Hispanic Journal of Behavioral Sciences

Assessing Diversity Among Latinos: Results From the NLAAS

Peter J. Guarnaccia, Igda Martínez Pincay, Margarita Alegría, Patrick E. Shrout, Roberto Lewis-Fernández and Glorisa J. Canino

The online version of this article can be found at:

Published by:

Additional services and information for *Hispanic Journal of Behavioral Sciences* can be found at:

Email Alerts: http://hjb.sagepub.com/cgi/alerts

Subscriptions: http://hjb.sagepub.com/subscriptions

Reprints: http://www.sagepub.com/journalsReprints.nav

Permissions: http://www.sagepub.com/journalsPermissions.nav

Citations (this article cites 25 articles hosted on the
SAGE Journals Online and HighWire Press platforms):
http://hjb.sagepub.com/cgi/content/refs/29/4/510

Assessing Diversity Among Latinos

Results From the NLAAS

Peter J. Guarnaccia
Igda Martínez Pincay
Rutgers University
Margarita Alegría
Cambridge Health Alliance and Harvard Medical School
Patrick E. Shrout
New York University
Roberto Lewis-Fernández
Columbia University
Glorisa J. Canino
University of Puerto Rico Medical Campus

This article provides a profile of a range of important variables for assessing diversity among different Latino groups from the National Latino and Asian American Study (NLAAS). The NLAAS is a nationally representative study of the mental health needs and mental health services use of the Latino population of the United States. The NLAAS employs a stratified area probability sampling design. There are 2,554 respondents in the Latino portion of the NLAAS. The article demonstrates through a detailed presentation of a wide range of variables the diverse experiences of Latino groups in their encounters with U.S. culture. Language use and migration experiences show considerable variability within and across Latino groups and are promising areas for analysis of their mental health consequences.

Keywords: diversity; Latinos; mental health; acculturation; NLAAS

The second half of the 20th century saw massive movements of people from Latin America and Asia to the United States. Like the European

510

immigrants of the early 20th century, these new arrivals formed ethnic enclaves and created a variety of cultural communities. Unlike the European immigrants, most of the new wave of immigrants were "racially" different from the mainstream society and faced different challenges of integrating into the new society. Many of these new immigrants also sustained strong ties with their home communities and countries that maintained language and culture in ways quite different from the earlier immigrants. These processes have posed complex challenges to examining their relationship to mental health problems and the need for mental health services (U.S. Department of Health and Human Services [USDHHS], 2001).

In the mental health field, a rapidly growing area of research has been to examine the impact of acculturation on mental health outcomes for these newly arrived groups and individuals (Chun, Organista, & Marin, 2003; Rogler, Cortes, & Malgady, 1991). One dimension of this interest in acculturation processes has been the challenges to the mental health care system of serving large numbers of new immigrants who speak a different language and bring with them distinctive health cultures. Another issue that has stimulated the growth of research has been the definition and examination of the "immigrant paradox" in health and mental health—the finding that recently arrived immigrants, despite their poverty, lack of education, and difficulties accessing health care, have better physical and mental health than their more acculturated counterparts (Escobar & Vega, 2000; Vega et al., 1998).

In this article, we examine a range of variables to assess diversity among Latinos in the United States. Many of the variables we use in this study are similar to those in other acculturation studies, but the perspective we take is different. Rather than focus on the methodological and psychometric issues of developing an acculturation scale that can be used across immigrant groups, we are concerned with identifying specific indicators of the acculturation process that may later be used to link group experiences to mental health. Although we realize that these measures provide only inferences from a cross-section through these complex processes, we argue that it is important to understand these variables as windows into these acculturative processes and to analyze and interpret these variables in this light. In this article, we review these key indicators of acculturation processes from the National Latino and Asian American Study (NLAAS), the most comprehensive, representative study of the mental health of Latinos (and Asian Americans) carried out in the United States to date. Papers by NLAAS investigators examine the impact of these social and cultural factors on mental health outcomes and services utilization (Alegria, Mulvaney-Day, et al., 2007; Alegria, Shrout, et al., 2007; Alegria, Sribney, Woo, Guarnaccia, & Torres, 2007; Alegria, Takeuchi, et al., 2004).

Theoretical Context: The Relation Between Cultural Diversity and Acculturation

Earlier anthropological work defined *acculturation* as "those phenomena which result when groups of individuals having different cultures come into continuous first-hand contact with subsequent changes in the original cultural patterns of either or both groups" (Redfield, Linton, & Herskovits, 1936). This context results in new forms of within- and between-group cultural diversity. From our perspective, two important features of the anthropological perspective include the issue of reciprocity in the exchange of cultures and the active analysis of the role of power in culture change processes. In defining acculturation, Herskovits (1938) emphasized studying situations of continuous, longer-term contact between cultures. These situations describe the status of most contemporary Latino groups, which have many members that are second generation or more in the United States, and this is one of the reasons we continue with this term.

The study of acculturation requires the use of real history—of establishing the specifics of how the culture change actually occurred within a broad historical and social context (Herskovits, 1938). One of the key arguments in this article is that it is critical to understand the diversity among Latino groups in terms of the different histories of their countries of origin, how these histories affected their patterns of migration, how their reception in the United States impacted their acculturation processes, and how the kinds of communities in which they settled in the United States affected the acculturation experiences of individuals. Whether these phenomena are measured directly, they are important contextual information that needs to be brought to bear on the interpretation of research results.

Anthropology, sociology, and psychology have taken different approaches to the study of the processes of acculturation, cultural change, and adaptation. Anthropologists have focused on acculturation as a broad process that occurs when any two culturally different groups meet, not only on relations between immigrants and U.S. residents. Anthropology's dynamic approach, and the focus on power relationships between the groups, is compelling for our contemporary research in Latino communities. In contrast,

Sociologists have, in general, conceptualized acculturation as a "group" process of assimilation and their primary interests have been within the context of minority group and race relations. Psychologists and psychiatrists, on the other hand, have conceptualized acculturation as an "intra-psychic" phenomenon dealing with changes in the perceptions, attitudes and cognitions of the individual. This "differential psychology" perspective has focused on the

wide range of individual differences in acculturation levels as well as the empirically demonstrable implication of these differences vis-à-vis stress and mental health. (Reichman, 2003, p. 24)

We believe that studies of acculturation need to take a contextual and processual approach to understanding the impacts of culture change (Alegria, Takeuchi, et al., 2004).

