



A transnational extended family in Tlacotepec, with migrants visiting from Vista, California.

6 *Lucharle por la Vida: The Impact of Migration on Health*

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Here in Tlacotepec you can get medical attention very fast. You have an ailment and they give you pills right away. It's not like that in the United States; it's slower, lots of paperwork. Of course, the best treatment is in the United States. It's slower but it's better. But if I've got something serious, I prefer to receive treatment here in Mexico, because it's difficult over there. For example, if someone dies there, it costs a lot of money to get the body back here.—Jesús, a 30-year-old returned migrant in Tlacotepec.

In a word, one feels alone. It's sad . . . but what can you do? Sometimes I think about going to the United States to be with my husband. The truth is that it's hard because you see other couples who are together. But that's how it is. We have been married for thirty-five years. The experience [of migration] has been very hard for us.—Juana, a 52-year-old nonmigrant in Tlacotepec.

Jesús used to live and work in Vista, California, before he contracted a blood infection and was forced to return to San Miguel Tlacotepec, where he resides today in a small house on the edge of town. Like many of Tlacotepec's returned migrants, Jesús has sought medical services in both Mexico and the United States, so he can compare the two health care systems and can speak to how migration affects individual health status and the utilization of health care. Juana, on the other hand, has never migrated, but both her husband and son have. She lives alone, worries

constantly, and hopes that one day they will both return for good, but it has been two years since Juana last saw her husband and she has only seen her son once in thirteen years. Their absence has taken a heavy toll on her emotional health.

These issues are crucial not only to scholarly research but also to public health practice and the welfare of migrant communities in the United States and Mexico. Existing studies frequently rely on data collected among migrants residing in the United States and neglect to analyze how the health and health care practices of migrants compare to those of nonmigrants and return migrants in sending communities. This omission precludes comparison between the groups and thus leaves open the question of whether the migration experience itself has health-related consequences. Also often overlooked are the ways in which important factors such as documentation status, income level, and time spent in the United States affect migrant health and access to health care. Using both quantitative and qualitative data, we discuss these factors as they relate to the prevalence of various illnesses and the likelihood that illnesses are treated among Tlacotepenses in both Tlacotepec and California.

Migration presents definite physical and mental health risks related to crossing the border. Further, migrants often perform dangerous construction and agricultural work and have limited access to health coverage once in the United States. Nevertheless, migrants residing in the United States tend to be healthier overall than residents of Tlacotepec, whether or not those residents have migration experience. Our evidence from Tlacotepec suggests this may be the case because migrants frequently return to Mexico to receive medical attention and so would be omitted from health studies in the U.S. migrant community—the so-called salmon bias effect. We find that the discrepancy is also at least partly due to the healthy migrant effect, a selectivity bias in migration whereby those who have health problems are less likely to migrate in the first place.

Our qualitative data reveal that other factors contributing to this transborder difference in health status may be poorer living conditions in Tlacotepec, fewer nutritional options available to town residents, and depression-inducing isolation among women whose nuclear family members—particularly their husbands, as in the case of Juana—have migrated. However, we found that migrants were much more likely to use alcohol,

which suggests that although they were less likely to seek treatment for mental health problems, they may be using substances such as alcohol to cope with the difficulties of their situations. Moreover, undocumented migrants and migrants with agricultural or unstable jobs (such as day labor) were less likely to have health insurance and thus used conventional health care services at a lower rate, instead relying on emergency rooms and other alternatives. Unlike residents of Tlacotepec, though, U.S.-based migrants did not report seeking the services of *curanderos* (traditional healers) in California.

THE SOCIAL CONTEXT OF HEALTH AND HEALING IN TLACOTEPEC

It is morning in Tlacotepec, and the Centro de Salud (health center) is full of town residents: pregnant women awaiting prenatal care, elderly people hoping to get subsidized medicines, and others waiting to see the nurse about routine health complaints. The Centro de Salud, located near the town's church and central plaza, maintains regular business hours Monday through Friday. The building is clean, has several examination rooms with good-quality (if not state-of-the-art) medical equipment, and five full-time staff members, including one doctor, two nurses, a nurse's assistant, and a secretary. On a wall inside the clinic is a neatly drawn map of Tlacotepec which displays each residence and indicates whether any inhabitant receives prenatal care or suffers from malnutrition, cancer, tuberculosis, diabetes, or hypertension. The Centro personnel are clearly knowledgeable about Tlacotepec residents' health statuses and concerned about promoting health education.

As in most Oaxacan towns, many of Tlacotepec's building exteriors are painted with health advisories similar to the following: "Are you pregnant? To ensure a happy outcome, take care of your health and that of your baby." "Family planning, a program for a better life. Visit the health center. Vasectomies, birth control pills, condoms, injections." And finally, "Beware of AIDS. It can affect anyone. Use a condom, and visit your health center." The signs are painted by Centro de Salud employees and representatives of the government program Oportunidades who volunteer at the Centro. The signs illustrate the federal government's efforts to promote family planning and safe sex—still sensitive issues in Mixtec towns. Reproductive practices are not easily discussed, even with one's doctor.

There are four private doctors in Tlacotepec, all of whom operate their own pharmacies and try to keep a full stock of medicines. It may seem strange that a town as small as Tlacotepec would have so many private doctors, particularly when there is a federally supported clinic that offers free consultations and low-cost care. The number of private practitioners is one sign of the problems that public health initiatives face in rural Mexico. The relationship between clinic workers and residents can be antagonistic, since the clinic is responsible for reporting to government health officials about Oportunidades participants' compliance (or noncompliance) with lessons taught at clinic-sponsored *pláticas* (informational talks). Government officials can strike participants from the program if they do not demonstrate compliance (Martínez 2005, 101).

Oportunidades, formerly known as Progresá, is a federal initiative begun in 1997 to serve Mexico's rural poor (see Levy 2006). About 60 percent of our respondents in Tlacotepec reported being enrolled in Oportunidades, which offers health care and a small stipend to families who have children in school.¹ Mothers must attend the *pláticas*, demonstrate compliance with health workers' lessons about best health practices (such as regular health checkups, boiling water if necessary, or using birth control), serve on clinic committees to solve clinic problems, and help clean the clinic grounds. There is no Seguro Popular² program in Tlacotepec, although, according to health care practitioners, the clinic is getting certified to administer this program. As private physician Heriberto Cruz Aguilar told us:

The number of people here who have insurance through the IMSS³ is minimal, maybe three or four people who have lived in Mexico City. The others I treat are affiliated with ISSSTE⁴—teachers who go to work too early in the morning to go to the ISSSTE. But it's more or less about

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1. See chapter 5 in this volume for details on the program.
 2. Seguro Popular is a national program in Mexico intended to provide health care subsidies for underprivileged citizens who have no other health care benefits.
 3. IMSS is the Instituto Mexicano del Seguro Social, or Mexican Social Security Institute.
 4. ISSSTE is the Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado, or Social Security Institute for State Employees. ISSSTE and IMSS are Mexico's two largest public health/social security systems.

1 percent ISSSTE and about 0.3 percent of IMSS-affiliated people who come to my practice. Seguro Popular, it doesn't exist here, but there's Oportunidades. A year ago they began gathering people's documents to affiliate them with Seguro Popular, but there hasn't been a response yet from the government, so there is no Seguro Popular here.

One reason women do not comply with clinic-based and Oportunidades health initiatives is that they are not always culturally appropriate. Medical anthropologist Konane Martínez offers the example of the clinic in Ixpantepec Nieves (about a fifteen-minute drive from Tlacotepec) that encouraged women to get yearly Pap smears without informing them that a male gynecologist would be doing the procedure. Many women were extremely uncomfortable with this arrangement, which ultimately undermined the Pap smear initiative (Martínez 2005, 105–107). Our own qualitative interviews with townspeople and private practitioners revealed that though the clinic offers good basic medical services, it is often crowded, lacks specialists for certain prevalent illnesses, and runs out of essential basic medications.

A patient at the Centro de Salud may not have to pay for care, but he or she is not guaranteed treatment. For example, we asked Sra. Ángela whether the Centro de Salud has helped in treating her daughter's epilepsy. She responded: "No; if I take her to the Centro de Salud, they don't give her anything. They know about her illness, but there's no medicine for her. There aren't any medicines at the Centro. I have rheumatism in my knees, but they don't do anything but give us a prescription and then you have to go elsewhere to buy the medicine."

