

Migration and Rural Urbanization: The Diffusion of Urban Behavior to Rural Communities in Guatemala.

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Abstract

This paper examines the influence of migration networks on the adoption of a range of health and marital relationship behaviors by married women in rural Guatemalan communities. Multivariate regression models are used to examine the impact of having kin in urban areas and the U.S. on a rural woman's: modern contraceptive knowledge and use, use of formal prenatal and delivery care, child immunization, and influence in household decisions. We argue that greater knowledge and use of health services and women's greater role in household decisions are characteristic of couples living in urban areas and are part of a range of behavioral and attitudinal changes that migrant women diffuse back to rural areas. After examining each of the outcomes individually, we use regression models to estimate the impact of migration networks on a single summary index of urban agency that we construct from the individual measures of health and decision making behavior.

Extended Abstract

The concept of diffusion is widely used in the social sciences to describe how the prior adoption of a new behavior in a population influences the subsequent adoption of that behavior by others. Diffusion processes have been used to explain the geographic spread and temporal pace of change in a variety of demographic and health related behaviors including family size goals, contraceptive use, utilization of prenatal care, and child immunization. Social networks are central to diffusion processes because learning and influence occur through social interaction, and most social interactions are embedded in social networks. The web of interpersonal relations that tie people together as members of households, kinship groups, and communities is the conduit through which information about new behaviors is transmitted and diffused. The migration of selected members of rural based social networks to urban and international destinations has the potential to introduce and spread new ideas and innovative behaviors among rural populations. Out-migration from rural communities to urban areas and high-income countries, and the return flows of people, information, and resources link non-migrants in remote rural areas to the lifestyles, behavior, and aspirations prevalent in distant locations. These socially based linkages are potentially more powerful agents of change than are the images of urban life conveyed by the mass media because they are transmitted by social peers.

In this paper we explore the role of urban and international migration networks in the adoption of a range of health and marital relationship behaviors by married women in a sample of rural Guatemalan communities. First, we use multivariate regression models to examine the impact of social relations to migrants in urban destinations and the United States on: modern contraceptive knowledge, modern contraceptive use, use of formal prenatal care, use of formal delivery care, child immunization, and women's influence in household decisions. We argue that greater knowledge and use of family planning, formal reproductive and child health services, and women's greater role in household decisions are characteristic of couples living in urban areas and are part of a range of behavioral and attitudinal changes that rural couples experience after migration to urban areas and abroad. After examining each of these outcomes individually, we use factor analysis to construct from the health and marital relationship behaviors an index of urban agency that we argue captures what for rural women is a new concept of individual action and autonomy. We then use multivariate regression models to estimate the impact of migration networks on this summary index. Finally, we use community level data from one of the study areas to demonstrate how the spatial location of communities with respect to paved roads is associated with migration flows, and in turn with knowledge, attitudes, and behavior with respect to family planning.

Data for this paper come from two studies. The 1995 Guatemalan Survey of Family Health (EGSF) was designed to study reproductive and child health in rural Guatemala. The survey covers a total of 60 rural communities in the western departments of Chimaltenango, Suchitepequez, and Totonicapán, and the southern department of Jalapa. The 60 communities encompass a broad range of ethnic combinations, from all indigenous to all non-indigenous Spanish speaking, and a range of economic development levels. The survey collected household and individual-level data for 2,871 randomly sampled women aged 18-35, and community-level questionnaires were completed with three key informants in each community. The second study that we use is the 2000-2002 Guatemalan Migration Survey (GMS). The GMS was conducted in

seven communities in the western department of Quiché. The purpose of the survey was to examine the determinants, dimensions, and consequences of internal and international migration in rural communities. The GMS included 570 randomly selected households. In addition to a household-level questionnaire, in-depth individual-level questionnaires were applied to household heads and spouses of household heads under age 50. The GMS included many of the reproductive and child health questions included in the EGSF, making the two surveys fully comparable for a broad range of analyses focused on migration and reproductive and child health. In this study we pool the two surveys and take advantage of the greater range of information on migration available in the GMS to demonstrate how the diffusion processes inferred from the pooled analysis play out at the community-level.

