Families Across Borders:
The Effects of Migration on Family Members Remaining at Home*

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Running Head: Families Across Borders

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Abstract

This paper examines the effects of migration on the well-being of migrants' family members remaining in the country of origin. Previous literature discusses the processes of family separation and adaptation to new roles as being very trying for immigrants in host countries, but very few studies address the effects of migration on non-migrants. The process of migration, however, is a transnational phenomenon that has profound effects on the lives of migrants' family members remaining at home. Members of transnational families remain linked to one another and experience the process of migration on both sides of the border. I use the Mexican Family Life Survey to empirically assess the effects of migration on the emotional well-being of migrants' family members. Results indicate that the migration of close family members, especially spouses and children significantly increases the depressive symptoms and feelings of loneliness reported by family members remaining in Mexico.

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Overview

International migration has the potential to stretch families across vast geographic spaces. Despite these distances, communication technology helps families remain linked as social units within a transnational space. Familial links sustained across borders, however, do not provide equal substitutions for the physical presence of family members within households. Familial separation may profoundly influence the roles, support structures, and responsibilities of transnational family members resulting in changes in psychological and emotional stress levels for all family members.

The separation of family units resulting from migration induces stressors that affect the emotional well-being of both migrants and their family members. A burgeoning literature on migration and mental health explores psychological effects of migration on migrants in host countries. Very little research, however, has addressed the psychological costs of migration on the family members of migrants that remain at home. I fill this gap in the literature by focusing on the effects of migration on the emotional well-being of migrants' family members remaining in their countries of origin.

Since close to 10 percent of the Mexican population resides and works in the United States (Chiquiar and Hanson 2005: 241, Latapi 2004), the effects of emigration influence numerous public, private, national, regional and local institutions in Mexico (Smith 2005). Familial separation is standard in what researchers are increasingly referring to as "a culture of migration" within towns that have high and sustained rates of out-migration (Kandel and Massey 2002). With so many families spanning two countries, repercussions

of migration resound in both the home and host communities. Because the emotional well-being of a migrant's family has the potential to affect the mental health of the migrant, investigating the effects of migration on non-migrants completes the exploration of the entire transnational space and is an invaluable addition to this body of literature.

Familial Involvement in Migration Decisions

Individuals migrate for a variety of reasons including individual level motivations and familial strategies. Although individuals' migration decisions often occur within the context of social networks, much immigration theory and policy is based largely on a neoclassical model of cost benefit analyses that focuses upon the risks and costs of crossing the border, wage differentials between the home and potential host countries, the probabilities of employment in the home and host countries, and the psychological costs of migrating (Todaro and Maruzko 1987, Massey et al 1993, Espinshade 1995). Neoclassical models of migration examine patterns of individual assessments that ultimately result in a rational decision to migrate permanently.

Without negating the importance of the individual as put forth in the neoclassical model, the new economics of migration model (NEM) expands upon the neoclassical model by examining migration patterns, and analyzing how market conditions in the home and host countries effect familial or household decision making. (Lauby and Stark 1988, Massey et al. 1993, Espinshade 1995, Durand et al. 1996, Taylor 1999). According to NEM theory, families respond to failures in market protections, such as a lack of insurance against economic shocks or natural disasters, by sending one or more family members to a different country or region to work in an industry that does not face the same threats or offers more protection against economic threats. Additionally, migration

decisions emerge as a means to get around market failures that impede people's access to credit. Higher wage opportunities in destination communities allow individuals to save money toward investments in their home communities, and send remittances back to their families. Finally, NEM situates familial or household units within communities, and discuses relative deprivation and income disparities as motivating factors that increase the chance of migration.

According to NEM, income disparities between countries and within communities promote migration (Stark and Taylor 1989, Stark and Taylor 1991, Massey et al. 1993). The NEM model of migration explains increases in out-migration by describing how families without migrant relatives witness the economic gains other families reap from migrant remittances. Although a household that does not send a migrant to the U.S. does not change its economic standing, its relative standing in comparison to migrant-sending households within the neighborhood decreases. The relative decrease in economic status, thereby, gives the household an incentive to engage in migration. By addressing familial strategies, NEM incorporates the importance of the household or family unit into the economic model of migration.

Critiques of NEM theory point out that family decisions are not always uniformly agreed upon by all family members, and that power structures within families may allow one member more control over family decisions than others. Patriarchal societies normalize practices that favor male household heads, and prioritize their decisions to migrate despite potential feelings of dissent on the part of their wives (Hondagneu-Sotelo 1992). Feminist critiques of NEM emphasize that family and household members do not necessarily act as a unified body, and that there may be dramatic differences in the

opinions of men and women within the household (Hondagneu-Sotelo 1992, Tilly and Scott 1987). By assuming a unified household decision, NEM does not acknowledge distinct priorities of different family members that frequently split along gender lines.

Consideration of family units within an influential community environment has entered into other migration theories such as cumulative causation and network theories of migration (Massey 1990, Palloni et al 2001, Singer and Massey 1998). According to cumulative causation and network theories, migration increases exponentially as it becomes more normative, and experienced migrants help facilitate the migration process. Cumulative causation theory posits migration streams sustain themselves once they become firmly established within a sending community. Clearly decisions to migrate, along with subsequent migration decisions after this initial one, are not made in vacuums. Furthermore, the effects of migration upon families and communities are felt long after the migrant leaves his or her home community.

Expected economic gains from migration will likely outweigh the potential psychological costs during the decision-making process, particularly in societies where migration is so prevalent that it has become a normative life event. Even in advanced market societies where additional income may not increase individuals' or families' chances of survival, or drastically alter the quality of their lives, the majority of individuals indicate that increases in pay will increase their life satisfaction. Additionally, individuals in market societies tend to pursue economic gain at the expense of family solidarity and personal intimacy (Lane 2000). In more dire situations where increased income is more of a necessity than a luxury, it is likely that economic influences will act even more persuasively on the decision-making process of migrants

and their families. Although potential migrant-sending families may anticipate the emotional costs of migration, this expectation may not lessen the importance of the financial motivation to migrate.

In contrast to neoclassical and feminist household models of migration, other models of migration do not address psychological costs, and instead focus more on cultural norms of migration. Theories of migration that are not based in rational choice models, such as cumulative causation and lifecourse migration models, focus on normative practices that occur within migrant-sending communities with strong network ties to migrant receiving communities abroad (Massey 1999). Migration in some communities becomes an expected rite of passage or transition into adulthood. Parents of migrants may experience less psychological distress if they regard the migration of their adult children as a normal event within this stage of life.

Migration likely results from a mix of the aforementioned theories as they differentially apply to individuals and their families in distinct life situations and communities. Migration, particularly international migration, may induce considerable stressors on both migrants and their family members. For migrants, international migration poses challenges in the forms of unfamiliar language, culture, foods, and daily interactions. Migrants' family members remaining in the country of origin must adapt to lengthy separations from their loved ones, and may have trouble relating to the new lifestyles of their migrant relatives. Conversely, migration may decrease familial stress by providing income for basic necessities, and occasionally removing hostile family members from immediate participation in family interaction.

Ideally families offer family members psychological and emotional support, nurturing environments, and social integration. Families, however, do not fit an ideal type and familial relations may be strained, or even hostile in more extreme circumstances. One study examined distinct familial situations in which the migration of fathers lead to improvements in the emotional well-being of remaining family members due to the disappearance of a hostile familial environment that dissipated with the migration of the father (Aguilera-Guzman et al. 2004). When migration is accompanied by the reduction in domestic violence or verbal abuse within the family, the separation of the family due to migration can actually decrease familial stress. Regardless of how, migration dramatically affects not only migrants, but their families as well.

The Role of the State in Influencing Migration Patterns

Sustained relations between migrants and their families have influenced immigration policy to emphasize family reunification. Since the end of the Bracero Program[1] and the creation of the 1965 amendments to the Immigration and Nationality Act, U.S. immigration policy has prioritized family members of U.S. citizens and legal immigrants. The 1965 amendments created quotas for immigrants from different regions of the globe, with preferential entry granted to immigrants with familial links to permanent U.S. residents, particular occupational skills, or humanitarian needs. Quota requirements initially only applied to regions within the Eastern Hemisphere, but similar numeric restrictions were placed on Mexican immigrants in 1968. Immigration policies further emphasize the importance of the family by allowing spouses, parents and

[1] The Bracero Program was a guest worker program that was enacted in 1942 in response to the labor market shortages brought about by WWII. From 1942 to its end in 1964, over 4 million Mexicans temporarily lived and worked in the US.

unmarried children of U.S. citizens into the U.S. without including them in the pool of immigrants allowed according to quota restrictions (Massey et al. 2002, Weintraub et al. 1997).

Despite the priority that U.S. immigration policy places upon family reunification, the waiting list for family members of legal U.S. permanent residents was over seven years as of March 2005 for Mexicans applying under the 2A family member qualifications (U.S. Department of State Visa Bulletin 2005). Although undocumented immigrants are not subject to legal waiting periods, Operations Gatekeeper and Hold the Line have made crossing the border a very difficult feat for an entire family to accomplish.

Literature indicates that Operations Gatekeeper and Hold the Line have led to longer stays of undocumented migrants due to the increased costs of border crossing and increased chances of apprehensions. Furthermore, because undocumented migrants are remaining in the U.S. for longer periods of time, they are increasingly bringing their spouses and children to the U.S. (Massey et al. 2002). While not countering this assertion, the difficulty of border crossing would greatly inhibit the migration of the entire extended family network of the undocumented migrant.