USE OF TRADITIONAL MEDICINE

A few blocks up the road from the Centro de Salud, a *curandero* (healer) named Herminio Martínez speaks over the din of his many dogs, hens, roosters, and horses during follow-up visits with clients he has treated using traditional healing methods such as local herbs and *limpias* (spiritual cleansings). He is one of several curanderos in the town. Another, 90-year-old Luisa Salas, is both a *curandera* and a *partera* (midwife). She began practicing when she was 14 years old and has delivered hundreds

of babies during her many years of practice. Some type of traditional medicine is practiced in most indigenous communities in Oaxaca, with the knowledge typically being passed from one generation to the next.⁵

In Mixtec medicine, illness, health maintenance, religion, and social relations are all intimately interwoven. In case of illness, “one’s spiritual, social, and cosmic positions are considered to affect both cause and cure” (Bade 2004, 234). While a biomedical practitioner such as a doctor at the clinic might focus on alleviating symptoms with medication, the *curandero* uses locally grown medicinal herbs, foods, or other substances to restore the patient’s equilibrium. In addition to physiological processes, the *curandero* searches for the causes of illness in the patient’s social and personal life, as well as things “that may have disturbed his or her physical, spiritual, or cosmic balance” (Bade 1994, 36).

Many *curanderos* are not so much “traditional” as “alternative,” in that Mixtec healers often blend their treatments with modern pharmaceuticals and some biomedical practices, leading to a type of syncretism that created what is now known as *curanderismo* (Bade 1994; Whiteford 1995; Diego 2002). Patients, too, often utilize a number of healing options depending on their own assessment of the malady, its severity, who they feel could be the most efficacious healer, and what resources are available (Whiteford 1995; McGuire 2001; Bade 2004).⁶ Medical anthropologist Bonnie Bade calls this practice “transmedical health care,” in which people (in her study they were Mixtec migrants in California) “move between distinct health care systems (with differing values, methods, languages, behaviors, and schedules) and along diverse pathways (with differing social relationships and behavioral expectations) to attend to their medical needs” (2004, 233).

In Tlacotepec, we found both skepticism about traditional medicine and faith in its efficacy. As Dr. Cruz Aguilar illustrates, Tlacotepenses often seek treatment from *curanderos* and formal health care practitioners for the same malady:

5. Some healers are called upon for all maladies; others specialize as *sobadores* (massage therapists), *hueseros* (bonesetters), *parteras* (midwives), and *tisateras* (herbalists).

6. The literature suggests that Latino migrants tend to utilize institutional or noninstitutional care depending on the chronicity of the ailment, usually tending toward institutional care in the case of persistent and debilitating illness (Cabassa 2007).

The people who are more frugal with their money tend to go more for traditional medicine, but what happens is that after eight days they come back to the doctor, now with an illness a bit more chronic, more complicated, so that you have to accelerate their treatment a bit. But first they look to traditional medicine or home remedies. When they don't see results, they come back to the doctor or to the Centro de Salud. But they get treatment from the two; they get treatment from both.

Dr. Cruz Aguilar noted that such medical syncretism can have negative effects, because the illness can worsen during the time that the patient is receiving care from a curandero.⁷ But he also believes that traditional medicine offers some help to the patient: "The little teas and herbal cleansings don't have any physical effect . . . but they can help psychologically. So sometimes traditional medicine acts like a placebo, though it doesn't produce a quick effect nor a sure one. So when they come to the doctor, they indicate they want potent treatment."

Whatever the effects of traditional medicine might be, the fact that there are several traditional healers in Tlacotepec makes it clear that at least some Tlacotepenses use traditional care. While practitioners like Herminio Martínez and Luisa Salas are known to most townspeople and speak freely about their approaches to healing, other healers prefer to keep their practices private and are spoken of in whispers. The sense that traditional medicine can be ineffective or even harmful may prompt some curanderos to remain partly in shadow. We asked Sra. Ángela whether she had taken her daughter to a curandero for treatment of her epilepsy. "No, they can't do anything. What do they know of her suffering? We don't employ that kind of medicine, and we don't believe in witches or curanderos. There's nothing better than a medical doctor."

7. In its exploration of the ways that Mixtec migrants utilize traditional Mexican healers in the United States, the *New York Times* reports concerns about the use of traditional medicine: "While acknowledging that some traditional treatments can complement modern medicine, [public health officials] point out that others do considerable harm. Powders used to quiet colicky babies, for instance, have been found to contain heavy doses of lead. Without legal status, the immigrants have little protection against dangerous or fraudulent practices" (Sack 2008).

In our survey we asked respondents whether in the past year they had suffered from maladies often treated by curanderos, such as *mal de ojo*, *mal aire*, *susto*, *bilis*, or *empacho*.⁸ We found that nonmigrants and returned migrants were more likely to report having suffered from *mal de aire*, *susto*, and *bilis*.⁹ These results are unsurprising, given that nonmigrants and returned migrants have greater access to curanderos than do migrants. While there are reports that Mixtec migrants in California's Central Valley utilize curanderos (Bade 1994, 2004; Sack 2008) and though there are curanderos in the San Diego area, none of our U.S.-based respondents reported seeking treatment from them.

Interestingly, however, several Tlacotepenses did mention having returned to their hometown to seek treatment from a curandero. And the fact that returned migrants are more likely than current migrants to report one of these maladies suggests that having spent time in the United States does not diminish one's faith in traditional medicine. As curandera Sra. Luisa told us, "Yes, I have treated people who went there [to the United States]. They suffer from the same things, like fright, because they get very frightened over there, so they come home. They come to my house, say they're ill, their head hurts, and so I cure them." On the other hand, we performed regression analyses for each of the informal illnesses and found that length of time spent in the United States decreases the chances that respondents had experienced any one informal illness ($p = 0.001$), and specifically *mal aire* ($p = 0.030$), *susto* ($p = 0.099$) and *bilis* ($p = 0.001$).

Another significant factor in whether migrants reported experiencing any of these illnesses was whether they spoke Mixtec ($p = 0.043$). All of

8. *Mal de ojo*, or "evil eye," is "generally believed to be caused by glances or power of a stronger person acting on a weaker person, particularly a child," resulting in headaches, fever, worry, and weeping (Baer and Bustillo 1993, 92). *Mal aire* is bad or evil air, cold drafts that can cause "a range of illnesses including pain, cramps, and even paralysis" (López 2005, 25). In *susto*, which is usually translated as "fright" or "shock," the soul leaves or is forced from the body, which can lead to "loss of appetite, listlessness, and often diarrhea and vomiting" (Bade 2004, 235; Rubel, O'Neil, and Collado-Ardón 1984). *Bilis*, also known as *coraje*, can be roughly translated as "anger" or "rage." It is thought to be the cause of imbalances that lead to feelings of "frustration, powerlessness, and restlessness" (Bade 2004, 235). *Empacho* is "a gastrointestinal disorder believed to be caused by an obstruction in the stomach or intestines caused by food or other material" (Weller et al. 1993, 110).

9. *Susto* and *bilis* were more likely to be reported by females.

the informal illnesses except bilis were more likely to have been reported by Mixtec-speaking migrants, indicating that retention of the indigenous language might correlate with explanations and beliefs about illness. In other words, those with a greater affinity to traditional culture, including the Mixtec tongue, have a higher propensity to interpret illness in ways that accord with traditional, informal medicine. However, Juan Ramón, a Mixtec-speaking health worker at the Vista Community Clinic, reported that migrants did not typically utilize informal medicine, “because they know that there is medical care, and because we have transportation for the farmworkers if they want medical attention.” He suggested that if given the option, migrants prefer a doctor’s care to traditional healing.

In Tlacotepec, the choice of treatment—at the Centro de Salud, seeing a private practitioner, relying on a curandero, or going to the government-operated IMSS hospital in nearby Juxtlahuaca—depends on a variety of factors. Tlacotepenses mix and match these services based on the nature of their medical problem and their ability to pay. In our survey of town residents, 12.2 percent reported that they had used money sent from the United States to pay for medical services, and 19.6 percent of Tlacotepec migrants living in the United States reported sending money that was used at least in part to cover medical services. These findings suggest that “*migradólares*” may enable some Tlacotepenses to receive treatment they might otherwise not be able to afford.

THE SOCIAL CONTEXT OF HEALTH AND HEALING IN CALIFORNIA

In Vista, California, meanwhile, the Vista Community Clinic is bustling with patients, mostly migrants, several of them from Tlacotepec. The clinic is a large, clean, well-run nonprofit that offers low-cost services to over 40,000 North County community members and operates several outreach programs geared specifically toward the migrant community. There are five branches of the Vista Community Clinic scattered throughout Vista and nearby Oceanside. All have several Spanish-speaking doctors and translators. The clinic offers informational pamphlets in English and Spanish that describe pediatric, female-specific, and male-specific treatment options. These include comprehensive prenatal care, breast and cervical exams, family planning programs, a “healthy male” program offering male-specific exams, and a teen clinic. Fees for clinic services depend

on the patient's income and family size, and the clinic accepts Medi-Cal and the Healthy Families Program,¹⁰ as well as private insurance. The clinic does not require documentation from patients; however, Medi-Cal and Healthy Families are only available to legal permanent residents and U.S. citizens, so undocumented patients have to pay the sliding-scale fees out of pocket. Although the clinic offers comprehensive, low-cost services, Tlacotepenses in Vista—like their counterparts in Tlacotepec—also frequently choose to see private doctors.