Table 1 presents sample size information and the place of interview for the women in the pooled analytic sample that we use. Our analyses are restricted to currently married women age 18 to 35 in the EGSF, and currently married women age 16 to 49 in the GMS. The pooled samples contain information on 2,125 women and provide broad coverage of rural areas in the western and southern regions of Guatemala. One of the primary outcomes of interest in this paper is the relationship between having kin resident in urban areas of Guatemala and in the United States, and the relative influence that women exercise in making decisions within the household. Out-migrant women living in urban areas and in the United States are much more likely to be working in wage employment and therefore tend to have greater influence in household decision making than women who remain in rural communities. Our hypothesis is that out-migrant women diffuse their new role in household decision making back to their female relatives at home through return visits and telephone conversations. Table 2 presents the proportion of women who report that their husband alone makes the decision for four types of household decisions by access to out-migrant kin. The four types of decisions involve food purchases, savings, use of formal medical care and buying medicine. The table reveals a clear relationship between decision making and access to migrant kin. The proportion of women who report that their husband makes the decision alone is greatest among women with no out-migrant kin and lowest among women with relatives in the United States. We have also examined these relations within categories of women's education and the basic relationships remain (table not shown).

Using factor analysis we construct a single index of husband's influence from these four questions. Table 3 presents the mean value of this power index by family migration networks and other selected characteristics of the women in the pooled sample. The index follows a standard normal distribution. Positive values are associated with greater husband's influence on decision making and negative values are related with greater wife's influence on decision making. The differences in mean values of the index for the no migrant-urban migrant, and no migrant-U.S. migrant comparisons are statistically significant. On average women with kin living in urban areas or in the United States exercise more influence in household decisions than women with no kin in urban areas or the United States.

These differences, however, could also be related to differences in the background characteristics of the women. Table 3 also presents ethnicity and education for the women by family migration networks. Women with family living in urban areas or the United States are more likely to be ladina (non-indigenous Spanish speaking) and have higher levels of education than women with no out-migrant relatives. These differences in background characteristics underscore the

importance of examining the relationship between networks and decision making power and health seeking behavior in a multivariate context. The analyses in this paper build on prior work by Lindstrom and Muñoz-Franco (1995 *Studies in Family Planning* and 1996 *Social Science and Medicine*) using the EGSF. In that work they found strong evidence of migration effects on modern contraceptive knowledge and use, and use of formal prenatal care and delivery services. In this paper we will provide a more comprehensive view of the diffusion of urban patterns of individual agency than the more focused approach taken in the earlier published papers.

Table 1. Currently Married Women by Department, Guatemalan Survey of Family Health, 1995 and Guatemalan Migration Survey, 2000-2002

EGSF 1995	
Chimaltenango	305
Totonicapan	443
Suchitepequez	529
Jalapa	494
GMS 2000-2002	
Quiche	354
Total	2,125

Table 2. Husband's Decision Making Power by Wife's Family Migration Networks, Guatemala.

Husband decides alone	Family migration networks		
	No migrant relatives	Urban migrant relatives	US migrant relatives
	%	%	%
Food purchases	35.1	22.2	18.0
Savings	62.3	44.3	35.6
Use of formal medical care	36.7	31.0	28.3
Buying medicine	31.1	25.9	22.6
Number of cases	924	1,025	582

Source: Guatemalan Survey of Family Health, 1995 and Guatemalan Migration Survey, 2000-2002

Note: Urban migrant and US migrant categories are not mutually exclusive, some women are in both categories.

Table 3. Selected Characteristics of Currently Married Women by Family Migration Networks.

Variable	Family migration networks		
	No migrant relatives	Urban migrant relatives	US migrant relatives
Husband's power index	0.2385	-0.1547	-0.4068
Ethnicity			
Ladina	26.3	45.6	54.3
Indigenous Spanish speaker	51.5	48.7	40.9
Indigenous non-Spanish speaker	22.2	5.8	4.8
Educational attainment (years)			
0	54.3	29.5	21.1
1-3	32.6	32.9	30.8
4-6	10.8	24.5	29.6
7+	2.3	13.2	18.6
Contraception			
Mean number of modern contraceptive methods known	3.0	5.0	5.5
Currently using a modern method	11.5	24.1	30.2
Number of cases	924	1,025	582

Source: Guatemalan Survey of Family Health, 1995 and Guatemalan Migration Survey, 2000-2002.

Note: Urban migrant and US migrant categories are not mutually exclusive, some women are in both categories.