**Health Practices among Immigrants to the US:
The Intersection of Cosmopolitan Medicine and Traditional Ethnopharmacology**

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Bio:

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Abstract:

This paper examines customer and vendor relations and generational transmission of ethnomedicine in a multicultural aspect focusing on the immigrant spectrum of traditional medicine from the angle of the Mexican American community. From the garden to natural food stores; the spiritual, religious, open-air markets; and the Mexican and Central American food markets and botanicas, the vibrant traditions of immigrants and locals are influencing new cosmopolitan traditions. These forms of localized knowledge are being organized by community members engaged in prevention and holistic treatments of disease in an effort to counterbalance the dominance of biomedicine discourse of simply managing disease. Multi-ethnic traditional medicine continues to provide new pharmacological treatments for Western diagnosed conditions and diseases.

Introduction

The purpose of this study is to explore traditional and cosmopolitan forms of medicine among first, second, and third generation immigrants and local residents in the diverse and distinctly different local communities of the Dallas–Fort Worth Metroplex (DFW). I was curious about the practices that immigrants, predominantly from Mexico, Central America and Asia, use to take care of themselves when they are ill. I wanted to know whether traditional knowledge was being transmitted from generation to generation and, if so, how. Finally, I was interested in learning about the sources for traditional and alternative remedies used by immigrant communities. This latter question became the focus of my research project.

Timothy Johns (1996), an evolutionary anthropologist, makes the case that human-plant interactions, the diverse ways in which people use plants, are rapidly disappearing and that knowledge of the diversity of human-plant adaptation is essential for understanding the past and directing the future. In contrast, Hans Baer argues that despite the tendency toward growing monopolization and concentration in biomedicine, other medical subsystems persist and even thrive under precarious conditions (Baer, 2003). Baer goes on to state that biomedicine's dominance over rival medical systems has never been absolute (Baer, 2003). The inherent tension between Johns' and Baer's arguments is the focal point of my research. I have seen firsthand how immigrants are continuing to transmit their ethnopharmacology in new and interesting ways. From the garden to the open-air markets, the spiritual-religious botanicas, and mainstream natural food stores, the vibrant traditions of immigrants and locals are creating new cosmopolitan traditions that have taken hold and are syncretizing with, and, in some cases, challenging the conventional practices of biomedicine.

Definitions

Below are the definitions of key terms used in this paper. The terms “folk,” “traditional,” and “ethno” are interchangeably seen in literature relating to cultures that are typically considered unassimilated to the values of advanced economies—usually termed “Western,” though Japan and Australia are included in this rubric. Anthropologists define *ethnomedicine* as the anthropological study of traditional medical systems and healing practices of non-Western societies (Quinlan, 2004; Erickson, 2008). Ethnomedicine examines cultural notions and behavior surrounding illness and medical treatment (Foster & Anderson, 1978; Nitcher, 1992; Quinlan, 2004; Rubel & Hass, 1990). Karen Baldwin states that folk medical systems operate in tandem with scientific biomedicine, and demonstrates how various folk medical practices, in addition to forming an integral part of community-based cultural identity and expression of culturally differentiated groups, converge and influence each other (Baldwin, 1992).

Ethnopharmacology is described by Andrea S. Wiley and John S. Allen as a field in close proximity to ethnobotany. It is the study of indigenous medicines that are almost always plant-derived (Wiley & Allen, 2008). Similarly, Ali Kahn categorizes the study of therapeutic plants under the term ethnopharmacology, which he sees as a subdivision of ethnoecology (Kahn, 2004). He reports that ethnopharmacology is one of the most active and modern fields of ethnobotanical research (Kahn, 2004).

Wiley and Allen describe *alternative medicine* as medical practices undertaken to replace standard biomedical practice and consider it to encompass all forms of medicine that are not represented by standard biomedicine (Wiley & Allen, 2008). Wiley and Allen also acknowledge the ethnocentrism in the use of the term “alternative medicine,” giving Western biomedicine a privileged place (Wiley & Allen, 2008). They compare this to complementary medicine which is used in conjunction with standard biomedical practice (Wiley & Allen, 2008). McElroy and

Townsend describe complementary and alternative medicine (CAM) as having now become a big business and having entered mainstream culture (McElroy & Townsend, 2009).

Alan Latham (2005) describes cosmopolitan knowledge in relation to Ulf Hannerz's definition of cosmopolitan as someone who has the competence, the patience, and the tolerance to live within and understand other cultures (Binnie, 2005; Hannerz, 1990). *Cosmopolitan medicine* is associated with mostly secular Western medicine experienced in cities worldwide that strives to heal the body while leaving spiritual health to other institutions (McElroy & Townsend, 2009). I will use the term cosmopolitan medicine to refer to the intersection of alternative medicine practices developed by multi-ethnic and multi-cultural communities incorporated into traditional ethnomedical practices specific to urban settings.

Literature Review

Because of the nature of the questions I was asking, my field research was panoramic, and, consequently, so is this literature review. I offer brief summaries of key debates that are pertinent to my findings, pulling the disparate threads together at the end of this section.

Origins of Traditional Medicine

A strong case can be made asserting how essential traditional, ethnopharmacological knowledge has been in the success of the human species by studying the origins of medicine and linking the role that plant-based medicines have had on the survival of societies. Johns (1996), an evolutionary anthropologist, traces the origins of medicine to the way that human populations, confronted by parasites and infectious diseases in new environments, including deficiencies in staple diets and the shift to urban communities caused the move to sequester allelochemicals with prophylactic compounds in plants (Johns, 1996). Johns argues that if the biological basis of

medicine lies in our consumption of secondary chemicals in food, the consumption of pharmaceutical agents is an intrinsic human behavior.

