Mental Health and Psychosocial Adjustment of Cuban Immigrants in South Florida

Andrew M. Cislo,
UNC - Chapel Hill, Chapel Hill, NC UNITED STATES

Naomi J Spence, PhD, and
Lehman College, City University of New York

Mathew D Gayman, PhD
University of North Carolina at Chapel Hill

Andrew M. Cislo: acislo@schsr.unc.edu

Abstract

Given documented variation in pre-migration and migration-related experiences, Cuban immigrants in the U.S. who arrived during or subsequent to 1980 may be disadvantaged in mental health and psychosocial adjustment relative to earlier arrivals. Using wave 1 of the Physical Challenge and Health study, we compare earlier and later arriving immigrants in levels of depression, anxiety, and self-esteem and test whether adversity and social support, acculturation-related factors, or pre-migration conditions account for any differences observed among a sample of adults living in South Florida (N=191). Bivariate analyses reveal that later arrivals are relatively disadvantaged in anxiety and self-esteem and marginally so in depression. While later arrivals do not report more adversity in the U.S., they have lower levels of family support to cope with any adversity experienced. Later arrivals are also less likely to interview in English or to have a strong American identity, and they were more likely to have arrived as adults. Relative disadvantages in anxiety and self-esteem are best explained by indicators of acculturation and family support. Policies and programs that address acculturation difficulties and increase family support could improve the health and adjustment of these and similar immigrants.

Keywords

Introduction

Sociopolitical and sociodemographic factors differentiate waves of Cuban migration to the U.S. (Aguirre, 1994; Bach et al, 1982; Eckstein, 2006; Gonzalez et al, 2005; Pedraza, 1995; Portes & Stepick, 1993; Rothe & Pumariega, 2008). The health and adjustment implications of these factors may be far-reaching (e.g., Aguirre et al 1994; Eaton & Garrison 1992; Fernandez, 2007). We investigate whether Cuban immigrants arriving during or subsequent

to 1980 are disadvantaged in depression, anxiety, and self-esteem relative to Cubans immigrating prior to 1980. We refer to these groups as *earlier* (pre-1980) and *later* (1980+) arrivals. While a detailed historical treatment of these groups is beyond the scope of this paper, the 1980 Mariel event has been labeled a "turning point" in Cuban migration to the U.S. (Aguirre et al, 1997).

We suggest, as did Eckstein and Barberia (2002) before us, that earlier and later arrivals are meaningfully distinguished. Later arrivals averaged lower socioeconomic status and worse pre-migration conditions relative to earlier arrivals (Portes & Stepick, 1993). They also experienced harsher passage during migration and notable stigmatization upon arrival (Burkett, 1990; Campisi, 2005; Portes & Stepick, 1993; Zaldivar, 1997). These factors and suspicion of psychopathology and criminogenic risk fueled by the Cuban and U.S. media have led to some examination of differential adjustment. Scholars have examined whether later arrivals, particularly Marielitos, are more likely to be involved in U.S. correctional facilities or otherwise institutionalized than other Cuban groups (Aguirre et al 1997; Fernandez, 2007) and whether homicides differed in motive (Martinez, Nielsen, & Lee 2003). Fernandez (2007) found that Marielitos were more likely than compatriots who came before or after to be in a correctional facility and attributed this to social prejudices and stigma. Martinez et al (2003) conclude that Marielitos had similar motives as other offenders. Relative to other U.S. Latina/o groups, little attention has been focused on Cuban mental health (for exceptions, see Narrow et al 1990; Portes, Kyle, & Eaton 1992; Eaton & Garrison 1992), and intra-group comparisons of Cuban immigrants in the U.S. are lacking.

In this study, we employ a sample of adult Cuban immigrants in South Florida (N=191) and compare earlier and later arrivals' mental health and psychosocial adjustment. We hypothesize that later arrivals will demonstrate poorer health and adjustment than earlier arrivals, and we test three explanations for any disadvantages observed. First, experiences of adversity (i.e., discrimination, stressful events in the U.S.) resulting from differential contexts of reception may account for differences observed. Second, disadvantages may be attributable to differences in acculturation-related factors (i.e., language of interview, American and ethnic identities, age at migration) across groups. Lastly, given documented pre-migration differences, we assess whether disadvantages in health and adjustment are artifacts of pre-migration onset of psychiatric disorder or stressful life events in Cuba.

BACKGROUND

Adversity in the U.S. and Coping Resources

Although international migration may generally be difficult, some Cuban immigrants to the U.S. faced greater adversity than others (Portes and Stepick 1993). These added difficulties may translate into poorer mental health and psychosocial adjustment. While members of the earlier group were largely viewed as righteous political dissidents, later group members were depicted as the dregs of Cuban society by the Cuban government and the U.S. popular press (Hufker & Cavender, 1990; Portes and Stepick, 1993). In addition, U.S. migration policy toward Cuba was relatively unfavorable for the later arriving group (Ackerman, Fernandez, & Dominquez, 2005; Nackerud, Springer, Larrison, & Issac, 1999). As a result, the later arrivals experienced harsher contexts of reception upon arrival (Aguirre et al, 1994; Gonzalez, Lopez & Ko, 2005; Portes & Clark, 1987; Portes & Stepick, 1993; Portes, Clark, & Manning, 1985; also see prologue). This may include elevated experiences of discrimination and a greater likelihood of experiencing stressful life events in the U.S. Differential stress exposure can translate into socially patterned mental health and adjustment difficulties (Pearlin, 1989) and both discrimination and stressful events appear to be associated with declines in mental health and adjustment (Kessler, Mickelson, &

Williams, 1999; Landrine & Klonoff, 1996; Turner & Lloyd, 1999; Verkuyten, 1998; Williams, Yu, Jackson, & Anderson, 1997).

