:341–350.

- Miranda AO, Matheny KB. Socio-Psychological predictors of acculturative stress among Latino adults. *Journal of Mental Health Counseling* 2000;22:306–317.
- Mirowsky, J. Social causes of psychological distress. New York: Aldine de Gruyter; 1989.
- Olson, DH.; McCubbin, H.; Barnes, HL.; Larsen, AS.; Muxen, MJ.; Wilson, MA. Families: What makes them work. Vol. 2. Beverly Hills, CA: Sage; 1989.
- Olson DH, Russell CS, Sprenkle DH. The circumplex model of marital and family systems, VI: Theoretical update. *Family Process* 1982;22:69–83. [PubMed: 6840263]
- Ortiz A, Simmons J, Hinton WL. Locations of remorse and homelands of resilience: notes on grief and sense of loss of place of Latino and Irish-American caregivers of demented elders. *Culture, Medicine & Psychiatry* 1999;23:477–500.
- Pennell BE, Bowers A, Carr D, Chardoul S, Cheung GQ, Dinkelmann K, et al. The development and implementation of the National Comorbidity Survey Replication, the National Survey of American Life, and the National Latino and Asian American Survey. *International Journal of Methods in Psychiatric Research* 2004;13:241–269. [PubMed: 15719531]
- Pilisuk, M.; Hillier Parks, S. The healing web: Social networks and human survival. Hanover, NH: University of New England Press; 1986.
- Portes, A.; Rumbaut, RG. Immigrant America: A portrait. Vol. 2. Berkeley: University of California Press; 1996.
- Portes, A.; Stepick, A. City on the edge: The transformation of Miami. Berkeley: University of California Press; 1993.
- Ramirez, RR.; Patricia de la Cruz, G. The Hispanic population in U.S. Washington, DC: U.S. Census Bureau; 2002.
- Rao JNK, Scott AJ. On chi-squared tests for multiway contingency tables with cell proportions estimated from survey data. *Annals of Statistics* 1984;12:46–60.
- Rao, JNK.; Thomas, DR. Chi-squared tests for contingency tables. In: Skinner, CJ.; Holt, D.; Smith, TMF., editors. Analysis of complex surveys. New York, NY: John Wiley and Sons; 1989. p. 89-114.
- Rivera FI. Contextualizing the experience of young Latino adults: The Relationship between acculturation and depression. *Journal of Immigrant and Minority Health* 2007;3:237–244. [PubMed: 17265173]
- Robert SA. Socioeconomic position and health: The independent contribution of community socioeconomic context. *Annual Review of Sociology* 1999;25:489–516.
- Ross C, Mirowsky J, Goldstein K. The Impact of family on health: A decade in review. *Journal of Marriage and the Family* 1990;52:1059–1078.
- Sabogal F, Marin G, Otero-Sabogal R. Hispanic familism and acculturation: What changes and what doesn't? *Hispanic Journal of Behavioral Sciences* 1987;9:397–412.
- Salgado de Snyder N. Factors associated with acculturative stress and depressive symptomatology among married Mexican immigrant women. *Psychology of Women Quarterly* 1987;11:475–488.
- Sluzki CE. Migration and family conflict. *Family Process* 1979;18:379–390. [PubMed: 527699]
- StataCorp. Stata Statistical Software Release 8.2. College Station, TX: Stata Corporation; 2004.
- Suarez-Orozco C, Todorova IL, Louie J. Making up for lost time: the experience of separation and reunification among immigrant families. *Family Process* 2002;41:625–643. [PubMed: 12613121]
- Turner JR. Social support as a contingency in psychological well-being. *Journal of Health and Social Behavior* 1981;22:357–367.
- Vega WA, Kolody B, Valle JR. The relationship of marital status, confidant support, and depression among Mexican immigrant women. *Journal of Marriage and the Family* 1986;48:597–605.
- Vega WA, Kolody B, Valle R, Weir J. Social networks, social support, and their relationship to depression among immigrant Mexican women. *Human Organization* 1991;50:154–162.
- Vega WA, Patterson T, Sallis J, Nader P, Atkins C, Abramson I. Cohesion and adaptability in Mexican American and Anglo Families. *Journal of Marriage and the Family* 1986;48:587–867.
- Vega WA, Rumbaut RG. Ethnic minorities and health. *Annual Review of Sociology* 1991;17:351–383.

Biographies

Fernando I. Rivera is an assistant professor in the Department of Sociology at the University of Central Florida. He received his doctoral degree in Sociology from the University of Nebraska-Lincoln in 2003 and was a post doctoral fellow at the Institute for Health, Health Care Policy and Aging Research at Rutgers, The State University of New Jersey. His research and teaching interests are in the areas of mental health, family social support, and discrimination, with a special emphasis on Latino groups. He is particularly interested in analyzing the impact of social support and discrimination on several mental health (depression, PTSD) and behavioral (substance use, antisocial behavior) outcomes. He loves to watch the Mets play baseball and likes to spend time chasing around his two year old daughter and six year old son.

