
Encyclopedia of Medical Anthropology

Health and Illness in the World's Cultures

Volume I: Topics

Volume II: Cultures

Edited by

Carol R. Ember

*Human Relations Area Files at Yale University
New Haven, Connecticut*

and

Melvin Ember

*Human Relations Area Files at Yale University
New Haven, Connecticut*

Published in conjunction with the Human Relations Area Files at Yale University

Kluwer Academic/Plenum Publishers
New York • Boston • Dordrecht • London • Moscow

Library of Congress Cataloging-in-Publication Data

ISBN 0-306-47754-8

©2004 Kluwer Academic/Plenum Publishers, New York
233 Spring Street, New York, N. Y. 10013

<http://www.kluweronline.com>

10 9 8 7 6 5 4 3 2 1

A C.I.P. record for this book is available from the Library of Congress

All rights reserved

No part of this book may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, microfilming, recording, or otherwise, without written permission from the Publisher, with the exception of any material supplied specifically for the purpose of being entered and executed on a computer system, for exclusive use by the purchaser of the work.

Permissions for books published in Europe: permissions@wkap.nl

Permissions for books published in the United States of America: permissions@wkap.com

Printed in the United States of America

- Vreeland, H. H. I. (1962). *Mongol community and kinship structure*. New Haven: HRAF Press.
- World Bank (2001). *Interim Poverty Reduction Strategy*. Report. Ulaanbaatar: World Bank.
- World Health Organization (WHO) & Ministry of Health. (1993). *Mongolia Health Sector Review*. Ulaanbaatar.
- WHO (1999). *Health Sector Review*. Ulaanbaatar: World Health Organization.
- Williams, D. M. (1996). The barbed walls of China: A contemporary grassland drama. *The Journal of Asian Studies*, 55(3), 665-691.
- World Bank (1992). *Mongolia: Toward a Market Economy: A World Bank Country Study*. Washington, DC.
- World Bank (2000). *World Development Indicators 2000*.

Dr. Brad R. Huber
 Dept. of Soc/Anthro.
 College of Charleston
 66 George Street
 Charleston, SC 29424

The Nahua¹

Brad R. Huber

ALTERNATIVE NAMES

Aztec, Nahuatl, Nahuatl, Mexicano, Mexijcatl.²

LOCATION AND LINGUISTIC AFFILIATION

The Nahua are the largest Native American group in contemporary Mexico. Approximately 1 to 1.5 million people speak Nahuatl³ or one of its dialects. Nahuatl is the southernmost member of the Uto-Aztecan language family. As Dow and Van Kemper (1995, p.182) observe, most Nahua currently live around the periphery of what was once the core of the Aztec Empire in the modern states of Puebla, Veracruz, San Luis Potosí, Hidalgo, and Guerrero. They can also be found living in smaller numbers in the Federal District, the states of Mexico, Tlaxcala, Morelos, Michoacán, Durango, Nayarit, Jalisco, Tabasco, and Oaxaca, and the country of El Salvador (Dakin, 1995).

OVERVIEW OF THE CULTURE

The Nahua generally live in rural areas where they cultivate subsistence and cash crops such as maize, beans, chili peppers, tomatoes, squash, maguey, sugarcane, and coffee. Maize is the most important caloric component of

their diet. It is a good source of complex carbohydrates, but is low in niacin, calcium, riboflavin, and protein, especially the amino acids lysine and tryptophan. These deficiencies are offset by the custom of combining maize with beans at the same meal, and boiling maize in water to which ground mineral lime has been added. The Nahua also raise chickens, turkeys, pigs, and to a much lesser extent, sheep, goats, cattle, horses, and mules. They generally consume animal proteins very sparingly, usually eating meat on festive occasions only. Many Nahua are also known for their production of crafts such as woven goods and pottery. In addition, young men and women may periodically work as migrant farm workers in Mexico and the United States or as masons and domestic servants in nearby towns and cities.

Nahua houses are often one- or two-room, rectangular structures with bamboo, wood, adobe, concrete block, or stone walls, thatch, tar-paper, concrete, or tiled roofs, and packed-earth or cement floors. Personal hygiene and household sanitation vary from community to community. In some communities, people bathe regularly, wear clean clothes, and sweep their homes frequently. The opposite is true in other communities. Regardless, the majority of rural residents do not have indoor plumbing or use a latrine. Furthermore, pigs, sheep, and fowl are kept in a shelter close to or adjoining the home. Fleas are common in houses and lice infest some school-age children and their parents. Because many people are poor,

they cook using a floor level hearth, sit on low stools, and sleep on a *petate* (woven mat) directly on the floor or on wood planks supported by concrete blocks. These living conditions permit the spread of infectious diseases of the skin, and of the respiratory and gastrointestinal systems.

Households are composed of nuclear or patrilocal extended families whose adult members may own arable land or have access to *ejidos* (government land grants). In general, the Nahua trace descent bilaterally, avoid marrying a blood relative or *compadre* (ritual coparent), and marry within the community or municipality. *Compadrazgo* ties are often very important socially and economically, and may be established on the occasion of a birth, marriage, severe illness, or death as well as for a first communion, confirmation, and the acquisition of a saint's image, car, or house. Fiestas that accompany these life-cycle events have banquets in which abundant amounts of food rich in carbohydrates, proteins, fats, vitamins, and minerals are served. They are also occasions for the ritual sharing of cigarettes and alcohol. The extent to which adults are addicted to nicotine and ethanol is not known, but fiestas are occasions during which some men and a few women become very inebriated.