Related to the stress process perspective, early and later arriving Cubans may have unequal levels of social support from family and friends, which can serve as coping resources to offset the deleterious effects of adversity. Conditions of migration for members of the later arriving group in particular may affect social support networks. Earlier arrivals generally experienced relatively calm and safe passage while later arrivals endured more urgency in exiting and more hazardous passage (Pedraza, 1995; Portes & Stepick, 1993; Campisi, 2005). While earlier arrivals largely migrated through pre-arranged travel or through the Freedom Flights, later arrivals were often hurriedly transported on the chartered boats of strangers (Garcia, 1996; Portes & Stepick, 1993). Among more recent Cuban migrants, risky passage was frequently made on makeshift rafts (Campisi, 2005; Eckstein & Barberia, 2002). Thus, later arrivals may have become disconnected from family and friends, who were unable to exit or incapable of withstanding the harsh migration circumstances (Campisi, 2005). Indeed, there is evidence of smaller family and friend networks among some later arrivals (Portes, Clark, & Manning, 1985). For these reasons, we expect lower levels of perceived social support among the later arriving group relative to earlier arrivals. Given the well-established positive association between social support and health, (Mulvaney-Day, Alegría, & Sribney, 2007; Turner & Marino, 1994; Pearlin, Menaghan, Lieberman, & Mullan, 1981; Syrotuik & D'Arcy 1984; Wethington & Kessler, 1986), variations in perceived social support may translate into relatively poor health and adjustment outcomes for later arrivals.

Acculturation-Related Factors

Another explanatory consideration is that later arrivals have less time than earlier arrivals to acculturate to U.S. society. While the concept and measurement of acculturation remains a matter of some scholarly debate, particular indicators are commonly employed. Years in the U.S., among the most commonly used indicators of acculturation, is confounded with our focal migration group distinction, disallowing consideration of this measure of acculturation as an explicit mechanism driving differences between earlier and later arrivals. Still, time in the U.S. may serve as an exposure variable for cultural, behavioral, and/or psychological changes in the host country. Such exposure may be a proxy for factors such as language proficiency/use or social identities.

Language is also among the most commonly-used indicators of acculturation (Rogler, Cortes, & Malgady 1991). For immigrants in the U.S., difficulty with the English language may preclude opportunities that can ease integration (such as employment and housing) and by extension, increase stress and deleterious outcomes. Although recent evidence suggests that English language proficiency is associated with risk for psychiatric disorders among U.S. Latina/os (Alegria et al 2007), other evidence suggests that Cubans in the U.S. interviewed in Spanish have higher levels of psychological distress and rates depressive disorder than those interviewed in English (Narrow et al 1990). While Cubans, as a whole, are more likely to retain Spanish or use English compared to other U.S. Latina/o subgroups, recent arrivals report lower English proficiency than earlier arrivals (Pew Hispanic Center 2006). We thus expect members of the later arriving group to be more likely to interview in Spanish, which may explain differential health and adjustment.

Social identities may also be implicated. Scholars recognize independent dimensions of ethnic and host country identities (Berry, 1987; Sanchez & Fernandez, 1993). When analyzed as such, strong ethnic and host country identities are generally shown as independently predictive of positive health and adjustment outcomes (Berry, 1997; Phinney, Cantu, & Kurtz, 1997; Umaña-Taylor, Diversi, & Fine, 2002). Among Cubans in the U.S.,

later arrivals may have not attained a strong American identity yet. This acculturation-related factor may differentiate the groups in health and adjustment. In terms of ethnic identity, we expect that later arrivals will have a stronger ethnic identity because they were more recently residents of Cuba; however, the groups may not significantly differ since South Florida is rich in Cuban-American social, cultural, and political influence that may help maintain a strong sense of Cuban ethnic identity.

Age at arrival is another acculturation-related factor that may differentiate the groups in health and adjustment. Available evidence suggests that Latina/os arriving as children appear to be at increased risk of psychiatric disorder later in life relative to those arriving as young adults (Alegria et al, 2007). Among the later arrivals, it is unlikely that many arrived as children in a current sample of adults; thus a greater proportion of the earlier arriving group likely migrated as children. To the extent that age at arrival affects the health and adjustment of Latina/o immigrants, we might therefore expect worse outcomes for the earlier arrivals, contrary to our other acculturation-related considerations. However, expectations specific to Cuban immigrants remain unknown.

Pre-migration Conditions

A third category of explanation relates to group variation in pre-migration characteristics. It is generally thought that the later group, and particularly Marielitos, migrated with existing psychiatric disorders. In 1980, Fidel Castro cleared psychiatric institutions and prisons, allowing the institutionalized to leave alongside the politically, economically, and socially disaffected (Portes & Stepick, 1993). While this notion has been empirically disputed (Bach, Bach, & Triplett, 1981; Martinez, Nielsen, & Lee, 1981), further consideration is warranted given evidence of higher rates of institutionalization among the later arrivals (Fernandez 2007) and established correlations between criminal justice involvement and mental illness (Andersen, 2004; Diamond et al, 2001). If more later arrivals arrived with an existing psychiatric disorder, this may explain group differences in health and adjustment viewed many years later. In addition, later arrivals were exposed more to deprivations within an economically declining communist system and likely experienced poorer quality of life in Cuba than earlier émigrés in terms of meeting basic needs and pressures to conform to political ideology (Bonnin & Brown, 2002; Eckstein, 2004). Therefore, observed group differences in current mental health may be partially attributable to stressful life events experienced in Cuba. It is thus important to consider pre-migration factors as an alternative explanation to adversity in the U.S. and acculturation-related factors in accounting for group differences in mental health and psychosocial adjustment.

To conclude, we expect that later arriving Cuban immigrants will be disadvantaged relative to earlier arrivals in mental health and psychosocial adjustment. We form this expectation by drawing from social histories with support from available empirical research. To the extent that later arrivals are disadvantaged in well-being due to experiences of adversity, discrimination and stressful life events in the U.S. should partially account for this, as should perceived support from family and friends as coping resources. If differences in health adjustment inhere in differences in acculturation-related factors, then language of interview, American identity, and age at migration should partially attenuate any group differences in outcomes. Finally, inequalities in outcomes may be partially accounted for by pre-migration considerations, including pre-migration onset of psychiatric disorder and pre-migration stressful life events. We thus consider the following hypothesis:

> H1: Later arrivals will report higher average levels of depression and anxiety, and lower level of self-esteem.

Because it is unclear *a priori* which explanation may be at work in accounting for H1, we also test the following hypotheses:

H2: Later arrivals will experience more adversity in the U.S. and have less social support for coping with adversity, and controlling on adversity and social support will reduce gaps in health and adjustment across groups.