Peter Guarnaccia is Professor in the Department of Human Ecology and Investigator at the Institute for Health, Health Care Policy and Aging Research at Rutgers University. His research interests include cross-cultural patterns of psychiatric disorders, family strategies for coping with mental illness, and cultural competence in mental health organizations. His current research examines mental health among Latino individuals in the U.S. and in Puerto Rico as part of the National Latino and Asian American (NLAAS) mental health study funded by National Institute of Mental Health. He is co-editor of *A Death Retold: Jessica Santillan, the Bungled Transplant, and the Paradoxes of Medical Citizenship* (2006, University of North Carolina Press, with K. Wailoo and J. Livingston). He enjoys playing and dancing to various kinds of traditional music.

Norah Mulvaney-Day, Ph.D., a Research Associate at the Center, is a mental health services researcher and social policy analyst. She has a background in community based participatory research and in using mixed methods to study health care systems and policy. Dr. Mulvaney-Day is currently overseeing a pilot project that is studying the effects of the MA health care reform for Latinos previously covered through the Uncompensated Care Pool. Other projects at the Center have included analyzing qualitative and quantitative data to inform the quality of depression care for racial and ethnic minorities and a participatory systems enhancement project to improve special education services for minority children in a public school setting. She received her Ph.D. in mental health policy from Brandeis University. She enjoys cooking and bike riding.

Julia Lin, Ph.D. is a Research Statistician at the Center for Multicultural Mental Health Research. Her research interests are causal models and mental health. She completed her Ph.D. in Biostatistics at the University of Pennsylvania where she was an NIMH pre-doctoral trainee. In her dissertation work she developed Bayesian hierarchical latent class models for looking at the effects of intervention on outcomes accounting for subject non-adherence to treatment randomization in longitudinal studies using the principal stratification framework. Her current projects at CMMHR include disparities research and working with the National Latino and Asian American Study. She enjoys practicing yoga.

Maria Torres, MA, is a doctoral student at the Heller School for Social Policy at Brandeis University and is an NIAAA trainee at the Heller School's Institute for Behavioral Health. Prior to entering the Doctoral Program at Brandeis, Ms. Torres developed her research skills working at the Center for Multicultural Mental Health Research as the Project Manager for the NLAAS Grant. Prior to working on the NLAAS, she had a career as a Mental Health Clinician and Program Administrator specializing in working with racial/ethnic minority and immigrant populations. Her current research interests center around the behavioral healthcare provider workforce, with a focus on substance abuse treatment providers who work with racial/ethnic minority and immigrant populations. She enjoys spending time with family.

Margarita Alegria, Ph.D., is the Director of the Center for Multicultural Mental Health Research (CMMHR) at Cambridge Health Alliance, and a professor in the Department of Psychiatry at Harvard Medical School. She has devoted her professional career to researching disparities in mental health and substance abuse services, with the goal of improving access, equity, and quality of these services for disadvantaged and minority populations. Dr. Alegria's published works focus on the areas of services research, conceptual and methodological issues with minority populations, risk behaviors, and disparities in service delivery. She was awarded the 2003 Mental Health Section Award of the American Public Health Association, as well as the 2006 Greenwood Award for Research Excellence, awarded by the Research Centers in Minority Institutions (RCMI) Program Directors Association, and the First Latino Mental Health Scientific Leadership Award, awarded in October 2007. In her free time, she enjoys art and art history.

Table 1
Descriptive Values for all Independent and Dependent Variables for the Whole Latino Sample and Different Latino Ethnic Subgroups
(Weighted)

Variables	Whole Sample		Puerto Ricans		Cubans		Mexicans		Other Latinos		
	M	SE	M	SE	M	SE	M	SE	M	SE	P*
Family cohesion scale	10.89	0.05	10.59	0.06	11.27	0.06	10.89	0.06	10.93	0.08	<0.01
Family cultural conflict scale	6.34	0.04	6.5	0.09	6.1	0.07	6.3	0.07	6.4	0.11	<0.01
Psychological distress scale	14.09	0.2	15.62	0.33	14.48	0.4	13.67	0.24	14.32	0.4	<0.01
Years of education	10.7	0.14	11.69	0.17	12.09	0.26	9.96	0.15	11.59	0.15	<0.01
Age group											
18-34	0.49	0.02	0.4	0.03	0.26	0.02	0.53	0.03	0.48	0.02	<0.01
35-49	0.3	0.01	0.32	0.02	0.26	0.02	0.3	0.02	0.31	0.02	0.51
50-64	0.13	0.01	0.19	0.02	0.25	0.02	0.11	0.01	0.13	0.02	<0.01
65+	0.07	0.01	0.09	0.03	0.23	0.02	0.06	0.01	0.07	0.02	<0.01
Household income											
<\$15,000	0.27	0.02	0.27	0.02	0.28	0.04	0.29	0.03	0.24	0.02	0.27
\$15,000-\$34,999	0.29	0.01	0.22	0.02	0.23	0.02	0.31	0.02	0.27	0.03	0.09
\$35,000-\$74,999	0.28	0.02	0.3	0.02	0.25	0.02	0.26	0.03	0.3	0.03	0.29
>\$75,000	0.16	0.01	0.22	0.02	0.24	0.04	0.13	0.01	0.19	0.02	<0.01
Marital status											
Married	0.52	0.02	0.39	0.03	0.56	0.03	0.57	0.03	0.45	0.02	<0.01
Never	0.3	0.01	0.34	0.02	0.16	0.01	0.28	0.02	0.33	0.02	0.01
Divorced	0.18	0.01	0.27	0.03	0.27	0.02	0.15	0.01	0.22	0.02	<0.01
Nativity											
Foreign born	0.58	0.02	0.44	0.03	0.86	0.02	0.57	0.04	0.62	0.04	<0.01
Sex											
Male	0.51	0.01	0.49	0.02	0.53	0.02	0.54	0.02	0.48	0.02	0.02
Female	0.49	0.01	0.51	0.02	0.47	0.02	0.46	0.02	0.52	0.02	0.02
Age of arrival into U.S.											
0-6	0.07	0.01	0.1	0.01	0.09	0.01	0.05	0.01	0.08	0.01	0.01
7-17	0.16	0.01	0.13	0.01	0.13	0.02	0.19	0.02	0.12	0.01	<0.01
18-24	0.18	0.01	0.11	0.02	0.11	0.01	0.21	0.02	0.16	0.02	<0.01
25+	0.17	0.01	0.1	0.01	0.53	0.03	0.12	0.01	0.25	0.02	<0.01