According to NEM theory, most international migrants do not intend to move permanently to their host countries. Migrants move to diversify their familial risks and save up enough money to invest in a house, land, or other capital upon returning to their home communities (Massey 1999, Massey et al. 1993, Massey and Espinosa 1997, Massey et al. 2002, Stark and Taylor 1989, Taylor 1999). Since their ultimate goal is to better their standing in their own countries, most migrants would not want to relocate

their entire families to the U.S. Migration intentions often change with extended amounts of time at the destination, but it would be highly unlikely that all or even most families would change their initial plans to move across an international border. Although some migrants opt to bring their families with them, many families remain in Mexico and endure the lengthy separations from their family members.

Stressors Affecting Emotional Well-being

Recent scholarly exploration identifies the family as a constantly changing entity without a traditional form, but stresses the influence of the family over individuals' economic and social status (Nicholson 1997, Midgley and Hughes 1997). Though families differ in form and size, Midgley and Hughes assert that families, as identified by the individuals within them, serve as "emotional and supportive network[s]" (1997:62). They place less emphasis on the form (whether nuclear or extended, blood-related or socially formed), and instead focus on the functions that families provide for their members. Serving as units of social and emotional support, families ideally protect their members from experiencing dramatic psychological distress brought about by stressful life events. Shifts in familial organization, however, disrupt familial functioning, and can add to the stress induced by difficult life events. I outline potential sources of stress specific to the process of migration below.

Separation: Studies linking stressful life events and depression have found significant correlations between reporting a separation from a significant person and depression. (Aguilera-Guzman et al. 2004, Maza 1997, Paykel 1970, Rodriguez et al. 2000, Suarez-Orozco et al 2002). Examining migrant families in the U.S., Suarez-

Orozco (2002) et al. focus on the issue of separation brought about by segmented, or stage migration. Stage migration refers to gradual a process of familial migration in which certain members of the family migrate first, and later send for their family members once they become established. Through their research with the Longitudinal Immigrant Student Adaptation Study, they found that adolescents who had experienced long periods of separation from their parents displayed higher levels of depressive symptoms than adolescent immigrants who were not separated from their parents, or who only experienced short periods of separation from their families. Suarez-Orozco et al. identified stage migration as particularly disruptive to adolescents who, in additional to adapting to a new lifestyle and culture, had to endure two sets of traumatic separations; first from their parents, and later from the people who became their primary caretakers during the time that they were geographically separated from their parents.

Family members of migrants that remain in their home countries do not suffer the strains of having to adapt to a new culture themselves, but they may still experience heightened levels of stress and depression due to the separation from their migrant family members. One study of Honduran transnational families stresses the importance of communication in maintaining family ties across borders, but provides ample evidence of stress that results from familial separation regardless of sustained communication (Schmalzbauer 2004). Although many respondents interviewed in the two year study discuss the economic benefits that in their minds outweigh the psychological and emotional costs of familial separation, others mention feeling abandoned or not understanding the reasons that their family members left without them. One respondent expressed jealousy of his younger siblings who migrated with their parents because they

were young enough to benefit from the education system in the U.S., while he was not. Although he understood the reasoning behind his parents' decision, he retained mixed feelings about the situation (2004: 1328). Another respondent expressed extreme sadness at the loss of family ties with her brothers in the U.S. She felt abandoned, rejected, and left behind (2004: 1324, 1328).

Other studies have highlighted spousal separation, in particular, as a stressful situation for migrants and their family members remaining at home (Hondagneu-Sotelo 1992, Rodriguez et al. 2000). In her ethnographic study of Mexican immigrant families, Hondagneu-Sotelo found evidence of severe strains resulting from husbands' migrations. The women in the study had since joined their husbands in the U.S., but many of them spoke of long periods of separation from their spouses prior to migrating themselves. Emphasizing the severe distress felt by some respondents in her sample, she states "Several women reported that they implored God to have the border patrol capture their husbands and send them back home" (Hondagneu-Sotelo 1992: 401). Most of the women in her study expressed emotions of sadness or loneliness in response to the migrations of their husbands, and for many women, it was their loneliness that led to their own decisions to migrate.

The dual identity of transnational migrants suggests that migrants do not leave their family members behind but instead maintain their ties and allegiances to their home countries. Much of the migration literature, however, refers to family members remaining in the home countries as "left behind" (Portes et al. 1999, Schiller and Fouron 1999, Schmalzbauer 2004, Vertovec 2004). The term "left behind" may be particularly inappropriate in the transnational literature that stresses the dual identity of migrants in

host countries. Furthermore, even in Mexican communities where migration is extensive, evidence indicates that while high migration rates increase the chances of wanting to work in the U.S., this correlation does not exist as clearly for a desire to migrate to the U.S. permanently (Kandel and Massey 2002). Thus, while the term "left behind" connotes a likelihood of forlorn family members longing to join their loved ones in far away lands, representative data has yet to substantiate this claim. The break-up of migrant families, however, causes stressors that affect the daily lives of both migrants and their family members.

Role Change and Role Addition: In addition to emotional strains resulting from familial separations, several studies of transnational families also address the stress that accompanies changes in familial roles (Hondagneu-Sotelo and Avila 1997, Schmalzbauer 2004, Aguilera-Guzman 2004). These studies adopt Patricia Hill Collins' phrase "other mothers" in referring to the stand-in females that take on the nurturing role in place of biological mothers who have migrated away from their families (Collins 1991). Adaptive behaviors are particularly salient for absent mothers, but every family member that leaves may perform roles that remaining family members assume once a family member migrates. After migrating, the main income earner may continue to provide the chief source of familial income through remittances, but this is not his or her only role within the family. Upon migrating, the other roles previously provided by migrants must be supplemented by non-migrant family members.

Adaptive behaviors of remaining family members may be disruptive for families, particularly when transmigrants return and reassume the roles that they used to play within the family. In her study of Honduran transnational families, Schmalzbauer

describes the return of one father whose young son refused to speak to him because he could not readjust to his father's presence. She describes this situation as "disruptive" to the entire household as everyone unsuccessfully attempted to resume their former roles and explain the role of the migrant to young children in the household (2004: 1325). Rifts in family relations between young children and their migrant parents have emotional repercussions that resonate throughout the entire family.

Adaptive roles to supplement the loss of migrant relatives occur within all households that have experienced the migration of a household member, but may be particularly stressful for mothers with dependents in the household (Aguilera-Guzman 2004, Maza 1997). Although they most likely filled the role of care taker before their husbands migrated, they now have the additional strain of fulfilling this role with out the emotional or physical support of the husband. The transfer of extra responsibility to remaining household members spreads beyond the "other mothers" to all members of the household. In one study of adolescents affected by paternal migration, additional obligations lead to increased stress among adolescents (Aguilera-Guzman 2004). This study not only addressed the additional tasks undertaken by the adolescents, but also discussed mothers who acted as both mother and father within in the home. According to the study, the adoption of additional roles was particularly stressful when new responsibilities crossed over traditional gender lines.

Breakdown of Support Structures: Research has shown social support, particularly in the form of close intimate relationships such as spousal relationships, to be a successful buffer against mental distress (Thoits 1995, Farrell and Barnes 1993). The separation of a close family member, thereby, may also signify the breakdown of an

individual's social support network. In the case of migration, the separation of migrants from their families is a stressful life event that severs the support network of both migrants and migrants' family members. The strain of migration, therefore, immediately highlights breakdowns in the support structure. Beyond the initial shock, however, daily life stressors may continue to cause exaggerated strain due to diminished support networks, particularly in the case of spousal migration. Studies examining migrants separated from their spouses and children indicate these individuals experience greater levels of depression than those who migrate with their families (Rodriguez et al. 2000, Aroian and Norris 2003). Most studies stress the primary importance of spousal relationships, but other relationships throughout the lifecourse differentially affect individuals' support structures. One study of adolescent reactions to the migration of fathers included a measure of social support regarding the absence of paternal advice and support (Aguilera-Guzman 2004). Adolescents may be more affected by the migration of one of their parents due to their daily reliance upon them. In contrast, the absence of parental support may be less dramatic for adults who are not as reliant upon their parents, but instead focus on spousal relationships. Other friends and relatives serve to buffer the effect of spousal separation, but these relationships are not as effective in providing outlets for support as this most intimate relationship (Cohen and Wills 1985, Thoits 1995).

Transnationalism and the Transnational Family

Although the data in this study do not allow for direct comparisons to families that have experienced the loss of a family member to internal migration, the militarization of the U.S. – Mexico border suggests that lengthened separations between undocumented

migrants and their family members in Mexico would lead to heightened stressors for families with international migrant family members. Even for legal immigrants with more opportunities to return home, cultural differences and potentially greater geographic distances would likely add more strain to familial interaction, and decrease the frequency of family visits. While I cannot definitively state that situations for families with international and internal migrants are distinct from one another, this paper deals exclusively with transnational families.

Though the concept of transnationalism is not a new phenomenon, current cross-boarder interactions are more immediate and enduring than previous communication and transportation technology allowed (Foner 2005, Glick-Schiller 1999). Portes et al. (1999) describe transnationalism in migrant communities in the United States and elsewhere as the increasing trend of people "speaking two languages, having homes in two countries, and making a living through continuous regular contact across national borders" (Portes et al. 1999: 218). In discussing transnationalism, Portes et al. argue for a more definitive use of the term to describe the phenomenon. They describe transnational activities as pertaining to frequent and sustained activities or occupations that span two countries and argue for the delineation of the unit of analysis as "the individual and his/her support networks," instead of larger transnational institutions that could also fall under the theoretical orientations of globalism. (Portes et al. 1999: 220).