It is not uncommon for Tlacotepenses to return to their hometown when they are ill and in need of treatment. Others who cannot afford U.S. health care or do not feel comfortable seeking treatment there telephone their doctors in Tlacotepec for medical advice. Doctors in Tlacotepec report that migrants call to describe their symptoms, ask for a provisional diagnosis, and request advice about what medication to take. Dr. Raúl Carrillo Valverde, another of Tlacotepec's private physicians, describes this process: "Some of my patients call me and tell me what they have. Then I tell them what they need to buy, and they go to Tijuana, where medicines are less costly." Overall, Tlacotepenses in Vista use a creative mix of health care options that depends on their occupation, income level, and legal status, as we will see in the following sections.

HEALTH PROBLEMS AMONG TLACOTEPENSES: THE HEALTH PARADOX

According to a diagnostic study carried out in 2006 by the Oaxacan state health service (Servicios de Salud de Oaxaca), the most common illnesses in the municipality of San Miguel Tlacotepec are acute respiratory infections, which affect nearly one-quarter of the population.¹¹ The principal

10. Medi-Cal is California's version of the federal Medicaid program that provides low-cost, and often no-cost, health insurance for low-income children and families, as well as the elderly, the blind, and pregnant women. Healthy Families is another California state initiative that grants low-cost health insurance to children under the age of 19 who are not eligible for Medi-Cal. Both programs require that the recipients be U.S. citizens or legal immigrants, although undocumented pregnant women can still receive Medi-Cal benefits, as can undocumented immigrants for emergency care. Both programs require immigration information solely about the recipient, not the recipient's parent or guardian (California Department of Health Care Services, <http://www.dhcs.ca.gov>).

11. These data pertain to the entire *municipio* of San Miguel Tlacotepec, which includes a number of small towns, including the town of San Miguel Tlacotepec.

cause of death from 2002 to 2006 was cardiopulmonary failure, followed by Type II diabetes and cirrhosis of the liver.

Of the 611 families surveyed in the 2006 study, 86 percent had running water in their homes. This statistic compares quite favorably to the national average of 23.3 percent among Mexico's rural population (Olaiz et al. 2006). According to Dr. Cruz Aguilar, the federally supported clinic in Tlacotepec is charged with ensuring that this water is properly chlorinated. Further, every six months the clinic provides parasite vaccinations for town residents. In the 2006 diagnostic study, only 55 percent of Tlacotepec's families reported having bathrooms in their homes; the rest used outdoor latrines. Dr. Cruz Aguilar reported that those who utilize latrines usually throw lime powder in them to neutralize the waste and reduce the possibility of airborne infection. Probably due to these efforts, only about 7 percent of residents in Tlacotepec report having been diagnosed or treated for parasites.¹²

The most common illnesses for respondents residing in Tlacotepec were gastrointestinal disease (18.6 percent for returned migrants, 19.5 percent for nonmigrants) and hypertension (21.2 percent for returned migrants, 18.2 percent for nonmigrants) (see figure 6.1). This hypertension rate is rather low compared to the Mexican national average of 30.8 percent in people over age 20, and rates of elevated cholesterol for all of our survey groups were well below Mexico's national average of 26.5 percent (Olaiz et al. 2006), suggesting that our sample enjoys relatively good health, at least with regard to several common illnesses.

On the other hand, as figure 6.1 dramatically illustrates, there are clear disparities in our sample between Tlacotepec residents (nonmigrants and returned migrants) and Tlacotepenses residing in the United States (migrants). Tlacotepec residents were more likely to have been diagnosed with each disease in our survey, and they were more likely to have been diagnosed with any one disease (see table 6.1). With regard to specific illnesses, both nonmigrants and returned migrants in Tlacotepec were more likely than migrants living in the United States to suffer from hypertension, diabetes, high cholesterol, and gastrointestinal problems. Nonmigrants were more likely to suffer from heart problems and parasites

12. These data contrast with results from a study of a rural migrant-sending community in Yucatán (Cornelius, Fitzgerald, and Lewin Fischer 2007), where parasitic infections were found to be a pervasive health problem.

than both returned migrants and current migrants. This could be the case because living conditions overall—including access to clean water, adequate waste disposal, and nutritional foods (discussed in the nutrition section below)—tend to be poorer in Tlacotepec than in Vista. Although nonmigrants and returned migrants are generally older than current migrants, potentially leading to a higher prevalence of disease among them (as shown in table 6.2), we find a statistically significant health disparity between residents of Tlacotepec and California even when controlling for age, gender, and income.

Figure 6.1 Incidence of Illnesses, by Type of Migration Experience

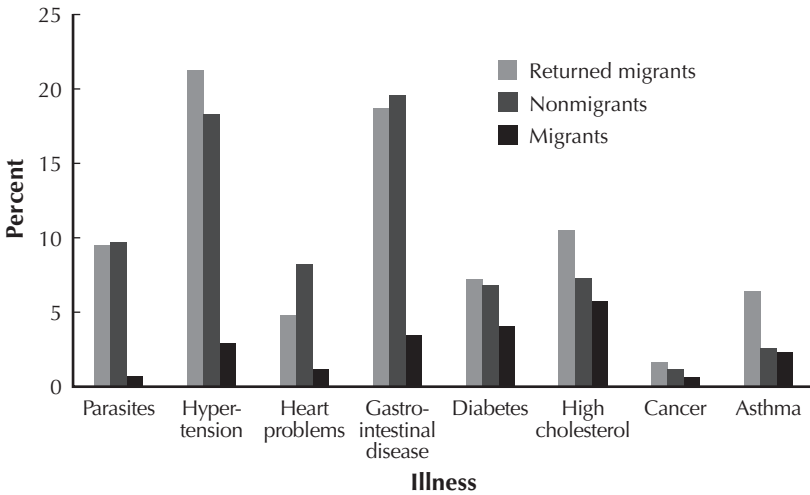


Table 6.1 Illness and Treatment among Migrants, Nonmigrants, and Returned Migrants

	Migrants	Nonmigrants	Returned Migrants
Diagnosed with at least one illness	18.1%	46.4%	50.7%
Those treated for at least one illness (among those diagnosed with at least one illness)	56.4%	81.2%	75.4%
No reported illness	81.9%	53.6%	49.3%

Table 6.2 Logit Analysis: Predicting Likelihood of Having Been Diagnosed with at Least One Illness

	Model 1 β
Age	.042*** (.006)
Male	-.536*** (.192)
Migrant	-1.274*** (.293)
Returned migrant	1.343*** (.317)
Wealth/income	.011*** (.004)
Constant	-2.157*** (.326)
N	743
Chi-squared	91.34

*** 99 percent confidence level; robust standard errors in parentheses.

These data suggest that selection biases—the healthy migrant and salmon bias effects—are likely operating in our sample. Both of these biases enter into the ongoing debate about the epidemiological paradox posed by the Hispanic-origin population. This “Hispanic health paradox”¹³ was originally reported by Markides and Coreil (1986) and has since been extensively researched and vigorously debated. The paradox derives from epidemiologists’ expectation that Hispanic health outcomes and mortality rates would be similar to those of African Americans, with whom Hispanics share a similar sociodemographic profile (relatively lower income, lower educational attainment levels, and less health insurance coverage than non-Hispanic white Americans). This contrasts with the empirical evidence that newly arrived Latino immigrants often exhibit lower death rates and infant mortality rates than African Americans and U.S.-born Latinos—in some cases even lower than non-Hispanic American-born whites (Hummer et al. 2007; Palloni and Arias 2004; Lara et al. 2005). This advantage in mortality rates is seen as a paradox because low socioeconomic status is a well-known determinant of mortality and is connected

13. It is also known as the Latino health paradox.

to a high prevalence of risk factors among Hispanics, including diabetes and obesity (Patel et al. 2004).

To explain this paradox, the literature advances three main theories: data artifact, cultural or social buffering effects, and migration effects. Most pertinent to our study would be migration effects, commonly divided into two phenomena referred to as the healthy migrant effect and the salmon bias effect. The former holds that “Hispanic migrants are selected from the origin population for certain traits, including better physical and psychological health” (Palloni and Arias 2004, 88); thus the “migration of the fittest” would explain better health outcomes for foreign-born Hispanic migrants (Escobar 1998, 781).