Transmission of Ethnomedical Knowledge

Traditional knowledge is intrinsically distinctive in its form of transmission because it is characterized by a culturally based form of dissemination and generational transference. Toledo (2002) notes how indigenous, traditional societies house a repertory of ecological knowledge that is generally local, collective, diachronic, and holistic; It is a cognitive system of natural resources that is transmitted from generation to generation. Pradesh (2004) notes that women are also conversant with the medicinal use of their flora, an aspect that led to the concept of folk or traditional medicine. The first system of indigenous medicine diagnosis is done through a medium of a medicine man or woman. The second system of medicinal practice is based wholly on general familiarity with medicinal plants, knowledge amassed by experimentation over millennia and passed on orally from generation to generation (Pradesh, 2004; Shultes & Reis, 1995).

Johns also observes that many cultures do not create a difference between food and medicine, considering diet as part of the healing process (Johns, 1996). Johns confirms that spices' characteristic flavors are a result of the secondary chemicals they contain; capsaicin in chili peppers activates the gastrointestinal system. Fowler & Mooney (1990) pose that without knowledge of the over-arching cultural patterns, the truly adaptive nature of ethnobotanical knowledge would be less obvious to the outside observer and less functional for the participant.

Localized cosmopolitan medicine. Khan (2004) proposes that ethnomedicine is entirely based upon the specific community that practices the method using the natural ingredients available in that ethnic location. This view is explored by Sikkink (2010) describes how

medicines sold at markets in urban Bolivia provide an opportunity to learn how people fashion new forms of health systems in changing contexts. Quiroz (1999) states the way that alternative medicines in Local Knowledge Systems are truly preserved is through oral traditions. Quiroz states that Local Knowledge Systems (LKS), broadly defined, are the systematic information that remains in the informal sector, usually unwritten and preserved in oral tradition rather than in texts, legal codes and canonical knowledge.

Sikkink (2010) notes that Brush and Stabinsky (1996) argue in favor of the positive contributions found in Local Knowledge. Quiroz relates that in contrast with the common connotation of traditional knowledge, local knowledge is dynamic, not static. It constantly changes through experimentation and stimuli from the outside (Quiroz, 1999). Quiroz relates how custodians of Local Knowledge generate knowledge every day, as well as how they also integrate and adapt new technologies into their knowledge system.

Resiliency of Traditional Medicine Within Alternative Medical Systems

Scholars are acknowledging how both Western and alternative medicine can trace their origins to ethnopharmacology. Baer (2003) points to the precarious authority of alternative medical subsystems despite biomedical rivalry and denies that biomedicine ever had an absolute dominance of the medical discourse. As Baer points out, in essence, biomedicine, commercialized alternative remedies, and traditional medicine, despite antagonistic relations between them, exhibit a great deal of overlap and even fusion. He goes on further to state that many modern pharmaceuticals are also potentially more toxic than botanical drugs.

Marc J. Plotkin, Executive Director of the Amazon Conservation team, states that there are conditions that can be treated with the natural medicines cannot yet be treated with western medicine (Films for the Humanities and Sciences, 1995). This view reflects the claim that

Erickson (2008) makes for the integration of complementary and alternative medicine into conventional Western biomedicine. She asserts that the “nails in the coffin” for biomedicine were the decision for the World Health Organization in 1978 to include and promote traditional medicine to world populations (Bannerman, et al., 1983, cited in Erickson, 2008, 3; World Health Organization, 1978). Erickson states that other factors included the soaring cost of biomedicine and the erosion of faith in scientific medicine (Erickson 2008). Finally, “the third nail was the erosion of faith in scientific medicine, the increasing interest in other healing traditions...and consumers’ desire to have control over decision making” (Erickson, 2008, p.3).

Western Medical Industrial Complex and Ethnomedical Resistance

At the same time that ethnopharmacological knowledge is being validated by Western science, biomedicine has proved to be a platform for indigenous intellectual rights usurpations. The degree to which traditional ethnopharmacology has influenced Western biomedicine is often and conveniently overlooked by science. Johns (1996) notes that 74% of the drugs that are used in modern allopathic medicine, are, or have been, obtained from plants, providing verification in the scientific community for the traditional use of medicine. Minnis (2000) describes how modern medicines are still heavily dependent on drugs derived from plants. He forcefully points out, however, that the indigenous knowledge that was harvested to develop the drugs that reap enormous profit for pharmaceutical companies is poorly compensated for by those same companies.

In her research on traditional medicine in Bolivia markets Sikkink (2010) suggests that medicinal plants represent goods and services that have already been discovered, tested, and used by human subjects for years, and, at the same time, they are providing fertile ground for pharmaceutical companies in their search for new drugs. Although patent law ostensibly rewards

innovations and their inventors, a closer look reveals that this relationship holds true only under certain systems within specific cultural contexts (i.e. the business culture of the United States); recognizing the “ability of corporations to use patent law to take ownership of biomaterials...activists have condemned these practices as patent piracy” (Arts, 1998, 182; Sikkink, 2010, 164).

Baer states that lower social classes, racial and ethnic minorities and women have often utilized alternative medicine as a forum for challenging not only biomedical dominance but also, to a degree, the hegemony of the corporate class in the U.S. as well as other advanced capitalist societies. Baer stresses that alternative medical systems often exhibit counterhegemonic elements that resist, often in subtle forms, the elitist, hierarchical and bureaucratic patterns of biomedicine (Baer, 2003).

The Role of Religion in Ethnomedicine

Biomedicine and many forms of alternative medicine underplay or omit the intrinsic role spiritism and religion have in healing practices. Johns confirms how magico-religious and empirical practices converge in the practice of medicine (Johns, 1996). For example, Mexican American traditional medicine incorporates religious and spiritual elements within its practice. Rubel (1960), in his anthropological research on Mexican American ethnomedicine describes the use of *piedra de alumbre*, or alum rock to cure *susto*, or fright by burning the rock and letting the fright escape in the smoke.