Research on transnational communities has focused largely on ties to the home country within immigrant communities in host countries, without placing similar emphasis on the communities in the home countries that are equally entrenched in the transnational network (Castles 2002, Guarnizo et al. 2003, Portes 2003). Throughout this

paper, I examine transnational families throughout Mexico. I define transnational families as families with one or more relative living abroad in the U.S. Although this broad definition of transnational families includes families with more distant relatives in the U.S., the focus of my analysis surrounds close nuclear family relations.

While transnational literature examines migrants' dual identities in transnational social spaces (Pries 2001), most of the literature addressing individual reactions to migration has focused on the assimilation of permanent immigrants in the host country (Gordon 1964, Portes and Rumbaut 2001, Alba and Nee 2003). Transnationalism moves beyond assimilation theories to suggest sustained and active links between migrants and their support networks remaining in the home countries. Migration has become so prevalent in some communities that its effects are experienced almost equally by those remaining at home as by the migrants themselves (Massey and Kandel 2002, Smith 2006). The adaptation process thereby occurs not only for migrating individuals but also for their friends and families in their countries of origin.

Despite the recognition of the effects of migration on those remaining in the home country by some scholars, the majority of transnational literature continues to focus on the struggles and behaviors of transmigrants, or migrants who adopt dual identities reflecting both their home and host countries (Schiller and Fouron 1999, Castles 2002, Portes 2003, Pries 2004). Recently, however, transnational scholars have begun to address the effects of migration on the home country and community (Faist 2000, Kyle 2000, Vertovec 2004, Schmalzbauer 2004). Small qualitative studies addressing the effects of migration on family members remaining at home (Hondagneu-Sotelo 1992, Schmalzbauer 2004) have been very important in advancing an interaction between

family and transnational theories, but their small and non-representative samples cannot describe the diversity of the effects of migration on the families and communities that experience the loss of their members to migration. Small quantitative studies, however, provide very provocative and relevant theoretical starting points for further examination.

Analytic Model

Although I intend to move away from the image of "left behind" relatives, I expect to see some effects on the emotional well-being of individuals in Mexico with family members in the U.S. as compared to Mexicans without family members in the U.S. Separation of the family through the process of migration strains, reorganizes, and disrupts the family unit. Although my data include all blood relatives living in the U.S., my main analysis focuses on the kinship ties of nuclear family members including spouses, children, siblings, and parents. The model put forth in Figure 1 proposes that family separation due to migration affects the well-being of family members remaining in the home country (see Figure 1).

[Figure 1 about here]

I anticipate that having relatives in the U.S. will have some effect on the emotional well-being of non-migrants, but I do not expect this effect to be equally salient for all non-migrants with relatives in the U.S. I hypothesize that the effects of migration on emotional well-being will be dependent upon the type of relationship that the individual has with the migrant. Non-migrants with very close ties to migrants will suffer from the loss of such a close relationship. Furthermore, they will have to adapt certain behaviors to supplement the roles they used to play. I expect spousal relationships to

show the greatest effect of migration on emotional well-being and loneliness, followed by maternal and child-parent relationships.

Additionally, I hypothesize that as the migration rate within sending-communities rises, individuals coming from those towns will display lower levels of emotional well-being than those coming from towns with lower rates of out-migration. Despite normative influences of cumulative causation or lifecourse migration, I expect people remaining in "ghost towns" will respond to the emptiness not only within their families, but also within their towns.

I also expect the size of the family to affect depressive symptoms. Previous research indicates that family size has a curvilinear relationship to emotional well-being with too many family members indicating a negative relationship to well-being (Rodriguez et al. 2000). In contrast to providing additional social and emotional support, too many family members may serve to limit the availability of emotional resources for each individual within the household. Based upon previous research, I hypothesize that a household with more members up to a maximum of five members will serve to add additional support rather than drain resources. Numbers above five remaining household members may add strain to the family.

The type of family members remaining in the household also affects the adaptation process to the loss of family members due to migration. I hypothesize that respondents from transnational families with dependents at home will experience greater emotional impacts of migration due to the additional responsibility that they need to adopt while learning to cope without the support of a close family member.

Not only do I expect the number of people remaining in the household to affect the emotional well-being of migrants' family members, but also the number of migrant relatives per family. If several members of the family are in the U.S., those remaining in Mexico may experience negative repercussions family separation regardless of the size of their family (Schmalzbauer 2004). As some of the previous ethnographic studies indicate, relatives remaining in the home country may feel jealous of the opportunities given to their relatives. Conversely, they may be more able to cope with the separation if it is a normal experience, and if they understand the need for migration. Finally, I hypothesize that the effects of migration on emotional well-being will be strongest for women and adolescents as these groups have been shown to have higher levels of depressive symptoms than other members of the population.

Methodology

Data: The data I analyze for this study is from the first wave of the Mexican Family Life Survey (MxFLS-1). The MxFLS-1 is a household survey that is representative at the national, urban-rural and regional levels. The first wave of data was collected between April and July of 2002, and was released in 2004. The second wave of data is scheduled for release in 2007. Based on the methodology of the Indonesian Family Life Survey (IFLS), the MxFLS-1 adapts the design of the IFLS to a Mexican context. The survey uses a probabilistic multi-stage cluster design of 8,440 households within 150 communities located throughout Mexico. Within regions identified in the National Development Presidential Plan 2000-2006, the localities were chosen randomly. Within these localities, households were chosen randomly. Finally, the researchers

interviewed all household members ages 15 and older and conducted proxy interviews with parents of individuals younger than 15 within the sampled households. The qualification of being a household member is defined as any person who usually lives in the household regardless of blood or familial relations. For the purposes of this study, however, I have limited the analysis to family members within the household. The total number of individuals within the data set is approximately 38,000 including the approximately 19,800 interviewed respondents over the age of fourteen. Descriptive statistics of sex and the number of migrant relatives reported by the sample are presented in Table 1.

[Table 1 about here]

Because of the size and representative nature of the data set, it provides ample opportunity for rich analyses into the social, economic and demographic realms of Mexican life. Further, as the subsequent waves are collected, it will allow for more in depth analyses of migration patterns and effects that were previously limited in surveys such as Massey and Durand's Mexican Migration Project Survey (MMP). The MMP has greatly advanced the study of Mexican migration to the U.S., and this survey can expand upon the information garnered through that data set. Above all, the sampling design allows for high external validity as the data is representative of the entire domestic Mexican population and includes detailed information from interviews with all older adolescent and adult household members, as opposed to relying predominantly on male household heads.

Measures

Dependent Variable: The emotional well-being scale I use in this study comes from the 21 question emotional well-being section in the MxFLS-1 (see Appendix: Table 1). The questions in the survey come from a mental health questionnaire that was designed and tested by the Mexican Institute of Psychiatry to assess depressive syndrome among the Mexican population (Calderon 1997). Many of the elements within the Calderon Scale are common to other well known scales such as the CES-D scale, the MacMillian Health Opinion Survey, the SCL 90 Scale and the Langner Index Item Scale. The cultural sensitivity of the scale increases its validity for use within the Mexican population in particular.

Calderon (1997) describes the advantages of the scale in comparison to previously used scales such as the Minnesota Multiphasic Personality Inventory and Hamilton's and Zhung's scales. He points out that previous scales asked questions in various directions which often confused Mexican respondents, particularly those of low socioeconomic, and presumably educational, status. Further, he highlights a lack of symptoms within these scales that he finds particularly relevant to the Mexican population. He sites insecurities, neuroses, obsessive tendencies, and compulsive behaviors that affect appetite as missing from some or all of these surveys. Although the scale specifically measures depressive symptoms in the Mexican population, it was not designed to address the emotional repercussions of migration.

The emotional well-being section within the MxFLS-1 includes 21 questions, but only the first 20 were included in the original scale designed by Calderon. Although, the final question, "In the last 4 weeks, have you felt lonely?" was not included in the general depression scale, I plan to include it as a separate dependant variable because of its

relevance to the absence of family members due to migration. Furthermore, the CES-D scale uses this measure of loneliness to address depressive symptoms in the depressive affect sub-section of the scale (Radloff 1977, Ensel 1986).

In contrast to the question of loneliness, the question, "In the last 4 weeks, has your sexual interest decreased?" does not have a clear connection to the experience of separation from a family member due to migration. Moreover, because of its very personal nature and the option of refusal to answer, the answers to the question display lower levels of reliability than the other questions within the scale. Thus, I plan to exclude this question from the scale for this study.

Recent studies of depression scales have suggested that scaled down models more accurately depict depressive symptoms in the population (Perriera et al. 2005). In Perriera et al.'s study of the CES-D scale, they report that Mexicans, older individuals, and people of lower socioeconomic status are more likely to respond affirmatively to questions, thereby highlighting inconsistencies among respondents of different cultures. While this cross cultural confusion does not apply to the instrument used in the MxFLS-1, the unidirectional questioning for the Mexican population seems to be an improvement over other instruments.