Much of the contemporary work on acculturation has come from psychology, well summarized in the recent collection on *Acculturation: Advances in Theory, Measurement, and Applied Research* (Chun et al., 2003). This work has focused on the development of acculturation scales that assess changes in key cultural traits. In our assessments of how to measure acculturation in the NLAAS, we examined a number of scales and found them wanting. As Rogler et al. (1991) and Zane and Mak (2003) noted in their careful review of a number of acculturation scales, the measures were quite similar, strongly emphasized language use, and empirically had a mixed record in associations with mental health outcomes. Often these scales have been developed and tested focusing on one ethnic group, particularly Mexican Americans, and their suitability across a range of Latino groups was uncertain before the NLAAS allowed for the assessment of these items in diverse Latino groups.

A further problem was that the majority of scales focus on a unidirectional process of acculturation, implying that the more Latinos adopted American cultural attributes, the more they lost their Latino culture. Newer scales have been developed that take a bidirectional approach to independently assess affiliation with Latino and American culture (Benet-Martinez & Haritatos, 2005; Marin & Gamba, 1996). Recent empirical assessments of the unidimensional and bidimensional approaches to measuring acculturation have found that there are not great differences in the explanatory power of these different scales; the correlations between the unidirectional scales and bidirectional scales with key outcome measures were quite similar (Flannery, Reise, & Yu, 2001).

An alternative approach is to independently include measures of enculturation. Enculturation is the process of preserving the norms of the native group, whereby individuals retain identification with their ethnic cultures of origin. Acculturation and enculturation can occur at the same time and can be measured separately (Kim & Ominzo, 2006). Measures of Spanish language use and proficiency, as well as ethnic identity, are key indicators of the degree of identity with Latino culture (Wallen, Feldman, & Anliker, 2002). Bringing in separate indicators of both processes allowed for different combinations of acculturation and enculturation that may lead to different

adaptation processes. These complex dynamics further enhance Latino diversity. In the NLAAS, we include measures of acculturation and enculturation.

From an anthropological perspective, the focuses on inventorying traits isolated from the larger context and the lack of a theory of the centrality of language to cultural processes are additional problems. Although the inventory approach to the measurement of acculturation has psychometric advantages, the items included are limited in assessing the processes of acculturation. It is also not clear that these items get at "what really matters" (Kleinman, 2006) in the acculturation process—issues such as differential rates and patterns of acculturation within families, parent-child conflicts that result from these processes, the nature of the broader context, and the degree of acceptance or rejection by the broader community and society. The central place of language in acculturation scales is also not fully appreciated. Language is often treated as a single item or set of items, but the central role of language in the transmission and construction of culture is not fully incorporated into existing acculturation scales (Good, 1994).

While addressing these issues in epidemiological studies is difficult, we argue that the first step is to assess a wide range of measures separately and examine their associations empirically with different mental health outcomes (diagnoses, distress, and services use) across the different Latino groups. This article provides an overview of measures and their distribution across Latino groups. We were inspired in this approach by the work of Rumbaut and Portes (Rumbaut, 1997; Portes & Rumbaut, 2001) in their Children of Immigrants Longitudinal Study (CILS) of diverse immigrant youth in San Diego and Miami. In their study, Portes and Rumbaut assessed a range of specific social and cultural factors, with careful attention to the differing contexts and cultures of the groups, to identify their impacts on a range of important outcomes, including depressive symptoms. Similarly, Zane and Mak (2003) recommended the specific element approach. They conclude that "more efforts are needed to deconstruct acculturation into specific psychological elements that are proximal to psychopathology, seeking help, response to treatment and other mental health issues" (Zane & Mak, 2003, p. 58). We concur with a multivariate approach, and that is the approach we took in the NLAAS (Alegria, Vila, et al., 2004).

Methods

The NLAAS is one of the largest population-based surveys of Latinos and Asian Americans ever conducted in the United States (Alegria, Takeuchi,

et al., 2004). The NLAAS is more than another psychiatric disorder preva-
lence 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 health and service use differ-
ences. It brings a renewed focus to social and environmental determinants of
mental disorder and services use that may shed light on how to intervene at
the population or regional level, rather than only at the individual level.

Sample Design

The NLAAS is based on a stratified area probability sample design and was
among the most challenging sampling designs ever developed and fielded by the
University of Michigan Survey Research Center (Heeringa et al., 2004). The sur-
vey populations for the NLAAS study included all Latino and Asian American
adults, 18 years of age and older, in the noninstitutionalized population of the
coterminous United States and Washington, D.C. This article is restricted to
the Latino sample. Within the Latino sample, data come from four distinct
subgroups: 868 Mexicans, 577 Cubans, 495 Puerto Ricans, and 614 Other
Latinos. In the final sample, there were 2,544 Latinos with a response rate of
75.5%. This includes an NLAAS core sample, designed to provide a nation-
ally representative sample of all Latino origin groups regardless of geographic
residential patterns, and NLAAS high-density (HD) supplements, designed
to oversample geographic areas with moderate-to-high density (> 5%) of
targeted Latino households in the United States. Weighting reflects the joint
probability of selection from the pooled core and HD samples and provides
sample-based coverage of the full national Latino population. The NLAAS
weighted sample is similar to the 2000 census (Bureau of the Census, 2000)
in sex, age, education, marital status, and geographical distribution, but differ-
ent in nativity and household income, with more Latino immigrants and lower
income respondents. This is consistent with reports of the undercounting of
immigrants in the census (Anderson & Fienberg, 1999).

Procedures for Data Collection

The University of Michigan's Institute for Social Research (ISR) con-
ducted data collection between May 2002 and November 2003. 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 ori-
gin), and language (persons who spoke English or Spanish). Professional lay
interviewers administered the NLAAS battery in face-to-face interviews,

averaging 2.6 hours, in either Spanish or English, depending on the interviewees' preference. The length of the interview was largely attributable to the detailed diagnostic assessment, especially among those who met criteria for a psychiatric diagnosis. All study materials were translated and adapted into Spanish for the substantial proportion of non-English-speaking respondents (for detail on instrument translation, see Alegria, Vila, et al., 2004). The Internal Review Board Committees of Cambridge Health Alliance, the University of Washington, and the University of Michigan approved all recruitment, consent, and interviewing procedures (for a detailed description of the NLAAS data collection procedures, see Pennell et al., 2004).

Measures

When choosing how to assess acculturation for this study, a conscious decision was made to include a wide range of measures as opposed to a particular scale. The overall goal was to evaluate which measures best assessed diversity and were most consequential for mental health outcomes. The key variables and scales are more fully described and scale reliabilities are presented in Alegria, Vila, et al. (2004) using the total NLAAS Latino sample as well as the reliabilities by Latino subgroup. For all the measures described below, we provide measures of internal consistency developed with the NLAAS study.