Nahua social organization is generally based upon men agreeing to perform for little or no financial remuneration civil, political, and religious works (*cargos*) that benefit the community. Cargo holders and other community authorities participate in the distribution of *ejido* lands, the settlement of minor disputes, and the sponsorship and celebration of saints' feast days. Community social organization is variable with respect to the presence and influence of a council of elders, state-level political officials, teachers, biomedical personnel, Catholic priests, and Protestant missionaries.

As is the case with other aspects of contemporary Nahua culture, religious beliefs and practices are a complex blend of Native American and Spanish elements. Pre-hispanic religious beliefs and practices can be found in relatively unacculturated communities where native religious practitioners celebrate rituals coinciding with the winter-solstice, planting, and harvesting, and preside over disease-prevention and curing rituals, ceremonies petitioning rain, and divinations. The influence of Spanish Catholicism is evident in more acculturated Nahua communities where Spanish-speaking priests have encouraged community members to observe the Catholic liturgical calendar for nearly 500 years.

THE CONTEXT OF HEALTH: ENVIRONMENTAL, ECONOMIC, SOCIAL, AND POLITICAL FACTORS

Nahua settlements can be nucleated or dispersed, and may consist of Nahua-speakers only, or of speakers of Nahua, Spanish, and other Native American languages such as Otomí, Tepehua, or Totonac. When Spanish-speaking *mestizos* (people of mixed Spanish and Indian ancestry) are present, they tend to occupy town and village centers. They may denigrate Nahua culture, and try to dominate local and regional political, economic, and religious activities. Locally powerful *mestizos* form ties with Spanish-speaking Mexicans living in other towns and cities of the region and state. Together they implement state policies that benefit them, and which often exploit the Nahua and integrate, assimilate, and subordinate them to the nation's social, economic and political processes.

As a result, land tenure is precarious and the soils the Nahua cultivate have deteriorated. The Nahua have experienced illegal encroachments on their lands, land shortages and conflicts, and low prices for cash crops and the artisan products they produce. Many Nahua are illiterate and impoverished, and have restricted access to biomedical health services.

MEDICAL PRACTITIONERS

Nahua medical specialists are usually consulted only when the herbal remedies and special diet recommended by members of an individual's family (e.g., wife, mother, grandmother) are ineffective in treating an illness. The most common Nahua medical practitioners are the shaman (*tepahtihqui*,⁴ *tepahtiani*, *tlamátiquetl*, *pajchijquetl*, *curandero/a*), midwife (*tetejquetl*, *partero/a*), bone-setter (*texixitojquetl*, *huesero/a*), herbalist (*xiutepatique*, *hierbero/a*), and massager (*tlatitilanki*, *sobador*). Less common are specialists such as curer of fallen fontanel, spirit exorcist, prayer leader, snake bite healer, sucking healer, injectionist, and spiritualist. The majority of medical practitioners heal on a part-time basis, devoting most of their energy to farming, housework, child care, wage labor, and crafts work. A small minority of medical practitioners practice two medical specialties, and a few undertake three or more. Nahua medical practitioners

range in age from approximately 15 years old to more than 90, and are often recruited from the most impoverished households.

There is a sexual division of medical labor in many communities. Nahua midwives are almost always female; only 5% are men. Shamans are also generally women, but shamans who combine healing with the performance of public, communal rituals are male. Male shamans-priests officiate at rites concerning animal and crop fertility, the control of the weather, the installation of public officials, and events associated with the Catholic church calendar. Roughly an equal proportion of men and women become massagers and herbalists. Approximately 75% of Nahua bonesetters are men.

Each of the above five specialties have practitioners who claim to have received a divine call to the healing role. However, it is generally the case that the more often a practitioner is required to deal with the supernatural, the more likely it is that the healer claims a sacred calling. Shamans and many midwives claim to have been recruited after being attacked by supernatural beings in the guise of lightning bolts, large snakes, or a *mal aire*, taking hallucinogenic drugs, or more commonly, after experiencing premonitory dreams. Supernatural beings are encountered during these experiences and they tell future healers of their special destiny to heal as well as provide instruction in the medicines they should use. These premonitions are often followed by severe and recurrent illnesses which are thought to be punishment for their not immediately heeding their calling. They only begin to heal reluctantly, usually after another healer reveals to them that they must either begin treating clients or die. This may be followed by an optional apprenticeship to an experienced healer that varies in length from several months to several years, the novices' successful healing of his or her first few patients, and a corresponding increase in clientele and prestige.

Some midwives, and most bonesetters, massagers, and herbalists do not claim a supernatural calling. Instead, they are recruited to the role after apprenticing themselves to an established healer or because an emergency arose (e.g., someone broke a bone, went into labor), and they decided to help out because an experienced practitioner was not available. Regardless of the mode of recruitment, Nahua healers tend to have had opportunities to observe and talk to relatives who are also healers.

The shaman is the practitioner who is generally accorded the most prestige. A shaman is respected for his or her knowledge of medicinal substances and for the considerable skill and courage it takes to negotiate with powerful, supernatural beings. Requests for a shaman's services are always accompanied with gifts of food or drink, and compensated with gifts of food and cash that are generous by local standards. A shaman is also respectfully greeted when met on the street. The status of a shaman, however, is ambiguous. Sometimes, spouses, other family members, neighbors, and residents privately criticize shamans as people who are lazy, interested only in financial gain, and sexually promiscuous. Shamans are also feared because they are thought to have the ability to supernaturally harm as well as heal people. On rare occasions, shamans are killed by a group of angry residents who blame them for the misfortunes they are experiencing.

