

# Mothers Left Behind: The Impact of a Child's Migration on Maternal Mental Health

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## *Background*

The Mexico-U.S. migration corridor is the largest in the world with around 11.5 million documented and undocumented Mexican immigrants crossing the border and residing in the U.S (American Community Survey, 2013). There is a vast literature that indicates that migration decisions trigger the reorganization of roles within the family (Falicov, 2007; Alegría et al., 2007; Coll & Magnuson, 2014). As a result, the emotional stress of those who stay and those who leave has been documented to be associated with these family transitions. In particular, the absence of a migrant has been compared to the one experienced by spousal separation or the death of a family member (Slone et al., 2006; Cooper et al., 2009; Osborne et al., 2012; Avison et al., 2007).

Literature that explores the effect of migration of a child over the health of parents has yielded conflicting findings, resulting in a divide between a support and abandonment hypothesis. On one side, offspring migration can improve the support received by parents if they send remittances and improve the economic well-being of the household (Abas et al., 2009; Chen et al., 2005; Knodel & Ofstedal, 2002). On the other, the second hypothesis argues that migration can hamper support networks for parents that have depended on their children for economic or emotional support (Antman, 2010; Kanaiaupuni, 2000; Levkoff et al., 1995). The aim of this work is to analyze the impact that migration of a child to the U.S. has over the mental health of the mother that stays in Mexico. The hypothesis is that mothers, in general, are emotionally vulnerable to the separation and the uncertainty inherent in migration decisions.

## *Data and methods*

We use data on 4,468 mothers from the first (2002) and second (2005-2006) waves of the Mexican Family Life Survey (MxFLS). The MxFLS is a longitudinal survey that is representative at the national, urban-rural and regional level in Mexico. The survey design is very convenient to answer our research question for several reasons. First, being a nationally representative survey, the MxFLS allows us to examine the impact of migration decisions on those who stay at a population level. Second, the survey is unique in the sense that it follows individuals across waves independent of their location, even baseline household members who decide to migrate to the US. That gives us the certainty that the child that left the household is indeed in the United States. Third, the MxFLS has an extensive questionnaire on mental health that allows us to identify changes in the emotional well-being of those mothers who stayed in Mexico before and after their child decision to migrate to the U.S., which helps us to identify better the causal effect. The mental health module gathers 21 questions that capture different dimensions of emotional well-being. The questionnaire has been validated to reflect the mental health conditions for the Mexican

context accurately. Finally, MxFLS includes a rich set of socioeconomic, demographic and health characteristics of the Mexican population used as controls.

There are several challenges associated with our intended objective. The most important methodological one is accounting for the possible reverse causality of child migration decisions in investigating its effect on the mother's emotional well-being if, for example, the child's decision to move to the U.S. is a response to the mother's mental state. *A priori*, the way that maternal mental could impact her offsprings' decision to migrate is unknown: offspring could accelerate their decisions to migrate to help pay for his/her mother's medical needs; alternatively, her child could delay planned migrations to be able to take care of her. Moreover, the child's decision to migrate and the mother's mental health could be correlated with unobservable heterogeneity. The presence of unobservable spurious correlation is a problem on causal estimation. For example, the economic environment or the perception of insecurity in the community are factors that can simultaneously influence the mental health and the migration decisions of those living in these communities.

To overcome these potential problems in identifying the effect of the impact of a child's migration decision on his or her mother's mental well-being, we use a difference-in-difference estimation approach. This is possible because we have mental maternal health measures before and after the child's decision to cross the U.S.-Mexican border. The difference-in-difference approach helps us to eliminate any spurious unobserved heterogeneity that could cloud our causal interpretation. Fixed effects control for the possibility that the mother's emotional state could affect her children's migration decision. Given that there still exists the possibility that the degradation (and not the level) in her emotional health is the one that influences the migration decision, we use a difference-in-difference estimator with instrumental variables that are correlated with the child's decision to migrate but not to the mother's change in mental health after controlling for unobserved fixed effects.

As instruments, we use historical migration rates during the peak of the second Bracero program (1955-1959). Historical migration rates were the result of the gradual construction of the train system in Mexico and the labor demands from the U.S. halfway through the 20<sup>th</sup> century (Massey et al., 1994) and the origin of today's migration networks of local communities in Mexico. Consequently, these rates have been found to be a good predictor of actual migration (McKenzie & Rapoport, 2011). An argument against using historical rates as instruments is that, by being a proxy for contemporaneous migration networks, they could be related to the mother's emotional state. Several authors have found a high prevalence of depression symptoms in traditionally migrant communities of those who stay (Aguilar-Morales et al., 2008; Aguilera-Guzman et al., 2004; de Snyder, 1993). However, this is not a concern given that our diff-in-diff approach controls for fixed effects, and because there is a low probability that ancient migration relates to contemporaneous shocks in migration tendencies.

## *Results*

We find preliminary evidence that a child's decision to migrate to the U.S. significantly increases the emotional stress of the mother who stays in Mexico. Specifically, mothers that face the absence of their child report an increase in the probability of having headache problems, the probability of waking up with fear, losing interest in things, and feeling more frequently tired and pessimistic as opposed to their emotional state before their child's departure.

Finally, we investigate whether the change in the mother's emotional well-being, as a consequence of her offspring's departure, is of different magnitude depending on the mother's age, on whether her spouse is present in the household before and after the child decided to migrate, and on whether the migrant is her daughter or son. We do not find a differential effect on maternal changes in mental health related to her child's gender. However, we find younger mothers are more sensitive to their offspring's absence. Finally, our results show that the child's decision to migrate affects the emotional stress on both on mothers with and without a spouse present in the household. In both cases, the maternal emotional stress deteriorates, but it is reflected in different symptoms. Mothers that live with their spouse (before and after the child leaves) report more frequently to feel tired than they did before, something that probably related to an increased domestic workload (Powers & Wang, 2014). On the other, for those mothers whose spouse is not present, their mental health deterioration is additionally manifested with a decrease in their sexual interest.

### *Contributions and Implications*

This study makes several contributions to the literature. First, by using an I.V. diff-in-diff approach, we overcome potential endogeneity problems present in previous research, and that may confound the true effect of household members' decisions to migrate on the emotional stress of those who are left behind. Second, our results are representative of the Mexican population. Third, the measure of mental health throughout 21 stress-associated symptoms provides a more robust picture of the size of the effect as opposed to relying on a simple question that captures the self-reported general health status of those who stay, as previous related literature has typically used. Finally, these work questions the idea that families in Mexico always benefit from having a migrant family member. Our results provide evidence that the burden on the mental health of those who stay as a consequence of those who decide to migrate is broadly present at the population level and consequently may be a potential public health concern.

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