

Migration and Mental Health: the immigrant advantage revisited

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Abstract

Mexican immigrants systematically exhibit better mental health than U.S. born residents, including those with Mexican heritage. The robust finding is often attributed to the healthy migrant hypothesis. This argument, however, falsely presumes that the Mexican and U.S. populations have similar mental health traits. In this paper, we examine a nationally-representative sample of Mexicans before they leave Mexico and after they arrive in the United States. Tests of within-person change allow us to assess 1) how migrants are selected on mental health and 2) how the process of migration changes mental health. We pay particular attention to gender differences in these processes. Our findings contradict the positive welfare interpretation of the mental health advantage observed among migrants. We observe that migration actually worsens the mental health of migrants and more so among women. We find no evidence of positive selection on mental health, further countering the “healthy migrant” hypothesis. Gender differences are discussed in the context of literature on migrant welfare.

Background

Following the dramatic rise in Mexico-U.S. migration in the 1980s and 90s, health researchers focused considerable attention on the characteristics that distinguish foreign-born Mexican immigrants from U.S.-born residents. A large body of research identified a robust physical health advantage across a number of domains, including mortality, birthweight, self-rated health, and physical growth (Palloni and Arias 2004; Goldman et al. 2006, Abraido-Lanza et al. 1999, Singh and Barry 2004). This scholarship is often bundled with the terms “Latino health advantage” or the “Hispanic paradox” -- the latter emphasizing the surprising nature of these health patterns in light of observed economic constraints (Buttenheim et al. 2010; Goldman et al. 2006).

A newer line of inquiry considers whether this advantage extends to mental health profiles. And indeed, nearly every population-representative data set in the U.S. indicates a strong advantage among Mexican immigrants on measures of depression, anxiety, and other psychiatric disorders (Alegria et al. 2008, Breslau et al. 2008, Ortega et al. 2000)¹ The comparison is particularly striking when focused on native-born Americans of Mexican origin (Vega et al. 1998). Akin to the broader scholarship on the Hispanic paradox, scholars regularly point to the “healthy migrant theory,” to help

¹ These findings hold across the National Comorbidity Survey, the National Latino and Asian American Survey, the Epidemiological Catchment Area Survey, the National Epidemiological Survey of Alcohol and Related Conditions, and the Mexican-American Prevalence and Services Study.

explain these patterns (Burnam et al. 1987, Grant et al. 2004). That is, either good mental health, or characteristics which predict good mental health, are necessary to successfully migrate to the U.S.

Problematically, the vast majority of current research on migrant mental health relies upon cross-sectional U.S. data to make these assertions.² As a result, our understanding of migrant mental health is limited in several ways. Properly assessing the healthy migrant hypothesis requires a comparison between migrants and non-migrants in Mexico and this comparison should be made *prior* to migrant departure. Observing an advantage among a migrant group and attributing it to positive selection presumes that the Mexican and U.S. populations have similar distributions of mental health characteristics.

Second, most major data sets in the U.S. undersample undocumented migrants and as a result, little systematic research on the mental health of this population exists (Sullivan and Rehm 2005). Yet, the undocumented population comprised, at minimum, half of the movement between Mexico and the U.S. in the 2000s (Passel and Cohn 2011).

Third, and perhaps most importantly, the *process* of migration is unlikely to be neutral with respect to effects on mental health. Theories of mental health, including those emphasizing stress, family disruption, social support, discrimination, and role ambivalence suggest that new migrants are at increased risk for compromised mental health (e.g., Finch, Kolody, and Vega 2000, Grzywacz et al. 2006, Sullivan and Rehm 2005, Vega, Kolody, and Valle 1987). An observed advantage relative to native born U.S. residents is insufficient and potentially misleading information for assessing the well-being of this population.

Our research fills these gaps by studying mental health using a novel, nationally-representative sample of Mexican households that includes assessments of migrant health collected in Mexico before departure and in the United States after migration. We examine selection into migration on indicators of mental health – as well as selection on the correlates of mental health. Then, adjusting for this selection process using within-person temporal comparisons, we estimate the effects of migration on mental health trajectories.

The inquiry is valuable for several reasons. By analyzing selection into migration with a prospective survey, we are able to appropriately test the healthy migrant theory and thereby shed light on the origins of the immigrant mental health advantage observed in the U.S. By analyzing how mental health *changes* in the process of migration, we complement existing research measuring the broader effects of Mexico-U.S. migration flows. That is, research increasingly emphasizes the effects of migration on sending and receiving communities; yet because of the dearth of bi-national longitudinal data, we have little research about the effects of migration on migrants themselves. Poor mental health is a particularly worthy outcome of study, as it is a strong predictor of lowered productivity among adults and worse nutrition and education outcomes of their children (Campbell et al. 2007, Das et al. 2007, Greenberg et al. 1999). Finally, understanding these effects help us contextualize the welfare interpretation of the migrant mental health “advantage”; in the presence of declining health, the wellbeing of this marginalized population warrants further attention.

Data and Method

Data for the study come from the Mexican Family Life Survey, a nationally-representative, longitudinal household study in Mexico. The survey was first fielded in 2002 and interviewed members of 8,400 households in 150 communities. In 2005, over 90% of households were successfully followed, with

² For a notable exception, see Breslau and colleagues’ research (2011) which adds cross-sectional data from Mexico to compare disorder prevalence.

concerted efforts to track migrants into the United States. Despite a high proportion of unauthorized movement among migrants, 90% of those in the U.S. at the second wave were successfully located (Rubalcava and Teruel 2008).