Midwives receive some of the same criticisms that shamans do but are not thought to intentionally harm people. The better known midwives are respected, and compensated well by local standards. For prenatal visits, attending a birth, and providing postpartum services, they receive the equivalent of 3 to 47 US\$, approximately one to fifteen times the daily wage paid to laborers in rural regions. On average midwives make two to three house calls per week. The bonesetter's skills are appreciated but their caseload is generally light (several cases per month or per year). The bonesetter is essentially a farmer who has acquired a medical skill that is valuable at times.

The five main types of Nahua healers can be placed on a scale according to the kind of conceptual model they tend to use to explain and treat illness. Shamans are found near the sacred end of the scale, and bonesetters, herbalists, and massagers are near the secular end. Midwives fall in the middle since they employ both supernatural and naturalistic models for understanding and dealing with pregnancy, childbirth, and the postpartum period.

CLASSIFICATION, THEORIES, AND TREATMENT OF ILLNESS

A formal ethnoscientific study of the way(s) the Nahua classify and conceptualize illnesses has not been undertaken. Nevertheless, Alan Sandstrom (1978, 1989, personal communication) has identified several principles the Huasteca Nahua use to explain and understand disease

and health.⁵ First, is the notion that balance and harmony in social, psychological, and spiritual matters are necessary for health. Closely related to this idea is a second principle: Extreme and antisocial behaviors that disrupt the social fabric or threaten an orderly universe (e.g., drunkenness, spouse abuse, too much aggression or sex, gossiping, lying, cheating) are believed to attract *ejecamej* (*malos aires*, bad winds) which are disease-causing spirits. A number of the *ejecatl* spirits have compound names that include the word *tlasoli* (filth, refuse, trash) and are thought to originate in tangled underbrush and filthy water. Moreover, the *ejecamej* that cause illness (*cocoliztli*, *enfermedad*, *pestilencia*) can also cause infertility, afflict domestic animals, cause crop diseases, droughts, and floods.

Nahua shamans deal with the above kinds of supernaturally-caused maladies. For example, they treat *mal aire* (a type of spirit intrusion), object intrusion due to sorcery, *mal ojo* (evil eye, a type of witchcraft), and *ahmo tonalcahua* (*perdida de alma*, soul loss). They also treat illnesses with naturalistic causes, such as those due to incorrectly mixing activities or foods that are considered hot or cold. For example, fever (*atonahuistli*, *huey-tononqui*, *calentura*), one of the most frequent illnesses (or symptoms of illnesses) treated by Nahua healers, is often attributed to being exposed to a sharp change in temperature or remaining too long in wet clothes. As can be seen, illnesses with naturalistic causes are also governed by the principle of balance and harmony.

Collectively, the illness symptoms shamans treat include: lack of energy, sadness, fever, vomiting, diarrhea, headache, coughing, soreness, aches, dizziness, swelling, bleeding, rash, alcohol abuse, cramps, depressed fontanel, and lack of appetite. From a biomedical perspective, Nahua shamans treat maladies that include gastrointestinal, respiratory, and cardio-vascular diseases, skin lesions and sub-cutaneous infections, and female reproductive problems.

Shamans diagnose by verbally, visually, and physically examining patients, and through divination. Divination techniques include entering trance-like states after becoming intoxicated with rum, marijuana, and hallucinogenic substances, egg, corn kernel, water vapor, crystal, and dream divination, and pulsing the wrist, neck, temples, waist, and chest. Illnesses with supernatural causes are treated primarily by using rituals (e.g., ritual cleansings, soul callings), during which the shaman may claim to make face-to-face contact with supernatural

beings (e.g., rain dwarfs, lightning-bolt spirits), the lost souls of their patients, and spirits of deceased people. In the Huasteca, shamans use cut-paper figures to portray the *yolotl* (heart-soul) of various spirits. Shamans control spirits for the benefit of clients by making offerings to the spirits' heart-souls during curing and disease-prevention rituals. The length of these rituals vary from a few hours for the simplest ones to several days for the most complex. In addition to ritual, shamans prescribe rest, baths, poultices, and teas and infusions made from a wide variety of plant, animal, and mineral substances (Argueta Villamar et al., 1994). They are holistic healers who treat body, mind, and spirit.

Uncomplicated fractures, dislocated joints, musculoskeletal pain and dysfunction, and sprains, cuts, and bruises are generally thought to have a naturalistic cause such as an unfortunate slip or an accidental fall. Nahua bonesetters treat these kinds of maladies by using massage, joint manipulation, herbs, splints, and casts. To arrive at a diagnosis, bonesetters palpate for the point of fracture or dislocation, and in the case of a bilateral anatomic structure, such as a shoulder, may use the healthy shoulder as a normal control against which the painful shoulder can be compared. Bonesetters treat fractures by setting them. Upon being set, uncomplicated fractures, such as those to an arm, may be immobilized with a cast made of reed splints, cloth, and pine resin. Dislocated or painful joints are treated by inducing motion in them. Inducing motion in a joint involves a thrust or a pull which pressures the joint slightly past its normal range of motion in an effort to set a dislocated joint, decrease pain, and increase range of motion. This kind of joint manipulation may be followed by joint massage during which preparations made from medicinal herbs, rum, rubbing alcohol, cooking oil, and iodine are applied to the painful area.