H3: Later arrivals will differ from earlier arrivals on indicators of acculturation, and controlling for acculturation-related factors will narrow gaps in health and adjustment across groups.

H4: Later arrivals will demonstrate disadvantageous pre-migration characteristics, and adjusting for these characteristics will reduce group differences in health and adjustment.

DATA AND METHODS

Data and Sample

We employ data from wave one of the Physical Challenge and Health study conducted in Miami-Dade County, Florida (Turner, Lloyd, & Taylor, 2006) and approved by the Institutional Review Boards of Florida International University and Florida State University. Described in detail elsewhere (Gayman, Turner, & Cui, 2008), this is a two-wave panel study of community-residing adults that provides a wealth of information on health and related factors relevant for testing our hypotheses. Despite focus on physical disability in the sampling design, the dataset offers a unique opportunity to study risk and protective factors with health and adjustment outcomes for Cuban immigrants. The primary sampling unit was the square-mile block of which there were 100 randomly selected from the county, containing 206,234 households. A random sample of 10,000 of these households was screened door-to-door and via telephone from May through November 2000. The goal was to identify 1,000 respondents with a physical limitation and 1,000 without limitation matched on age (18 years or older), sex, race/ethnicity, and area of residence. Computer-assisted interviews in 2000–2004 were offered in either English or Spanish by trained, largely bilingual, interviewers. With an 82% response rate, the total sample is 1,986 cases. By design, this sample somewhat over-represents physically challenged adults in South Florida, requiring that multivariate analyses control for disability status.

From the full sample, we limit our analyses to 18–59 year-old Cubans immigrants (n=191). This age range is imposed because adults 60 years or older were disproportionally represented in the earlier arriving group than in the later group, and our primary interest is in whether period of migration differentiates migrants in health and adjustment. In addition, this particular age range yields proportions of Cuban immigrants in South Florida in each group closely corresponding to estimates reported by the Pew Hispanic Center (2006; 35% vs. 31% early arrivals, respectively) based on the 2004 American Community Survey.

Measures

Dependent Variables—_Depressive symptoms_ were measured using the 20-item version of the Center for Epidemiologic Studies Depression Scale (CES-D), a widely-used and reliable index of depressive symptomatology (Radloff, 1977). Respondents were asked how often in the last month they experienced a list of feelings and experiences indicative of depressed mood. Positive affect items were reverse coded and all items were then summed and rescaled to result in the conventional range of 0–60. Higher values indicate more symptoms during the previous month. This index was found to be highly reliable in this sample (α=.90) and is consistent across language of interview (Spanish interview α=.91; English interview α=.89).

Anxiety was constructed from five items derived from the Rosenberg scale (1979) asking respondents how true it was that they experienced each item over the past month. Example items include "I am worried about possible misfortunes," "I am anxious," and "I feel nervous." Responses ranged from "not at all" to "very much." Items were summed, resulting in a range of 5–20, with higher values representing more frequent anxiety symptoms (full sample and Spanish interview α=.83; English interview α =.82).

Self-Esteem was constructed from six items derived from the Rosenberg scale (1965) asking respondents how strongly they agree with statements about their perceived self worth. Example items include "you feel you have a number of good qualities" and "on the whole you are satisfied with yourself." Measuring self-esteem using Rosenberg scale items is common in studies with diverse ethnic groups, including Cubans (e.g., Erkut & Tracy, 2002; Rumbaut, 1994; Turner et al, 2004; Umana-Taylor, Diversi, & Fine 2001). Response options range from strongly agree to strongly disagree. Items were summed resulting in a range of 5–30, with higher numbers representing more positive self-evaluations (α=.84; English interview α=.88; Spanish interview α=.83).

Independent and Control Variables—Migration group is the primary independent variable of interest. Year of migration was established by subtracting number of years in the U.S. from the respondents' year of interview. Migration group is coded 1 for *earlier arrivals* (prior to 1980) and 0 for *later arrivals* (1980 and later). Despite our fundamental interest in group differences, we also considered a continuous indicator of years in the U.S. as a substitute for migration group, since these two variables are necessarily highly correlated (r=.84). We did not find this indicator to have more explanatory power. We control for important sociodemographic correlates of our outcomes, including gender (1=*female*, 0=*male*), *age* (in years), and education (dummy variables for *less than high school* (ref), *high school graduate or some college*, and *college graduate and above*).

We also consider three sources of attenuation for any observed migrant group differences in health and adjustment outcomes. First, social adversity experienced in the U.S. was measured two ways. *Events per Years in U.S.* was indexed by dividing the number of potentially stressful life events experienced in the U.S. by the number of years in the U.S. This division adjusts for the longer time earlier arrivals have been in the U.S. to experience adversity than later arrivals. We use reports of age at which each event first and last occurred to determine the event timing relative to migration. Example events are "having been forced to live apart from family" and "having been kidnapped or held captive." These events are commonly used in stress research (e.g., Turner et al., 1995). *Any Discrimination* is a dummy variable derived from reported experiences in the U.S. with major discrimination (e.g., being denied a job), daily discrimination (e.g., frequency of being treated with little respect), or ethnic discrimination (e.g., being treated unfairly due to being Latina/o or Hispanic). Each type of discrimination indexes items derived from previously established and employed scales (for major and daily discrimination, see Williams et al., 1997 and Taylor & Turner, 2002; for ethnic discrimination, see Vega et al., 1993). We combine and collapse the three discrimination measures into a more parsimonious indicator of any perceived discrimination because: 66%, 47%, and 35% of respondents reported no experiences with major, daily, and ethnic discrimination, respectively.

We also examine perceived social support as a coping mechanism for any adversity experienced. Perceived social support was measured separately for family and friends using the Provisions of Social Relations scale, for which evidence of both reliability and construct validity is available (Turner, Frankel & Levin, 1983), and that has been employed in previous large-scale community studies (Turner & Lloyd, 1999; Turner & Marino, 1994). Perceived *family support* is measured using 16 items that asked respondents about their

present relationship with family members. On a four point Likert scale, respondents were asked how true it is that "you feel very close to family" and "your family is always there for you," as examples. Eight items were reverse coded so that higher values on the scale represent greater perceived support. The final scale represents mean scores across all sixteen items (α=88). Perceived *friend support* is measured using 8 items that ask respondents about their present relationship with friends. On a four point Likert scale, respondents were asked how true it was that "You feel very close to your friends" and "You feel that your friends really care about you," as examples. Items were reverse coded so that higher values on the scale represent greater perceived support. The final scale represents mean scores across all eight items (α=.93).

