Health and Migration Within and Across Borders:

A Longitudinal Study of Mexican Internal Migrants and Return US Migrants

Extended Abstract

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Paper submission for the
Population Association of America Annual Meeting
2019

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ABSTRACT

This paper investigates the relationship between migration and health across two migratory streams originating in the same country. Focusing on the case of Mexico, the goals are two-fold: The goals of this paper are two-fold: (1) identify health selection effects among internal and return US migrants compared to non-migrants, and (2) examine the effect of internal and international migration on health. Using longitudinal data from the Mexican Family Life Survey, I estimate linear growth curves to assess migrants' and non-migrants' initial health status and changes in health over time. The outcome is overall health, measured by self-rated health. Preliminary results reveal that the migration-health relationship operates differently based on destination. Return US migrants exhibited positive health selection relative to their non-migrant counterparts and experienced health deterioration after migration. Internal migrants, on the other hand, were not significantly different from non-migrants in initial health or changes in health over time.

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STATEMENT OF RESEARCH QUESTIONS

Two themes tend to dominate migrant health research: health selection effects and migration effects (Jasso 2013). The question about selection is primarily concerned with positive or negative selection on health across different migration streams (Jasso et al. 2004; Lu and Zhang 2015; Palloni and Morenoff 2001). The question about migration effects is concerned with migrants' health trajectories (Jasso 2013)—namely, whether their health improves or deteriorates (or stays the same) following the migratory move (Anglewicz et al. 2017; Goldman et al. 2014; Nauman et al. 2015; Spallek, Zeeb, and Razum 2011).

The answers to these questions depend largely on the study population, but also on where individuals they migrate to. Domestic and international movements tend to be studied separately, each with different literatures and analyzed using different theoretical and methodological frameworks (De Jong et al. 1983; King and Skeldon 2010). Considering only one type of migration, however, "is to look at only one part of the story, and results in a partial and unbalanced interpretation" (King and Skeldon 2010:1640). Prior studies suggest that, overall, the relationship between internal migration and health operates in similar ways as that of international migration and health (Chen 2011; Lu 2008, 2010; Nauman et al. 2015; Tong and Piotrowski 2012). However, internal and international migration streams originating in the same country tend to draw from different sectors of the population (Quinn and Rubb 2005; Sobrino 2014), and thus selection mechanisms and migration effects might operate differently.

In this paper, I study the reciprocal relationship between migration and health across two migratory streams originating in Mexico. The goals of this paper are two-fold: (1) identify health selection effects among internal and return US migrants (relative to non-migrants), and (2)

examine the effect of internal and international migration on health by comparing data from before and after migration.

DATA AND METHODS

Prospective data from the Mexican Family Life Survey (MxFLS) allow me to examine these issues in a methodologically appropriate way (Anglewicz et al. 2017; Goldman et al. 2014). The MxFLS is a nationally representative longitudinal survey of the well-being of individuals and families in Mexico (Rubalcava and Teruel 2006a, 2013, 2006b). Panel respondents were interviewed at three time points between 2002 and 2012. The MxFLS includes detailed migration histories, as well as repeated measures on a variety of social, economic, and household indicators. For the purpose of this study, I restricted the analyses to individuals age 15-50, as both internal and international migration in Mexico are concentrated within this age range. The analytical sample includes data on 12,537 respondents who participated in the first wave of data collection, had complete migration histories, and complete data in key variables.

Migration status was constructed using migration history data collected at each follow-up interview. Respondents were asked: “Since [year of last interview] have you moved for a year or longer outside of the locality/neighborhood where you used to live?” If they answered “yes”, respondents were then asked to list all the places where they lived, both within the country and internationally. Using this information, respondents were coded as *return migrants* if they migrated to the US and returned to Mexico between interviews, *internal migrants* if they migrated within the country at any point between interviews, or *non-migrants* if they remained in their community of origin at all times during the same timeframe.

The outcome of interest is overall health, measured by self-rated health. This measure is useful when studying populations that do not have widespread access to health care services (Wong, Peláez, and Palloni 2005), as is the case of most rural, migrant-sending areas in Mexico.