Less research has been undertaken with Nahua massagers and herbalists. Massagers appear to treat the less severe conditions that are also treated by the midwife, bonesetter, and shaman. They treat stomachache, headache, sore throat, and fallen fontanel in addition to massaging pregnant women, women with fallen uterus, and people with bruises and sprains. Some evidently use massage to treat culture-bound syndromes such as soul loss, evil eye, and *mal aire*. Herbalists specialize in making herbal remedies and using them to treat a variety of symptoms including diarrhea, vomiting, fever, tooth ache, malnutrition, coughing, intestinal parasites, dysentery,

and some culture-bound syndromes such as soul loss and bewitchment.

SEXUALITY AND REPRODUCTION

The contemporary Nahua disapprove of both premarital and extramarital sexual relationships. Sexually promiscuous men and women are likened to dogs that mate indiscriminately. Premarital sex is disapproved of much more strongly for girls than for boys, and parents and brothers are vigilant of their daughters and sisters. Nevertheless, premarital sexual relationships are not uncommon, and a couple may decide to live together or make plans to marry as the result of a girl becoming pregnant.

Some men regard women as sexually voracious and suspect their wives will be unfaithful if given a chance. Women may suspect the same about their husbands and complain about promiscuous husbands to municipal authorities. Some men seek out prostitutes and find lovers when working outside of their community as migrant laborers and a few women find a lover in their home community (Taggart, 1997).

The Nahua think of planting as analogous to sexual intercourse. Men make holes with a dibble stick in the feminine earth into which they place seed. The Nahuatl word to plant (*tatoca*) connotes sexual intercourse. They are aware that pregnancy can result from sexual intercourse. For some Nahua, conception is regarded as seating an infant in the womb (Taggart, 1997, pp. 135–136). In communities with government-sponsored clinics, some women are provided with contraceptives including birth control pills, IUDs, implants, and condoms.

HEALTH THROUGH THE LIFE CYCLE

Pregnancy and Birth

A small percentage of women give birth without the assistance of midwives. The majority, however, request that midwives attend them during childbirth and ask them to provide prenatal and postnatal care. Midwives massage the abdomen and legs of pregnant women during their second and third trimesters in order to make them more comfortable, to determine the position of the fetus and, when necessary, to change it. The latter procedure is known as external version. Some may also use a sash to

perform a more rigorous massage known as a *manteada*. A *manteada* consists of placing a sash underneath a pregnant woman's waist while she is lying down. Straddling the client, the midwife pulls firmly on each end of the sash and rocks the woman back and forth. Some clients ask midwives to enter a *temazcal* (sweatbath) with them in order to heat their bodies, and make the bones, ligaments, and muscles of their pelvis more flexible. *Limpias* (ritual cleansings) may also be performed.

Pregnancy is thought to be an illness of sorts by many of the Nahua. Pregnant women may experience lack of energy, headaches, nausea, and chills. Occasionally, husbands of pregnant women have similar symptoms. However, there is no report of Nahua fathers customarily going to bed at the birth of children and simulating the symptoms of labor and childbirth (i.e., the *couvade*).

Nahua midwives generally attend births in their clients' homes. One or more additional adult women (e.g., the mother-in-law, mother) and, in some cases, the clients' husbands may assist at birth. Herbal teas are administered to speed delivery. Delivery generally takes place with the pregnant woman kneeling or squatting on a *petate* or blanket on the floor. Midwives position themselves behind, beside, or in front of their clients, and apply pressure to their abdomen with their hands. After delivery, the newborn's eyes, nose, and mouth are cleaned, the umbilical cord is tied and cut with a small knife, scissors, or a sharp piece of cane, and the infant is wrapped in a blanket. Following the delivery of the placenta, midwives clean and dress the mother, bind her waist with a sash (*ilpicat*), and place a ball of cloth (*fiador*) underneath it so that additional abdominal pressure is applied. In cases of problematic births, midwives administer medicinal teas made from the dried tail of an opossum, perform a *limpia*, or seek the assistance of other midwives or biomedical practitioners. If the placenta is slow in coming, midwives stimulate their patient's gag reflex by placing the end of a woman's braided hair in her mouth.

Midwives provide post-partum care during two or three visits to the home of the mother and newborn. They bathe the infant, massage and rebind the woman's abdomen with a sash, and wash soiled blankets and clothing. Midwives may also accompany their patients to the sweat bath and use bunches of herbs, whose species varies from community to community, to fan and warm a woman's body. Or, they may perform ritual cleansings instead. In addition to using herbs in the *temazcal*, midwives prepare herbal teas to stop heavy post-partum

bleeding and to stimulate milk production as well as to facilitate labor, ease labor pains, and to treat sterility. In some communities, there is a 40-day period of sexual abstinence and rest after childbirth known as the *cuarentena*. In practice, rest and post-partum sex taboos vary in length from 40 days to six months or longer (Taggart, 1997, p. 234). In the Sierra Norte de Puebla and the Sierra de Zongolica (Veracruz), recently delivered women eat special foods to help keep them warm and regain their strength.