With regard to the healthy migrant effect, we found that people who are ill do sometimes migrate: four of our respondents who had migrated at some point in their lives indicated that getting medical attention in the United States was one of the most important factors in their decision to leave Tlacotepec. However, among males between the ages of 15 and 29 (the group most likely to migrate), 27 percent of the individuals who do not have plans to migrate in the coming year had at least one illness. Although these respondents might have had other reasons not to migrate, only 10 percent of males aged 15 to 29 who do have plans to migrate in the next year had an illness. These data, in addition to the fact that there is a higher prevalence of illness among people who have not migrated to the United States, suggest that, indeed, healthier people are more likely than unhealthy people to migrate in the first place.

The salmon bias effect, on the other hand, suggests that migrants may be inclined to return to their country of origin to seek medical attention for illnesses or, in extreme cases, to die. If unhealthy migrants return to their countries of origin, they become “statistically immortal” (Abraído-Lanza et al. 1999). Their deaths are not reported, “leading to an artificially low mortality rate among Mexican immigrant adults” (Hummer et al. 2007, 442). Further, if migrants return home to seek health care, whether or not they return to the United States after recovering, the data would naturally detect a high number of healthy migrants in the United States (Cornelius, Chávez, and Jones 1984; Bade 2006).

To test the salmon bias effect empirically, our questionnaire asked: “Have you or any of your relatives gotten sick in the United States and returned to Mexico to get treatment?” We found that 20.7 and 22.3 percent

of Tlacotepenses in Tlacotepec and Vista, respectively, had returned or had a family member who had returned to Mexico to seek medical attention. Our survey also asked migrants who had returned to Tlacotepec at any time, "Why did you return [to Tlacotepec] the last time?" Although the most common responses were to reunite with family members and to attend the town's annual fiesta, eleven of our interviewees cited medical problems. Although this was not a substantial portion of our sample, the fact that some migrants do return home for treatment suggests that health and illness do figure into some return migration decisions. Further, health-related concerns might have been contributing factors in other decisions to return but were not reported as the principal reason. Interestingly, though we might expect that elderly migrants would be more likely to return to their hometowns for medical reasons or to receive treatment, older people were not overrepresented among those returnees to Tlacotepec.

Nonmigrants and returned migrants were more than 2.5 times as likely to have been diagnosed with at least one illness. However, as the second column in table 6.1 shows, they were also much more likely than migrants to have received treatment for their illnesses. These data indicate that migrants may have reduced access to health care (a subject discussed further below) and may also be further evidence of the salmon bias in that Tlacotepenses may be returning to Tlacotepec for medical care.

Our interviews with doctors and patients in Tlacotepec and Vista confirm that the salmon bias is a plausible explanation for health and health care disparities between residents of Tlacotepec and residents of Vista. According to our informants, people return to Mexico for treatment because treatment in the United States is very costly and Mexico is very near, a geographical proximity that has long encouraged circularity in migration patterns. As Dr. Cruz Aguilar told us in Tlacotepec, "Migrants take advantage of the chance to come and get treatment here when they come to see their families for a couple of months. But some mention that there is no health support for them there, since they run the risk of being caught and deported. So they bear their discomfort there, and when they come back they get treatment here."

Overall, although other factors may play into each individual's decision to return to Mexico or not to migrate in the first place, our data suggest that a combination of the healthy migrant effect and the salmon bias effect is at work in our sample. Importantly, the illnesses that most

strongly indicate better health among migrants than among nonmigrants and returned migrants—and thus illustrate the salmon bias and healthy migrant effects in our sample—are nutrition-related illnesses (see figure 6.1). Nutrition is clearly a pivotal element of health; in the following section we discuss the impact of migration on the dietary practices of and nutritional options for both migrants and nonmigrants.

MIGRATION AND NUTRITION

It is clear that migration to the United States introduces migrants to foods that are not readily available in the Mixteca region, where the traditional diet consists of tortillas, beans, eggs, *mole*, rice, *atole*, and meat-based stews like *pozole*.¹⁴ Tlacoatepenses historically have produced their own food, growing corn and raising animals for household consumption. In contrast, migrants in the United States are constantly exposed to highly processed fast foods. These are cheap and easily obtained, and thus a more practical solution than homemade meals during their long workday. Therefore, migrants tend to eat foods high in fat, foods that satisfy their need for calories but not their need for nourishment. As Abundio, an elderly former *bracero* now residing in Tlacoatepec, remembers:

When I went to the United States they gave us beans from a can and meat from who knows where. There were enormous dining halls where 400 or 500 people would eat. At 1:00 a.m. they would wake us up and we would line up for nothing more than coffee. Our lunches were just four little tacos, a piece of fruit. Then they took us to the ranches to work. We ate three times: in the morning, at midday, and then supper. In the evening they gave us Kool-Aid, a big chunk of meat from who knows what kind of animal, which we wolfed down. When we finished we went to sleep, and the next day at three or four in the morning we went to work again in the fields in Santa Ana, California.

14. *Mole* is a thick sauce comprising ground chiles, chocolate, almonds, and sesame seeds, among many other ingredients; it is usually served over poultry. *Pozole* consists of hominy, pork, seasonings, and garnishes like lime and avocado. *Atole* is a thick, corn-based beverage, served warm.

Workers at the Vista Community Clinic noted that high blood pressure and diabetes are the two most common illnesses among migrants presenting at the clinic, and they attribute this to the fact that migrants typically do not have healthy diets. “The lunch trucks that go to the ranches serve quick meals that are high in fat and salt . . . fried rice, fried chicken, Spanish rice, burritos, instant noodles in a cup. Basically that’s what the diet is made up of.”

Given the pervasiveness of unhealthy foods in the United States, one might predict that migrants would be at higher risk for nutrition-related illnesses than their nonmigrant and returned migrant counterparts. On the contrary, controlling for gender, age, and income, we find that returned migrants and nonmigrants are more likely than migrants to suffer from diabetes, hypertension, and gastrointestinal problems (see table 6.3) These findings are all statistically significant, and they suggest that nutritional factors play into the salmon bias and healthy migrant effects discussed above.

Table 6.3 Logit Analysis: Predicting Likelihood of Having Been Diagnosed with Any Nutritional Illness (diabetes, hypertension, high cholesterol, or gastrointestinal disease)

	Model 2 β
Age	.049*** (.006)
Gender	-.585*** (.212)
Migrant	-1.494*** (.361)
Returned migrant	1.679*** (.385)
Wealth/income	.012*** (.004)
Constant	-2.88*** (.356)
N	743
Chi-squared	97.65

*** 99 percent confidence level; robust standard errors in parentheses.

Our qualitative data suggest that this discrepancy might be due to several factors. First, due to migration the majority of Tlacotepec residents are women, children, and the elderly, who may be less likely to perform labor-intensive activities like sowing their own crops and raising their own animals. They often opt instead for convenient and accessible processed foods. Second, migrants bring their U.S.-influenced dietary customs home with them, contributing to an increasing demand in Tlacotepec for cheap industrialized products. And finally, given that residents of Tlacotepec are poorer overall than Tlacotepense migrants in the United States, the former may be less able to supplement these processed products with more nutritious foods. Indeed, although locally grown, nutritious produce is available at the Juxtlahuaca outdoor market each Friday, the more convenient community stores in Tlacotepec are loaded with products such as cups of instant noodles, white bread, canned meats, chips, and sodas. Sra. Maribel Legaria, a proprietor of one of these community stores, explains that she sells “beans, corn, rice, sugar, milk, and eggs, but [instant] soups sell the most, along with Bimbo bread and pre-packaged pastries.”

Industrialized foods and substances like alcohol and tobacco are not necessarily new to Tlacotepec. They came to the community around the 1970s, and demand has only increased since then. “When I was younger,” Abundio says, “they began to talk about how soda would come to the town, cigarettes would come. . . . We didn’t know what beer was; then when I came back from the United States beer had been introduced here.” However, the popularity of such products is growing, and demand is so high that some families, like Abundio and his wife, sell things like noodle cups, sodas, and candy out of their homes. As Abundio explains, “You see Maruchun [a brand of microwavable instant noodles in a Styrofoam cup] wherever you go. They distribute it in Juxtlahuaca, and people buy it in bulk so they don’t have to go every eight days to buy it in the stores. . . . Sometimes vendors bring soft drinks and the yogurt that kids have started eating.”

The 2006 Health Diagnostic in the San Miguel Tlacotepec municipality found that 38.4 percent of children under age 5 presented some level of malnutrition (though not qualifying as severe malnutrition). Further, the 2006 national Mexican health survey showed that malnutrition is a

leading cause of death for children under 5 years of age (Olaiz et al. 2006). Dr. Carrillo Valverde says that parents often feed highly processed products to their children: "Eating these processed foods makes no sense, but the people do it anyway. It's just filler, those cups of noodles, all of that, not fit to eat. There are some older, poor women who come back from the Juxtlahuaca market with their boxes of instant soups that they feed to their children for the week. What can we do?"