The second category of attenuating factors includes acculturation-related factors. *English language interview* is coded 1 if the interview was conducted in English and 0 if conducted in Spanish. *Strong American identity* was created from an item asking for level of agreement with the statement "You consider yourself to be an American." This item, included in a previous major data collection effort (described in Turner and Gil 2002), was set in a four point Likert scale with one representing "Agree a lot" and four representing "Disagree a lot." The item was reverse coded with higher scores representing Stronger American identity. Because 48% of respondents "Agreed a lot" with the item, we dichotomized to create the final measure such that it is coded 1=strong American identity and 0=less than strongest American identity. *Strong ethnic identity* was indexed using 10 items asking respondents how strongly and positively they identify with their ethnic group and the extent to which respondents prefer to socialize within their ethnic group. These items were set in a Likert scale with "strongly agree" coded as one and "strongly disagree" as seven. Four items were reverse coded and items were summed. We dichotomized this variable such that 0=less than strongest identity and 1=strong ethnic identity (i.e., the respondent scored seven on each of the original ten items) for several reasons: 1) 18% of respondents reported the highest level of ethnic identity possible, 2) substantive conclusions about the effect of ethnic identity and its influence on the migrant group-outcome relationship were consistent across all outcomes using the dichotomous or continuous specification, and 3) to parallel American identity and allow for consistent interpretation of the two identities. Finally, *age at migration* is a dichotomous variable using the cutpoint 0–17 years (coded 0) vs. 18 years and older (coded 1), following precedent in the literature (Alegria et al 2007; Mills & Henretta 2001).

The third and final source of potential attenuation considered was pre-migration factors. To evaluate this possibility, we include pre-migration psychiatric problems and stressful life events. *Prior Onset of Disorder* indicates whether respondents experienced the onset of any one of 10 psychiatric or substance use disorders prior to migration using DSM-IV diagnostic criteria (American Psychiatric Association, 1994). The basic instrument was the Michigan Composite International Diagnostic Interview (CIDI; Robins et al., 1988; Spitzer et al., 1990; World Health Organization, 1990). The CIDI is a fully structured interview based on the Diagnostic Interview Schedule (Robins et al., 1988) and designed to be administered by trained non-clinical interviewers. Respondents are coded 1 if there was an onset of psychiatric/substance disorder prior to migration and 0 if there was not. *Events per years in Cuba* indexes the average number of potentially stressful events experienced per years in Cuba. The measure was indexed using forty-two events (examples above) with first and last occurrences set in reference to year of migration.

Analytic Plan—Analyses are conducted using STATA, v11 (StataCorp, 2007) employing the survey module (svy) to adjust standard errors for complex sampling design. We first present descriptive statistics for all study variables, noting where the earlier and later arrivals differ significantly in means or percentages (Table 1). We then present multivariate analyses

using linear regression techniques to assess the effect of early versus late arrival and the potential attenuation of this effect by adversity & coping resources, acculturation-related factors, and pre-migration considerations. Across three multivariate tables, distinguished by outcomes, Model 1 (our "baseline" model) includes migration group controlling for physical disability status (due to sample strategy) age, gender, and educational attainment. We then sequentially enter adversity experienced in the U.S. and social support (models 2–5), acculturation factors (models 6–9), and pre-migration factors (models 10–11). Our primary interests are whether and to what extent these potentially explanatory considerations attenuate the migrant group-outcome relationship(s) observed in model 1 net of sociodemographics.

A more common measure of exposure in an acculturation framework highlights time in the U.S. We thus explored parallel models substituting years in the U.S. for migrant group to examine whether the number of years in the U.S. is able to explain more variation in the outcomes than does the group distinction. First, a comparison of baseline models for all three outcomes demonstrate little difference in r-squared when using a) the group distinction or b) number of years in the U.S. (depressive symptoms: a) $r^2=.07$, b) $r^2=.07$; anxiety: a) $r^2=.14$, b) $r^2=.14$; self-esteem: a) $r^2=.10$, b) $r^2=.11$). Moreover, a comparison of Bayesian information criteria (BIC) across models following standards recommended by Raftery (1995) for judging improvement in model fit for non-nested models, resulted in none of our 33 multivariate models reaching the "strong" or "very strong" improvement in fit by substituting years in the U.S. Therefore, given substantive and theoretical interests and a lack of strong empirical evidence for improvement in model fit by using years in the U.S., we employ the group distinction as our focal independent variable.

RESULTS

Descriptive analysis

Table 1 presents weighted means or percentages of study variables for adult Cuban immigrants (ages 20–59) in Miami-Dade county, FL contrasting earlier arrivals (N=66) with later arrivals (N=125). Later arrivals are relatively disadvantaged in anxiety and self-esteem compared to earlier arrivals ($p<.05$), and marginally so for depressive symptoms ($p<.10$). The migrant groups do not significantly differ in proportions confirming physical disability status, gender, or proportion high school graduates/some college. However, later arrivals are younger on average, have attained less than a high school degree in higher proportions, and have attained a college degree or higher in lower proportions.

In terms of adversity, the groups do not differ in proportion reporting any discrimination in the U.S., though later arrivals report fewer stressful events per year in the U.S. than earlier arrivals. Later arrivals report lower levels of family support than earlier arrivals. The groups do not differ in perceived support from friends.

The groups differ in three of the four acculturation-related factors considered. Later arrivals were much less likely than earlier arrivals to answer the interview in English. While later arrivals were less likely to report having a strong American identity, the groups did not significantly differ in proportion reporting a strong ethnic identity. Later arrivals were also more likely to have entered the U.S. adults relative to earlier arrivals.

Finally, in terms of pre-migration factors, later arrivals were less likely to have had the onset of a psychiatric disorder while still in Cuba relative to earlier arrivals. The groups did not significantly differ in average number of stressful life events experienced per years in Cuba.