The Nahua of the Sierra Zongolica thank midwives for attending births at the end of the *cuarentena* during a hand- and house-cleansing ceremony. In the Huasteca, Nahua midwives make offerings to the earth spirit after a woman has given birth. Offerings are made because there is a concern about offending this spirit with the afterbirth, blood, and amniotic fluid of a recently delivered woman. Nahua midwives from this region also play an important role in village-wide religious ceremonies such as the *Tlaccatellis*, a winter solstice ceremony meaning to cause to be born, and the *Xochitlalia*, a crop fertility ritual (Sandstrom, 1991; Sandstrom & Sandstrom, 1986). *Xochitlalia* can be literally translated as to place flowers, but its metaphorical meaning is probably to seat something delicate or precious, thus paralleling the Nahua view of conception.⁶

There are a number of food and behavioral taboos related to pregnancy. Pregnant woman should not travel about at night, especially during a lunar eclipse, since the latter can lead to an infant being born with a cleft palate. Nor should pregnant women view dancers at a fiesta because their children may be born with a face similar to the masks that dancers wear. Working hard while pregnant is to be avoided; it can lead to a miscarriage. Weaving or embroidering while pregnant is also dangerous because it can result in a child being born with its umbilical cord wrapped around its neck. Collectively, these taboos, if observed, would encourage pregnant woman to remain close to home at night, work in moderation, and avoid fiestas.

Some pregnant women have food cravings that husbands are encouraged to satisfy. These cravings are attributed to the fetus. If they are not satisfied, a miscarriage is thought to result. Giving birth to twins is attributed to a pregnant women eating twin fruits, such as double bananas or plums. The color and number of bumps on the umbilical cord can be counted to divine the number of boys and girls a woman will bear in the future.

The sex of a child can be divined by feeling for the position of the fetus while massaging a pregnant woman. It is thought that a couple's adult children will always live close to them if their placentas are buried beneath the floor of the house. The sheer number of beliefs surrounding childbirth, and this is by no means an exhaustive list of them, show the Nahua's concern with having many healthy children.

Infancy

Babies are carried with a shawl on their mothers' backs and breast-fed on demand for the first six months of their lives. In some parts of the Sierra Norte de Puebla, a mother applies a bitter herb (*chichicxihuit*) to her nipples to discourage a child from breast-feeding. Weaning foods (e.g., *atole*, tortillas, beans) are gradually introduced until the child is fully weaned, which occurs about the sixth month of a woman's next pregnancy (Taggart, 1997, pp. 234–235). By age 2 or 3, children eat the full repertoire of local foods, and begin to talk and walk. There is a widespread belief that a woman's children, especially the youngest one, may become *tzipititoc* when she becomes pregnant again. A child who is *tzipititoc* is said to ache, lack an appetite, and cry constantly. These symptoms are attributed to the jealousy a young child feels toward the expected baby.

Some Nahua mothers bottle-feed infants and serve cow's milk to their children. However, many Nahua children are probably lactase-deficient to some degree, and experience diarrhea, abdominal pain, flatulence, and bloating after consuming cow's milk (Cifuentes & Limón, 1985).

Nahua healers indicate that there are a number of illnesses that infants are likely to suffer. Those characterized by respiratory problems include *opatzmigui* (*ogúio*, bronchitis), *mitetaxis* (*tos ferina*, whooping cough), and *pulmonía* (pneumonia). Others are characterized by fever (e.g., *aferecía*, epilepsy), and diarrhea, vomiting, and other kinds of gastro-intestinal distress including *ahuetzi* (*caída de mollera*, fallen fontanel), *caída de cuajo* (fallen or dislocated cuajo, an organ believed to be inside the stomach), *cólicos* (colic), *ocuiloua* or *chincual* (worms), *mal de ojo* (evil eye), and soul loss.

In a number of cases, these illnesses are attributed to something that happened to the mother or something the mother did while she was pregnant, for example inappropriate conduct, becoming angry frequently, eating

excessive amounts of lard or sweets. In other cases, such as in Tlaxcala and the Sierra Norte de Puebla, a child's illness or death is attributed to nocturnal animals or witches who suck the blood of newborns. Babies and small children of all regions are thought to be especially at risk for *mal de ojo*, a culture-bound syndrome brought on by the strong or envious gaze of admirers. The affliction is caused involuntarily.

In communities that government medical teams visit or have government-sponsored clinics, infants and children receive vaccinations against diseases such as measles, tetanus, and diphtheria, and are given vitamin A. Nevertheless, the infant mortality rate is still relatively high during infancy and many Nahua parents intentionally wait to name their infants until they are reasonable sure of their survival, for example, at 6 to 12 months of age.

Childhood

Childhood begins around age 4 and lasts until the child reaches 13 or 14 years of age. In some villages, anthropometric data suggest that 50 to 70% of preschool and school-age children are underweight and malnourished. Intestinal parasites are also common in children. Biomedical practitioners treat children (and adolescents and young adults) for acute respiratory conditions (e.g., pneumonia, bronchitis, tuberculosis), diarrhea, and wounds sustained in accidents that occur at home, at school, at work, and while traveling by taxi, truck, or bus. Males are treated for wounds at a higher rate than are females.

Nahua healers indicate there are a number of culture-bound illnesses that children suffer, including *apisuilo* (*tiricia*, jaundice), which is characterized by yellowish skin and eyes and attributed to a variety of causes including being reprimanded continually or being a victim of envy. *Netatil* (*quemadas*, burns) is another culture-bound syndrome that children as well as adult men are thought to suffer. It is attributed to close contact with a woman who recently gave birth, and characterized by a rash or yellowish skin. Urinary infections (*mal de orín*) and eye irritations (*ixtemtoleulixli*, *mal de los ojos*) are also common among children.

Adolescence and Adulthood

Adolescent boys and girls are generally given no parental instruction in or preparation for sexual activity and the

sexual aspects of adulthood. Girls begin to menstruate around age 15, and menstrual blood is thought to be particularly dirty. At this age or even before, a girl's mobility, both within and outside of her natal village is severely restricted in some communities. Nevertheless, some adolescents have their first children when they are in their early and middle teens. Most marry and begin to have children in their late teens and early 20s.