Perrone, Stockel and Krueger (1989) are careful to explain how the belief systems of Mexican-Americans of Texas are different from the Chicanos of Los Angeles. Perrone states how *la curandera*, a Hispanic healer, will say that illness is frequently a matter of chance and that “chance” is somehow associated with the will of God. A fundamental assumption in both

Native American and Southwest Hispanic cultures in that physical disease can be caused by the violation of spiritual or religious laws.

Position of the State in Ensuring the Endurance of Alternative Ethnomedicine

Nation states have an important role to play in ensuring the longevity of ethnomedical practice and traditional knowledge. Despite this, the state's interest is often in conflict with the interests of the indigenous people under its domain. Prakash (1999) point to Alvares' observation that once the "ordinary" people's epistemological rights were devalued, the state could proceed to use allegedly scientific criteria to supplant such rights with officially sponsored and defined perceptions of needs. Alvares, the Executive Secretary and Director of the Goa Foundation, an environmental monitoring action group, argues that in medicine the bias exercised against folk or traditional systems of healing in favor of imported allopathy. Alvares argues that "science's propaganda that it alone provided a valid description of nature, was turned into a stick with which to beat trans-scientific, or folk-scientific, descriptions of nature....it continues gallantly attempting to replace science of the village sorcerer with barbarism of modern science's frontal lobotomies" (Alvares, 1992, p. 230).

Scholarly views on conservation have placed the role of indigenous and local knowledge in the forefront of natural resource sustainability. Quiroz states that "today, policy decision-makers, socio-economic planners, bureaucrats, and educators are recognizing the importance of various local or culture-based knowledge systems in addressing the pressing problems of development and the environment in developing countries" (Quiroz, 1999, p. 306).

Feminism in alternative medicine. Women play an essential role in not only the transference of traditional ethnopharmacological practice, but also in contesting the validity of Western biomedical narratives. Rosenberg (2000) relates that Ecological Feminist praxis

challenges patriarchal institutions of power, such as corporations, militaries and governments, which are largely responsible for toxic pollution, which is known to weaken immune systems and to cause hormone, genetic, and behavioral disruptions, illness, and often death. Rosenberg relates to E. Martin (1977) in stating that Western medicine has made medical casualties routine.

Literature Relevance

In summary, the modes of transmission of traditional knowledge systems are considered by scholars as a key difference between traditional and modern (bio) medical systems. It is also important to take into account the commonalities between what is deemed “traditional” and “Western,” being that many drugs are derived from traditional and indigenous knowledge of pharmacologically active plants that are later verified scientifically to the benefit and profit of pharmaceutical companies. The degree of the connection that religion and spiritism have on culturally-based diagnosis and treatments holds an important place in traditional medicine, a connection that is often overlooked in alternative and complementary medicine’s use of ethnopharmacology. The position of the state and power-class recognition of traditional medicine has become linked by scholars as the conduit for social and environmental justice as well as sustainable development practices in the developing world. Traditional medicine in practice is not static; quite the contrary, it is dynamic and experiences syncretism in the most unlikely places. Far removed from the third world remote villages, localized forms of ethnomedicine are being shaped in multi-cultural urban spaces; they are often connected with movements to contest the supremacy of the biomedical discourse.

Ethnomedicine is being upheld by social movements both in minority and mainstream groups as a form of contestation to hierarchical dominance of biomedicine and the power class. For this reason I find it imperative to analyze the modes of preservation that practitioners of

traditional medicine are using in assuring the transition of non-Western practices. The idea of ethnomedicine being vibrant and advocated for in the U.S. within metropolitan urban areas is an enticing concept and area for research. The interaction between different ethnic groups and ethnopharmacologies can shed light to the different means that immigrant and local populations resort to in order to transmit their traditional knowledge and shape them into new cosmopolitan traditions.

Methodology

Observations were collected at a Dallas botánica, traditional medicine shops, plant based medicinal shops at open air markets, food markets catering to Central and Mexican-American tastes, and medicinal plants and community gardens in the DFW metroplex. I conducted 23 days of participant observations of 1-2 hours per day over 7 weeks to gain firsthand knowledge of the diverse field sites. The research questions addressed the resources that immigrant communities resort to in order to provide for their medical, health, and well-being practices and the reasons for their medical choices. The research involved documenting the knowledge transmission of traditional medicine practitioners and resistance of contemporary Western biomedicine. I observed the different ways that immigrant and local populations blend their knowledge of traditional medicine with new forms of cosmopolitan practices. Photographs of a sample of the traditional plant-based medicine found in the study and a community garden are available in Figure 2 and 3.

Vendors of ethnomedicine from a Dallas botánica, Denton food markets and natural food stores, and open-air markets at Grand Prairie and Coppell were asked to participate in the study. After gaining entrée to the different establishments, permission was solicited in each field site to request that customers volunteer to participate in the research.

Gardeners and community garden leaders were interviewed in an effort to establish if traditional medicines or plants used to promote well-being were being grown for local consumption in the metroplex. To gain entry to the community gardens and research participant gardeners I had to attain access through a gate keeper, a Texas Master Gardener who was an online coordinator. He arranged interviews with community gardens in the North East DFW area.

A total of 15 qualitative semi-structured interviews were used in the research. Special attention was placed on creating pseudonyms for the research participants and establishments in order to protect their privacy and ensure their anonymity. The information about traditional treatments was analyzed by cataloging the plants by traditional and scientific names. This was followed with comparisons of different procedures for preparation and ethnopharmacological use by the interviewees and further archival research on their traditional uses by the Mexican American community. Finally, the 63 traditional plants were found and/or collected through field research. These plants were compared with research data to ascertain their pharmacological attributes based on archival references on allelochemical biochemistry. A list of these traditional plants with their traditional names, English names, scientific names, and the field sites where they were found appears in Figure 3.