Tables 2–4 present OLS models regressing depressive symptoms, anxiety, and self-esteem (respectively) on indicators of adversity and social support, acculturation-related factors, and pre-migration factors. All models control for disability status, age, gender, and educational attainment (not shown). Table 2 for depressive symptoms shows that the marginal difference in depression observed in Table 1 is not robust to the inclusion of sociodemographics. Though the earlier arrival coefficient in Model 1 is not statistically significant, the group difference that does appear is most altered in Models 4, 7, and 9 where American identity, family support, and age at migration are respectively introduced.

Table 3 presents analyses of anxiety. In Model 1, the later arrival disadvantage persists net of disability status, age, gender, and educational attainment. While neither indicator of adversity in the U.S. attenuates the group difference (Models 2–3), perceived family support reduces the baseline coefficient for migrant group by 44 percent (Model 4). In terms of acculturation-related factors: language of interview (Model 6; 30 percent reduction in the baseline coefficient), American identity (Model 7; 42 percent reduction) but not ethnic identity, and age at migration (Model 9; 68 percent reduction) significantly reduce the group difference in anxiety. However, language of interview is not independently predictive of anxiety, and age at migration is only marginally predictive of anxiety. Finally, pre-migration factors--onset of disorder in Cuba (Model 10) and stressful life events per years in Cuba (Model 11)--partially attenuate the group difference in anxiety, bringing it to marginal significance.

Table 4 presents multivariate findings for self-esteem. In Model 1, the bivariate disadvantage among later arrivals persists net of sociodemographic controls. Neither indicator of adversity in the U.S. accounts for the group difference in self-esteem (Models 2–3). While family support attenuates the group difference observed in the baseline model by 45 percent (Model 4), friend support reduces the gap to marginal significance (Model 5). In terms of acculturation-related factors, the results mirror those for anxiety. Language of interview (Model 6; 42 percent coefficient reduction), American identity (Model 7; 40 percent coefficient reduction) but not ethnic identity, and age at migration (Model 9; 87 percent coefficient reduction) have notable attenuating effects. Language of interview shows only marginally significant independent effects on self-esteem. Lastly, neither pre-migration consideration attenuates the later arrival disadvantage in self-esteem (Models 10–11).

DISCUSSION

Based on a reading of social history and available empirical research, we hypothesized that Cuban immigrants in South Florida who arrived during or subsequent to 1980 would be at a disadvantage in mental health (depressive symptoms and anxiety) and psychosocial adjustment (self-esteem) relative to earlier arriving compatriots. Descriptive results demonstrate that later arrivals are relatively disadvantaged in anxiety and self-esteem--a disadvantage that was not accounted for by sociodemographic characteristics in multivariate analyses. Thus, our first hypothesis was largely supported. A similar pattern of attenuating factors was observed for anxiety and self-esteem. For both outcomes, the later arriving group disadvantages were largely explained by acculturation-related factors (language of interview, American identity, and age at migration) and family support. Thus, Hypothesis 3 receives support. Moreover, family support, as an important coping mechanism, partially explains group differences in well-being.

The other hypotheses were not supported. While we expected that later arrivals would experience more adversity in the U.S. than earlier arrivals due to variation in contexts of reception, bivariate analysis revealed that the groups did not differ in proportions experiencing any discrimination and later arrivals experienced fewer stressful life events

averaged over years in the U.S. One possible explanation for these counterintuitive findings is that later arrivals are more likely to be institutionalized (Fernandez 2007) and therefore selected out of the community-based sample. It seems plausible that the same individuals that are at risk of institutionalization are also at higher risk of experiencing stressful events. Irrespective of this counterintuitive difference, our second hypothesis was not supported as indicators of adversity did not account for group differences in well-being.

We also failed to support our fourth hypothesis. Pre-migration factors did little to account for the later arrival disadvantages in anxiety and self-esteem. While the migrant groups did not significantly differ in stressful life events experienced prior to migration, later arrivals were less likely to have a pre-migration onset of psychiatric disorder than earlier arrivals. Given that Castro cleared the prisons and hospitals of "mental defectives" in 1980 and that members of the later group were generally of lower socioeconomic status than the earlier group, which is generally associated with worse mental health outcomes, this may be seen as a counterintuitive finding. Again, this finding may have resulted from higher rates of institutionalization within the later arriving group and sample selection biases leading to an underestimation of existing disorders among later arrivals that are incarcerated, homeless, or otherwise outside of the community.

Our study contributes to understandings of U.S. Latina/o mental health. While scholars have recognized that 1980 was an important shift in Cuban immigration to the U.S., we compare the mental health and psychosocial adjustment of these earlier and later arrivals. The data source afforded an analysis of multiple outcomes of interest and several explanatory considerations. What appears fairly consistent across the outcomes is that acculturation-related factors and family support reduce the gap in well-being across the migrant groups.

The migrant group distinction may index factors beyond basic exposure measures, such as years in the U.S. In additional analyses not presented, we examined years in the U.S. as an alternative exposure measure. In comparable models to those presented, we did not observe a significant difference in model fit with this substitution. We also investigated the full age range of Cuban immigrants available in the dataset to examine whether years in the U.S. would be a more appropriate indicator of exposure without age truncation. It was not independently predictive of the three outcomes in baseline models with the full age range. This leads us to consider whether Cuban immigrants are negatively affected in health and adjustment through time exposure, as has been observed in other immigrant groups within the "immigrant paradox" literature. We find patterns consistent with existing knowledge about Cuban American mental health suggesting that the immigrant paradox may not apply well to Cubans. Our findings related to acculturation and well-being are consistent with those of Bonnin and Brown (2002). While English language interview was not independently predictive of our outcomes, the coefficients were negative for depression and anxiety, consistent with the findings of Narrow and colleagues (1990) and positive for self-esteem.

With additions to knowledge about the health and adjustment of adult Cuban immigrants in South Florida, some limitations are notable. Future studies are needed in areas outside of South Florida with refugees and refugee-like migrants to establish whether similar patterns are apparent. The generalizability of our results is uncertain since they are based on Cubans in Miami, FL. Additional research can inform the wider implications of this study. Additionally, future research might seek to examine whether our counterintuitive findings discussed above may be related to greater institutionalization of certain groups. If so, our findings may conservatively suggest a disadvantage among later arrivals relative to earlier arrivals.