Men find medium-weight women to be more attractive than thin ones because the former are considered healthier, stronger, and better able to stand up to demanding household chores. Both men and women tend to gain weight as they mature, but men tend to be thinner due to the more strenuous physical activity required by the kind of work they do. There is no mention of healers treating people in Nahua communities for obesity but doctors do treat a small percentage of adult Nahua patients for diabetes.

In general, both men and women desire children; couples with 6–8 children are not unusual. In some communities it is believed that God punishes women who remain childless. Childless women may be likened to men and may be pitied or severely criticized. Women are often blamed for infertility, a condition attributed to a woman bathing with cold water or burying a doll while she was a young girl. Infertility is grounds for divorce in some communities.

Women are thought to suffer vaginal hemorrhages because they lift heavy loads when pregnant or due to placenta previa. *Caída de matriz* (fallen uterus) is attributed to excessive work. It is thought to be a "loosening" and "displacement" of the uterus from its normal position in the abdomen. *Recaída de parturienta* ("post-partum relapse") is an illness experienced by young women, especially first-time mothers, after having given birth. It is characterized by fever, headache, diarrhea, and joint and stomach pain, and is attributed to working or being frightened during the *cuarentena*.

Some of the illnesses that adults experience are attributed to their working very hard, often under difficult conditions. *Envaramiento* (stiff tendons) is an illness thought to result from bathing an excessively hot body too soon after working hard for a long period of time. It is characterized by muscular pain throughout the body. *Estiramiento de cuerdas* (stiff muscles) is characterized by intense muscular pain due to straining oneself while working. *Garrotillo* ("croup") is an illness that adults suffer after they have worked outside for a long time

under a strong sun. Its symptoms include an intense headache, fever, a "dry" cough, sore throat, and leg and arm pain. *Cabeza abierta* ("open head") is attributed to carrying heavy sacks with a tump line or receiving a heavy blow to the head.

The Aged

People are considered older adults when they are in their late 50s and 60s. Most men and women remain active until their deaths, and it is not unusual to see 70 or 80-year-old men farming or elderly women weaving, cooking, and washing clothes. Men and woman expect their children to care for them when they become elderly. The very old (and the very young) are thought to be relatively weak, and especially prone to illness, including *mal aire* and soul loss. Sometimes, couples are faced with the difficult decision of allocating scarce financial resources to treat a sick elderly parent or grandparent, or to purchase food and clothing for their children.

Dying and Death

When a child or adult dies, a doctor may be summoned to determine the cause(s) of death, especially if the municipality has a government-sponsored clinic. The deceased usually lies in state for a day, and is washed and dressed by a widow. A married woman does not handle the deceased. If she handles a corpse, she might bring the spirit of the deceased to her home where it could attack her husband and children, and cause *mal aire*. The deceased is generally buried the day following death, after a wake has been held during the night. If a municipality has a cemetery, burials within it are regulated by a councilman, *topiles* (local police), or relatives of the deceased.

Beliefs concerning the afterlife are variable and depend upon the extent to which a community has been influenced by Catholicism over the past 500 years and by 20th century Protestant missionaries. In many acculturated communities, the fate of the soul is thought to depend upon an individual's conduct during life, including his or her meeting of religious obligations. In the Sierra Norte de Puebla, for example, souls of people who conducted themselves well go to heaven. Souls of infants who die before being baptized go to limbo and cannot see God; sinners become the slaves of the Devil.

In less acculturated communities, beliefs surrounding death and the fate of an individual's soul show more

continuity with those of the prehispanic period. In the Huasteca, a person's *yolotl* soul generally travels to *Mictlan*, an underworld place of the dead. However, souls of those who die from water-related causes (e.g., drowning) go to a watery paradise (*Apan*). Disease-causing wind spirits are thought to be the spirits of people who die prematurely.

CHANGING HEALTH PATTERNS

There are a number of changes related to health and illness in Nahua communities. Visitations to biomedical personnel, acceptance of the germ theory, and the use of pharmaceuticals are increasing. In some communities, shamans prescribe medications that their clients are instructed to purchase in a pharmacy. Healers are also now much more likely to charge a fixed fee for their services than they were in the past. In the past, healers accepted as compensation whatever their patients could afford to give them. In addition, there have been changes in beliefs and practices. The use of the *temazcal* has declined dramatically, so much so that some people are no longer repairing or building them. Many people question the belief that burying the placenta inside the home will assure them that their children will always remain closeby. They observe that adult children are migrating to and living in distant cities and towns regardless of how carefully they dispose of the placenta.

In general, doctors and nurses are reluctant to work with shamans. Biomedical practitioners as well as schoolteachers, priests, missionaries, and village authorities often belittle or seek to eliminate shamans and shamanistic practices and beliefs. This is leading to a reduction in the number of Nahua shamans and a narrowing of the scope of their healing role. However, Mexico's National Indian Institute (*Instituto Nacional Indigenista*, or INI) has encouraged Native American groups throughout the country to form organizations for traditional medical practitioners. These organizations are designed to reinforce the knowledge of traditional healers, legalize their practice, and provide people with an alternative to the formal health sector. There are at least nine such organizations to which Nahua shamans and other types of healers belong: four in the state of Puebla, three in the Huasteca region of the states of San Luis Potosí and Veracruz, and one each in the states of Guerrero and Michoacán. In the case of the organization whose center is in Cuetzalan, Puebla,

INI doctors work with Nahua and Totonac healers in a hospital where both biomedical and traditional medicine are practiced. It remains to be seen how much impact INI and these organizations will have on the maintenance and promotion of shamanic healing practices.