Findings and Analysis

By selecting both vendors and customers as my interview participants, I attempted to gain a broader view of the traditional medicine that is being practiced in the DFW metroplex. I explored the connection that vendors had in addressing and diagnosing illnesses and in prescribing remedies important to Mexican, Central American and South East Asian immigrant populations. By interviewing customers, I attempted to gain a better understanding of what

attracted them to traditional medicine and any reasons that they might have in their medical choices. I compared customer and vendor relations to traditional medicine by observing and interviewing community garden leaders and members. By exploring the community gardens, I attempted to see if the needs of the immigrant populations were being addressed and if any forms of traditional plant-based remedies or food for wellness were being grown locally in the area. This form of triangulating the research question of traditional medicine allowed me to analyze the ways that ethnomedicinal practices were being received and accepted by different class and ethnic groups.

Religion and Spiritism in Alternative Medicine Systems

Walking into the botánica, the ties to religion and spiritism were at every turn. The scent of unlit incense and scented candles impregnated the space. As you come in, the various books titled in both Spanish and English on topics such as home remedies and prayers occupied the shelves and do not escape your eyes. Countless vials and packages of herbal medicine concentrates filled the shelves behind the counter. Statues, figurines, and multi colored crystals crowded the glass counters. The religious references spanned the gamut of different beliefs, not restrictive to Catholicism or even to Latin America. The variety of religious items seemed to cater to the different spiritual needs of customers. From religious crosses, scapulas and statues of Catholic saints as well as *La Santa Muerte*, saintly death. Santería religious saints such as *El Cristo Negro*, the Black Christ, as well as statues and statuettes of Hindu Kali, Ganesh, and Buddha of Chinese tradition were displayed along with natural, derived, and plant based herbal remedies common to Latin American traditional medicine.

I asked the botánica vendor about the herbs sold at the shop, “Excuse me, do you know what these packages of herbs are used for.” His disengaged response was in broken English:

“There are a lot of uses for them.” I tried again asking him in Spanish about the use for a specific bark, “para que se usa el palo azul.” His hesitation disappeared, his eyes focused and he began to walk to me. Taking the bag from me, he replied in Spanish, “I didn’t know that you spoke Spanish.” He continued, “I only know the uses of some of the herbs but you are free to look around.” He walked toward the end of the herb aisle inviting me to contemplate his vast collection of herbs, roots, barks, seeds, and minerals.

I asked about the most common herbs that he prescribed in the botánica, he commented, “I do not like to give prescriptions, only suggestions.” He explained that sometimes customers come in with a wrong self-diagnosis and are not pleased when the natural remedies that he prescribed them do not serve to heal them. Some of the plant-based remedies required spiritual methods of preparation prior to use. Don Adrian, the botánica vendor, proceeded to tell me about a recipe that old customers use to sanctify their homes. A branch of cypress was placed in a bowl of water followed by prayer to ward off *malas vibras*, or bad vibes. In my subsequent visits, the botánica vendor also recommended crystals for health, luck, and to ward off evil and el *mal de ojo*, or evil eye. He explained the process of diagnosing and treating *susto* or fright. He grabbed a *piedra de alumbre*, an alum crystal, and said, “when you have a *susto* from experiencing a mugging or a car accident, you take alum crystal and burn it, within the smoke you will see the reasons of your fright appear, the fright will be lifted and escape your body,” he explained as he motioned the route of the smoke with his hands.

My interviews with customers also recounted culturally-based illnesses diagnoses and treatments relating to the humeral beliefs of hot and cold imbalances in the body. An open-air market and Mexican food market customer, Doña Rosalva, told me that her method to relieve the body of a cold *aire* in the back was to use *ruda*, (rue) or *pirul* (pepper tree) in a *barrida* or body

sweep coupled with religious prayer. Doña Rosalva carefully explained the process of using the same plant either by placing the plant on the ear or by making a tea with *ruda* and chocolate to control chronic headaches.

Knowledge Transmission at the Denton Food Markets

If at first glimpse, the secular themed food market was not a typical place where faith and traditional medicine would be seen as being combined, the interview with the vendor would soon change my mind. The sign advertising medicinal herbs beacons in the hot summer sun. As you walk in, the smell of seasoned meats and herbs permeates the air. The fast paced rhythms of music of Mexican *Norteñas*, a type of northern Mexico country music, intermittent with local radio station hosts announcing the next *tardeada* or afternoon dance, are pronounced in the background and are contrasted by the lightly stocked shelves and lonely aisles. I headed straight for the brightly colored packages of dried plant-based remedies. Their uses seemed at first inconclusive due to the lack of recommended uses on the package. I was approached by Don Javier, the food market vendor. “Can I help you?” he said in Spanish. I introduced myself and then revealed that the purpose of my visit was to obtain interviews on the traditional uses of medicinal herbs. Don Javier was quick to reveal that, “I do not know the uses of all the herbs.” He went on to explain how he firmly believed in traditional medicine, but still he confirmed how “*tener fe es la mitad de la parte*,” or having faith is half of the cure.

Don Javier retold his experience treating his own son’s *empacho*, a traditional diagnosis that consists mainly of extreme indigestion and constipation. He commented on how the medical doctors prescribed his son pills that cost \$100, medicine that he could not afford. He decided to give his son a traditional medicine bark tea treatment of *fresno*, a type of ash tree. His recipe is to boil the bark and take one cup as a tea before eating. Don Javier expressed that, “*a los doctores*

no voy, solo lo natural, siempre,” explaining that he does not rely on Western doctors, and solely relies on natural treatments. He gave a disclaimer towards traditional medicine stating that, “*lo natural es mas bueno, aunque trabaja mas despacio,”* what is natural is better yet its effectiveness is measured in a lengthened period of time. Don Javier noted that *cuachalalate*, *Amphiptherygium Adstringens*, had worked to treat his own illness. He explained, “*tomaba mucho, pero el cuachalalate me sanó mi hígado,”* he used to drink a lot but attests that the treatment of *cuachalalate* healed his damaged liver.