Another potential limitation in our effort is an inability to assess rates of psychiatric disorder in our group comparison. It may be that later arrivals are disadvantaged in levels of health and adjustment, but disadvantages do not rise to the level of substantial impact on quality of life, requiring greater need for health services. We also have two measurement-related limitations. Although previous literature uses an age at arrival cutpoint of 35+ years in addition to the younger than 18 category (e.g., Alegria et al 2007), no members of the earlier arriving group arrived at ages 35+. Also, while the single-item indicator of American identity was among the strongest attenuating factors, an inventory of American identity would be useful for unpacking the components that may differentially matter for health and adjustment. Lastly, a larger analytic sample may have provided the opportunity to assess the independent effects of adversity, acculturation-related factors, and pre-migration considerations in the prediction of Cuban immigrant well-being.

With these considerations in mind, we reiterate the potential benefits of English language courses (as well as aides to psychological acculturation) and family programs suggested by Portes and Clark (1987) more than 20 years ago. Our analyses suggest that later arriving adult Cuban immigrants in South Florida may not be substantially disadvantaged in health and adjustment relative to earlier arrivals if the groups were more similar in terms of socially modifiable factors. Our analyses suggest that these factors likely include perceptions of family support, English language use, and strength of American identity.

Acknowledgments

References

Ackerman H, Fernandez D, Dominguez M. Special section: The Cuban Balsero crisis 10 years later – Editors' introduction. Latino Studies 2005;3:372–374.

Aguirre BE. Cuban mass migration and the social construction of deviants. Bulletin of Latin American Research 1994;13:155–183.

Aguirre BE, Saenz R, James BS. Marielitos ten years later: The Scarface legacy. Social Science Quarterly 1997;78:487–507.

Alegria, Margarita; Sribney, William; Woo, Meghan; Torres, Maria; Guarnaccia, Peter. 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 2007;4(1/2):19–47. [PubMed: 19412354]

Anderson HS. Mental Health in Prison Populations A review – with special emphasis with special emphasis on a study of Danish prisoners on remand. Acta Psychiatr Scand 2004;110 (Suppl 424):5–59.

Bach RL, Bach JB, Triplett T. The flotilla —entrants: Latest and most controversial. Cuban Studies 1981;11:29–37.

Berry JW, Kim U, Minde T, Mok D. Comparative studies of acculturative stress. International Migration Review 1987;21(3):491–511.

Berry JW. Immigration, acculturation, and adaptation. Applied Psychology: An international review 1997;46:5–68.

Bonnin R, Brown C. The Cuban Diaspora: A comparative analysis of the search for meaning among recent Cuban exiles and Cuban Americans. Hispanic Journal of Behavioral Sciences 2002;24:465–478.

Burkett E. Cuban refugee homosexual history anniversary. The Miami Herald 1990 April 1;:9. record no. 9001230146.

Campisi E. Guantanamo: Safe haven or traumatic interlude? Latino Studies 2005;3:375–392.

Dalgard OS, Bjrk S, Tambs K. Social Support, Negative Life Events and Mental Health. The British Journal of Psychiatry 1995;166:29–34. [PubMed: 7894872]

Diamond PM, Wang EW, Holzer CE, Thomas C, Cruser dA. The prevalence of mental illness in prison. Administration and Policy in Mental Health 2001;29(1):21–40. [PubMed: 11811770]

Eaton WW, Garrison R. Mental health in Mariel Cubans and Hatian boat people. International Migration Review 1992;26(4):1395–1415.

Eckstein S. Cuban émigrés and the American dream. Perspectives on Politics 2006;4(2):297–306.

Eckstein, S. The clash between Cuban immigration cohorts. In: Font, MA., editor. Cuba today: Continuity and change since the 'Periodo Especial. New York: Bildner Center for Western Hemisphere Studies, The Graduate Center, The City University of New York; 2004. p. 129-145.

Eckstein S, Barberia L. Grounding immigrant generations in history: Cuban Americans and their transnational ties. International Migration Review 2002;36:799–837.

Erkut S, Tracy AJ. Predicting Adolescent Self-Esteem from Participation in School Sports among Latino Subgroups. Hispanic Journal of Behavioral Sciences 2002;24:409.

Fernandez GA. Race, gender, and class in the persistence of the Mariel stigma twenty years after the exodus from Cuba. International Migration Review 2007;41:602–622.

García, MC. Havana USA: Cuban exiles and Cuban Americans in South Florida, 1959–1994. Berkeley: University of California Press; 1996.

Gayman MD, Turner RJ, Cui M. Physical limitations and depressive symptoms: Exploring the nature of the association. Journals of Gerontology: Social Sciences 2008;63B:S219–S228.

González a MJ, Lopez JJ, Ko E. The Mariel and Balsero Cuban immigrant experience: Family reunification issues and treatment recommendations. Journal of Immigrant and Refugee Studies 2005;3:141–153.

Hufker B, Cavender G. From freedom flotilla to America's burden: The social construction of the Mariel immigrants. The Sociological Quarterly 1990;31:321–335.

Kessler RC, Mickelson KD, Williams DR. The prevalence, distribution, and mental health correlates of perceived discrimination in the United States. Journal of Health and Social Behavior 1999;40:208–230. [PubMed: 10513145]

Landrine H, Klonoff EA. The schedule of racist events: A measure of racial discrimination and a study of its negative physical and mental health consequences. Journal of Black Psychology 1996;22:144–168.

Martinez R, Nielsen AL, Lee MT. Reconsidering the Marielito legacy: Race/ethnicity, nativity, and homicide motives. Social Science Quarterly 1981;84:397–411.

Mills TL, Henretta JC. Racial, Ethnic, and Sociodemographic Differences in the Level of Psychosocial Distress among Older Americans. Research on Aging 2001;23:131–152.S.