Migration. To explore migration characteristics, several questions were included (and analyzed separately) about participants' migration experiences and reasons for migrating. Most of these items came from the Mexican American Prevalence and Services Study (MAPSS; Vega et al., 1998), but new ones were developed to evaluate the different migratory experiences of diverse Latino groups. Individual immigration factors such as parental nativity and age of arrival of immigrants were also assessed as variables linked to immigration that might influence the experience of adaptation to U.S. society. Other questions about the migratory process and relations with relatives in their home country were used to capture more detailed information regarding the migration experiences of the participants, as well as their expectations after coming to the United States.

Language use and ability. Language use has consistently been identified as a key indicator of acculturation and has been found to be strongly associated with social and health variables. To measure language, questions were asked regarding language use in different contexts as well as language proficiency. The questions on language use included language of interview,

general language use, language spoken as a child, language spoken with friends, language spoken with family, and language of thought. Language proficiency in Spanish and English was measured independently using items from the Spanish ($\alpha = 0.90$) and English ($\alpha = 0.98$) Proficiency sub-scales of the Cultural Identity Scales for Latino Adolescents (Felix-Ortiz, Newcomb, & Myers, 1994). English language proficiency serves as a proxy to measure acculturation.

Ethnic identity. To assess the degree of ethnic identity for each respondent, three questions were asked to determine the extent to which respondents identified and shared time with members of their ethnic group. In creating the final ethnic identity measure, the marriage item was dropped as its inclusion negatively affected the overall internal consistency of the measure. The Ethnic Identity scale ($\alpha = 0.75$) serves as a proxy to measure the construct of enculturation.

Acculturative distress. The Acculturative Distress scale was drawn from the Hispanic Stress Inventory (HSI; Cervantes, Padilla, & Salgado de Snyder, 1990, 1991) and included several items from the MAPSS study (Vega et al., 1998), as well as other items deemed relevant by the coinvestigators ($\alpha = 0.67$). It was designed to measure the psychological stress experiences of Hispanics. These questions were only asked of those who had immigrated to the United States and not those born on the U.S. mainland, because many of the items referred to the immigration experience.

Family experience scales. The 3-item Family Support scale assesses respondents' abilities to rely on relatives ($\alpha = 0.71$). Family burden is a 2-item measure developed in 2004 by Kessler and colleagues (Pennell et al., 2004) that captures the frequency of demands from and arguments with relatives and children. The Family Cultural Conflict scale consists of 5 items measuring respondents' frequency of cultural and intergenerational conflict over values and goals ($\alpha = 0.91$). It is a subscale of the HSI (Cervantes et al., 1990, 1991). The Family Cohesion scale is the sum of 3 items concerning family feelings about spending time together, with a higher score equaling more cohesion ($\alpha = 0.82$).

Analyses

Unadjusted and age- and gender-adjusted contrasts across the four Latino groups (see Table 1) were tested using the Rao-Scott adjustments

Table 1
Frequency of Demographic Characteristics (percentages and standard errors)

	Total (*SE*)	Puerto Rican	Cuban	Mexican	Other Latinos
Age*** (in years)					
18 to 34	49.01 (1.78)	39.15 (2.84)	25.70 (2.06)	53.01 (2.52)	48.31 (2.28)
35 to 49	30.07 (1.10)	32.50 (2.66)	26.15 (2.23)	29.48 (1.71)	31.01 (1.88)
50 to 64	13.37 (0.87)	18.92 (2.10)	25.31 (2.03)	11.35 (1.03)	13.51 (1.66)
65 and older	7.55 (0.91)	9.43 (3.52)	22.84 (2.39)	6.16 (1.00)	7.17 (1.61)
Gender*					
Male	51.50 (1.23)	48.68 (2.17)	52.59 (1.57)	53.89 (1.89)	47.61 (2.25)
Female	48.50 (1.23)	51.32 (2.17)	47.41 (1.57)	46.11 (1.89)	52.39 (2.25)
Education*** (in years)					
≤ 11	44.46 (1.80)	34.45 (2.85)	30.37 (2.61)	52.71 (2.32)	33.95 (2.13)
12	24.51 (0.90)	28.17 (1.87)	24.51 (1.56)	24.32 (1.17)	23.61 (1.96)
13 to 15	26.36 (1.34)	32.83 (2.52)	32.22 (2.00)	19.72 (1.67)	36.26 (2.23)
16 or more	4.67 (0.64)	4.55 (0.79)	12.91 (2.14)	3.25 (0.77)	6.18 (0.97)
Household income* (in U.S. dollars)					
0 to 14,999	27.48 (2.09)	27.11 (1.67)	28.10 (3.98)	29.32 (3.31)	23.90 (1.92)
15,000 to 34,999	28.68 (1.35)	21.86 (1.93)	23.41 (2.17)	31.24 (2.03)	26.86 (3.07)
35,000 to 74,999	27.73 (2.10)	29.47 (1.95)	24.83 (2.16)	26.29 (2.64)	30.44 (3.07)
75,000 or more	16.11 (1.14)	21.56 (2.01)	23.66 (4.16)	13.15 (1.23)	18.81 (2.39)
Citizenship***					
Not U.S. citizen	38.31 (2.34)	0.00 (0.00)	39.18 (4.36)	45.19 (3.43)	38.08 (2.77)
U.S. citizen	61.69 (2.34)	100 (0.00)	60.82 (4.36)	54.81 (3.43)	61.92 (2.77)

Note: All percentages are weighted. Chi-square tests were used to assess the differences among the four Latino groups.
*$p \leq .05$. ***$p \leq .001$.

(Rao & Scott, 1984) provided by the STATA survey command for categorical variables and tests of mean value differences for continuous variables. These comparisons reveal differences across Latino groups. All analyses included the sample weights so that results reflect the broader populations of Latinos in the United States. Analyses were done using the STATA Statistical Software program (StataCorp, 2004), which allows for weighting adjustments to account for the complex sampling design.

Results

Table 1 contains descriptive statistics for the major demographic variables used in this study. The sample ranged in age from 18 to older than 65 (mean age = 38 years). Of the four groups studied, Cubans tended to be older than the other Latino groups with a mean age of 47 years. Males and females were equally represented in the overall sample; however, the Mexican subgroup included slightly more males than the other Latino groups. In terms of education, the overall sample had a mean of 10.7 years of education. Of the four Latino subgroups, Mexicans had fewer years of education on average (9.9 years). Cubans had the largest proportion of individuals with 16 or more years of education. Mexicans also had lower household incomes than the other Latino groups. With regard to citizenship, Puerto Ricans are all citizens by U.S. law, whereas approximately 60% of the other Latino subgroups are citizens of the Unites States.