Although our survey did not investigate the types of foods Tlacotepenses bought with remittances, 78.6 percent of them reported that the money they either sent or received from the United States was used for food and other household expenses. Families looking for ways to save money would be likely to purchase processed food products. As Dr. Cruz Aguilar told us:

Unfortunately, people here in Tlacotepec start their families when they are only about 17 years old, and by their twenties they have five or six kids. The economic contributions that migrant family members send are not sufficient to meet the needs of these large families, so they buy cheaper foods in order to provide for the whole family. They look for products that will fill them up, not ones that will nourish them.

Indeed, Tlacotepenses' pantries are full of canned goods, instant coffee, white bread, high-sodium instant soups, candy, bottled juices, and sodas. But this is not to say that Tlacotepenses never eat traditional Mixtec and Oaxacan foods. On the contrary, many grow their own corn, make their tortillas, raise chickens and turkeys, and serve dishes like mole, pozole, and traditional stews. However, the relatively high prevalence of Tlacotepec residents with nutrition-related illnesses suggests that, though remittances often contribute to household income in Tlacotepec, families there do not seem to be spending these monies on nutritious food.

As we will see in the following section, even though migrants are less likely to suffer from nutritional and other illnesses, they often lack access to health care and insurance, and so are less able to receive treatment in the United States for any illness they may experience.

HEALTH STATUS AND ACCESS TO HEALTH CARE AND HEALTH INSURANCE

The health status of Tlacotepense migrants depends largely on their access to medical services for both the diagnosis and treatment of illness. Particularly among migrants living in the United States, access to health insurance often determines the availability of health services and the level of treatment sought. In turn, migrants' access to and utilization of health care affects the level of expenditure and types of services that federal and local governments provide. Our analysis focuses specifically on health insurance and paths to health care in the Tlacotepense community.

Health insurance can be employer provided, purchased privately, or obtained through government-sponsored programs. In the United States, most insured people (81 percent) receive health insurance from their employer (Brown and Yu 2002). However, employment-based health insurance varies by type of job and length of employment. Our research among Tlacotepenses indicates that migrants who have legal status and stable, nonagricultural jobs are more likely to have health insurance than are undocumented migrants or migrants who work in agriculture or as day laborers (regardless of legal status).

Overall, only 25 percent of migrants had health insurance on their most recent trip to the United States. This low rate of coverage is partly a function of the types of jobs Tlacotepenses hold. Of our sample of migrants currently residing in the United States, 44 percent hold service jobs, 27 percent work in construction, 12 percent in manufacturing, and 12 percent in agriculture. Those working in agriculture had the lowest rate of health insurance coverage (25 percent), because most employers of agricultural workers do not offer insurance. Tlacotepenses employed in the service sector fared little better. The figure for workers in the manufacturing sector was the highest, at 56 percent (see table 6.4).

In addition to employment sector, documentation status also plays a part in determining the insurance status of Tlacotepense migrants. National-level data show that foreign-born Hispanics are generally much less likely to have health insurance than their native-born counterparts or the U.S. adult population as a whole. A survey by the Pew Hispanic Center found that only 48.5 percent of Mexico-born women in the United States have some type of insurance, compared to 75.4 percent of native-born Hispanic women and 82.3 percent of the general U.S. population

(Gonzales 2008). In our sample, we found that undocumented migrants are insured at even lower rates than migrants with some type of documentation. Only 28 percent of undocumented immigrants currently living in the United States have health insurance, versus 51 percent of documented migrants.

Table 6.4 Health Insurance Status, by Sector of U.S. Employment

Sector	Percent of Sample	Percent of Insured	Percent of Uninsured	Percent of Insured with Insurance from Employer (own or family member's)
Construction	27	47	53	41
Agriculture	12	25	75	75
Services	44	32	68	39
Manufacturing	12	56	44	100
Self-employed	3	50	50	50
Other	0.7	100	0	0

Similarly, the proportion of those with health insurance tends to rise with increased length of residence in the United States. Our data show that 57 percent of migrants who have been in the United States for more than fifteen years are insured, compared to 40 percent of those who have lived in the United States for less than two years and only 30 percent of those who have been there between two and five years. The interplay between time spent in the United States and increased levels of regularization of status could explain the rising rates of insurance coverage. For example, although only 25 percent of the overall migrant sample had insurance during their last stay in the United States, 41 percent of migrants who consider the United States their primary place of residence are insured. This suggests that legal documentation and longer periods of time in the United States combine to create a kind of stability and permanency for these migrants that facilitates their access to health insurance.

As migrants remain in the United States for longer periods, they are more likely to have stable, higher-paying jobs, and legal status ensures that they can take advantage of employer-provided health insurance when it is available. We found that 45 percent of migrants who have lived

in the United States for less than two years work in the service sector (which has low levels of health insurance), compared to only 30 percent of those with more than fifteen years in the United States. Likewise, 30 percent of migrants who have lived in the United States between two and five years work in agriculture, versus only 5 percent of those who have been in the United States for more than fifteen years. This is important with regard to health care, given that insurance coverage correlates with income and income correlates with employment sector (California-Mexico Health Initiative 2005). Our research confirms this relationship. Among our interviewees, migrants who have health insurance have a median weekly income of \$580, compared to \$374 for uninsured migrants. In short, higher wages mean that migrants have better access to health services, independent of workplace coverage.

Access to health insurance influences the overall health status of Tlacotepense migrants as well as the ease and frequency with which they can obtain health care. Certain health behaviors in the U.S.-based Tlacotepense community are clearly related to low rates of insurance coverage. One is the low rate of utilization of health care services in general, which are prohibitively expensive for the uninsured. Jesús, a former migrant, told of a friend who had to forgo needed dental care in the United States due to cost: "It is so expensive, equal to what he earns for two weeks of work." Our survey found that 58 percent of migrants with health insurance who currently reside in the United States have visited a doctor in the past year, compared with only 48 percent of those who lack insurance, suggesting that those with health insurance are more likely to seek medical care, including preventive care.

The effects of low insurance rates are also evident in how Tlacotepenses use certain types of health care services. For example, a migrant without health insurance will postpone seeking treatment and then visit an emergency room when the medical problem can no longer be ignored (Palinkas and Arciniega 1999). In our interviews with Tlacotepenses, we found that 59 percent of U.S.-based migrants who had suffered a serious accident sought treatment in the emergency room, compared with only 24 percent of those who reside primarily in Mexico. Moreover, 75 percent of migrants who had a serious accident in the past year but did not have health insurance sought treatment in the emergency room. This is

in stark contrast to the 50 percent of migrants with health insurance who sought emergency room treatment. By law, U.S. emergency rooms are required to treat all patients, regardless of documentation, insurance status, or ability to pay. However, utilization of emergency room services is very expensive, putting a large burden on both the migrant (who is billed following treatment) and the local hospital or government.

Migrants occasionally turn to other alternatives when they fall ill. Many go to Tijuana, where the costs for care and medicine are usually much lower. As Tlacotepec resident Sra. Ángela told us, "They say that medicines are very expensive in the United States, and so my daughters go to Tijuana for health care. The doctors in Tijuana charge them less than doctors in Vista." Juan Ramón and Elva, employees of the Vista Community Clinic, reported the same type of behavior, noting also that the Tijuana option is only open to migrants who have papers to cross the border.

Our research confirms that Mexican migrants often lack health insurance because of the kinds of jobs in which they are employed and their undocumented status. Lacking health insurance, they often follow other avenues to care, either in the emergency room or across the border, a situation that holds implications for migrant health in the long term, especially with regard to preventive care.

FAMILY PLANNING AND SEXUAL PROTECTION

Our study of Tlacotepenses yielded several interesting findings about sexual practices and the types of birth control and sexual protection used by migrants and nonmigrants. Migrants' reproductive behavior—measured by the number of respondents expecting a child in the coming year—did not differ significantly from that of nonmigrants. However, several notable and consistent variations do emerge with regard to birth control and protection methods.

Migrants who are U.S. residents and those with migratory experience in general are more likely to use most forms of birth control included in our survey, the exceptions being "female operation" (hysterectomy or tubal ligation) and abstinence (see table 6.5). The only practice used significantly more in Mexico and by nonmigrants was "female operation." Otherwise, all forms of birth control—pills, injections, condoms—were used with much greater frequency in the United States. This could be

a reflection of several factors. First, there is more access to information about birth control methods and to the products themselves in the United States. For example, migrant women reported using birth control pills at a much higher rate than their Mexico-based nonmigrant counterparts (see table 6.5). Birth control pills, whose use is sometimes discouraged by husbands in Mexico, can be obtained more easily in the United States and are also perceived as more socially acceptable there. Second, the use of different birth control methods could be a function of access to health insurance and affordable care. Women with health insurance in the United States reported using birth control pills and injections at higher rates than noninsured women. This is not surprising; health insurance reduces the cost of these products and thus increases their utilization.