Perriera et al. point to five main effect indicators in their reduced depression scale. Some of the indicators on their scale (depressed and sad) reappear in the Calderon scale. Others such as the statement, "You felt life was not worth living," seem to have less to do with migration since the MxFLS-1 data indicate that over three-fourths of the respondents that have thought about migrating either internally or internationally site work/improving the quality of their lives or gains in education as the reasons for their

potential migration (See Appendix, Table 2). More difficult to translate to the Calderon scale, Perriera et al. also identify the statement, "You felt that you could not shake off the blues" as an indicator of depression. This sentiment could potentially be reflected in the questions, "Have you felt sad or anguished?," "Have you felt nervous, sorrowful, anxious or eager more than normal?," or "Have you felt tired or discouraged more than normal?" Their fifth indicator statement, "You were happy" was not included in the Calderon survey.

The DSM-IV classifies the symptoms of Major Depression and the less intense but more chronic condition of Dysthymic Disorder as including at least two of the following: "poor appetite or overeating, insomnia or hypersomnia, low energy or fatigue, low self-esteem, poor concentration or difficulty making decisions, and feelings of hopelessness" (DSM-IV 2000: 377). As I am testing specifically for decreases in emotional well-being as a result of family member migration, I expect increases in some of these symptoms, but do not anticipate all of them to relate directly to the experience of loss to migration.

Examining the psychological impacts of migration on Latinas, one study emphasizes that reactions to migration, which manifest themselves in mood changes and depression, are not pathological conditions (Espin 1987). Although this study examines migrants and not their family members, the immigrants who sought psychotherapy frequently spoke of the loss of their loved ones, and of feelings of longing for their communities, families, and friends who remained in their countries of origin. Espin stresses that these feelings are normal reactions to the grieving process that immigrants go through while adjusting to their new lives and surroundings. She describes this

reaction as "a moderate level of emotional disorganization which may be manifested by apathy, insomnia, loss of appetite, irritability, angry outbursts, psychosomatic symptoms and other signs of distress" (499). Espin's findings focus specifically around migrants' feelings of loneliness that can often become complicated with feelings of anger at the people whom the migrants have left, and subsequent feelings of guilt about their feelings of anger toward their loved ones (Espin 1987: 493-496). Although this study centers around immigrants who have moved away from their countries of origin, the loss of loved ones, and the feelings that accompany this loss, apply to family members of migrants remaining in their countries of origin as well.

Feelings of loss may be particularly strong in "pueblos fantasmas, pueblos de mujeres, de ancianos y de ninos [ghost towns, towns of women, of elderly and children]" (Maza 1997: 41). Juxtaposing immigrant experiences in destination countries with experiences of family member migration in migrant sending towns, many of the same descriptions of loss and adaptation emerge in response to separation and disruption of routines within both locations.

Responding to the specific situation of migration, I use a reduced version of the Calderon scale in my model. I also examine the full Calderon scale, but do not focus my analyses around this scale, as it is not an effective measure of emotional responses to the migration of a family member. I do not include the loneliness question in my full scale because it was not designed to be a part of the full instrument. I analyze loneliness as a separate indicator and as a part of the reduced instrument. I designed the scaled model around specific repercussions of migration raised in previous studies, and around the Perriera et. al. scale, DSM-IV symptomatic description, and the elements that Calderon

stresses as particularly important to the Mexican population. My scaled model includes the questions:

1. In the last 4 weeks, have you felt sad or anguished?
2. In the last 4 weeks, have you cried or felt like crying?
3. In the last 4 weeks, have you slept badly at night?
4. In the last 4 weeks, have you woken up spiritless?
5. In the last 4 weeks, have you had difficulty focusing on your daily activities?
6. In the last 4 weeks, has your appetite diminished?
7. In the last 4 weeks, have you felt obsessive or constantly repetitive?
8. In the last 4 weeks, have you felt nervous, sorrowful, anxious or eager more than normal?
9. In the last 4 weeks, have you felt more tired or discouraged than normal?
10. In the last 4 weeks, have you felt pessimistic, or have you thought things will go wrong?
11. In the last four weeks, have you felt more irritated, or more angry than normal?
12. In the last 4 weeks, have you felt lonely?

The alpha reliability level among the items in the reduced depressive symptom instrument is 0.88 as compared to the full scale alpha level of .86 (Calderon 1997). Thus, in reducing the scale, I have not sacrificed its inter-item reliability, and I have created a measure that more closely relates to the emotional experience of losing a close family member to migration. Because the DSM-IV does not include physical symptoms in its description of depressive symptoms, and because physical symptoms are not a result of family member migration, I did not include the questions regarding headaches or chest pains the reduced scale. Further, the questions regarding feeling useless or not having confidence do not apply to altered emotional well-being of individuals with migrant family members because the remaining family members take on more responsibility, therefore becoming more useful to their families. Finally, I discarded the questions regarding death, hopelessness, or impending tragedy as they relate more to severe depression than situationally-induced decreases in emotional well-being. The reduced

scale ranges from 12 to 48, with 48 indicating the highest severity of depressive symptoms and 12 indicating the lowest.

Each item on the scale has four possible answers, coded one through four, with responses ranging from "no," "sometimes," "most of the time," or "all the time." The Mexican Institute of Psychiatry identifies normal scores on the complete scale as falling between 20 and 35 (or 16 and 31 on the complete scale minus the sexual desire question), persons with some anxiety as having scores falling between 36 and 45 (32 and 41), persons displaying median levels of depressive syndrome as having scores between 46 and 65 (42 and 61), and persons displaying severe levels of depressive syndrome as having scores between 66 and 80 (62 and 76). These classifications are only meant to be the first step in identifying clinical depression. A complete diagnosis requires a much more intensive test (Calderon 1997).

Because all of the questions in the scale are asked in the same direction, the scale does not account for positive affect, but has therefore reduced confusion for the Mexican population. While this may inhibit the validity of the scale as a measure of depressive symptomology (Radloff 1977, Ensel 1986), it does not affect the reliability of the scale. Thus, the levels of depressive symptoms within the population will be comparable from respondent to respondent. Furthermore, tests run by the Mexican Institute of Psychiatry found the scale to be a valid measure of depressive syndrome for this population (Calderon 1997).

Independent Variables: The main relationship in question is whether the experience of having relatives in the U.S. affects non-migrants' emotional well-being. Thus, the first independent variable I use measures whether or not respondents have relatives in the U.S.

with the question, “Do you have any relatives living in the U.S.?” If the respondents answered yes to this question, they were asked to further specify which relatives were living in the U.S. Respondents were allowed up to four relatives identified as, “spouse/couple; your father; your mother; your brother/sister; your son/daughter; your father/mother in law; your grandparents; your brother/sister in law; your grandson/granddaughter; your cousin; your uncle/aunt; your niece/nephew; or other relative (specify).” The classification of the type of relative allows me to test if the type of relation to the migrant affects the emotional well-being of the family members remaining in Mexico in any discernable way. Because of small frequency distributions in the grandparent, father and mother in law, and grandchild categories, I group these relative variables in with the “other” category.

By summing the number of relatives identified by the respondent I am able to discern a measure of the number of relatives each respondent has in the U.S., and thus examine the effects of the number of migrant relatives on remaining family members in Mexico. I also measure the effects of the number of household members remaining in Mexico. Because previous literature suggests that there is a tipping point where the positive effects of additional household members reverse, I examine this variable as a categorical variable coded into households of one, two, three to five, or more than five members. I also examine the effects of the presence of dependents, defined as children under the age of 15 or adults over the age of 65, on the emotional well-being of household members.

In addition to family variables, I examined the community level variable of migration. As significant changes in community size, reported by the municipality

representative, did not effect individuals' emotional well-being, however, I removed this variable from my analysis. Because population change was based on the report of local community leaders, this measure may be error prone, and deserves further attention in future analyses of community shifts due to migration and the emotional well-being of local inhabitants.

Finally, I control for age, sex, and socioeconomic status (SES). I code age into categorical variables by teen, early adulthood, adulthood and senior age categories, thus reflecting roughs measure of life stages. As most Mexicans do not move out of their parents houses at the age of 18, I included the measure of early adulthood (20-24) to reflect a period of extended adolescence and transition into adulthood. Emotions about their family members' migration may be particularly stressed during this time of life as they themselves are considering different life pathways.

As women typically report higher levels of depression than men, controlling for sex is important in determining differential reactions to the migration of family members by gender. Additionally, feminist critiques of NEM theory imply that women may be less happy with their family members' decisions to migrate, particularly if their husbands migrate, or if their husbands support the migration decisions of their children but they oppose them.

To assess SES, I create a measure of logged household income by aggregating individual incomes into a singular household income measure. In addition to income, I also examine total household consumption by summing household expenditures on food, transportation, education, clothing and other personal items, household items, electronics, and car expenses. In my primary analyses, however, this variable was insignificant.

Once I examined a measure of consumption based around food and basic necessities, however, the variable became significant indicating that the emotional well-being of this population is more sensitive to survival measures of consumption rather than measures including luxury items. In order to account for diminishing returns on consumption and income, I log these variables. I also examine whether or not families report having a savings as an additional measure of SES. Finally, I add a measure of whether or not the household has a telephone. This measure partially addresses SES and also alludes to an ease of communication with family members abroad in the U.S. I tested for differences in having a telephone in communities where very few people had a phone, as well as not having a telephone in communities where having a telephone was the norm, but these measures were not significantly different from the more simple measure of having or not having a telephone.