Table 2 contains information regarding migration experiences for each of the Latino groups studied. About 85% of Cuban respondents were born in Cuba, whereas more than half of Puerto Ricans were born on the U.S. mainland. Not surprisingly, the overwhelming majority of the parents of Cuban subjects were also born in Cuba. For the rest of the Latino groups, between 60% and 70% of parents were born in their home countries. If respondents had U.S.-born parents, it was more likely that both of their parents were born in the United States than only one parent. Those Puerto Ricans who were migrants were significantly younger than the other groups when they arrived in the United States, whereas Cubans were significantly older when they arrived. As a result of earlier age of migration, Puerto Ricans have spent a larger proportion of their lives on the U.S. mainland compared to the other Latino groups.

Of the four groups, Cubans were the only ones where a large majority expressed a desire to move to the United States, and they were more likely than the other groups to have carefully planned their move. For Cubans,

Table 2
Frequency of Migration Characteristics (percentages and standard errors)

	Total (*SE*)	Puerto Rican	Cuban	Mexican	Other Latinos
Nativity***					
U.S. born	41.46 (2.35)	54.95 (3.12)	13.85 (1.93)	42.93 (3.64)	38.28 (3.56)
Foreign born	58.54 (2.35)	45.05 (3.12)	86.15 (1.93)	57.07 (3.64)	61.72 (3.56)
Number of parents born in U.S.***					
0	69.62 (1.65)	63.16 (3.11)	96.67 (1.13)	67.89 (2.37)	70.94 (3.34)
1	9.21 (0.55)	12.06 (1.65)	2.65 (1.02)	10.23 (0.77)	7.26 (1.12)
2	21.17 (1.46)	24.77 (2.80)	0.68 (.039)	21.88 (1.94)	21.80 (3.29)
Percentage of life in U.S.***					
< 30%	18.52 (1.67)	6.74 (1.42)	32.72 (5.01)	17.73 (2.52)	21.88 (2.24)
30% to 70%	29.64 (1.30)	19.09 (2.64)	35.32 (2.59)	30.61 (2.02)	30.54 (2.41)
>70%	51.84 (2.23)	74.17 (2.90)	31.96 (3.57)	51.66 (3.61)	47.58 (2.99)
Wanted to move***					
No	68.13 (2.12)	71.87 (4.03)	32.67 (3.90)	72.41 (3.15)	67.40 (3.05)
Yes	31.87 (2.12)	28.13 (4.03)	67.33 (3.90)	27.59 (3.15)	31.87 (2.12)
Move planned*					
Carefully	30.96 (2.22)	33.77 (3.76)	49.95 (2.75)	26.55 (2.93)	34.01 (2.51)
Somewhat	25.65 (1.46)	26.69 (3.71)	15.95 (1.98)	27.08 (2.37)	24.99 (3.08)
Poorly	14.02 (1.45)	13.15 (2.38)	10.72 (1.35)	14.20 (2.11)	14.66 (2.25)
Not at all	29.37 (2.22)	26.40 (3.58)	23.37 (2.85)	32.17 (3.14)	26.34 (2.80)
Ease of visiting family/friends***					
Very difficult	29.85 (1.96)	13.73 (2.61)	54.88 (3.02)	32.61 (2.60)	23.27 (2.97)
Somewhat difficult	26.33 (1.90)	13.75 (3.01)	19.49 (1.26)	24.80 (2.47)	33.82 (2.88)

Not very difficult	13.78 (1.17)	21.89 (4.39)	8.21 (0.93)	13.22 (1.77)	14.00 (1.86)
Not at all difficult	27.69 (2.00)	48.16 (4.44)	10.35 (1.45)	27.74 (3.26)	26.34 (2.97)
Economic opportunities in U.S.**					
Very satisfied	30.23 (1.13)	25.86 (1.57)	46.36 (3.57)	29.22 (1.49)	31.15 (2.39)
Satisfied	49.79 (1.12)	50.61 (2.05)	38.78 (2.12)	52.89 (1.49)	45.17 (2.22)
Neither	14.19 (0.93)	15.90 (1.72)	11.19 (2.73)	12.54 (1.25)	17.34 (1.75)
Dissatisfied	4.42 (0.45)	5.99 (0.97)	2.52 (0.61)	4.26 (0.61)	4.51 (0.82)
Very dissatisfied	1.37 (0.28)	1.63 (0.54)	1.16 (0.36)	1.10 (0.36)	1.83 (0.81)

Note: All percentages are weighted. Chi-square tests were used to assess the differences among the four Latino groups.
*$p \leq .05$. **$p \leq .01$. ***$p \leq .001$.

521

visiting relatives in their home country was very difficult; for Puerto Ricans, it was easy. Mexicans and Other Latinos present a more mixed picture on ease of visiting their home countries, depending on their immigration status and reasons for leaving. In terms of satisfaction with economic opportunities in the United States, most Latinos felt satisfied, with Cubans feeling particularly strongly regarding this issue.

The reasons for coming to the United States were diverse across the Latino groups. Mexicans were most likely to come looking for employment. All groups came to improve the future for their children. Cubans and some Other Latinos had strong political motivations for leaving their home countries. Only small proportions of the four groups reported coming to the United States for medical care or because of family problems in their countries of origin—reasons that are often speculated about as sources of psychological distress among Latino immigrants.

In this study, language use was measured in a number of different ways (see Table 3). In terms of language of interview, Cubans were most likely to prefer the interview in Spanish, followed by Mexicans. Puerto Ricans more often preferred to be interviewed in English. Because the interviewers were fully bilingual/bicultural, respondents could freely choose the language of interview and could switch languages during the interview, though this was rarely done.

In asking about general patterns of language use, the bilingual group accounted for about a fifth of the sample and was of similar proportions across the groups. There was a trend for Cubans to prefer Spanish and for Puerto Ricans to prefer English in everyday language use. Overwhelmingly, everyone spoke Spanish as children and stated that Spanish was also the language of thought. With the exception of Puerto Ricans, Latinos spoke more Spanish with friends, though there was considerable variation. Similarly, with family interactions, Spanish was more predominant across the Latino groups. Table 3 also contains a description of language ability across groups. Overall, Puerto Ricans are most English proficient whereas Cubans are the least. Cubans, in turn, are most Spanish proficient, with the other groups being similar.

Information regarding ethnic identity is presented in Table 4. Across the Latino groups, there was strong identification with other members of one's ethnic group. Ethnic identity indicators such as desire to spend time with others from the group or sharing thoughts with coethnics were high for all indicators of identity, with Cubans expressing somewhat higher ethnic identity than the other groups. The exception was the importance of marrying someone from the same ethnic group, which was consistently low across Latino groups.