Table 6.5 Birth Control Practices, by Migration Status

Type of Protection	Mexico Residents (percent)	Nonmigrants (percent)	U.S. Residents (percent)	Migrants (percent)
Nothing	25.8	25.9	14.0	18.5
Feminine operation	26.1	22.3	16.0	24.4
Vasectomy	2.1	2.8	4.6	2.9
Birth control pills	4.6	5.2	13.7	9.8
Injections	0.9	1.2	7.6	4.9
Norplant	0.3	0.4	0.0	0.0
Intrauterine device (IUD)	8.6	7.9	9.1	9.8
Condoms	13.5	13.6	17.5	16.1
Óvulos, ^a spermicide, or diaphragm	0.3	0.4	3.0	1.9
Rhythm, calendar, periodic abstinence	2.5	2.0	0.8	2.0
Withdrawal	0.0	0.0	0.8	0.5
"Morning after" pill	0.0	0.0	1.5	1.0
Abstinence	12.3	15.1	6.9	5.4
Other	2.8	3.2	3.8	2.9

Note: Table entries represent the percentage of each population that reported the use of a given method. $N = 456$, $p = 0.01$.

^a Óvulos are tablets that a woman introduces into her uterus to induce a hormonal change.

There is a clear increase in most forms of protection as we move across the columns in table 6.5 from Mexico residents and nonmigrants to U.S. residents and those with migration experience. Mexico residents and nonmigrants also indicated higher rates of abstinence than their migrant counterparts in the United States, which could point to differing cultural norms or to the separation of women in Mexico from their migrant husbands in the United States. Increased awareness and information may also promote sexual protection efforts.

Dr. López Silva, a private physician in Tlacotepec, observed that knowledge of birth control and methods to prevent the spread of socially transmitted diseases was scarce among nonmigrant Tlacotepenses, especially women: "Women still lack information here in the Mixteca." Clearly, methods of sexual protection change significantly with migration and residence in the United States, whether it be for financial, informational, or cultural reasons.

HIV/AIDS AND MIGRATION

The spread of HIV/AIDS and other sexually transmitted infections is an important issue to consider in communities with substantial levels of circular migration, such as Tlacotepec, since various studies have revealed a correlation between the spread of HIV/AIDS in Mexico and migration to the United States (Bronfman, Camposortega, and Medina 1989; Bronfman, Sejenovich, and Uribe 1998; Magis Rodríguez et al. 1995; Hirsch et al. 2002). Further, in recent years Mexico has experienced an increase in HIV cases, especially among experienced U.S. migrants. In a study of risk factors among the migrant population, Rangel Gómez et al. (2006, 4) estimate that between 25 and 39 percent of AIDS cases in rural Mexico are presented by men who have been in the United States.

Health practitioners we interviewed in Tlacotepec did not report having detected cases of HIV/AIDS among residents. However, the Centro de Salud is aware that HIV/AIDS is an important public health issue and is taking preventive measures to educate local residents. Ana Gómez of the Centro reported: "We are in HIV/AIDS Awareness Month [December 2007]; last week we talked with people from Oportunidades about what HIV is, we gave them information about how to prevent it, about HIV transmission mechanisms, and about what they must do if they are

already infected with the virus. They haven't found any cases in this community, though."

Given that condoms are the second-most-popular form of contraception in Tlacotepec (see table 6.5), it would seem that residents are taking measures to prevent HIV and socially transmitted infections. However, Ana Gómez suggests that although awareness about these illnesses is growing, pregnancy is the main concern of many women: "Last week I gave a talk about HIV and told the women that we could give them condoms. But before that, they didn't come for condoms. When women know that their husbands will be coming back from the United States, they come to the clinic and adopt a contraceptive method. But what they most ask for are monthly injections."

Like others health practitioners in Tlacotepec, Ana attributes the risk of infection in the community to high levels of migration from Tlacotepec to the United States and other parts of Mexico; the risk is especially high for wives of migrants. Close to half of our female respondents whose husbands are in the United States (44.3 percent) reported that their husbands had come back to visit in Tlacotepec within the last two years. Such circular migration can increase the levels of risk in the migrants' points of origin and destination, as well as their transit points in between.

Undocumented migrants who have been deported from the United States may also have an elevated risk of contracting HIV/AIDS. Strathdee and colleagues found that recently deported male migrant intravenous drug users who had lived in Tijuana for short periods were four times more likely to be infected with HIV than other males ($p = 0.002$). One explanation for this finding might be that "deportation from the U.S. is the precipitating factor leading to social upheaval, loss of social ties and income, homelessness, and possibly other destabilizing conditions which lead to engagement in high risk behaviors and HIV acquisition" (Strathdee et al. 2008, 9).

Our survey found that 45.8 percent of Tlacotepense migrants were apprehended at least once by the Border Patrol on their most recent trip to the United States. We also found that the San Diego–Tijuana region is the main crossing point for undocumented Tlacotepenses (72.3 percent of them crossed most recently in that region). These two findings allow us to infer an elevated risk for HIV/AIDS in this population, especially

considering that apprehended migrants in San Diego are deported to the nearest border town, Tijuana, which has an extremely high level of HIV/AIDS infection (Brouwer et al. 2006). We do not have data showing time spent in the border town to which migrants were returned, nor the incidence of high-risk practices that might have occurred during their stay there. Therefore, the data presented here only allow us to speculate that circular migration—combined with high rates of apprehension, deportation from the United States, and growing HIV/AIDS prevalence in Tijuana—could lead to an elevated risk for HIV exposure among Tlacotepenses in the future.

MIGRATION AND MENTAL HEALTH

The majority of studies on the psychological and emotional effects of migration have focused solely on the migrant, arguing that border crossing and integration experiences contribute to high stress levels and psychological distress (Vega et al. 1998; Escobar 1998, 782; Alderete et al. 2000; Grant et al. 2004; Prelat and Maciel 2007). However, the migration process affects not only those who leave but also those who are left behind. Recent studies have begun to show how those who do not migrate can suffer psychological distress as a result of the migration of family and community members (Salgado de Snyder 1993; Bacallao and Smokowski 2007).

Our study results reveal that 12 percent of Tlacotepenses—both in Tlacotepec and in the United States—have received treatment for depression, nerves, or anxiety in the past year.¹⁵ This rate is nearly twice that of major depressive disorder in the United States (6.7 percent in those aged 18 or older), but it is less than the 2001 U.S. rate of 18.1 percent for anxiety disorders (National Institute of Mental Health, <http://www.nimh.nih.gov>). Our data do not allow us to disentangle the two disorders, but

15. In their study of Tunkás, a migrant-sending community in Yucatán, Prelat and Maciel (2007) found that 39 percent of migrants reported feelings of depression, an incidence almost four times that of Tlacotepenses. However, different wording in the survey questions probably affected these self-reports. We asked Tlacotepenses if they had received *treatment* for depression, anxiety, or nerves, while the Tunkás study asked if the person had *experienced* increased feelings of depression, anxiety, or nerves. Hence our study only counts people who have been diagnosed and received treatment, allowing us to control for perceived depression. By including all Tlacotepenses in our sample, we are able to analyze the mental health of those who have migrated and also those who have not, thus providing a more comprehensive view of the migration/mental health linkage.

they do suggest that mental distress is a significant issue in the Tlacotepec community.

There was a strong consensus among Centro de Salud staff and other doctors in Tlacotepec that older women are at the highest risk for depression, primarily because they are often the ones who are separated from their husbands and children for long periods. Ana Gómez explained: "The older adults suffer more depression because the majority are all alone here; their kids are working abroad. Young people don't suffer from depression; the majority are older people."

Our data support these claims. In general, nonmigrant Tlacotepenses reported receiving treatment for depression and psychological disorders at higher rates than migrants: 11.8 and 7.4 percent, respectively.¹⁶ Women revealed a higher prevalence for depression: 13.2 percent for women versus 6 percent for men. Further, married women whose husbands are living in the United States were significantly more likely to have been treated for depression (27 percent) than married women who live with their husbands (13 percent). These claims are on point with claims made by various health practitioners in Tlacotepec.

Several of the town's doctors attribute depression to the emotional and psychological distress caused by long separations from family members. This situation is illustrated by the case of Juana, a nonmigrant living alone in Tlacotepec while her husband and son are living in the United States. She has not heard from her son for seven years and prays for his well-being or for news of him. "A mother is always thinking about her children," she said. The sadness in her voice and her tears made it very clear that she has suffered greatly from this separation, and she refers to her life as "very hard," "tough," and "very black."