Selection Issues: Because the data at this point is only cross sectional, I cannot empirically address the issue of selectivity. While it is possible that individuals' low levels of emotional well-being influenced their migrant family members to leave, the data do not suggest this relationship. The MxFLS-1 asks respondents if they had ever thought about migrating. Of those individuals expressing a desire to migrate, only 6.91% indicate the desire for "independence from family" as one contributing reason for wanting to move, while about 7.84% site being closer to family as a contributing reason for wanting to move (See Appendix, Table 2). Moreover, of those respondents that have already migrated either within Mexico or abroad but have since returned, only 1.19% indicated a desire to be independent from their family as the main reason of their previous migration (See Appendix, Table 3).

As independence from family does not necessarily denote negative feelings toward the family, this measure would only overestimate the measure of migrants who move away from their families as a result of their family members' low levels of emotional well-being. While the cross-sectional data does not allow for thorough tests of internal validity within the causal model of migration leading to lower levels of emotional well-being in non-migrant family members, both previous research and the current data suggest that the relationship operates in this direction.

To further confirm the theoretical frame that family members of migrants experience declines in their emotional well-being as a result of the migration of their close nuclear family members and not the reverse, I examine a fixed effects model of families to ascertain if there are differences between the emotional well-being levels dependant upon the relation to the migrant in the U.S. As most migrants to the U.S. from Mexico leave their families and their countries in hopes of improving the qualities of their lives, low SES levels may account for lower levels of emotional well-being within families with migrant relatives. If low SES levels explained higher levels of depressive symptoms, however, this effect would arguably be uniform or random for all family members within the household. I use a fixed effects model to determine if respondents with very close family members report higher levels of depressive symptoms than the rest of their family members in the household.

As stated earlier, I expect adolescent children with parents in the U.S., younger parents with children in the U.S. and respondents with spouses in the U.S. to display levels of depressive symptoms higher than respondents without these ties to their migrant relatives.

Analytic Techniques

To best analyze the effects of the migration on family members, I perform an OLS regression analysis including particular characteristics of the families and their communities. Because the dependent variables of the full Calderon scale and the reduced migration-specific scale are interpretable as continuous scales, OLS regression is the most appropriate way to analyze the relationships between the independent variables and the emotional well-being of respondents.

As loneliness is the most immediate outcome of losing a close family member to migration, I use ordered probit regression to examine the relationship between loneliness and family-member migration. After examining the relationship within the overall model, I examine the predicted probabilities of falling into each of the four categories of loneliness and sadness dependant upon family member migration.

Findings

Examining the relationship between family member migration and the reduced depressive symptom scale, the preliminary findings support the hypothesis that respondents with spouses, mothers and children in the U.S. show the greatest emotional effects of migration as evidenced by their mean differences in the depressive symptoms compared to respondents without these migrant relatives (see Table 2). In support of my hypothesis, these results were particularly strong for spousal relationships. While fathers do not show significant results for a difference in means, this could reflect a normalcy to the absence of fathers due to migration. Respondents with mothers in the U.S., conversely, report higher levels of depressive symptoms perhaps because this situation is less common. Interestingly, sibling relationships do not show significant effects for the overall population. Arguably, social support provided by siblings

could be filled more easily by friends or other siblings remaining in Mexico. Parent-child relationships, however, are less substitutable even if a parent has more than one child.

The Mexican family has traditionally been characterized by strong links to extended family members (Smith 2006), but these results indicate the strength of the nuclear family and particularly spousal and parent-child relationships. Although having nieces and nephews and other non-specified relatives in the U.S. indicate significant relationships to increases in depressive symptoms, these increases are smaller (see Table 2). Other relationships with more distant migrant relatives did not show any significant differences in means between respondents with distant relatives in the U.S. and those without them. These results support the importance of close, intimate relationships as social support structures.

[Table 2 about here]

Controlling for other variables in the model and examining the relationship between the full depression scale and having migrant relatives in the U.S., only the relationship between having children in the U.S. remains significantly related to increases in depressive symptoms once sex is added to the model (see Appendix: Table 4). As the general depression scale does not relate directly to the process of family member migration, I discuss the results of the reduced model in more detail.

The results of the reduced depression scale indicate significant relationships for spousal and parent to child relationships to migrants even after controlling for sex (see Table 3: Model 5). Uncle and aunt relationships are also significant after controlling for sex, but it is likely that this relationship appears because respondents do not reap the benefits of remittances from more distant relatives. It remains unclear, however, why only this distanced relationship remains significant. Model 5 offers the most explanatory power of all the models with an R^2 value of .08. This model indicates that respondents with

spouses in the U.S. display .648 more depressive symptoms on average than respondents without spouses in the U.S. This relationship is significant at the .05 alpha level.[2] Similarly, respondents with children in the U.S. report .856 more depressive symptoms than respondents without children in the U.S. on average, and this relationship is significant at the .001 alpha level.

Logged household income and consumption are significantly and negatively associated with depressive symptoms indicating that as income and consumption increase, respondents report lower levels of depressive symptoms. Although having a savings operates in the same direction as these two SES measures, it does not add any significant additional explanatory power to the model, thereby suggesting the importance of survival over economic cushioning in affecting emotional well-being. Having a telephone in the house is significantly associated with decreased levels of depressive symptoms. Respondents with telephones report an average of .365 fewer depressive symptoms than respondents without phones. This relationship is significant at the .001 alpha level.

In accordance with my hypotheses, increasing numbers of migrant relatives show a significant association with increased depressive symptoms in model 5. Additionally, increasing numbers of household family members indicate a significant association with decreases in depressive symptoms. My findings do not indicate any tipping point where this relationship reverses, indicating that larger families act as buffers against increased depression levels. Contrary to my hypothesis, the presence of dependents in the household is associated with decreases in depressive symptoms.

[2] Although .648 does not seem like a particularly large increase, the death of a family household member within the last 5 years is associated with a .254 increase in depressive symptoms (significant at the .001 level) on the reduced depression scale.

Finally, respondents between the ages of 20 and 24 do not significantly differ from teenage respondents in their reported levels of depressive symptoms. Contrary to my hypothesis, however, respondents in each of the two older categories report more depressive symptoms than the younger age categories.

Of all the variables, sex shows the highest level of association with depressive symptoms. Females display 2.321 more depressive symptoms than males on average, ceteris paribus. The addition of sex to the model, however, is not enough to negate the effects of having migrant family members on depressive symptoms.

[Table 3 about here]

Examining the table for loneliness, many of the same patterns reappear (see Table 4). AIC measures reveal the full model (model 5) to offer the most explanatory power. Respondents with spouses, children, and nieces or nephews are more likely to report higher levels of loneliness than other respondents. Having a spouse in the U.S. shows the strongest relationship between having a migrant relative and being more likely to report higher levels of loneliness than respondents without spouses in the U.S. This relationship is significant at the .001 alpha level. Having a child in the U.S. also results in a higher likelihood of respondents to report higher levels of loneliness than respondents without children in the U.S. This relationship is significant at the .01 alpha level. The relationship between having a niece or nephew in the U.S. and reported loneliness is also positive and significant at the .01 level. As more people fall into this category it is possible that this relationship does not disappear because it is picking up families that have low incomes and are less likely to receive the benefits of remittances from nieces and nephews than they are from fathers or siblings.

Respondents with more household members are more likely to report lower levels of loneliness. As there are more people remaining at home, it is logical that there would be a negative relationship between having more household members and being lonely. Respondents that have dependents at home are also less likely to report high levels of loneliness than those who do not. Household income, savings and consumption are associated with significant decreases in the likelihood to report high levels of loneliness. In accordance with my hypothesis, having a telephone is also associated with a decreased likelihood of reporting high levels of loneliness.

Unlike the measures for depressive symptoms, only the oldest age category of respondents ages 65-100 is significantly different than teenagers in its association with loneliness. Respondents in the oldest age category are more likely to report high levels of loneliness than teenage respondents, and this relationship is significant at the .001 level. Finally, women are more likely than men to report higher levels of loneliness. This relationship is also significant at the .001 alpha level.

[Table 4 about here]

Separating the sexes within the analysis reveals stronger relationships between having migrant relatives and emotional well-being for women than for men. Although there are not enough men in the sample with migrant wives to ascertain an accurate assessment of the effects of spousal migration on men, the relationship between having a migrant spouse and loneliness remains significant and strengthens slightly for women in the separated analysis (see Table 5). The relationship between spousal migration and loneliness, thereby cannot be explained exclusively as a sex effect. Interestingly, only the female models reflect associations between increases in depressive symptoms and

loneliness and having migrant children. Specific to men, the male models reflect significant relationships between sibling migration and decreases in depressive symptoms and loneliness. Differing patterns between men and women in the sample suggest clear differences in reactions to family member migration by sex.

[Table 5 about here]

To verify that the results of the OLS and probit regression models are not reflecting selection effects that imply families with lower levels of emotional well-being are more likely to have migrant relatives, I impose fixed effects models on the reduced depression scale, the loneliness measure, and a separate categorical sadness measure based upon first question in the Calderon scale (see Table 6). The results of both the depression scale and the sadness measure indicate that after controlling for the average depression levels of family household units, only those respondents with children (and interestingly aunts and uncles) in the U.S. display significantly higher levels of depressive symptoms or sadness than respondents without children in the U.S. These results may suggest decreased levels of emotional well-being for parents who perceive themselves as failing to provide sufficiently for their children. Because aunt and uncle relatives in the U.S. are also consistently associated with increases in depressive symptoms and sadness, these results suggest a relationship that I predict has to do with the lack of remittances from these relatives. The data do not reveal that respondents with aunts and uncles are more likely to also have other close relatives in the U.S., so it is unlikely that this relationship is reflective of other additional migrant relationships. As the fixed effects models necessitate households with more than one family member, these results may not accurately reflect the depressive symptoms of respondents with spouses

in the U.S. as only about half of the respondents with spouses in the U.S. lived in households with two or more household members above the age of 14.