Table 3
Frequency of Language Use and Ability Variables (percentages and standard errors)

	Total (SE)	Puerto Rican	Cuban	Mexican	Other Latinos
Language of interview*					
Spanish	48.89 (3.08)	33.46 (2.40)	70.64 (2.89)	52.64 (4.43)	43.39 (3.35)
Spanish/bilingual	5.44 (0.73)	8.76 (1.36)	6.16 (1.14)	4.54 (0.98)	5.95 (1.20)
English/bilingual	8.02 (0.75)	9.56 (1.38)	4.42 (0.64)	7.19 (0.63)	9.69 (2.16)
English	37.65 (3.17)	48.22 (2.66)	18.79 (2.35)	35.63 (4.79)	40.97 (3.36)
General language use*					
Spanish only	5.57 (0.63)	2.68 (1.04)	4.10 (1.01)	7.66 (1.07)	3.15 (0.96)
Mostly Spanish	29.45 (2.13)	22.39 (2.41)	45.47 (2.86)	28.77 (2.78)	31.36 (3.16)
Both equally	21.24 (2.01)	24.65 (2.63)	20.08 (2.32)	19.39 (2.59)	23.36 (3.50)
Mostly English	42.31 (2.68)	49.28 (2.91)	28.98 (3.01)	42.97 (3.89)	40.12 (3.58)
English only	1.43 (0.49)	0.99 (0.50)	1.37 (0.86)	1.21 (0.44)	2.01 (1.13)
Language spoken as child*					
English	18.34 (1.62)	21.93 (2.19)	4.63 (1.25)	18.06 (2.51)	19.85 (2.19)
Spanish	81.66 (1.62)	78.07 (2.19)	95.37 (1.25)	81.94 (2.51)	80.15 (2.19)
Language spoken with friends*					
Spanish all the time	37.61 (2.80)	22.84 (2.42)	52.61 (4.45)	41.50 (3.68)	32.14 (2.95)
Spanish most of time	13.68 (0.83)	11.90 (1.45)	14.38 (2.19)	13.74 (1.39)	14.04 (1.74)
Both equally	16.06 (1.20)	21.60 (2.46)	13.41 (1.76)	14.76 (1.51)	17.25 (1.53)
English most of time	18.12 (1.19)	26.03 (3.39)	13.39 (2.37)	16.30 (1.79)	19.82 (2.11)
English all the time	14.54 (1.68)	17.63 (2.78)	5.67 (0.98)	13.71 (2.04)	16.74 (2.16)
Language spoken with family*					
Spanish all the time	52.21 (2.74)	35.78 (2.56)	71.95 (3.70)	53.28 (3.60)	52.31 (3.80)
Spanish most of time	13.02 (0.92)	15.73 (1.68)	11.23 (2.03)	11.84 (1.17)	14.81 (1.71)
Both equally	15.41 (1.20)	25.13 (1.51)	10.51 (2.03)	15.96 (2.03)	11.71 (1.65)
English most of time	11.52 (1.03)	16.65 (2.23)	4.98 (1.31)	10.56 (1.90)	12.88 (2.40)
English all the time	7.83 (1.20)	6.71 (1.70)	1.33 (0.58)	8.36 (1.71)	8.30 (1.33)

(continued)

523

Table 3 (continued)

	Total (SE)	Puerto Rican	Cuban	Mexican	Other Latinos
Language of thought***					
Spanish all the time	45.82 (2.19)	32.61 (3.05)	58.87 (4.50)	49.27 (2.92)	41.09 (2.97)
Spanish most of time	7.93 (0.79)	6.24 (0.91)	7.16 (1.91)	8.38 (1.00)	7.74 (1.46)
Both equally	16.28 (0.97)	19.98 (1.51)	12.71 (1.96)	14.80 (1.25)	18.64 (2.02)
English most of time	11.47 (1.13)	19.22 (1.85)	11.07 (1.55)	9.68 (1.19)	12.47 (2.17)
English all the time	18.50 (2.03)	21.95 (2.44)	10.19 (1.65)	17.87 (2.54)	20.06 (2.41)
English proficiency***					
Poor	30.31 (2.66)	11.95 (2.00)	44.54 (5.07)	35.70 (3.79)	23.80 (2.06)
Fair	18.88 (1.61)	18.67 (1.41)	14.77 (2.09)	18.87 (2.56)	19.64 (2.27)
Good	20.19 (1.16)	31.80 (2.40)	19.22 (1.69)	17.08 (1.68)	22.44 (2.09)
Excellent	30.62 (1.78)	37.58 (1.78)	21.47 (3.23)	28.35 (2.30)	34.12 (3.02)
Spanish proficiency**					
Poor	4.74 (0.81)	8.52 (2.01)	1.23 (0.51)	3.95 (0.91)	5.68 (1.26)
Fair	24.04 (1.38)	23.13 (1.28)	12.17 (1.58)	26.59 (2.11)	21.26 (2.24)
Good	36.99 (1.67)	35.50 (3.34)	43.20 (2.76)	37.01 (2.64)	36.35 (2.76)
Excellent	34.23 (1.25)	32.85 (2.47)	43.39 (2.84)	32.45 (1.58)	36.71 (2.55)

Note: All percentages are weighted. Chi-square tests were used to assess the differences among the four Latino groups.
*$p \leq .05$. **$p \leq .01$. ***$p \leq .001$.

Table 4
Ethnic Identity (percentages and standard errors)

	Total (SE)	Puerto Rican	Cuban	Mexican	Other Latinos
Identification with others from own group*					
Very closely	60.43 (1.24)	64.86 (2.23)	75.45 (2.77)	59.79 (1.63)	57.72 (2.58)
Somewhat closely	28.30 (0.95)	27.37 (2.14)	20.03 (2.57)	28.62 (1.23)	29.34 (2.10)
Not very closely	8.44 (0.67)	5.86 (1.66)	3.67 (0.80)	9.04 (0.89)	8.94 (1.25)
Not at all closely	2.83 (0.36)	1.91 (0.39)	0.89 (0.26)	2.55 (0.56)	4.00 (1.09)
Share ideas and feelings with others from own group**					
Very closely	46.67 (1.39)	46.33 (2.45)	61.23 (2.52)	47.09 (1.74)	43.62 (2.39)
Somewhat closely	39.19 (1.45)	41.77 (2.50)	31.38 (2.27)	37.97 (1.90)	41.97 (2.62)
Not very closely	10.76 (1.14)	7.98 (1.80)	5.53 (0.85)	12.40 (1.70)	9.34 (1.25)
Not at all closely	3.38 (0.48)	3.93 (0.96)	1.85 (0.52)	2.54 (0.50)	5.08 (1.29)
Prefer to spend time with others from your group**					
A lot	39.98 (1.76)	37.55 (2.48)	53.95 (2.68)	41.95 (2.33)	34.69 (2.20)
Somewhat	46.10 (1.26)	48.09 (2.15)	35.60 (3.03)	45.98 (2.24)	47.31 (1.97)
A little	12.16 (0.79)	12.73 (1.26)	9.47 (1.76)	10.84 (0.94)	15.02 (1.96)
None	1.76 (0.41)	1.63 (0.69)	0.98 (0.45)	1.24 (0.48)	2.97 (0.72)
How important is it to marry others from your group?					
Very important	18.10 (1.13)	16.50 (2.57)	23.99 (2.32)	17.79 (1.64)	18.31 (1.85)
Somewhat	22.99 (1.08)	21.07 (1.70)	15.77 (2.19)	24.10 (1.38)	22.63 (1.74)
Not very	19.68 (0.91)	19.49 (1.66)	17.62 (1.58)	19.27 (1.13)	20.90 (2.24)
Not at all	39.23 (1.45)	42.95 (2.91)	42.63 (2.55)	38.84 (1.91)	38.16 (2.28)