Salgado de Snyder (1993) found that 43 percent of wives left behind in rural Jalisco and Michoacán internalize emotions associated with migration-related separations by crying privately; 24.3 percent of those women suffered from mental discomfort and generalized distress. Moreover, 31.2 percent of the wives left behind had a negative view of their husband's decision to migrate, which they thought had adversely affected their family. Issues raised by the migration of husbands included family dissolution,

16. The rate of 7.4 percent is consistent with that of the general Mexico-born migrant population in the United States (7.7 percent) but is much lower than the U.S.-born Mexican American population (15.2 percent) (Grant et al. 2004, 1230).

new responsibilities and roles to play within the family, fights (verbal and physical), and the fear of losing children to migration.

While we found that nonmigrants in Tlacotepec had a higher incidence of depression, nerves, and anxiety, 7 percent of migrants also reported suffering from these emotional disturbances. Importantly, their mode of migration correlated with emotional distress. For instance, those who sought treatment for depression, anxiety, or nerves were those who had entered the United States illegally through the deserts or mountains. In contrast, none of those who entered legally or with falsified or borrowed documents had been treated for emotional distress. This suggests that the stressful, often dangerous, clandestine border crossing and the day-to-day problems that undocumented status causes for migrants can have detrimental effects on their emotional state. Undocumented migrants are forced to live secretive lives in the United States in order to avoid deportation, and life in the shadows carries legal, financial, psychological, and emotional risks (Núñez and Heyman 2007).

Juan, a Tlacotepense migrant now living permanently in Brentwood, California, describes the border-crossing experience: "The crossing is very difficult. Sometimes people get lost. The problem is the mountains. Many people die and the *coyotes* [people-smugglers] rape the women, they steal." Although Juan now lives in the United States legally, he recalls what it was like living as an undocumented migrant: "Being here without papers, always on the lookout for the Border Patrol, is difficult. Thank God I was never deported, but my sons were." Living secretly and in constant fear of apprehension while simultaneously trying to integrate into a foreign environment obviously can be detrimental to a migrant's mental health.

Unfulfilled financial expectations, discrimination, cultural misunderstanding, and distance between place of origin and host country can trigger depressive symptoms for migrants (Vega, Kolody, and Valle 1987), along with guilt over having left family behind (Salgado de Snyder 1986, 1993, 392; Cervantes, Padilla, and Salgado de Snyder 1991). Doctor López described the distress he encounters in recently returned migrants: "Because things are calmer here, it's easy to notice how a returned migrant has been changed by his experience over there. It takes them two or three months to lose the sense that they are being followed, to lose

the nervousness. People here are relaxed; they walk slowly. But when people live in another society, there is a different way of living, and that can cause stress.”

Hovey (2000) found a correlation between acculturation stress and depression and suicidal ideation. Migrants who reported higher levels of acculturation stress had a higher incidence of depressive symptoms and suicidal ideation (49 percent of migrants expressed feelings of acculturation stress, 19.56 percent expressed feelings of depression, and 10.14 percent expressed feelings of suicidal ideation). This may stem from difficulty becoming accustomed to values, norms, and customs of their new environment as well as feelings of discrimination, language barriers, economic difficulties, and the breaking of ties with family and friends left behind in Mexico.

Several studies have shown that migrant mental health is inversely related to the amount of time spent in the United States; in other words, mental health appears to worsen the longer migrants are in the United States. It is possible that “socialization into American culture and society increase[s] susceptibility to psychiatric disorders” (Vega et al. 1998), whereas “retention of Mexican cultural traditions” has a positive effect (Escobar 1998, 782). In their study of migrants in Fresno, California, Vega and colleagues found that the prevalence rate for any psychiatric disorder, including substance abuse (as defined by the DSM-III-R), was 24.9 percent for immigrants and 48.1 percent for native-born informants (Vega et al. 1998, 774). Alderete et al. (2000, 613) and Grant et al. (2004, 1229) also report that the lifetime prevalence rate for psychiatric disorders among migrants was less than half that among Mexican Americans and the U.S. Hispanic population at large.¹⁷ Although our study explored the effects of time spent in the United States and treatment for mental illness, none of our findings on the topic was statistically significant. As discussed above, mental health problems were more strongly associated with undocumented status in the United States and living in Tlacotepec without one’s spouse than with time spent in the United States as a migrant.

Mental health services in Tlacotepec are limited, and local residents must travel 15 miles to the IMSS hospital in Juxtlahuaca to see a therapist.

17. Alderete et al. ruled out the healthy migrant effect by determining the similarity in prevalence rates among residents of Mexico and Mexican migrants to the United States.

Once someone is diagnosed with a mental illness (as opposed to temporary depression or anxiety), the patient must travel even further, to Huajuapán (about two hours away) or Oaxaca City (about six hours away) to see a psychologist or psychiatrist. The time commitment and financial burden of such a trip may prevent Tlacotepenses from seeking these services. Instead, the staff of the Centro de Salud and private doctors in Tlacotepec often serve as the town's psychologists, providing basic therapy. Ana Gómez described the mental health services they provide: "They come here with general complaints, like body aches. We diagnose them with depression, and patients tell us their problems. We give them advice on how to beat depression, and if their condition doesn't improve we send them to a psychologist." Dr. Cruz Aguilar echoes her words: "We talk with them, give them some guidance. We're general practitioners; we've studied psychology but just a bit. Patients come to us and vent, and we give therapy. Older people sometimes don't come to us and go instead to the priest."

Personnel at the Centro de Salud are not authorized to prescribe antidepressants. Private practitioner Dr. Carrillo Valverde could prescribe such medications but does not: "We have identified cases of depression, but I generally don't deal with those types of illnesses. I don't treat them, and I don't prescribe narcotics. We just detect cases and refer them to a specialist." Nevertheless, some private practitioners do have a supply of such drugs. As Dr. Cruz Aguilar explains: "People usually present with an anxiety crisis that eases up in a few days. Sometimes we give them antidepressants and about a fourth of a Diazepam or Valium, but it's a very small dosage so they won't become dependent. The other drug we prescribe is Fluoxetine [Prozac], which they will keep taking, but also in very small dosages."

With regard to Tlacotepense migrants in the United States, although the Vista Community Clinic provides an array of services aimed at the migrant community, it does not have a psychologist on staff. Elva explains: "We got a program started for mental health, but we didn't go very far with it. As far as trying to refer farmworkers to the mental programs, we really don't have any referrals other than what the doctors have within the clinic." If a migrant is in need of a psychologist, he is referred to North County Lifeline, a nonprofit organization that provides mental health

and counseling services. Unlike in Tlacotepec, where patients must travel a considerable distance to receive mental health care, North County Life-line is easily accessible to Tlacotepenses residing in Vista.

Regardless of place of residence, several obstacles discourage Tlacotepenses from seeking mental health treatment. One is cultural. When we asked Dr. Carrillo Valverde how mental illness is perceived in Mexico, he responded: "People here think that if they go to a psychologist, they're going to be treated as though they are 'crazy.' That is the stigma it carries. That's why they avoid getting treatment for mental illness." Another local physician, Dr. Silva, noted that the stigma of mental illness often presents itself in somatic form. Thus Tlacotepenses might experience depression or other mental distress as illnesses that are more common and less stigmatized in their community. This may also explain why the incidence of treatment for depression we found in Tlacotepec was only about a quarter of that found in Tunkás, Yucatán, where respondents were asked if they had *experienced* feelings of depression, anxiety, or nerves, rather than whether they had been *treated* for these conditions.

Migration has a clear impact on the mental health of both migrants and nonmigrants. Further, long separations between family members can exacerbate the emotional consequences of migration and take their toll on the family unit.

MIGRATION AND FAMILY STRUCTURE

The theme of family disintegration as a consequence of migration to the United States emerges frequently in conversations with Tlacotepenses. This is not surprising, given that a quarter of wives in Tlacotepec have husbands currently living in the United States. According to Dr. Cruz Aguilar, "We're seeing a lot of family disintegration. Let's say the father leaves and the wife and daughters stay here. The daughters get married, and their husbands migrate, leaving their pregnant wives behind. Their children grow up not knowing their fathers until they are three or four years old. And when the father returns, there are problems because the children don't know the father and they treat him like a stranger."

Our survey revealed a higher prevalence of depression among Tlacotepenses with a close family member in the United States (17.5 percent) than those without (8.8 percent). Bacallao and Smokowski (2007) found

that the loss of relationship with a parent can lead adolescents, especially males, to fall into high-risk situations such as illegal activities or antisocial behavior. Salgado de Snyder (1993) also found that mothers in rural Jalisco and Michoacán with husbands in the United States had experienced increasing conflicts with their children (32.1 percent) and physical violence between the children (29.7 percent) as a consequence of shifts in family dynamics.