In contrast to the more direct depression measures, the results of the loneliness model indicate a significant effect of spousal absence, but not child absence. The reversal of significant relationships between the depression and loneliness measures imply differential emotional effects of migration depending on different types of familial relationships to migrants. The larger effect of spousal absence on loneliness than general depressive symptoms implies that spouses are more important as companions and bastions of social support than other family members. Conversely, parent-child relationships may reflect more altruistic relationships in which parents want to provide the best possible lives for their children. It is possible that parents suffer emotional consequences if they feel that they have failed in providing their children with ample life opportunities.

[Table 6 about here]

To more closely examine the effects of spousal absence to migration on loneliness, I test the predicted probabilities of reporting each of the four hierarchal categories of loneliness dependant upon spousal location (See Figure 2). In accordance with prevailing theory, females with spouses in the U.S. have the lowest predicted probability of reporting the lowest levels of loneliness, and the highest predicted probabilities of reporting all higher level categories of loneliness, holding all of the other variables at their means. Women with spouses in the U.S. have a .5196 predicted probability of reporting the lowest category of loneliness. They are about 14% less likely to be in the lowest category of loneliness than women without spouses in the U.S., and

they are over 21% less likely to be in the lowest category of loneliness than both males and females without spouses in the U.S.

Males with spouses in the U.S. are about 11% less likely to report the lowest levels of loneliness as compared with males without spouses in the U.S. Males with spouses in the U.S., however, have a .7101 predicted probability of reporting the lowest category of loneliness, which is a higher than the probability of women without spouses in the U.S. As men with spouses in the U.S. are about 5% more likely to report the lowest category of loneliness than women without spouses in the U.S., these results indicate a large effect of gender than spousal absence in self-reported loneliness.

All respondents are more likely to report the lowest level of loneliness on average than any of the higher categories of loneliness. The order of the predicted probabilities for each category of respondents reverses itself from category one (the lowest level of loneliness) to category two, and remains in this reversed order throughout the two highest categories of loneliness. The likelihood that any respondents will report levels of loneliness in either of the two highest categories is less than 10%.

[Figure 2 about here]

The data suggest clear associations between spousal absence due to migration and increased levels of loneliness. The strongest effects, however, occur between the lowest and second to lowest categories of loneliness with very few respondents reporting the highest two levels of loneliness. These results indicate that while spousal absence impacts the reported loneliness of respondents, the migration of a spouse is not normally associated with severe or debilitating levels of loneliness. The predicted probabilities for

loneliness reiterate Espin's assessment of reactions to migration as "moderate" emotional shifts (1987: 499).

Similarly, the relationship of child migration and sadness reveals major shifts in the predicted probabilities of sadness within the two least severe categories of sadness (see Figure 3). Unlike the measure for loneliness, however, women with children in the U.S. are more likely to report the second (or more severe) category of sadness than the lowest category of sadness, holding all of the other measures at their mean. Women with children in the U.S have a .4788 probability of reporting the second category of sadness as compares with a .4126 of reporting the lowest probability of sadness. Although this difference is not vast, no other group of respondents in the model reflected a reversal in the pattern of descending probabilities of being in each category of increasing levels of sadness.

[Figure 3 about here]

Discussion:

The findings of this study clearly suggest that migration has marked effects not only on migrants, but also on their family members who remain at home. While the data do not allow for distinctions between documented and undocumented migrants or the length of time that families have been separated from their close relatives, the results of this limited analysis suggest that separations from close family members affects the emotional well-being and levels of loneliness of migrants' family members. The fixed effects models suggest that the emotional repercussions of family member migration are particularly strong for spousal and parent-child relationships.

The strengths of these particular relationships suggest that the loss of family members to migration is only traumatic when family members provided some level of social support or played a role that would have been much harder to substitute with friends or remaining family members. Although maternal relationships would not likely be easily substitutable, perhaps the presence of "other mothers" would help to offset negative effects of the loss of a mother to migration. Further, because the survey did not question children under the age of 15 about their emotional well-being, the effects of parental absence may be muted in this sample as it is likely easier for adult children to carry out daily routines without the input or presence of their parents.

Finally the large effect of sex implies some support for the feminist critique of the NEM model of migration that suggest that women are frequently opposed to the migration decisions of their husbands or other close family members. If women were against the migration decisions of their family members, they could thereby suffer increased emotional repercussions resulting from their absence. Regardless of individuals' initial feelings about the migration of their family members, however, it is clear from this analysis that women have a harder time coping with the loss of their relatives than men.

Conclusion:

Because so much of the Mexican population resides outside of Mexico, the effects of migration must be more carefully examined within the population remaining in Mexico. Family members of migrants that remain in the country of origin have been largely neglected in the literature addressing the effects of migration. The neglect of this population becomes particularly glaring in contrast to literature regarding decisions to

migrate which include the family as relevant and prominent actors in migrants' decision-making processes.

Once migrants travel across the border, their families do not cease to be active influences in their lives. Current communication technology and products marketed to global audiences such as telephones, telephone cards and email facilitate the ease of communication among families that span international borders. While global information technology and commercialism allow separated families to be more in touch than ever before, the influences of family members also become more immediate than in previous migration waves. The emotional distress of family members remaining at home, thereby, may have more of an effect over the emotional well-being of migrants and vice versa. Although telephone ownership mitigates the negative effects of family member migration to some extent, it is not enough of a protective factor to negate the emotional repercussions of family member absence.

Furthermore, the current militarization of the border between Mexico and the U.S. creates a situation in which many families with migrant relatives must restructure their relationships with one another exclusively around distanced communication rather than face to face interaction. While all families with both internal and international migrants have always had to adapt to the absence of their family members, the current situation of many transnational families is different because they cannot look to a fixed point in the future in which they know they will reunite with their relatives. As border enforcement increases, so too does the length of stay for undocumented migrants in the U.S.

The evidence presented in this paper suggests clear associations between the migration of a close family member, particularly a spouse or child, and the decrease in

the emotional well-being. To better assess the direction of this association, further tests regarding the amount of money remitted to the family, better analyses of migrant sending town atmospheres, the reported levels of depressive symptoms and loneliness prior to the migration of a close family member, and the length of the separation among families and their migrant relatives should be examined. Finally, comparisons between internal and international migration will indicate whether increases in border enforcement and lengthier separations of families have lead to increases in depression and loneliness on the part of family members remaining in their communities of origins. The cross sectional design of the first wave of data does not allow for exploration of these themes, but the second wave of data will allow for verification and elaboration of the findings of this study.

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Table 1: Descriptive Statistics of Sex and Migrant Relatives (N=19,665)

Relative	Male		Female		Total	
	In U.S.	Not in U.S.	In U.S.	Not in U.S.	In U.S.	Not in U.S.
Spouse	18 (.21)	8,729 (99.79)	245 (2.24)	10,673 (97.76)	263 (1.34)	194,402 (98.66)
Child	529 (6.05)	8,218 (93.95)	738 (6.76)	10,180 (93.24)	1,276 (6.44)	18,398 (93.56)
Father	125 (1.43)	8,622 (98.57)	151 (1.38)	10,767 (98.62)	276 (1.40)	19,389 (98.60)
Mother	37 (0.42)	8,710 (99.58)	88 (0.81)	10,830 (99.19)	125 (0.64)	19,540 (99.36)
Sibling	1,133 (12.95)	7,614 (87.05)	1,516 (13.89)	9,402 (86.11)	2,649 (13.47)	17,016 (86.53)
	8,747		**10,918**		**19,665**	

Table 2: Bivariate Analysis of Emotional Well-being by Type of Relative (N=19,665)

Type of Relative in the US	Emotional Well Being: Depressive Symptoms Mean *(Frequency)*		Difference in Means
	Has Relative in US	Does Not Have Relative in US	
Any Relative	17.03 *(7,028)*	16.38 *(12,637)*	0.652***
Spouse	18.56 *(263)*	16.58 *(19,402)*	1.977***
Father	17.20 *(276)*	16.60 *(19,389)*	0.600
Mother	17.88 *(125)*	16.60 *(19,540)*	1.280**
Child	18.07 *(1,267)*	16.51 *(18,398)*	1.562***
Sibling	16.76 *(2,649)*	16.58 *(17,016)*	0.177
Sibling In-Law	16.57 *(235)*	16.61 *(19,430)*	-0.034
Cousin	16.62 *(899)*	16.61 *(18,766)*	0.011
Uncle or Aunt	16.71 *(1,367)*	16.60 *(18,303)*	0.109
Nephew or Niece	16.71 *(484)*	16.60 *(19,181)*	0.567*
Other	17.16 *(300)*	16.59 *(19,365)*	1.034***

*p < .05, **p < .01, ***p < .001 (two-tailed test)

Table 3: OLS Regression of Emotional Well-being (small) by Relative Type and Other Socio-Demographic Attributes (N=19, 665)