Mulvaney-Day NE, Alegría M, Sribney W. Social cohesion, social support, and health among Latinos in the United States. Social Science and Medicine 2007;64:477–495. [PubMed: 17049701]

Nackerud L, Springer A, Larrison C, Issac A. The end of the Cuban contradiction in the U.S. refugee policy. International Migration Review 1999;33:176–192. [PubMed: 12294979]

Narrow WE, Rae DS, Moscicki EK, Locke BZ, Regier DA. Depression among Cuban Americans: The Hispanic Health and Nutrition Examination Survey. Social Psychiatry and Psychiatric Epidemiology 1990;25:260–268. [PubMed: 2237607]

Pearlin LI. The sociological study of stress. Journal of Health and Social Behavior 1989;30:241–256. [PubMed: 2674272]

Pearlin LI, Menaghan EG, Lieberman MA, Mullan JT. The stress process. Journal of Health and Social Behavior 1981;22:337–356. [PubMed: 7320473]

Pedraza, S. Cuba's refugees: Manifold migrations. Proceedings of the Fifth Annual Meeting of the Association for the Study of the Cuban Economy (ASCE). 1995. Accessed at http://lanic.utexas.edu/la/cb/cuba/asce/cuba5/FILE26.PDF June 5, 2009

Pew Hispanic Center. Cubans in the United States. 2006. Fact Sheet.

Phinney JS, Cantu CL, Kurtz DA. Ethnic and American identity as predictors of selfesteem among African American, Latino, and White adolescents. Journal of Youth and Adolescence 1997;26:165–185.

Portes A, Kyle D, Eaton WW. Mental Illness and Help-seeking Behavior Among Mariel Cuban and Haitian Refugees in South Florida. Journal of Health and Social Behavior 1992;33(4):283–298. [PubMed: 1464715]

Portes A, Clark JM. Mariel refugees: Six years after. Migration World Magazine 1987;15:14–18. [PubMed: 12341948]

Portes A, Clark JM, Manning RD. After Mariel: A survey of the resettlement experiences of 1980 Cuban refugees in Miami. Cuban Studies 1985;15:37–59.

Portes, A.; Stepick, A. City on the edge: The transformation of Miami. Berkely and Los Angeles: University of California Press; 1993.

Radloff LS. The CES-D scale: A self-report depression scale for research in the general population. Applied Psychological Measurement 1977;1:385–401.

Robins LN, Wing J, Ulrich Wittchen H, Helzer JE, Babor TF, Burke J, Farmer A, Jablenski A, Pickens R, Regier DA, Sartorius N, Towle LH. The composite international diagnostic interview: An epidemiologic instrument suitable for use in conjunction with different systems and in different cultures. Archives of General Psychiatry 1988;45:1069–77. [PubMed: 2848472]

Rogler LH, Cortes DE, Malgady RG. Acculturation and mental health status among Hispanics. American Psychologist 1991;46(6):585–597. [PubMed: 1952420]

Rosenberg, M. Conceiving the self. Malabar, FL: Krieger Publishing Company; 1979.

Rosenberg, M. Society and the adolescent self-image. Princeton, NJ: Princeton University Press; 1965.

Rothe EM, Pumariega AJ. The new face of Cubans in the United States: Cultural process and generational change in an exile community. Journal of Immigrant and Refugee Studies 2008;6:247–266.

Rumbaut RG. The crucible within: Ethnic identity, self-esteem, and segmented assimilation among children of immigrants. International Migration Review 1994 winter;28:748–794.

Sanchez JI, Fernandez DM. Acculturative stress among Hispanics: A bidirectional model of ethnic identification. Journal of Applied Social Psychology 1993;23(7):654–668.

Spitzer, RL.; Williams, JBW.; Gibbon, M.; First, MB. Structured clinical interview for DSM-III-R–Patient Edition (SCID-P, Version 1.0). Washington, DC: American Psychiatric Press; 1990.

StataCorp. Stata statistical Software. Release 10. College Station, TX: StataCorp LP; 2007.

Syrotuik J, D'Arcy C. Social support and mental health: Direct, protective, and compensatory effects. Social Science and Medicine 1984;18:229–236. [PubMed: 6701567]

Taylor JR, Turner RJ. Perceived discrimination, social stress, and depression in the transition to adulthood: Racial contrasts. Social Psychology Quarterly 2002;65(3):213–225.

Turner RJ. Personal resources and depression in the transition to adulthood: Ethnic comparisons. Journal of Health and Social Behavior 2004;45:34–2. [PubMed: 15179906]

Turner RJ, Gil AG. Psychiatric and substance use disorders in South Florida: Racial/ethnic and gender contrasts in a young adult cohort. Archives of General Psychiatry 2002;59:43–50. [PubMed: 11779281]

Turner RJ, Lloyd DA. The stress process and the social distribution of depression. Journal of Health and Social Behavior 1999;40:374–404. [PubMed: 10643162]

Turner RJ, Lloyd DA, Taylor J. Physical disability and mental health: An epidemiology of psychiatric and substance disorders. Rehabilitation Psychology 2006;51:214–223.

Turner RJ, Marino F. Social support and social structure: A descriptive epidemiology. Journal of Health and Social Behavior 1994;35(3):193–212. [PubMed: 7983334]

Turner RJ, Wheaton B, Lloyd DA. The epidemiology of social stress. American Sociological Review 1995;60:104–125.

Umaña-Taylor AJ, Diversi M, Fine MA. Ethnic identity and self-esteem of Latino adolescents: Distinctions among the Latino populations. Journal of Adolescent Research 2002;17:303–327.

Vega WA, Gil AG, Warheit GJ, Zimmerman RS. Acculturation and delinquent behavior among Cuban American adolescents: toward an empirical model. Community Psychology 1993;113:13.

Verkuyten M. Perceived discrimination and self-esteem among ethnic minority adolescents. The Journal of Social Psychology 1998;138:479–493. [PubMed: 9664864]

Wethington E, Kessler RC. Perceived support, received support, and adjustment to stressful life events. Journal of Health and Social Behavior 1986;27:78–89. [PubMed: 3711634]

World Health Organization. Composite international diagnostic interview (CIDI), Version 1.0. Geneva, Switzerland: World Health Organization; 1990.

Williams DR, Yu Y, Jackson JS, Anderson NB. Racial differences in physical and mental health: Socio-economic status, stress, and discrimination. Journal of Health Psychology 1997;2:335–351.

Zaldivar RA. Immigrants from Cuba facing image problem, poll shows. The Miami Herald 1997 June 16;:1A. Record Number: 9706180090.