Variables	Whole Sample		Puerto Ricans		Cubans		Mexicans		Other Latinos		P*
	M	SE	M	SE	M	SE	M	SE	M	SE	
N	2554		495		577		868		614		

* Note: p-value from Rao Scott statistic for the Pearson chi-squared test for contingency tables

Table 2
 Summary of Multiple Regression Analyses for the Relationship between Sociodemographic and Family Variables on Psychological Distress by Latino Ethnicity

Variables	Whole Sample B (SE)	Puerto Ricans B (SE)	Cubans B (SE)	Mexicans B (SE)	Other Latinos B (SE)
Scale 1: Family cohesion	-0.43(0.19)**	-0.79(0.66)	1.48(0.79)*	-0.00(0.20)	-0.90(0.36)**
Scale 2: Family cultural conflict	0.30(0.25)	-0.09(0.82)	3.20(1.13)**	1.13(0.34)***	-0.74(0.45)
Interaction of scale 1 and scale 2	0.06(0.02)**	0.11(0.08)	-0.24(0.10)**	-0.02(0.03)	0.18(0.05)***
Years of education	-0.06(0.04)	-0.20(0.11)*	-0.34(0.08)***	-0.04(0.06)	-0.16(0.07)**
Age group					
18-34	1	1	1	1	1
35-49	0.43(0.24)*	1.71(0.80)**	0.77(0.67)	0.24(0.21)	0.09(0.99)
50-64	0.68(0.41)	2.16(1.25)*	1.00(0.63)	0.33(0.60)	-0.84(0.89)
65+	0.64(0.53)	-0.04(1.81)	0.37(0.99)	-0.25(0.66)	1.35(1.56)
Household income					
<\$15,000	0.86(0.56)	2.72(0.89)***	2.55(0.91)**	0.23(1.02)	0.96(0.72)
\$15,000-\$34,999	0.52(0.37)	0.22(0.74)	2.51(0.69)***	-0.06(0.74)	1.74(0.82)**
\$35,000-\$74,999	0.18(0.34)	-0.27(0.74)	0.79(0.45)*	-0.06(0.76)	0.50(0.48)
>\$75,000	1	1	1	1	1
Marital status					
Married	1	1	1	1	1
Never	0.59(0.41)	1.00(0.72)	-0.97(0.55)*	-0.02(0.34)	0.93(0.87)
Divorced	0.95(0.30)***	-0.11(0.83)	1.20(0.59)*	1.06(0.48)**	0.16(0.63)
Sex					
Male	1	1	1	1	1
Female	1.22(0.23)***	0.83(0.54)	1.56(0.36)***	1.02(0.31)***	1.55(0.33)***
Nativity					
U.S. born	1	1	1	1	1
Foreign born	-0.17(0.64)	-0.51(0.90)	0.20(0.79)	-0.73(0.95)	0.30(1.08)
Age of arrival into U.S.					
0-6	1	1	1	1	1
7-17	-0.02(0.64)	2.94(1.62)*	0.27(0.79)	0.21(0.94)	-0.79(1.10)
18-24	0.14(0.73)	1.63(1.22)	0.06(1.04)	0.10(1.03)	0.85(1.08)

Variables	Whole Sample B (SE)	Puerto Ricans B (SE)	Cubans B (SE)	Mexicans B (SE)	Other Latinos B (SE)
25+	0.34(0.55)	1.83(1.09)	-0.74(0.67)	0.73(0.88)	-0.28(1.10)
Intercept	11.49(2.34)***	16.42(6.43)**	-4.04(9.58)	7.90(2.49)***	16.54(3.82)***
N	2540	489	576	863	612
R ²	0.13	0.18	0.21	0.14	0.017

* Note: p<.10,

** p<.05,

*** p<.01