	Model 1	Model 2	Model 3	Model 4	Model 5
			Depressive Symptoms		
Spouse	1.944***			1.882***	0.648*
	(0.315)			(0.316)	(0.330)
Father	0.521			0.476	0.492
	(0.326)			(0.324)	(0.315)
Mother	1.140*			1.150*	0.528
	(0.500)			(0.496)	(0.476)
Sibling	0.240*			0.274**	-0.012
	(0.104)			(0.103)	(0.143)
Child	1.601***			1.527***	0.856***
	(0.160)			(0.161)	(0.204)
Sibling in Law	-0.067			0.006	-0.383
	(0.264)			(0.262)	(0.268)
Cousin	0.142			0.256	0.230
	(0.165)			(0.165)	(0.184)
Uncle or Aunt	0.253			0.399**	0.349*
	(0.136)			(0.136)	(0.159)
Niece or Nephew	0.679**			0.727**	0.431
	(0.231)			(0.232)	(0.246)
Other Relative	0.941**			0.969**	0.297
	(0.292)			(0.289)	(0.299)
Number of Relatives			0.357***		0.206**
			(0.039)		(0.070)
HH Members = 2			-1.271**		-0.727***
			(0.143)		(0.142)
HH Members = 3-5			-1.212***		-0.444**
			(0.142)		(0.144)
HH Members > 5			-1.669***		-0.753**
			(0.218)		(0.224)
Dependants in HH			-0.290*		-0.479***
			(0.125)		(0.128)
Logged HH Income				-0.151***	-0.104**
				(0.038)	(0.037)
Has Savings				-0.394***	-0.170
				(0.091)	(0.090)
Logged HH Consumption				-0.168**	-0.138*
				(0.056)	(0.056)
Has Telephone				-0.228*	-0.365***
				(0.090)	(0.090)
20-24(omitted 15-19)		-0.059			0.013
		(0.116)			(0.116)
25-64		0.408***			0.444***
		(0.085)			(0.091)
65-100		1.524***			1.207***
		(0.144)			(0.155)
Sex (Female)		2.375***			2.321***
		(0.060)			(0.060)
Constant	16.378***	14.902***	17.588***	18.169***	16.725***
	(0.045)	(0.079)	(0.131)	(0.353)	(0.376)
Observations	19665	19665	19665	19665	19665
R-squared	0.01	0.07	0.01	0.02	0.08

Standard errors in parentheses
*p < .05, **p < .01, ***p < .001 (two-tailed test)

Table 4: Ordered Probit Regression of Loneliness by Relative Type and Other Socio-Demographic Attributes (N=19, 665)

	Model 1	Model 2	Model 3	Model 4	Model 5
			Loneliness		
	0.625***			0.612***	0.327***
Spouse	(0.065)			(0.065)	(0.070)
	0.068			0.052	0.061
Father	(0.080)			(0.080)	(0.082)
	0.296**			0.306**	0.197
Mother	(0.109)			(0.110)	(0.112)
	0.022			0.034	-0.010
Sibling	(0.028)			(0.028)	(0.039)
	0.277***			0.255***	0.135**
Child	(0.035)			(0.036)	(0.049)
	-0.052			-0.028	-0.092
Sibling in Law	(0.087)			(0.087)	(0.091)
	-0.007			0.026	0.038
Cousin	(0.046)			(0.047)	(0.053)
	0.053			0.094*	0.081
Uncle or Aunt	(0.037)			(0.038)	(0.046)
	0.190**			0.204***	0.166**
Niece or Nephew	(0.058)			(0.058)	(0.064)
	0.159*			0.164*	0.013
Other Relative	(0.072)			(0.072)	(0.076)
			0.065***		0.034
Number of Relatives			(0.009)		(0.081)
			-0.506***		-0.400***
HH Members = 2			(0.033)		(0.035)
			-0.505***		-0.361**
HH Members = 3-5			(0.032)		(0.035)
			-0.684***		-0.513***
HH Members > 5			(0.055)		(0.058)
			0.043		-0.020***
Dependants in HH			(0.034)		(0.058)
				-0.042***	-0.028**
Logged HH Income				(0.010)	(0.010)
				-0.057*	-0.025
Has Savings				(0.028)	(0.029)
				-0.072***	-0.047**
Logged HH Consumption				(0.015)	(0.015)
				-0.038	-0.077**
Has Telephone				(0.024)	(0.028)
20-24(omitted 15-19)		-0.004 (0.037)			-0.005 (0.037)
25-64		0.030 (0.027)			-0.007 (0.028)
65-100		0.389*** (0.039)			0.271*** (0.042)
		0.532***			0.506***
Sex (Female)		(0.019)			(0.019)
Observations	19665	19665	19665	19665	19665
AIC	29838.26	29175.15	29755.13	29720.75	28916.48

Standard errors in parentheses
*p < .05, **p < .01, ***p < .001 (two-tailed test)

Table 5: OLS Regression of Emotional Well-Being and Ordered Probit Regression Loneliness by Sex (N=19,665)

	Male	**Female**	**Male**	*Female*
	Depressive Symptoms		Loneliness	
Spouse	1.480 (1.020)	0.570 (0.360)	0.141 (0.371)	0.373 (0.074)***
Father	0.121 (0.420)	0.844 (0.443)	0.039 (0.125)	0.074 (0.111)
Mother	-0.202 (0.766)	0.765 (0.588)	-0.029 (0.225)	0.251 (0.130)
Sibling	-0.353* (0.167)	0.258 (0.214)	-0.146* (0.066)	0.063 (0.048)
Child	0.412 (0.244)	1.183*** (0.288)	0.010 (0.082)	0.208*** (0.058)
Sibling in law	-0.382 (0.332)	-0.399 (0.382)	-0.328 (0.202)	-0.007 (0.108)
Cousin	0.005 (0.206)	0.456 (0.303)	0.017 (0.081)	0.044 (0.071)
Uncle or Aunt	0.096 (0.191)	0.546* (0.242)	0.068 (0.073)	0.092 (0.059)
Niece or Nephew	0.317 (0.294)	0.536 (0.379)	0.114 (0.099)	0.198* (0.084)
Other Relative	0.533 (0.392)	0.147 (0.398)	0.076 (0.131)	-0.021 (0.091)
Number of Relatives	0.202* (0.082)	0.212* (0.108)	0.035 (0.030)	0.034 (0.022)
HH Number = 2	-0.652** (0.211)	-0.726*** (0.182)	-0.706*** (0.062)	-0.266*** (0.040)
HH Number = 3-5	-0.451* (0.213)	-0.394** (0.184)	-0.653*** (0.061)	-0.235*** (0.040)
HH Number > 5	-0.519 (0.284)	-0.931** (0.287)	-0.745*** (0.090)	-0.425*** (0.071)
Dependents in HH	-0.278 (0.152)	-0.641*** (0.169)	0.066 (0.060)	-0.015 (0.043)
Logged HH Income	-0.112** (0.042)	-0.104* (0.050)	-0.040** (0.015	-0.22 (0.012)
Has Savings	-0.092 (0.104)	-0.247 (0.146)	-0.037 (0.044)	-0.020 (0.038)
Logged HH Consumption	-0.174** (0.060)	-0.104 (0.076)	-0.032 (0.022)	-0.057** (0.017)
Has Telephone	-0.121 (0.101)	-0.570*** (0.122)	-0.074 (0.039)	-0.078** (0.029)
Ages 20-24	0.066 (0.142)	0.012 (0.175)	-0.001 (0.060)	-0.005 (0.046)
Ages 25-64	0.130 (0.109)	0.729*** (0.138)	-0.059 (0.045)	0.031 (0.036)
Ages 65-100	0.907*** (0.183)	1.522*** (0.235)	0.278*** (0.062)	0.252*** (0.054)
Constant	17.170*** (0.441)	18.600*** (0.512)		
Observations	8747	10918	8747	10918
R-squared	0.02	0.03		

Standard errors in parentheses
*p < .05, **p < .01, ***p < .001 (two-tailed test)

Table 6: Fixed Effects Models for Emotional Well-being, Loneliness, and Sadness Grouped by Household(N=17,979)

	Model 1 Depressive Symptoms (Reduced Scale)	Model 2 Loneliness	**Model 3** Sadness
Spouse	0.213 (0.430)	0.123** (0.043)	0.056 (0.048)
Father	0.383 (0.391)	0.032 (0.040)	-0.007 (0.044)
Mother	0.650 (0.522)	0.047 (0.053)	0.095 (0.058)
Sibling	0.038 (0.192)	-0.005 (0.019)	0.023 (0.021)
Child	0.761** (0.252)	0.014 (0.025)	0.094** (0.028)
Sibling In Law	-0.479 (0.377)	-0.057 (0.038)	-0.011 (0.042)
Cousin	0.240 (0.230)	0.010 (0.023)	-0.006 (0.026)
Uncle or Aunt	0.413* (0.208)	0.035 (0.021)	0.056* (0.023)
Niece or Nephew	0.262 (0.284)	-0.048 (0.029)	0.060 (0.032)
Other Relative	-0.345 (0.354)	-0.003 (0.036)	0.026 (0.040)
Number of Relatives	-0.033 (0.099)	-0.026 (0.010)	-0.021 (0.011)
Ages 20-24	0.119 (0.137)	0.005 (0.014)	0.004 (0.015)
Ages 25-64	0.750 (0.102)***	0.018 (0.010)	0.089*** (0.011)
Ages 65-100	1.878 (0.189)***	0.083*** (0.019)	0.148*** (0.021)
Sex (Female)	2.316*** (0.065)	0.180*** (0.006)	0.208*** (0.007)
Constant	14.520** (0.102)	1.140*** (0.010)	1.222*** (0.011)
Observations	17979	17979	17979
Number of households 2 or more members	6360	6360	6360
R-squared	0.11	0.06	0.08