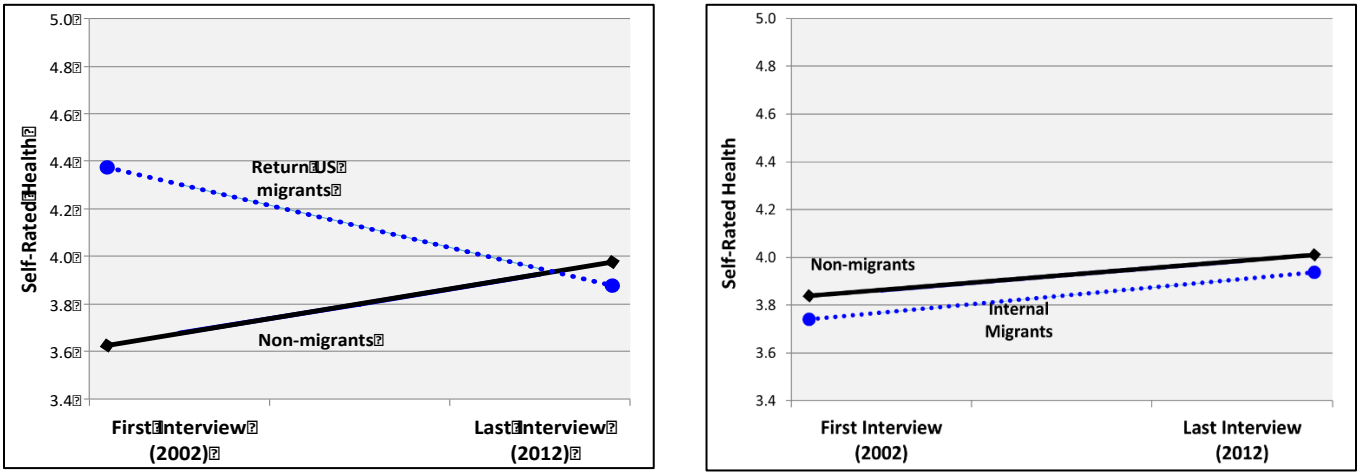
Another advantage is that self-rated health measured over time is able to capture continuous and underlying changes in health that may occur before the emergence of a disease or a functional loss (Shaw and Krause 2002). Because the decision to migrate is not random, I adjust for personal (gender, indigenous status, age, marital status, and children in the household), socioeconomic (education and employment), and migration capital (having migrant family members and from traditional migrant-sending state) variables related to selective out-migration and that also shape health outcomes. Following prior longitudinal studies on racial/ethnic and immigrant health disparities (e.g., Gubernskaya 2015; Warner and Brown 2011), I include two additional control variables to correct for biases related to differential attrition and mortality: the number of measurement waves completed and whether they died during the study period.

Using this data, I will first estimate baseline descriptive statistics and compute two-tailed t-tests and chi-square tests to assess significant differences in the means and proportions for migrants and non-migrants. Next, I will estimate a series of individual growth curves within a linear mixed model (i.e., multilevel) framework in order to model initial health (before migration, measured at the first interview) and to assess if changes in self-rated health over time (from the first to the last interview) were related to changes in migration status. I will estimate separate models for return migrants vs. non-migrants and for internal migrants vs. non-migrants to adjust for the different factors that shape each migrant flow.

PRELIMINARY FINDINGS

Below I summarize the preliminary results for the linear growth curves modeling initial self-rated health and changes in self-rated health over time. Using the coefficients from the models and for ease of interpretation, Figure 1 presents the predicted self-rated health trajectories of return migrants vs. non-migrants (panel A) and internal migrants vs. non-migrants (panel B).

Figure 1. Predicted Self-Rated Health Trajectories for (A) Return US Migrants and (B) Internal Migrants compared to Non-migrants



A) Return US Migrants

B) Internal Migrants

Overall, findings reveal different health patterns for Mexican return and internal migrants. As illustrated in panel A of Figure 1, at the time of the first interview (before migration), return migrants reported better self-rated health than non-migrants, which provides support for the healthy migrant hypothesis. However, as shown by the negative slope, returnees exhibited an accelerated negative change in health over time relative to non-migrants. By the time of the last interview (after migration), return migrants reported worse health than their non-migrating counterparts. Non-migrants experienced positive changes in self-rated health during the same period of time. This second finding is consistent with prior studies that have found patterns of health deterioration following US migration and return to Mexico (e.g., Goldman et al. 2014; Montes de Oca et al. 2011; Riosmena, Wong, and Palloni 2013).

On the other hand, I found no evidence of health selection or of migration effects on health among internal migrants. As illustrated in panel B of Figure 1, there were no significant differences between internal migrants and non-migrants in initial health and their health trajectories were similar over time. Overall, both groups experienced health improvements during the study period and a comparable degree of change.

Taken together, these findings reveal that the relationship between migration and health varies based on the destination. One explanation could be that the health risks of internal migration are much lower than those of US migration. Indeed, prior research suggests that health deterioration among return US migrants experience is related to adverse experiences during the migration process, in the immediate post-migration stage, and as they try to reincorporate to Mexican society upon return (Goldman et al. 2014; Montes de Oca et al. 2011). An additional explanation could be related to the different skill levels and types of occupations held by these migrant groups. Mexican migrants in the US tend to work in unskilled occupations that require good health and that are physically taxing, such as agriculture and construction (Massey, Durand, and Pren 2016; Velasco-Ortiz 2014). Mexican internal migrants, on the other hand, have higher levels of education than migrants to the US and tend to work in higher skilled and less physically intensive jobs (Quinn and Rubb 2005; Villarreal 2016).

The extent to which this is true will be further explored in this paper through secondary analyses to examine if the internal migration-health relationship operates differently for low-skilled vs. high-skilled migrants. College-educated Mexicans are the most likely to relocate domestically (Romo Viramontes, Téllez Vázquez, and Ramírez López 2013), but there is also an important presence of low-skilled migration within Mexico (Pérez-Campuzano and Santos-Cerquera 2013). Low-skilled internal migrants may face more health risks such as carrying heavy loads, exposure to toxic substances, and working long hours (Benach et al. 2011), and thus may exhibit patterns similar to those found among return migrants.

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