Note: All percentages are weighted. Chi-square tests were used to assess the differences among the four Latino groups.
*$p \leq .05$. **$p \leq .01$.

525

Table 5 presents the average scores on the family experience and acculturative distress scales for the Latino groups. When asked about family culture conflict, Puerto Ricans reported higher levels of conflict compared to Cubans or Mexicans. Cubans were highest on family pride and cohesion. Puerto Ricans' scores on these scales were consistently the lowest of the four Latino groups.

With regard to acculturative distress (which was asked only of those participants who were born outside the U.S. mainland), Puerto Ricans experienced the least and Mexicans reported experiencing the most acculturative distress. Many of the acculturative distress items focused on problems faced by undocumented immigrants and the kinds of discrimination and fears they face. The intensity of these issues in California and other Southwestern states are reflected in these results.

Discussion

The major finding from these analyses is the wide-ranging diversity among the different Latino groups in the United States that is strongly influenced by immigration and the differing histories of relationships between Latinos' home countries and the United States. It is also shaped by processes of changing language use, changing family relationships, and changing social contexts. Comparisons across groups show how these changes vary by receiving context, with little change in English acquisition for Cubans in Florida, whereas Puerto Ricans in the Northeast may have been required to rapidly adopt English. An alternative explanation is that in Puerto Rico, children are exposed to English in elementary school and are expected to be proficient. Once they migrate to the mainland, they may transition more easily into English, particularly if they come at earlier ages. In this nationally representative sample of Latinos, the majority of Puerto Ricans, Mexicans, and Other Latinos, compared to one third of Cubans, have spent more than 70% of their life on the mainland. The finding that Latinos as a group are rapidly becoming established residents and citizens of the United States, with substantial knowledge and use of English, presents a different portrayal of Latinos than is often reflected in the media.

Some Cubans, Puerto Ricans, and Other Latinos came to the United States with considerable social capital, especially in the form of advanced education, and they have been able to translate this into higher incomes. In contrast, half of the Mexicans in the United States have less than a high school education, and this group also has lower incomes, though not

Table 5
Family Experiences and Acculturative Distress (means and standard errors)

	Total (*SE*)	Puerto Rican	Cuban	Mexican	Other Latinos
Family pride***	25.66 (0.14)	24.43 (0.16)	26.36 (0.15)	25.18 (0.13)	25.39 (0.17)
Family cohesion***	11.02 (0.06)	10.60 (0.06)	11.27 (0.06)	10.89 (0.07)	10.93 (0.08)
Family cultural conflict***	6.23 (0.07)	6.51 (0.09)	6.09 (0.07)	6.30 (0.07)	6.40 (0.11)
Acculturative distress***	2.82 (0.10)	1.66 (0.12)	2.10 (0.21)	3.22 (0.10)	2.55 (0.16)

Note: All means are weighted. ANOVA was used to assess the differences among the four Latino groups.
***$p \leq .001$.

527

as dramatically lower as one might expect from the education data. But as we look more closely at the social and demographic data in Table 1, the diversity within the groups is even more striking than the diversity across groups.

There are major differences among the four Latino groups in terms of their migration experiences. The reception by U.S. society of the four groups was different depending on how and why they came. It is important to remember that acculturation processes began in people's home countries given the impacts of neocolonialism and globalization, and that Latino groups differ in terms of the historical relationships between their home countries and the United States. One of the key arguments in this article is that it is critical to understand the different histories of the Latino groups' countries of origin, how these histories affected their patterns of migration, how their reception in the United States affected their acculturation processes, and how the kinds of communities they established affected the acculturation experiences of individuals. Whether these phenomena are measured directly, they are important contextual information that needs to be brought to bear on the interpretation of research results. The history and migration patterns of diverse Latino groups into the United States are quite different. For example, part of what is now California, New Mexico, Nevada, and parts of Colorado, Arizona, and Utah were Mexican territories prior to the signing of the Treaty of Guadalupe Hidalgo in 1848, which ceded these territories to the United States. In similar terms, Puerto Rico was incorporated into the United States as a result of the Spanish American War Treaty, becoming a Commonwealth of the United States in 1952. Meanwhile, Cuba's relationship with the United States was an economic one, before turning into a conflicted one after the Cuban Revolution in 1959. The separation from family still in Cuba continues as an important emotional stressor that is different for this Latino group, though shared by a minority of Mexicans and Other Latinos.

There is considerable diversity among the four Latino groups in language preference and use. Language use looks different depending on the context and the available social networks in those contexts. Cubans reflect one end of the continuum where they strongly maintain Spanish language in all contexts. Puerto Ricans, in contrast, reflect the other end of the continuum by preferring English in everyday language use. This may be related to different pressures to assimilate in the receiving context of the Northeast, compared to Miami where there was great receptivity and acceptance of maintaining Cuban heritage. It is important to point out that the overwhelming majority of Latinos started their lives speaking Spanish, and so the changes in language preference have been quite rapid over the lifetime

of these individuals in the United States. This also argues against the myth that Latinos do not integrate in terms of English language acquisition.

One area where there was not a great deal of diversity was in response to ethnic identity questions. Most members of all four Latino groups identified closely with members of their own ethnic group, reported sharing ideas and feelings with them, and preferred to spend time with coethnics. This strong sense of ethnic identity may be a response in reaction to perceived and real discrimination (Portes & Zhou, 1993). Work of Phinney, Horenczyk, Liebkind, and Vedder (2001) has shown that in reaction to an antagonistic environment, members of ethnic groups may assert their pride and establish a stronger sense of ethnic identity to cope with the negative attitudes of those in the new environment. Additionally, because the research team was fully bicultural, respondents may have felt like the socially desirable answer was to state strong ethnic identification.