Robust standard errors in parentheses
*p < .05, **p < .01, ***p < .001 (two-tailed test)

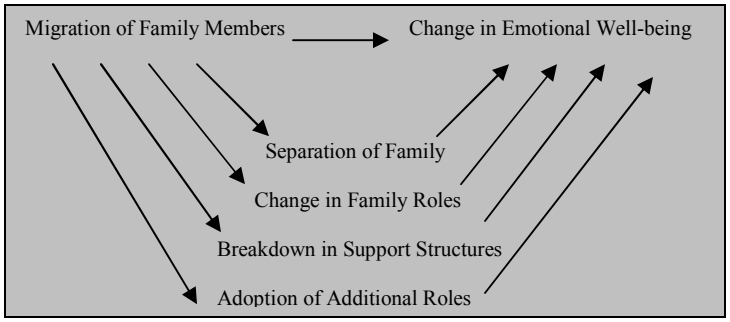

Figure 1: Analytic Model for the Effects of Migration On Family Members Remaining in the Country of Origin

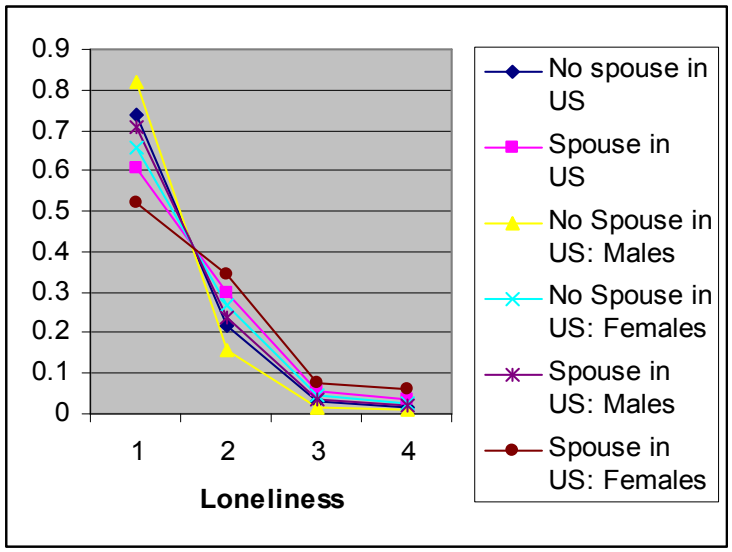

Figure 2: Predicted Probabilities of Loneliness by Spousal Location (N=19,665)

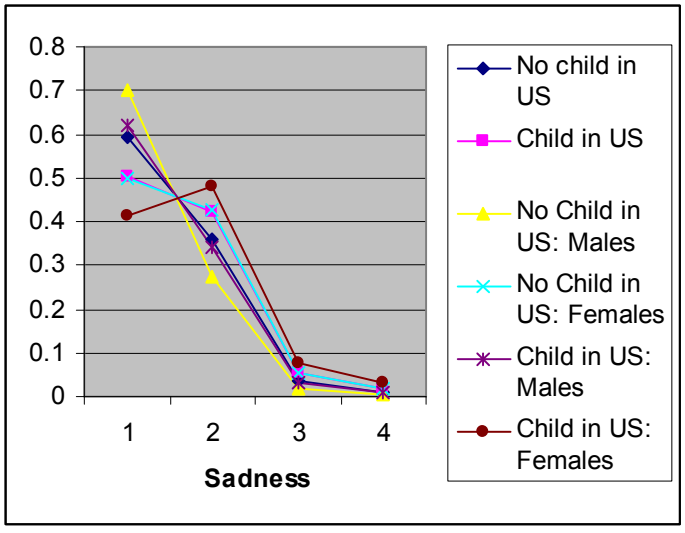

Figure 3: Predicted Probabilities of Sadness By Child's Location (N=19,665)

Appendix:

Table 1: Emotional Well-being Scale

1. In the last 4 weeks, have you felt sad or anguished?
2. In the last 4 weeks, have you cried or felt like crying?
3. In the last 4 weeks, have you slept badly at night?
4. In the last 4 weeks, have you woken up spiritless (due to lack of energy or fear)?
5. In the last 4 week, have you had difficulties focusing on your daily activities?
6. In the last 4 weeks, has your appetite diminished?
7. In the last 4 weeks, have you felt obsessive or constantly repetitive (for example: with ideas that you cannot remove from your mind or with actions that you constantly repeat)?
8. In the last 4 weeks, has your sexual interest decreased? (omitted)
9. In the last 4 weeks, do you think you've been underperforming in your job or daily activities?
10. In the last 4 weeks, have you felt pressure in the chest?
11. In the last 4 weeks, have you felt nervous, sorrowful, anxious, or eager more than normal?
12. In the last 4 weeks, have you felt tired or discouraged more than normal?
13. In the last 4 weeks, have you felt pessimistic or have thought things will go wrong?
14. In the last 4 weeks, have you frequently had a headache?
15. In the last 4 weeks, have you felt more irritated or angry than normal?
16. In the last 4 weeks, have you felt insecure or lacking confidence in yourself?
17. In the last 4 weeks, have you felt Useless to your family?
18. In the last 4 weeks, have you felt fear of something, as if you were waiting for something serious to happen?
19. In the last 4 weeks, have you wished to die?
20. In the last 4 weeks, have you lost interest in things?
21. In the last 4 weeks, have you felt lonely? (separate)

Table 2: Main Reason(s) for Potential Migration (N=3,341)

Reason for Potential Migration	Frequency	Percent
Related to Work / Improve Life	2,129	63.72
Education	413	12.36
Return to Place of birth	170	5.09
Partner's Health	51	1.53
Parents' / Parents In Law's Health	11	3.29
Someone Else's Health	11	3.29
To be Closer to Family	262	7.84
Insecurity Reasons	130	3.89
Political Reasons / Disturbances	7	2.10
Natural Disasters	14	0.42
Independence from Family	231	6.91
Marriage / Union	14	4.19
Better Housing	43	1.29
To know new places	54	1.62
Other	143	4.28

Table 3: Main reason for internal migration (N=9186)

Reason for Previous Internal Migration	Frequency	Percent
Related to Education/Training of Any Household Member	953	10.39
Going Back To Place of Origin	544	5.93
Related with the job of any household member / To improve standards of living	4,375	47.72
Marriage/union	1,347	14.69
Pregnancy	20	0.22
Death of Spouse/Partner	23	0.25
Somebody else's death	77	0.84
Your or your spouse's/partner's health reasons	99	1.08
Someone else's health reasons	133	1.45
To be close to family	677	7.38
For insecurity reasons	73	0.8
Political issues or disturbances	16	0.17
To be independent from family	109	1.19
Because you like the destination	213	2.32
Natural Disasters	32	0.35
Because you were deported	15	0.16
Other	462	5.04
Total	9,168	100

Table 4: OLS Regression of Emotional Well-being (full) by Relative Type and Other Socio-Demographic Attributes (N=19, 665)

	Model 1	Model 2	Model 3	Model 4	Model 5
			Depressive Symptoms		
Spouse	2.280***			2.175***	0.541
	(0.443)			(0.446)	(0.492)
Father	0.617			0.543	0.374
	(0.443)			(0.440)	(0.470)
Mother	1.734*			1.752*	0.712
	(0.733)			(0.724)	(0.699)
Sibling	0.289*			0.349*	-0.328
	(0.147)			(0.147)	(0.316)
Child	2.451***			2.325***	1.245***
	(0.236)			(0.237)	(0.300)
Sibling in Law	-0.298			-0.172	-1.757*
	(0.379)			(0.377)	(0.384)
Cousin	0.051			-0.245	0.176
	(0.229)			(0.229)	(0.260)
Uncle or Aunt	0.191			0.440*	0.379
	(0.189)			(0.188)	(0.222)
Niece or Nephew	1.026**			1.107**	0.609
	(0.388)			(0.338)	(0.359)
Other Relative	1.582***			1.629***	0.612
	(0.443)			(0.438)	(0.447)
Number of Relatives			0.500***		0.325**
			(0.056)		(0.102)
HH Members = 2			-1.412***		-0.617**
			(0.201)		(0.200)
HH Members = 3-5			-1.316***		-0.146
			(0.200)		(0.203)
HH Members > 5			-1.861***		-0.439
			(0.310)		(0.319)
Dependants in HH			-0.431*		-0.711***
			(0.177)		(0.180)
Logged HH Income				-0.251***	-0.194***
				(0.056)	(0.054)
Has Savings				-0.670***	-0.336**
				(0.129)	(0.126)
Logged HH Consumption				-0.297***	-0.260**
				(0.083)	(0.082)
Has Telephone				-0.375**	-0.566***
				(0.129)	(0.128)
20-24(omitted 15-19)		-0.109			0.025
		(0.164)			(0.164)
25-64		0.663***			0.763***
		(0.120)			(0.129)
65-100		2.540***			2.093***
		(0.210)			(0.226)
Sex (Female)		3.270***			3.215***
		(0.085)			(0.086)
Constant	25.090***	22.949***	26.422***	28.189***	25.695***
	(0.064)	(0.111)	(0.183)	(0.521)	(0.552)
Observations	19665	19665	19665	19665	19665
R-squared	0.01	0.07	0.01	0.02	0.08

Standard errors in parentheses
*p < .05, **p < .01, ***p < .001 (two-tailed test)