Nahua childbirth beliefs and practices have been changing dramatically over the past 25 years. Mexico's Ministry of Health (*Secretaría de Salubridad y Asistencia*, or SSA) and Social Security Institute (*Instituto Mexicano de Seguro Social*, or IMSS) have established a large number of health clinics and hospitals in rural and urban areas. It is increasingly common for pregnant Nahua women to seek out the services of these institutions. Some Nahua women prefer doctors and nurses because they administer injections to control pain during childbirth and because they charge relatively little for their services. At the same time many Nahua midwives have received biomedical training from the SSA and IMSS. As a result, the use of a sharp piece of cane to cut the umbilical cord, cauterization of the cord end, and the kneeling birth position are declining in popularity while the use of pincers to cut the umbilical cord, a sterile tie, gauze, and tape to wrap the cord, and alcohol to sterilize hands and equipment are increasing. INI has promoted the continued use of the *temazcal* and teas made from local medicinal plants for use before, during, and after childbirth. Nevertheless, Nahua midwives are gradually being incorporated into Mexico's biomedical health care system. Many Nahua midwives are essentially auxiliary health workers whose primary role is to funnel pregnant women to SSA and IMSS clinics and take orders and training from doctors and nurses.

NOTES

1. The author would like to thank Alan R. Sandstrom (Anthropology, Indiana University-Purdue University Fort Wayne) and James M. Taggart (Anthropology, Franklin & Marshall College) for critically commenting on this article. The author, of course, is solely responsible for any errors of fact or interpretation.
2. The way in which Nahua terms were rendered in the original sources has been preserved. There is no standard orthographic system used by all Nahua scholars.
3. Many of the Nahua, especially school-aged children, young adults, and men speak Spanish as a second language.
4. The Nahua, Spanish, and English terms used for different types of healers and illnesses are terms of reference rather than strict translations.
5. To varying degrees, these principles are applicable to Nahua living in other regions and to many other Mesoamerican groups as well.

6. The author thanks James M. Taggart for pointing out that "tlalia" means "to seat or place", and that a parallel might be drawn between conception and the Xochitlalia ritual.

REFERENCES

- Álvarez Heydenreich, L. (1987). *La enfermedad y la cosmovisión en Hueyapan, Morelos*. (Colección INI, No. 74). México: Instituto Nacional Indigenista.
- Álvarez Heydenreich, L. (1992). Tipos de curanderos en Hueyapan, Morelos. In R. Campos Navarro (comp.), *La antropología médica en México, Volume 2* (pp. 127-138). México, DF: Universidad Autónoma Metropolitana.
- Argueta Villamar, A., Cano Asseleih, L. M., & Rodarte, M. E. (1994). *Atlas de las plantas de la medicina tradicional mexicana. (3 Volumes)*. México, DF: Instituto Nacional Indigenista.
- Bonfil Batalla, G. (1968). Los que trabajan con el tiempo: Notas etnográficas sobre los graniceros de la Sierra Nevada, México. *Anales de Antropología*, 5, 99-128.
- Cifuentes, E., Flores, J. J., & Limón, N. E. (1985). Deficiencia de lactasa intestinal en un pueblo Nahua: Alternativas para los programas de intervención nutricional en la región. *La Revista de Investigación Clínica (Mexico)*, 37, 311-315.
- Dakin, K. (2001). Nahuatl. In D. Carrasco (Ed.), *The Oxford encyclopedia of Mesoamerican cultures: The civilizations of Mexico and Central America, Volume 2* (pp. 363-365). New York: Oxford University Press.
- Dow, J. W., & Van Kemper, R. (1995). Nahua peoples. In J. W. Dow & R. Van Kemper (Eds.), *Encyclopedia of world cultures, Volume VIII: Middle America and the Caribbean* (pp. 182-183). Boston: G. K. Hall.
- Emes Boronda, M., Ochurte Espinoza, C., Castañeda Silva, G., & Peralta González, B. et al. (1994). *Flora medicinal indígena de México: Treinta y cinco monografías del Atlas de las plantas de la medicina tradicional mexicana. (3 Volumes)*. México, DF: Instituto Nacional Indigenista.
- Huber, B. R. (1990). The recruitment of Nahua curers: Role conflict and gender. *Ethnology*, 29, 159-176.
- Huber, B. R., & Anderson, R. (1996). Bonesetters and curers in a Mexican community: Conceptual models, status and gender. *Medical Anthropology*, 17, 23-38.
- Huber, B. R., & Sandstrom, A. R. (2001). The Recruitment, training, and practice of midwives from the United States-Mexico border to the Gulf of Tehuantepec. In B. R. Huber & A. R. Sandstrom (Eds.), *Mesoamerican healers* (pp. 139-178). Austin, Texas: University of Texas Press.
- Huber, B. R., Sandstrom, A. R., & Toribio Martínez, A. (forthcoming). Transformations in the recruitment, training, and practice of midwives in a Nahuatl-speaking community of Mexico. In M. Good Maust & M. Güémez Pineda (Eds.), *Mexican midwives: Change, continuity and controversies*. Austin, Texas: University of Texas Press.
- Instituto Nacional Indigenista. (2001). *Información básica sobre los pueblos indígenas de México; National profile of the indigenous peoples of Mexico; Pueblos Nahuas de la Huasteca*. México, D. F. (March 19, 2001); <http://www.ini.gob.mx>.