In terms of cultural stress measures, the study included measures of family cultural experience that focused at the local level and an acculturative distress scale that focused on the societal level. Cubans reported the highest levels of family pride and cohesion. Puerto Ricans reported the highest rates of family culture conflict, which may be related to higher levels of disrupted family relations. Puerto Rican families appear to be most stressed in terms of breakdown of family unity; in part, this is likely related to the economic stresses resulting from the industrial decline of the urban northeast and the higher rates of marital disruption among Puerto Ricans compared to other Latino groups.

Mexicans reported the highest levels of acculturative distress and Puerto Ricans the lowest. Mexicans are the Latino immigrant group that have been most targeted by immigration authorities, and this is reflected in their response to the scale. This appears to be one area where Puerto Rican citizenship buffers some of the stress for the group as a whole.

Conclusion: Implications for Studying Diversity Among Latinos

In the future, researchers need to design studies that take into account the diversity of Latinos and to focus on this diversity in their analytic strategies. It is no longer tenable to treat Latinos as one large, homogeneous group for analyses. Once researchers understand how the different histories of the relationship of different Latin American countries with the United States are reflected in the broad social processes that influence migration

and acculturation, it becomes clear that treating Latinos as a group in research studies does not accurately reflect their reality. A related point is that in examining any particular Latino group, or comparing across Latino groups, sampling should incorporate dimensions of intragroup social difference. One important contribution of the NLAAS is to provide a national profile of the Latino groups across a range of dimensions as a reference point for researchers.

In studying acculturation, language has been consistently shown to be a key indicator of acculturation processes and has been a strong correlate of a range of health and mental health outcomes. One reason for this is the centrality of language to culture. As Latinos shift in their language use, a number of important cultural and social experiences change. Language measures capture different dimensions of these acculturation processes. Another reason that language use is such a powerful variable is more methodological in nature. Considerable variation exists in language ability and use, within and among the different Latino groups. This variability, which is further enhanced by using multiple indicators of language use, makes language measures particularly powerful variables in multivariate models.

Differences in migration patterns are also good indicators of the processes of acculturation. These variables also link back to the different histories of the groups. Thus, what may be appear to be simple questions about migration embed within them whole stories of personal and political crises at home, the nature of the journey to the United States and the context of reception in the new society. Again, the interpretive task is to link answers to a few key questions about migration to these broader historical and social processes. The migration history variables also show significant variation between and within groups, enhancing their predictive power in multivariate models.

The key issue for assessing the relationship of Latino diversity to mental health outcomes is conceptualizing which different measures are relevant and why they are relevant for those outcomes (Abraido-Lanza, Armbrister, Florez, & Aguirre, 2006). What is different about our approach is not the list of variables that we are using, but the interpretive and analytic approach we take to these variables. One of our goals is to use these variables as windows into more complex processes. The second is to more fully and systematically assess through multivariate modeling approaches which of these key variables are most important for which mental health outcome measures.

References

Abraido-Lanza, A. F., Armbrister, A. N., Florez, K., & Aguirre, A. N. (2006). Toward a theory-driven mode of acculturation in public health research. *American Journal of Public Health, 96,* 1342-1346.

Alegria, M., Mulvaney-Day, N., Torres, M., Polo, A., Cao, Z., & Canino, G. (2007). Prevalence of psychiatric disorders across Latino subgroups in the United States. *American Journal of Public Health, 97*, 68-75.

Alegria, M., Shrout, P., Sribney, W., Guarnaccia, P., Woo, M., Vila, D., et al. (2007). Understanding differences in past year mental health disorders for Latinos living in the U.S. *Social Science and Medicine, 65*, 214-230.

Alegria, M., Sribney, W., Woo, M., Guarnaccia, P., & Torres, M. (2007). Looking beyond nativity: The relation of age of immigration, length of residence, and birth cohorts to the risk of onset of psychiatric disorders for Latinos. *Research in Human Development, 4*, 19-47.

Alegria, M., Takeuchi, D., Canino, G., Duan, N., Shrout, P., Meng, X., et al. (2004). Considering context, place and culture: The National Latino and Asian American Study. *International Journal of Methods in Psychiatric Research, 13*, 208-220.

Alegria, M., Vila, D., Woo, M., Canino, G., Takeuchi, D., Vera, M., et al. (2004). Cultural relevance and equivalence in the NLAAS instrument: Integrating etic and emic in the development of cross-cultural measures for a psychiatric epidemiology and services study of Latinos. *International Journal of Methods in Psychiatric Research, 13*, 270-288.

Anderson, M., & Fienberg, S. (1999). *Who counts? The politics of census-taking in contemporary America.* New York: Russell Sage Foundation.

Benet-Martinez, V., & Haritatos, J. (2005). Bicultural Identity Integration (BII): Components and psychosocial antecedents. *Character & Personality, 73,* 1015-1050.

Bureau of the Census. (2000). *U.S. Census 2000.* Washington, DC: Department of Commerce.

Cervantes, R. C., Padilla, A. M., & Salgado de Snyder, N. (1990). Reliability and validity of the Hispanic Stress Inventory. *Hispanic Journal of Behavioral Sciences, 12*, 76-82.

Cervantes, R. C., Padilla, A. M., & Salgado de Snyder, N. (1991). The Hispanic Stress Inventory: A culturally relevant approach to psychological assessment. *Psychological Assessment, 3*, 438-447.

Chun, K. M., Organista, P. B., & Marin, G. (Eds.). (2003). *Acculturation: Advances in theory, measurement, and applied research.* Washington, DC: The American Psychological Association.

Escobar, J. I., & Vega, W. A. (2000). Mental health and immigration's AAAs: Where are we and where do we go from here? *Journal of Nervous & Mental Disease, 188*(11), 736-740.

Felix-Ortiz, M., Newcomb, M. D., & Myers, H. (1994). A multidimensional measure of cultural identity for Latino and Latina adolescents. *Hispanic Journal of Behavioral Sciences, 16*(2), 99-115.

Flannery, W. M., Reise, S. P., & Yu, J. (2001). An empirical comparison of acculturation models. *Personality and Social Psychology Bulletin, 27*(8), 1035-1045.

Good, B. J. (1994). *Medicine, rationality and experience: An anthropological perspective.* Cambridge, UK: Cambridge University Press.

Heeringa, S. G., Wagner, J., Torres, M., Duan, N., Adams, T., & Berglund, P. (2004). Sample designs and sampling methods for the Collaborative Psychiatric Epidemiology Studies (CPES). *International Journal of Methods in Psychiatric Research, 13*(4), 221-240.

Herskovits, M. J. (1938). *Acculturation: The study of culture contact*. New York: J. J. Augustine.

Kessler, R., Berglund, P., Chiu, W. T., Lumler, O., Heeringa, S., Hiripi, E., et al. (2004). The US National Comorbidity Survey Replication (NCS-R): An overview of design and field procedures. *International Journal of Methods in Psychiatric Research, 13*(2), 69-92.