Don Javier expressed the feeling of accomplishment that he obtained when customers, pleased with the results of *fresno* and *cuachalalate*, made it a point to return and give him thanks for prescribing the herbal medicine. Don Javier made a point to relate that his knowledge of the traditional herbal medicines he sells and practices comes from women *curanderas*. He asserted that he teaches traditional medicine to his children saying, “*a mis hijos siempre les digo que hay muchas plantas muy buenas para remedios.”* He always relates to his kids that there are a lot of plants that are very good to treat illnesses. Don Javier went further to relate that Anglo customers, ready with prescriptions and looking for specific herbs, often come to the Mexican food market to purchase herbal medicine. Don Javier also stated that he relates his limited knowledge of traditional remedies in his recommendations of natural medicine and that he shares them openly to the public.

The Mexican traditional supermarkets provided access to a variety of dried herbs and spiritual aids that I came across in my research in the biochemistry of Latin-American ethnopharmacology. Of the 63 plant-based medicinal remedies and treatments for well-being that I studied, 22 dried herbs I found were provided to the community both by the botánica and the Denton food markets catering to Mexican and Central American tastes.

Ethnomedicine at the Open-Air Market Shops in Grand Prairie

The efforts that immigrant communities undertake to promote and augment their traditional pharmacology are apparent at the open-air markets in Grand Prairie. The open-air market is visited by a multicultural mixture of vendors and customers, the majority of which are of Latino/a, mostly of Mexican and Mexican American descent. Ethnicity could be inferred by the majority of traditional food products and symbols sold at the numerous shops that related to Mexico and Latin America. The majority of the shoppers that I interacted with and observed turned out to be women, often bringing their children along. They asked questions relating to the effectiveness and safety of the natural health and well-being plant-based remedies. One of the customers commented on the fact that she takes ownership of providing her family with traditional remedies. She commented, “*yo le doy té a mi esposo y el me dice, me vas a enhierbar,*” she makes teas to give to her husband and that he replies, “you are going to herb-me-up.” She replied in a stern voice, “*yo le digo, tu nada más tomatelo y ya cállate,*” or “you just drink the tea and that’s it, be quiet,” her eyebrows relaxed and her serious expression turned to a smile as she looked down to her child in the stroller.

Of the hundreds of shops that lined the narrow walkways varying from commercial retail to prepared Mexican food shops, only twelve shops providing plant-based medicinal remedies were confirmed during my four field research visits. Of the twelve establishments, five had more than three types of plants or plant based medicines or remedies. Two had dried grains, stems, leaves, flowers, and seed pods that were discussed as having medicinal properties. The other five establishments had four or more living garden plants that were promoted as having medicinal properties. In two of the shops, the vendors readily advertised the medicinal properties of the plants or plant-based products they provided. While the rest of the shops provided insight into

the spiritual, medicinal, and health and well-being properties of the plants when asked, these ethnopharmacological plants were sold alongside more common garden plants. Nevertheless, a general theme of plant based remedies treating specific ailments and conditions was observed.

Different plants and sections of plants for were sold for headaches; intestinal, liver, and kidney illnesses and conditions; high blood pressure; and diabetes, as well as plants used to cure culturally-based illnesses like *susto*, fright. At three of the shops in the open-air market, pre-teens and teenager vendors were the main attendants who informed me of the plants they carried and their medicinal properties. They were often accompanied by adults who would guide the teenagers' conversations with customers in their suggestions of a plant's traditional medical uses. This trans-generational dialogue provided direct visual evidence of traditional knowledge transference across generation in the open-market.

Food, Medicine, Healing and Holistic Approaches to Health and Well Being

Johns' (1996) view of people's syncretism of plant-based medicine and food for well-being in traditional medical practices is evident in the consumption of *epazote*, or wormwood, to season dishes as well as a medicine for its important has anthelmintic properties that can stop or even kill parasitic worms. Johns indicates *epazote* as being one of the most powerful anthelmintics for expelling parasites. The interviews conducted at the Grand Prairie open-air market confirmed the syncretism of food for health and plant based medicine where three of the five vendors of *epazote* plants suggested, besides being medicinal, *epazote* makes a great condiment for traditional Mexican dishes. At the Grand Prairie open-air market, five of the twelve medicinal plant shops had *epazote*, although only three of the five shops that carried it openly discussed the medicinal properties of the plant and the rest testified to its unique flavor if added to traditional Mexican dishes like *albondigas*, a brothy meatball soup.

As the interviews with vendors, Jacob and Marcela, at the open-air market revealed, the procedures of illness prevention were often tied to diet and included particular plants that I found being sold at shops at the open-air market. Jacob is a Caucasian and Marcela is of both Thai and Lao ancestry; they provide medicinal plant remedies complete with literature testifying to their pharmacological properties. They extolled the holistic properties and well-being aspects of food and herbal remedies to prevent illness as opposed to treating existing illness or disease. Marcela spoke about the fact that herbs were used in their own home, as she explained how she makes Thai basil tea for her husband Jacob every day. She explained that, Thai basil tea, “Is good for the heart,” in that it wards off heart disease. Marcela also made me aware of three types of mints that all had different well-being, as well as healing, properties. One of the dried plant-based treatments at the open-air market was bitter melon or Chinese sour gourd; I was informed of the traditional use to of this vegetable to combat diabetes. The link to thousand-year-old family traditions and medical knowledge was a topic highlighted by Marcela at the open-air market in Grand Prairie.

Chiles (Spanish) or chilies, known to the scientific and biomedical industry for their medicinal qualities and used in traditional remedies, were an item present in almost all of the open-air market shops in Grand Prairie. Chilies plants as well as picked peppers and powder were sold to compliment dishes used in well-being natural health treatments alongside fresh and dried herbs that consumers readily buy for use in alternative medicinal treatments or remedies.

Community Gardens Fastening the Ties to the Land

By interviewing gardeners and directors of three community gardens in Denton, Coppell and Lewisville, I became aware of the role that community gardens take in ensuring the transmission of cultural knowledge across generational lines and ethnic boundaries. As I

interviewed the gardeners and directors I focused on the types of people who participate as gardeners and who are benefited by the plants grown in the community gardens, and the factors that made them become gardeners and how they decided what crops to grow.