Roles within the family unit change with migration, particularly because wives often remain in the sending community and become solely responsible for the family's well-being. These new burdens may cause psychological distress because, as Dr. López Silva explains, "Now the wife has to resolve all the problems in the family. The father sends money, but that doesn't solve the problems that arise. The children grow up without a father figure, without a relationship. It affects them." Juana, a nonmigrant in Tlacotepec, also described the difficulties of life without her husband: "My children helped me go to the mountains to cut wood, get water, and take care of the animals. My husband would tell me not to do it, but I would tell him that the money he sent wasn't enough. . . . I worked to feed my children. I made mole to sell and carried wood on my back in order to be able to make a home."

Miguel, a recently returned migrant, is very much aware of the adverse effects his absence had on his wife. He recalled his experience away from his family: "I left my wife for two years, then for four years, and after this [an injury in the United States] happened, I left her for ten years. She was here in Tlacotepec suffering, doing men's work, taking care of the children."

Children also suffer from changes in the family structure caused by migration. Long family separations resulting from migration can have long-term detrimental effects on relationships between children and parents. When asked how her husband's absence affected her children, Juana responded: "My oldest daughter saw that he did not give them the warmth or support of a father. She says, 'My father, we didn't have his support, he wasn't a father.'" This is consistent with the findings of Bacallao and Smokowski (2007), who showed that children left in Mexico tended to develop strong attachments to their mothers and later had difficulty establishing relationships with their fathers. A husband's/father's decision to

migrate to the United States is often an attempt to improve the family's living situation; however, this decision can also result in an array of problems and psychological distress for the family that must deal with his absence.

ALCOHOL USE

Numerous studies have found high levels of alcohol consumption among migrants living in the United States, something researchers have suggested is a mechanism for coping with the stresses migrants endure when away from family members or trying to integrate into a foreign environment (Burnam et al. 1987; Castro and Gutierrez 1997). We found that 23 percent of Tlacotepenses living in the hometown consume alcohol, compared to 32 percent of Tlacotepenses living in the United States. However, both of these rates are substantially lower than Mexico's national averages of 60 percent of men and 20 percent of women who consume five or more alcoholic beverages at least once a month (Olaiz et al. 2006).

Our interviews with medical practitioners found that alcoholism was not an issue for nonmigrating Tlacotepenses, but doctors frequently encounter the disease in returning migrants. This coincides with our finding of a statistically significant higher rate of alcohol consumption among those with a migratory history than among those without: 36.6 and 18 percent, respectively.¹⁸ Higher alcohol consumption could be attributed to the stresses of migration, such as long separations from family. Vista Community Clinic staff reported that migrants often use alcohol as a way to cope with their stressful experiences in the United States and as a form of escape: "They feel depressed, sad, so instead of talking to somebody, they'd rather have a couple of drinks and go to sleep, get it over with, and forget about it."

This claim is supported by our finding that men who have received treatment for depression are more likely to drink, especially when compared to women (47 percent and 18 percent, respectively). Instead of seeking professional help, migrants may look for other ways to deal with the stresses of migrant life in the United States (Burnam et al. 1987). Holmes (2006, 1785) reports similar findings, claiming that many nurses and physicians

18. This finding is consistent with Prelat and Maciel's (2007) study of migrants from Tunkás, Yucatán, which found an increase in alcohol consumption in 27 percent of migrants living in the United States.

identified “depression in the form of somatization and/or substance abuse” as the most common health problem among migrant workers.

In Tlacotepec, alcohol is a different kind of problem. Dr. Cruz Aguilar noted that alcohol is most popular among the town’s young people: “If you come back in the evening, you’ll see groups of teenagers, 16-, 17-year-olds, who hang out, drinking and smoking. It’s a real health problem.” Similarly, Ana Gómez from the Centro de Salud observed that “alcohol is very common in adolescents between the ages of 15 to 25, and in adults between 35 and 50 years old.”

Our findings lend support to the claims of health practitioners in Tlacotepec. Except for the 15–19 age group, alcohol consumption was consistently higher for people with migration experience (see table 6.6). Among migrants, the 20–29 age group had the highest incidence of alcohol consumption, followed by the 50–65 cohort. This may mean that even after returning to Tlacotepec, migrants may still be coping with stresses experienced in the United States.

Table 6.6 Alcohol Consumption in Tlacotepec among Returned Migrants and Nonmigrants, by Age

Age	Returned Migrants	Nonmigrants
15–19	0%	8%
20–29	47%	17%
30–39	32%	24%
40–49	39%	26%
50–65	50%	23%

DRUG USE

Although our questionnaire did not explicitly measure drug use, illegal drugs are an important issue within the migrant community and were a common theme in our discussions with health practitioners in Tlacotepec and Vista. According to several private doctors and personnel at the Centro de Salud, drug use in Tlacotepec itself is not a problem. Dr. Carrillo Valverde explained that “there weren’t any drugs ten years ago. Now there are some, but very little. The drugs come mostly from Juxtlahuaca, where drug abuse is a serious issue. The cases we have are

few, though. Say, out of 150 high school students, 2 or 3 people do drugs, a very small percentage.”

Doctor Cruz Aguilar attributes drug abuse in Tlacotepec to migrants returning from the United States. Although he says he has not seen drug use in Tlacotepec, he claims that adolescents coming back from the United States are using drugs: “They’re people who have been in U.S. high schools so, just imagine, they’re well acquainted with drugs.” Joaquín, from Vista Community Clinic, described drug use within the migrant community in the United States: “Drugs are more of a quiet thing. We don’t really see it at the clinic. Because it’s illegal, they don’t tell us about it. I know it’s present, but I’d assume they would be using less expensive drugs like marijuana.”

Migrants living in the United States have higher incidences of stress and depression—feelings of isolation, fear of deportation, and powerlessness in their new environment—than the general population, and these factors contribute to increased chances of drug use. Brouwer et al. (2007) found a higher prevalence of drug usage among migrants, especially those who have been deported and therefore face unique social stressors. Deportation means loss of income and threatens the survival of the migrant’s family in Mexico, factors that further increase the likelihood that a migrant will engage in high-risk behavior. Given that we found that 47 percent of Tlacotepense migrants have been apprehended at least once by the Border Patrol on their most recent trip to the United States and that 7 percent of migrants have received treatment for emotional or mental disturbances, we can infer that Tlacotepense migrants are highly vulnerable to the trap of substance abuse.

CONCLUSION

The binational design of our study fills gaps left by other researchers, who often depend on data collected among either residents of Mexico *or* migrants living in the United States. In this chapter we have shown the ways in which migration affects health status and treatment of illness among both U.S.-based and Mexico-based Tlacotepenses. Generally speaking, our research reveals that Tlacotepense migrants in the United States are healthier than their counterparts in Tlacotepec. We explain this finding as a consequence of the combination of the salmon bias, the healthy migrant

effect, nutritional practices and living conditions among residents of the United States and Tlacoatepec, and the high emotional costs of migration for both undocumented migrants and the relatives they leave behind. These findings advance our understanding of the Hispanic health paradox, suggesting that the relative healthiness of Hispanics as compared to others in similar sociodemographic groups is more a function of sampling than of intrinsic health differences.

Our study shows that the health of migrants is shaped in large part by the type and quality of the care they receive, which is determined by factors like legal status, type of employment, and income. These factors, in turn, can combine to leave migrants with fewer opportunities for health insurance. Whether three-quarters of Tlacoatepecenses in the United States are without insurance due to their undocumented status, their job type (agriculture, for example), or their low earnings, they represent a significant group that must seek needed health care through unconventional means.

Current efforts among anti-immigration lobbyists to prevent undocumented migrants from accessing health care, along with the more general anti-immigrant sentiment in the United States (which can lead migrants to avoid public spaces such as hospitals and doctors' offices for fear of apprehension and deportation), may contribute to emotional distress among migrants and thus increase the likelihood that they will engage in high-risk behaviors such as alcohol and drug use as a response to stress. Nonmigrants and returned migrants are also subject to the stresses of long separations from family. Such separations often result in changes to family structure and heightened levels of anxiety over family members' well-being in the United States.

Many Tlacoatepecenses referred to migration as a way to fight for their lives, or "*lucharle por la vida*." Indeed, the phrase came to be a type of refrain in our conversations on both sides of the border, and it is clear from our health data that it is not always meant figuratively. With all the challenges that Tlacoatepecenses face, though, many remain positive and determined to keep *luchándose por la vida*, in hopes that their struggles will pay off for themselves and their families in the near future. As 66-year-old returned migrant Miguel Niño put it, "We ought not dwell on what happened yesterday but focus on what could happen tomorrow."

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