Kim, B., & Ominzo, M. (2006). Behavioral acculturation and enculturation and psychological functioning among Asian American college students. *Cultural Diversity & Ethnic Minority Psychology, 12*, 245-258.

Kleinman, A. (2006). *What really matters: Living a moral life amidst uncertainty and danger*. New York: Oxford University Press.

Marin, G., & Gamba, R. J. (1996). A new measurement of acculturation for Hispanics: The Bidimensional Acculturation Scale for Hispanics (BAS). *Hispanic Journal of Behavioral Sciences, 18,* 297-316.

Pennell, B. E., Gebier, N., Chardoul, S., Carr, D., Pennell, S., Torres, M., et al. (2004). Plan and operation of the National Survey of Health and Stress, the National Survey of American Life, and the National Latino and Asian American Survey. *International Journal of Methods in Psychiatric Research, 13*, 241-269.

Phinney, J. S., Horenczyk, G., Liebkind, K., & Vedder, P. (2001). Ethnic identity, immigration and well-being: An interactional perspective. *Journal of Social Issues, 57*, 493-510.

Portes, A., & Rumbaut, R. G. (2001). *Legacies: The story of the immigrant second generation.* New York: Russell Sage Foundation.

Portes, A., & Zhou, M. (1993). The new second generation: Segmented assimilation and its variants. *Annals of the American Academy of Political and Social Science, 530,* 74-96.

Rao, J. N. K., & Scott, A. J. (1984). On chi-squared tests for multiway contingency tables with cell proportions estimated from survey data. *Annals of Statistics, 12*, 46-60.

Redfield, R., Linton, R., & Herskovits, M. (1936). Memorandum for the study of acculturation. *American Anthropologist, 36*, 149-152.

Reichman, J. S. (2003). *The relationship of acculturation and folk medical beliefs in recently immigrated Mexican nationals*. Ann Arbor, MI: University Microfilms International Dissertations.

Rogler, L. H., Cortes, D. E., & Malgady, R. G. (1991). Acculturation and mental health status among Hispanics: New directions for research. *American Psychologist, 46*(6), 585-597.

Rumbaut, R. (1997). Assimilation and its discontents: Between rhetoric and reality. *International Migration Review, 31*, 923-960.

StataCorp. (2004). *STATA statistical software release 8.2*. College Station, TX: Stata Corporation.

U.S. Department of Health and Human Services. (2001). *Mental health: Culture, race, and ethnicity—A supplement to mental health*. Rockville, MD: Author.

Vega, W. A., Kolody, B., Aguilar-Gaxiola, S., Alderate, E., Catalano, R., & Carveo-Anduaga, J. (1998). Lifetime prevalence of DSM-III-R psychiatric disorders among urban and rural Mexican Americans in California. *Archives of General Psychiatry, 55*, 771-778.

Wallen, G., Feldman, R., & Anliker, J. (2002). Measuring acculturation among Central American women with use of a Brief Language Scale. *Journal of Immigrant Health, 42,* 95-102.

Zane, N., & Mak, W. (2003). Major approaches to the measurement of acculturation among ethnic minority populations: A content analysis and an alternative empirical strategy. In K. M. Chun, P. B. Organista, & G. Marin (Eds.), *Acculturation: Advances in Theory, Measurement, and Applied Research.* Washington, DC: The American Psychological Association.

Peter J. Guarnaccia is a 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 United States and in Puerto Rico as part of the National Latino and Asian American Study (NLAAS) of mental health funded by the National Institutes of Mental Health. He is co-editor of *A Death Retold: Jesica 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.

Igda Martínez Pincay is a doctoral candidate at the Graduate School of Applied and Professional Psychology of Rutgers University. Her research interests include cultural considerations in mental health and cross-cultural family relations. Her dissertation explored Latino community members' experiences of depression and depression treatment. She recently coauthored "Perception of Stigma Among Latinos Receiving Antidepressants" (*Psychiatric Services*). She enjoys scuba diving whenever she has the opportunity.

Margarita Alegría is the director of the Center for Multicultural Mental Health Research (CMMHR) at Cambridge Health Alliance and a full 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. She currently serves as principal investigator of three National Institute of Mental Health–funded research studies, including the National Latino and Asian American Study (NLAAS), the Advanced Center for Latino and Mental Health Systems Research, and the NCMHD-funded Excellence in Partnerships for Community Outreach, Research on Health Disparities and Training (EXPORT) center. She is also principal investigator of a study funded by the Robert Wood Johnson Foundation to provide information to policy makers and clinicians to improve the quality of depression care. 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. She enjoys painting, gardening (especially peonies), and collecting art by Latin American painters.

Patrick E. Shrout is a professor in the Department of Psychology at New York University, where he teaches applied statistics courses to graduate and undergraduate students. Prior to moving to NYU, he was on the biostatistics faculty at Columbia University. He received his PhD from the University of Chicago, where he specialized in quantitative psychology and personality. His current methodological interests focus on inferences that can be made from nonexperimental data, and his substantive interests are in psychiatric epidemiology and stress and coping in intimate relationships. He has been involved in research on mental health in Puerto Rico since the early 1980s, and has been an investigator of the National Latino and Asian American Study (NLAAS). He likes to cook, and he jogs so that he can eat lots of butter and carbs.

Roberto Lewis-Fernández is director of the Hispanic Treatment Program at New York State Psychiatric Institute, associate professor of clinical psychiatry at Columbia University, and

lecturer on social medicine at Harvard University. He obtained his psychiatric training at The Cambridge Hospital and completed a Dupont-Warren psychiatric research fellowship and an NIMH-sponsored fellowship in clinically applied medical anthropology at Harvard Medical School. His research focuses on the sociocultural determinants of illness and treatment experience among U.S. Latinos, focusing on depressive and anxiety disorders. Specific interests include developing interventions to improve Hispanic rates of entry and retention in mental health care. He likes watching films, reading history and fiction, and bicycling.

Glorisa J. Canino is a professor at the School of Medicine, Department of Pediatrics, and the director of the Behavioral Sciences Research Institute, University of Puerto Rico, School of Medicine. She is presently principal or coprincipal investigator of several grants funded by the National Institutes of Health. She has published substantially in the area of instrument psychometrics, psychiatric epidemiology, mental health services research, and more recently in the area of pediatric asthma and health disparities. At present she is the principal investigator of an Asthma Disparity Center in collaboration with Brown University and of another Health Disparity Center in collaboration with Cambridge Health Alliance and Harvard University. She loves to cook, swim, travel, do yoga, listen to opera and classical music, watch movies, and read South American novels.