In the Denton Church Community Garden, James expressed the healing and religious journey that gardening had provided for him as well as others in the community. This garden is relatively new, less than a year old. It combines community building, spirituality, food production for underprivileged members of the Denton community, and well-being practices within its prerogatives. In this interview, James spoke vividly of his passion to bring food to the hungry, relating to a spiritual connection to the land. Some of the medicinal plants that I recorded being sold at the open-air market that were also being grown at the garden include chilies, holy basil, Thai basil, oregano and chocolate mint. James informed me that Thai basil, holy basil and chocolate mint were medicinal plants being grown by South Asian farmers who did not hold back in relating to their medicinal properties to Caucasian community members.

The Coppel community garden is a bit older and better established. I interviewed Nancy, a community organizer, gardener, and community volunteer that has been gardening for three years. She walked me through the gardening plots, each pertaining to a different family or gardener. Some of the garden plot varieties included annual, perennial, Texas Earth Kind Native Plants, Texas Smartscape, and permaculture garden plots. “Ms. Nancy” made me aware of the important role that diet had in preventing illnesses. The variety of plants grown in the garden benefit the gardeners and the whole community alike; the garden is one 100 % organic and provides organic foods for health and well being, as well as herbs and crops used for medicine.

One particular crop that I came across at the open-air market, I also saw in the Coppel Community Garden, the Chinese sour gourd or bitter melon, mainly grown here by South Asian

immigrant gardeners. The traditional ethnopharmacological knowledge was being passed down in a localized inter-cultural manner; Nancy explains how the bitter melon “is good for blood pressure and for diabetes,” the same traditional uses that I noted were being promoted in the open-air market. Other medicinal herbs that were grown include basil, oregano, chocolate mint, and sage.

The community gardeners and consumers of the locally grown food and medicine are aware that their actions liberate their families from store bought food and Western medicine that simply treats existing illness. At the same time, the interviews with the gardeners revealed that, at the local level, their actions to rely bring urban gardening and ethnomedicinal production are contesting the commercialism through community building and cross-cultural knowledge exchange.

Diversity in food for well-being was a key element that discussed by community gardeners James, Nancy, George, and Adam at Denton, Coppell, Lewisville, and Flower Mound community gardens respectively. The importance of accessing plant-based medicines and plants for well-being was a major theme among the gardeners that I interviewed at the community gardens. Community gardens include Master Gardener classes, classes that are also sponsored by the community gardens in the Metroplex and the network to which many of the gardeners, garden leaders, and directors belong. In the Coppell Community Garden, I was exposed to Texas Earth Kind, Texas Smartscape gardening and permaculture that use native plants. These forms of sustainability were prized by both the Coppell community as well as my interviewees. The “three sisters,” a Mesoamerican combination of corn, beans, and squash crops—a sustainable agricultural combination—was also popular among the Master Gardeners and volunteer interviewees at the community gardens that were striving to maximize soil productivity in a limited area. The over-

arching purpose of the community garden organization's contribution was tied to aiding the multicultural community by providing diverse produce for traditional foods. As Ms. Nancy articulated, "I like to see the human side." She went on to say how the community gardeners take it upon themselves to address the diverse needs of the community by "growing food to cater specifically for the Hispanic and Asian population's tastes."

The element of the medicinal and well-being properties of the produce grown and provided was seen as a prominent, yet supplementary aspect by garden leaders in the Denton and Coppell community gardens. Although three of the four community gardens in the research had ties with Christian religious institutions and community kitchens, as well as the South East Asian, Latin American and Mexican American community, the role of religion and spiritism in my interviews with community garden leaders was not a topic addressed with the same frequency as the cultivation or the use of traditional medicinal plants.

A barrier that I found to immigrant populations using the space of the community gardens might be linked with the costs of gardening. As my interview with Adam, a community garden leader at Lewisville community garden revealed, "gardening is not cheap, you have to garden because you really love to garden, with gardening you will not make any money." This restraint could very well be the reason that more immigrant populations do not resort to the gardens to grow traditional medicinal plants.

The production of food for well-being to prevent illness and of medicinal plant-based treatments and remedies at the community gardens show that the community gardens are receptive to indigenous and traditional forms of sustainability. Despite the fact that only three of the four community garden leaders expressed knowledge of the medicinal properties of the herbs grown in the community gardens in the northwest DFW area, all four discussed the intrinsic

health and well-being aspects of the organic and locally grown produce at the community gardens. The process of seed-saving of medicinal plants for well-being is being practiced at the community gardens of the northwest DFW Metroplex. Traditional, cosmopolitan knowledge has endured through seasoning preferences for traditional dishes and as well as medicinal remedies, but most importantly, as a way to prevent illness and promote healthy living and well-being,

The Irony of Holism in Mainstream Alternative Medicine Consumerism

The research conducted in the Denton natural food store indicated at least 22 different plant-based herbal extracts, teas, and concentrates that my research shows are used in Mexican American traditional ethnopharmacology. Some of these traditional medicines include: acacia or *huisache*, amaranth or *amaranto*, cat's claw or *uña de gato*, calendula, *cascara sagrada*, chia, cohosh, *damiana*, dandelion or *diente de león*, dragon's blood or *sangre de drago*, flax or *alpiste*, gentian or *gentiana*, horsetail or *cola de caballo*, hibiscus flowers or *jamaica*, *hierba santa*, Mexican wild yam or *barbasco*, *nopal*, papain or *papaya*, sambucus or *sauco*, sarsaparilla or *zarzaparilla*, valerian or *valeriana*, wormwood or *ajenojo*. These herbs are sold in concentrations of the specific herb, bark, root, or seeds, or are sold sometimes mixed or prepared with other herbs to treat specific ailments or conditions. The herbs and plants that were packaged as concentrates in pill or liquid form, just as in the botánica, most were ambiguously packaged as medicine with only its traditional or botanical name. If the customer seeking alternative medicine treatments did not know the specific translation, or treatment, attendants were ready to offer pharmacological medical suggestions and assistance. As my interview with the medicinal department attendant revealed, the prominence of women as shoppers for traditional medicine was noted by the Denton natural food store employees and management.