- Lewis, Oscar. (1963). *Life in a Mexican village: Tepoztlán restudied*. Urbana: University of Illinois Press.
- Madsen, C. (1968). A Study of Change in Mexican Folk Medicine. In M. S. Edmonson, C. Madsen, & J. F. Collier (Eds.), *Contemporary Latin American culture. Middle American Research Institute, Publication 25* (pp. 92-137). New Orleans: Tulane University.
- Madsen, W. (1955). Shamanism in Mexico. *Southwestern Journal of Anthropology*, 11, 48-57.
- Mellado Campos, V., Sánchez Reyes, A., Fernia, P., Navarro Magdaleno, A., Erosa Solana, E., Bonilla Contreras, D. M., & Domínguez Hernández, M. del S. (1994). *La medicina tradicional de los pueblos indígenas de México (3 Volumes)*. México: DF: Instituto Nacional Indigenista.
- Mellado Campos, V., Zolla, C., & Castañeda, X. (with Antonio Tascón Mendoza). (1989). *La atención al embarazo y el parto en el medio rural mexicano*. México, D.F.: Centro Interamericano de Estudios de Seguridad Social.
- Montoya Briones, J. de J. (1964). *Atla: Etnografía de un pueblo Nahuatl*. México: D.F.: Instituto Nacional de Antropología e Historia.
- Nutini, H. G., & Forbes de Nutini, J. (1987). Nahualismo, control de los elementos y hechicería en Tlaxcala rural. In S. Glantz (Ed.), *La heterodoxia recuperada en torno a Angel Palerm* (pp. 321-346). México, DF: Fondo de Cultura Económica.
- Nutini, H. G., & Isaac, B. L. (1974). *Los pueblos de habla Nahuatl de la región de Tlaxcala y Puebla*. México, DF: Instituto Nacional Indigenista.
- Ramírez Celestino, C. (1991). *Plantas de la región Nahuatl del centro de Guerrero*. Tlalpan, México: Centro de Investigaciones y Estudios Superiores en Antropología Social.
- Redfield, M. P. (1928). Nace un niño en Tepoztlán: A child is born in Tepoztlán. *Mexican Folkways*, 4, pp. 102-108.
- Redfield, R. (1930). *Tepoztlán, A Mexican village: A study of folk life*. Chicago: University of Chicago Press.
- Robinson, D. F. (1961). Textos de medicina Nahuatl. *American Indígena*, 21, pp. 345-353.
- Sandstrom, A. R. (1978). *The image of disease: Medical practices of Nahua Indians of the Huasteca. Monographs in anthropology. no. 3*. Columbia: Dept. of Anthropology, University of Missouri-Columbia.
- Sandstrom, A. R. (1983). Paper dolls and symbolic sequence: An analysis of a modern Aztec curing ritual. *Folklore Americano*, 36, pp. 109-126.
- Sandstrom, A. R. (1989). The face of the devil: Concepts of disease and pollution among Nahua Indians of the southern Huasteca. In G. Stresser-Péan & D. Michelet (Eds.), *Enquêtes sur l'Amérique moyenne: Mélanges offerts à Guy Stresser-Péan* (pp. 357-372). México: Instituto Nacional de Antropología e Historia, Consejo Nacional para la Cultura y las Artes, & Centre d'études mexicaines et centraméricaines.
- Sandstrom, A. R. (1991). *Corn is our blood: Culture and ethnic identity in a contemporary Aztec Indian village*. Norman: University of Oklahoma Press.
- Sandstrom, A. R. (1995). Nahua of the Huasteca. In J. W. Dow & R. Van Kemper (Eds.), *Encyclopedia of world cultures, volume VIII: Middle America and the Caribbean* (pp. 184-187). Boston: G. K. Hall & Co.
- Sandstrom, A. R. (2000). Contemporary cultures of the Gulf Coast. In J. D. Monaghan (Ed.), *Supplement to the Handbook of Middle American Indians. Volume 6, Ethnology* (pp. 83-119). Austin: University of Texas Press.
- Sandstrom, A. R., & Sandstrom, P. E. (1986). *Traditional papermaking and paper cult figures of Mexico*. Norman: University of Oklahoma Press.
- Signorini, I. (1989). *Los tres ejes de la vida: Almas, cuerpo, enfermedad entre los nahuas de la Sierra de Puebla*. Xalapa, Veracruz, Mexico: Universidad Veracruzana.
- Taggart, J. M. (1995). Nahuatl of the Sierra de Puebla. In J. W. Dow & R. Van Kemper (Eds.), *Encyclopedia of world cultures, volume VIII: Middle America and the Caribbean* (pp. 190-193). Boston: G. K. Hall & Co.
- Taggart, J. M. (1997). *The Bear and his sons: Masculinity in Spanish and Mexican folktales*. Austin: University of Texas Press.
- Taggart, J. M. (2001). Nahua. In D. Carrasco (Ed.), *The Oxford encyclopedia of Mesoamerican cultures: The civilizations of Mexico and Central America, Volume 2* (pp. 359-363). New York: Oxford University Press.
- Unidad Regional de Acayucan. (1983). *Ciclo de vida de los nahuas. Cuadernos de Trabajo, Acayucan, No. 22*. México: Dirección General de Culturas Populares.
- Vexler, M. J. (1981). Chachahuantla, A blouse-making village in Mexico: A study of the socio-economic roles of women. Doctoral dissertation, University of California, Los Angeles, 1981.