Table 1

Weighted Means or Percentages for Cuban Immigrants

	Earlier Arrivals (n =66)	Later Arrivals (n =125)
Mental Health & Adjustment		
Depressive Symptoms	16.08	18.45[†]
Anxiety	7.67	9.10[*]
Self-Esteem	27.85	26.26[*]
Sociodemographics		
Disabled(%)	23.53	16.62
Age	50.16	46.10[**]
Female(%)	46.93	51.04
<H.S.(%)	17.1	38.14[**]
H.S. Graduate-Some College(%)	41.66	37.72
College Graduate+(%)	41.25	24.15[*]
Adversity		
Discrimination(%)	75.91	71.47
Events/Years in U.S.	0.04	0.02[*]
Social Support		
Family Support	3.45	3.20[**]
Friends Support	3.25	3.09
Acculturation		
English Language Interview(%)	49.68	9.86[***]
American Identity(%)	63.57	40.31[**]
Ethnic Identity(%)	14.31	23.75
Migration Age 18+(%)	27.41	84.43[***]
Pre-Migration Factors		
Prior Disorder Onset(%)	1.81	1.05[**]
Events/Years in Cuba	0.56	0.65

Significantly different than earlier arrivals at

[†]$p<.10$;

[*]$p<.05$;

[**]$p<.01$,

[***]$p<.001$

Table 2

OLS Coefficients of Depressive Symptoms Regressed on Adversity, Social Support, Acculturation-Related Factors, and Pre-Migration Factors (Cuban Immigrants; N=191)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Earlier Arrivals	−1.48 (1.51)	−2.02 (1.47)	−1.67 (1.51)	−0.42 (1.41)	−1.27 (1.49)	−0.59 (1.80)	0.16 (1.49)	−1.95 (1.47)	2.02 (2.18)	−1.05 (1.58)	−1.30 (1.54)
Adversity											
Any Discrimination		6.82** (1.90)									
Events/Years in U.S.			11.29† (6.61)								
Social Support											
Family Support				−6.69** (1.45)							
Friend Support					−1.95* (0.96)						
Acculturation											
English Language Interview						−2.11 (1.97)					
American Identity							−7.25** (1.54)				
Ethnic Identity								−4.22† (2.18)			
Migration Age 18+									5.18* (2.39)		
Pre-Migration Factors											
Prior Disorder Onset										4.53 (3.30)	
Events/Years in Cuba											16.98† (9.49)
Constant	20.70** (4.40)	12.18** (4.25)	18.23** (4.32)	37.89** (6.21)	25.68** (5.212)	22.35** (4.95)	23.06** (4.35)	20.55** (4.23)	22.55** (4.47)	20.08** (4.38)	19.65** (4.50)
R-squared	0.07	0.14	0.09	0.19	0.09	0.08	0.18	0.10	0.09	0.08	0.09

Note: All models control for disability status, age, gender, educational attainment

Robust standard errors in parentheses;

**
p<0.01,

*
p<0.05,

†
p<0.1

Table 3

OLS Coefficients of Anxiety Regressed on Adversity, Social Support, Acculturation-Related Factors, and Pre-Migration Factors (Cuban Immigrants; N=191)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Earlier Arrivals	-1.29^* (0.61)	-1.52^{**} (0.58)	-1.40^* (0.59)	-0.86 (0.53)	-1.21^* (0.60)	-0.90 (0.70)	-0.75 (0.58)	-1.45^* (0.59)	-0.41 (0.85)	$-1.03^†$ (0.59)	$-1.20^†$ (0.62)
Adversity											
Any Discrimination		2.99^{**} (0.55)									
Events/Years in U.S.			6.60^{**} (2.50)								
Social Support											
Family Support				-2.70^{**} (0.46)							
Friend Support					-0.78^* (0.35)						
Acculturation											
English Language Interview						-0.91 (0.71)					
American Identity							-2.37^{**} (0.52)				
Ethnic Identity								-1.50^* (0.61)			
Migration Age 18+									$1.30^†$ (0.77)		
Pre-Migration Factors											
Prior Disorder Onset										2.72^* (1.22)	
Events/Years in Cuba											$8.56^†$ (4.39)
Constant	10.12^{**} (1.41)	6.38^{**} (1.35)	8.67^{**} (1.52)	17.07^{**} (2.02)	12.09^{**} (1.67)	10.82^{**} (1.57)	10.89^{**} (1.35)	10.06^{**} (1.36)	10.58^{**} (1.40)	9.74^{**} (1.41)	9.58^{**} (1.46)
R-squared	0.14	0.25	0.18	0.29	0.16	0.14	0.23	0.16	0.15	0.17	0.17

Note: All models control for disability status, age, gender, educational attainment

Robust standard errors in parentheses;

**
$p<0.01$,

*
$p<0.05$,

†
$p<0.1$

Table 4

OLS Coefficients of Self-Esteem Regressed on Adversity, Social Support, Acculturation-Related Factors, and Pre-Migration Factors (Cuban Immigrants; N=191)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Earlier Arrivals	1.47* (0.72)	1.67* (0.72)	1.42* (0.71)	0.83 (0.66)	1.28† (0.68)	0.85 (0.88)	0.88 (0.76)	1.66* (0.72)	−0.19 (1.00)	1.62* (0.75)	1.50* (0.71)
Adversity											
Any Discrimination		−2.58** (0.53)									
Events/Years in U.S.			2.89 (2.03)								
Social Support											
Family Support				4.02** (0.49)							
Friend Support					1.75** (0.40)						
Acculturation											
English Language Interview						1.45† (0.77)					
American Identity							2.58** (0.65)				
Ethnic Identity								1.75** (0.63)			
Migration Age 18+									−2.45** (0.91)		
Pre-Migration Factors											
Prior Disorder Onset										1.63† (0.95)	
Events/Years in Cuba											2.68 (3.11)
Constant	27.13** (1.73)	30.36** (1.90)	26.50** (1.87)	16.80** (2.06)	22.66** (1.79)	26.01** (1.77)	26.29** (1.79)	27.19** (1.75)	26.26** (1.75)	26.91** (1.78)	26.97** (1.73)
R-squared	0.10	0.17	0.11	0.37	0.21	0.11	0.19	0.13	0.13	0.11	0.10

Note: All models control for disability status, age, gender, educational attainment

Robust standard errors in parentheses;

**
$p < 0.01$,

*
$p < 0.05$,

†
$p < 0.1$