My interviewee with Julissa, a customer at the Denton natural food store showed a preference for a combination of traditional, naturally derived, and conventional medical use. Julissa's preference for alternative medicine was reliant on the availability of the products. Nevertheless, Julissa explained that, "when I'm really sick, I take prescription medicine," revealing that her reliance on conventional Western medicine was guided by the severity of her illness. When a traditional remedy or medicine that was not found, or not found in its usual form, the vendor would recommend another medicine or treatment, often across ethnic lines, creating a medium of cosmopolitan, cultural, knowledge exchange.

Sikkink explains that the existing plant uses are of potential benefit to the rest of the world. At the natural food store in Denton, holy basil, and bitter melon—South Asian traditional medicines—were being also being sold and promoted for their pharmacologically active properties. Despite the commonalities among Mexican, Latin American, and South East Asian plants used in traditional medicine at natural food stores, the elements of spiritism and religion were absent or omitted in these locations. The plans were packaged and presented by the staff as being effective despite the detachment from the aspect of faith and belief tied to traditional ethnopharmacological practices in the Mexican and Latin American community.

From my observations of the alternative medicine extracts and supplements incorporated into the U.S. natural food stores, a key element in the practice of traditional ethnopharmacology and traditional medicine is missing. The spiritual-religious connection with traditional medicine that was observed in the botánica, the Grand Prairie open-air market, and the Central and Mexican food markets, was overlooked or excluded at the natural food stores field sites. The religious products and connotations that were deemed important to traditional Mexican and Mexican American ethnomedicine from my interviewees were absent. Besides the option

presented by the medicinal department attendant of possibly ordering the religious or spiritual products for me, I was offered the option of obtaining the religious items like *piedra de alumbre* and traditional plant-based treatments such as *cuachalalate* or *ruda*, by going to Mexican food stores as the most likely source for these items.

Despite the commonalities that I have found relating to literature of Southwest spirituality and my field site observations and interviews on immigrant and Hispanic cultures, it was important for me to avoid imposing and generalizing the view of spirituality on my observations of alternative medicine vendors and customers—other than the verifications of spirituality and religion that I received from the vendors and customers that I interviewed. The Denton food stores catering to Mexican and Central American tastes, open-air markets, and the Dallas botánica were all equipped with the merchandise to provide for both spiritual-religious as well as purely medicinal products that were coupled with advice instructing new customers on the medicinal properties and spiritual processes of ethnomedicine.

Discussion

From production to consumption, urbanite locals and immigrants are synergizing and adopting new forms of localized alternative medicine. The urban immigrants in the DFW area are preserving their own medicinal pathways, as well as reinventing their traditional pharmacology in new localized forms of medicine particular to the urban metropolis. These new practices are dependent upon the different immigrant communities and immigrant enclaves that are practicing ethnomedicine. The endurance of traditional, cosmopolitan ethnomedicine, organically grown local food, and herbs and native plants are being retained as a way to not only provide remedies, but also prevent illness, prolong healthy living, and promote environmental sustainability.

Through the immersion in the field of research on ethnopharmacology, I have seen firsthand how ethnomedicine, local sustainability, community building, and social action are working together to reinvent traditional knowledge as cosmopolitan knowledge. At the same time, the rift that set traditional ethnopharmacology apart from cosmopolitan medicine was the discordant lack of recognition of the spiritual and religious elements of traditional medicine in both the mainstream nature stores and community gardens.

From all of my participants, the importance of completing my research on the viability of traditional ethnomedicine was a reoccurring part of our interview discussions. The contestation of conventional medicine can readily be seen at the botánicas, open-air markets, community gardens, and local food markets and in the interviews among immigrant communities in the Metroplex. Their disillusionment with western medicine lead them to increase their interest in, and use of, alternative, traditional medicine, or a combination of both.

In all of my field site observations, women represented the majority of consumers of both traditional and alternative medicine. My hopes are that in future research, the role that women and feminist praxis have in transmission of ethnopharmacology and traditional treatments can be further documented. Additional research will also be required to analyze the trans-generational knowledge transmission of localized, traditional ethnomedicine in U.S. immigrant populations.

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Figure 1. Medicinal Plant-based Remedies from the Dallas Botánica and Grand Prairie Open Air Market

Spiritual material, well-being and medicinal remedies and processing “molcajete” mortar and pestle bitter gourd, and literature on magico-spiritual homemade recipes purchased from Dallas Botánica and Grand Prairie open air market from June 26th-July 11th 2010.

Figure 2. Field Site: Community Garden in Lewisville

Sweet basil, Thai basil and oregano being grown for medicinal purposes.
Community Garden in Lewisville visit July 19th 2010.