The MxFLS combines rich individual, household, and community level socioeconomic, health, and demographic information. In both 2002 and 2005, a mental health module collected data from all adult respondents (ages 15 and older) on 21 depressive symptoms. These questions capture various elements of distress, including sadness, loneliness, and fear; the exhibition of physical symptoms such as headache; and feelings of pessimism, uselessness, and a wish to die. Together, the symptoms can be combined into a scale that has been validated against other mental health inventories in Mexico (Calderón 1997), and has been used in several studies of mental health in Mexico (e.g., Das et al., 2007).

Of the 21 indicators, two items alone explain over 50% of the variation in the depression scale responses in the 2002 data. These are the frequency with which respondents express feeling “tired of life” and “a wish to die.” As such, the 2005 MxFLS U.S. survey asked migrants to report on these particular indicators of psychological well-being. Thus, along with the full depression scale, these indicators are the focus of this study.

Our analytical approach proceeds in four steps. We begin by regressing emigration (θ) between 2002 and 2005 on indicators of mental health (MH) measured in 2002, adjusting for age (eq. 1).

$$1. \theta_{2002-2005} = \alpha + \beta MH_{i,2002} + \gamma A_{i,2002} (+ \sum \delta' C_{ihc,2002}) + \varepsilon$$

A significant β estimate indicates that migrants are positively or negatively selected on depressive symptoms. If this finding persists in the presence of controls that likely drive both mental health and emigration (C_{ihc} , such as gender, wealth, family structure, and region of origin), it provides evidence that selection occurs on *mental health itself*, versus the correlates of mental health.

We then estimate the effect of migration on depressive symptoms. To improve the interpretation of these estimates as causal effects, we develop a set of individual-level fixed effect regressions using pooled 2002 and 2005 data (eq 2). The fixed effect (μ_i) adjusts for all time-invariant confounding characteristics, whether or not they can be observed. This is particularly important in the presence of a self-reported outcome; any enduring person-specific response bias is also removed from these estimates. The specification is substantively identical to a first-differenced regression; the estimate of interest is thus the coefficient on the interaction between the measure of emigration status (E_i) and the dummy indicating the 2005 survey wave (S_t). The MxFLS data allow us to adjust for a number of time-varying covariates (C_{ihct}) in these regressions as well.

$$2. \beta_{it} = \tau S_t + \rho(E_i * S_t) + \sum \delta' C_{ihct} + \mu_i + \varepsilon$$

Third, we test theories of differential acclimation by examining heterogeneity in these findings across employment status, social networks, duration of movement, and family living arrangements – these measures are collected both in the U.S. and in Mexico in 2005.

Finally, using data on migration intentions collected in the first wave and on the mental health of *returned* U.S. migrants in the second wave, our analysis concludes with tests of possible threats to the causal interpretation of the findings (For example, if the observed effect is purely a function of temporary mood elevation resulting from anticipating migration, we should observe a mental health advantage among those *intending* to migrate).

Preliminary Findings

Between 2002 and 2005, 4% of the adult population migrated to the United States. Coefficients estimated on the depressive symptom indicators are shown in Table 1. We find no evidence of positive selection on mental health. In fact, female migrants may be *more* likely to exhibit depressive symptoms relative to female non-migrants. These findings persist when controls for a number of demographic and socioeconomic measures are introduced into the specifications (results not shown). The data thus indicate little support for the healthy migrant theory.

When we examine the effect of migration on migrants (Table 2), we find no effect on expressions of a wish to die. By contrast, we observe significant and large increases in the frequency with which men and women experience feeling “tired of life.” Notably, the estimate for women is substantively larger than that for men. In combination, the results point to a more complicated and concerning profile of mental health among Mexican immigrants than is typically described in population research on migrant mental health. Our subsequent work will elaborate on these findings.

Table 1. Selection into U.S. Migration, Mexican adults 2002-2005

Covariates, 2002	Rural		Urban		All
	Males	Females	Males	Females	Adults
<i>Age-Adjusted Coefficients on:</i>					
Depression Index	0.000 [0.000]	0.001 [0.000]	0.000 [0.000]	-0.000 [0.000]	0.000 [0.000]
Tired of Life	-0.006 [0.016]	-0.006 [0.009]	0.013 [0.014]	-0.006 [0.004]	-0.000 [0.005]
Wish to Die	0.013 [0.034]	0.044* [0.022]	-0.006 [0.018]	-0.009 [0.006]	0.005 [0.008]
<i>Observations</i>	2,521	3,274	3,346	4,321	13,462

*p<0.05 Source: Mexican Family Life Survey, 2002 and 2005 waves

Table 2. Estimates of individual-level change in expressions of depressive symptoms based on migration status, Mexican adults 2002-2005

Comparison with change in outcomes among those who stayed in Mexico	Wishing to die	Feeling tired of life
<i>All Adults</i>		
Migrants in the U.S.	0.006 [0.030]	0.111* [0.051]
<i>Rural Males</i>		
Migrants in the U.S.	-0.009 [0.018]	0.156* [0.063]
<i>Rural Females</i>		
Migrants in the U.S.	-0.111 [0.111]	0.268* [0.108]
<i>Urban Males</i>		
Migrants in the U.S.	0.041 [0.031]	-0.008 [0.075]
<i>Urban Females</i>		
Migrants in the U.S.	[0.060 [0.073]	0.106 [0.083]

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