Figure 3. List of Mexican American Traditional Plants and Minerals from the Study

Traditional name	English name	Scientific name	Location
Aguacate (ojas)	Avocado (leaves)	<i>Persea americana</i>	Dallas Botánica, Denton food markets
Alcachofa	Artichoke	<i>Cynara cardunculus</i>	Open air market Grand Prairie
Albaca	Holy Basil	<i>Ocimum sanctum</i>	Open air market Grand Prairie, Denton Community Garden
	Sweet Thai Basil	<i>Ocimum basilicum</i>	Coppell, Lewisville community gardens, open-air market Grand Prairie
	Lemon basil	<i>Ocimum canum</i>	Open air market Grand Prairie, Denton Community Garden
Ajenjo	Wormwood, Sea worm wood, absinth	<i>Artemisia maritima</i>	Dallas Botánica, Denton food markets
Savila	Aloe vera	<i>Aloe barbadensis</i>	community garden denton, Coppell , Dallas botánica
Alpiste	Canary grass seed	<i>Phalaris canariensis</i> L	Denton Food markets , Botánica
Angelica	Archangelica	<i>Angelica archangelica</i>	Dallas Botánica, Denton food markets
Anis estrellado	Star anise	<i>Illicium anisatum</i>	Denton food markets , Dallas Botánica
Amaranto	Amaranth	<i>Amaranthus hupochondriacus</i> L	open air market Grand Prairie
Arnica (hierba santa)	Arnica	<i>Arnica montana</i>	Dallas Botánica, Denton food markets
Bitter Melon	Chinese Sour Gourd	<i>Momordica. Chantaria</i>	Community garden Coppell, open-air market Grand Prairie
Boldo		<i>Peumus boldus</i>	Denton Food markets , Botánica
Canela	Cinnamon	<i>Cinnamomum camphora</i>	Dallas Botánica, Denton food markets, open-air market Grand Prairie
Cascara sagrada		<i>Rhamnus purshiani</i> cortex	Dallas Botánica
Chia	Chia	<i>Salvia hispanica</i> L.	Open air market Grand Prairie
Chile	Chilli	<i>Capsicum frutescens</i>	Denton food markets, Open-air market Grand Prairie
Cipres	Cypres	<i>Cupressus Sempervirens</i>	Grand Prairie Open-air market, Dallas Botánica, Denton food markets
Cocolmeca	Kokolmex	<i>Similax Mexicana</i> , <i>Phaseolus</i> sp.	Dallas Botánica, Denton food markets
Cohosh negro		<i>Cimicifuga racemosa</i>	Dallas Botánica
Cola de caballo	Shave grass, Horse tail	<i>Equisetum myriochaetum</i>	Dallas Botánica, Denton food markets

Comino	Cumin	Cuminum cyminum	Denton food markets
Corteza Peruana (Raiz Roja del Peru)		Lepidium meyenii	Open air market Grand Prairie
Cuachalalate		Emphipterygium adstringens, Ambrosoides	Denton food markets
Damiana	Damiana	Turnera diffusa, Turnea aphrodisiaca	Denton Food markets , Botánica
Encino	Oak	Quercus spp	Dallas Botánica, Denton food markets
Epazote	Epazote	Chenopodium Ambrosoides	Community garden Coppell, Open air market Grand Prairie
Estafiate		Artemisia ludoviciana, ssp. Mexicana	Open air market Grand Prairie
Eucalipto	Eucalyptus	Eucalyptus globulus	Dallas Botánica, Denton food markets
Flor de Tila	Linden Flower	Ternstroemia sylvatica	Dallas Botánica, Denton food markets
Fresno	Ash	Fraxinus excelsior	Dallas Botánica
Gobernadora	Chaparral Herb	Larrea tridentata	Dallas Botánica, Denton food markets and Open-air market Grand Prairie
Gordolobo	Mullein Leaves	Gnaphalium oxyphyllum	Dallas Botánica, Denton food markets
Guacimas		Guazuma ulmifolia lam	Dallas Botánica
Guayaba (ojas)	Guava leaves	Psidium guajava	Dallas Botánica, Denton food markets
Hierba Amargoza		Eupatorium Sp.	Grand Prairie Open air market
Huisache		Acacia Farnesiana	Dallas Botánica
Jamaica	Hibiscus Flower	Hibiscus sabdariffa L.	Grand Prairie open air market, Dallas Botánica, Denton food markets
Laurel Mexicano	Mexican Bay Leaves	Prunus laurocerasus	Dallas Botánica, Denton food markets
Linaza	Linseed, Flax seed	Linum usitatissimum	Grand Prairie open air market vendors
Manzanilla		Matricaria chamomilla	Dallas Botánica, Denton food markets
Menta	Apple Mint	Mentha rotundifolia	Grand Prairie Open air market
	Chocolate Mint	Mentha piperita	Grand Prairie Open air market
Hierba Buena	Spear Mint	Mentha spicata	Grand Prairie Open air market
Nuez mosquiada	chestnut		Denton food markets
Oregano	Oregano	Origanum vulgare	Denton food markets and Grand Prairie open-air market
Papaya (semillas)	Papaya (seeds)	Carica papaya	Denton food markets and Grand Prairie open air market
Palo Azul	Kidney wood	Cyclolepis genistoides	Dallas Botánica, Denton food markets

Piedra de Alumbre (mineral)	Crystal of alum	Hydrated potassium aluminium sulfate	Dallas Botánica, Denton food markets and Open air market Grand Prairie
Pirul	Pepper Tree	Schinus molle	Dallas Botánica, Denton food markets
Poleo	pennyroyal	Metha pulegium	Dallas Botánica, Denton food markets and Grand Prairie open air market
Quina	Quinoa	Cinchona ledgeriana Moens	Denton food markets and Grand Prairie open-air market
Toronjil	Lemon Balm	Melissa officinalis	Dallas Botánica, Denton food markets
Quina Roja	Quinine	Cinchona Succiruba P.	Dallas Botánica, Denton food markets
Ruda	Rue, herb of grace	Ruta graveolens L.	Don Adrian West Dallas Botánica in Grand Prairie
Romero	Rosemary	Rosmarinus officinalis	Community garden Coppell, Lewisville, open air market Grand Prairie
Salvilla	Sage	Fullonum del cardenchadipsacus	Dallas Botánica, Denton food markets and Coppell community garden
Una de Gato	Cat's claw	Uncaria tomentosa	Dallas Botánica
Valeriana	Valerian	Valeriana officinalis	Dallas Botánica, Denton food markets
Zapote negro	Sapodilla, sapodilla plum	Diospyros digyna	Denton food markets
Zarzaparrilla Root	Sarsaparilla	smilax spp.	Dallas Botánica, Denton food markets, Denton natural food market