Health Care and Social Service Use Among Chinese Immigrant Elders

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Abstract:

We explored patterns and reasons for health and social service use among Chinese immigrant elders. Interviews were conducted with 27 Chinese immigrant elders, 11 adult care giving children, and 12 health and social service providers. Content analysis of these data indicated that participants across groups agreed that Chinese elders underutilize services because of problems related to language, transportation, cost, long waits for appointments, and because of cultural norms/values related to need for care, preference for self-over professional care, fear, and distrust of western biomedicine, and the obligation to refrain from using formal services. These problems are complicated by geographical dispersion and dialect differences in the local Chinese immigrant community.

Keywords: Chinese immigrant elders; health care utilization

Article:

The US population has increasingly been characterized by growing numbers of immigrants and, thus, greater diversity among the elderly (Gwen, 1997). This increasing diversity has prompted interest in health and social service use among immigrant elders. Although inter-group variation exists, immigrants, in general, are known to refrain from using services despite their high need (Damron-Rodriguez, Wallace, & Kington, 1994; Hu, Snowden, Jerrell, & Nguyen, 1991; LeClere, Jensen, & Biddlecom, 1994; Strand & Jones, 1983; Weitzman & Berry, 1992). Service use in immigrant elders is of particular interest because perceived barriers to and low rates of use are associated with poor health outcomes in this group (Levine, Becker, & Bone, 1992; Ren & Chang, 1998).

Most studies of health and social service use are theoretically driven by Andersen's (1968, 1995) behavioral model. In the original model, Andersen (1968) proposed that people's use of health services is a function of predisposition to use, factors that enable use or act as barriers impeding use, and the need for care. Predisposing characteristics, such as demographic factors and social structure, exist prior to or regardless of use. Demographic factors, such as age, represent biological imperatives, while social structure refers to social status and the ability to command resources to deal with health problems. Enabling resources, such as health insurance and income, are necessary but not sufficient for use. Need must be present for use actually to take place.

Although the behavioral model has been widely used for decades, it has been criticized for leaving an unsatisfactory amount of variance in health and service use unexplained (Rosenberg & Hanlon, 1996; Weitzman & Berry, 1992). For immigrants, in particular, the model omits important constructs like language and culture (Portes, Kyle, & Eaton, 1992). Andersen (1995) responded to these criticisms with an updated model that adds health beliefs to the initial set of predisposing characteristics, explicitly distinguishes between perceived need and evaluated need, and includes the health care system and external environment. Health beliefs, which are strongly influenced by cultural norms and values, provide a means of explaining how social structure might influence enabling resources and perceived need. Perceived need, in contrast to need evaluated by others, refers to how people view their own health and functional state and whether they judge their problems to be of sufficient magnitude to seek professional services.

The updated behavioral model is presented in Figure 1. The promise of the updated model—to yield better explanation—has yet to be realized. Population-specific health beliefs and relevant aspects of the health care system and external environment still need to be specified (Anderson, 1995; Pourat, Lubben, Yu, & Wallace, 2000).

Compared to other immigrant groups, Asians have particularly low rates of health and social service use (Snowden, & Sue, 1998; Boult & Boult, 1995; Hu et al., 1991; Snyder, Cunningham, Nakazono, & Hays, 2000; Sproston, Pitson, & Walker, 2001; Yu & Cypress, 1982; A.Y. Zhang). Yet, there is considerable variation among different Asian ethnic groups, both in terms of level of use (Sproston et al.) and the variables that explain use (Ryu, Young, & Kwak, 2002). Researchers have recommended studying specific subgroups to capture this variation (Andersen, Harada, Chiu, & Makinodan, 1995; Gwen, 1997; Ryu et al.).

Chinese immigrant elders are under-studied relative to their population size (Andersen et al., 1995). Slightly more than one-fourth (25.16%) of US Asians are Chinese, and, compared to other Asians, a greater proportion of Chinese immigrants are elderly (Mui, 1996). Yet, we could locate only a few studies that have addressed health and social service use among the Chinese, and none of these studies focused on the elderly (Hislop et al., 2003; H.Z. Li & Browne, 2000; P.L. Li, Logan, Yee, & Ng, 1999; Ma, 2000; Ryu et al., 2002; Sproston et al., 2001; Tabora & Flaskerud, 1997; Ying & Miller, 1992). In addition, most studies of service use among the Chinese were limited to mental health services. (For exception, see Hislop et al.; Ma; Ryu et al.; Sproston et al.) In one study of primary care, researchers compared general practitioner visits for Chinese and other minority groups in Great Britain, but did not address the reasons for different rates of use (Sproston et al.). Ryu et al. identified sex, education, marital status, family size, employment, health insurance, and health status as significant predictors of physician visits in a random sample of US Chinese adults. In a third study, Ma explored why Chinese adults in Houston, aged 25 years or older, did not use health services, including traditional ethnic services such as acupuncture. Reasons identified included communication barriers, preference for self-care and peer advice, lack of health care insurance, not understanding insurance coverage, distrusting Western medicine, transportation difficulties, and barriers specific to managed care.

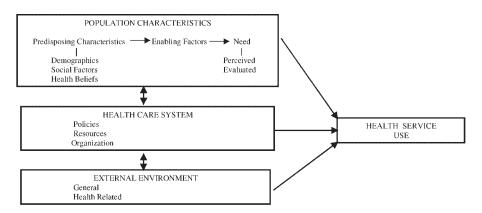


FIGURE 1. Andersen's (1995) updated behavioral model.

The reasons might have been different if the study had focused exclusively on elders. Because of eligibility for Medicare, Chinese immigrant elders are more likely than their younger counterparts to have health care insurance and to receive services outside of managed care settings (Jang, Lee, & Woo, 1998).

Although informative, findings from these studies do not provide sufficient evidence for policy and clinical interventions specific to Chinese elders. Inadequate identification of relevant aspects of the behavioral model for Chinese elders also makes the model insufficient for explaining service use in this group. To address these issues, we used the behavioral model as a framework for a qualitative descriptive study to explore health and social service use among Chinese immigrant elders. Study aims were to describe the pattern of, and factors associated with, service use in Chinese elders from the perspective of the elders themselves, of their adult caregiving children, and of health and social service providers who had a significant number of Chinese elders

in their caseloads. The study aims and method replicate the aims and method in a previous study with Soviet immigrant elders (Aroian, Khatutsky, Tran, & Balsam, 2001).

METHOD

Sample

The sample for this study included 27 Chinese immigrant elders, 11 adult children who were caregivers for Chinese parents, and 12 health and social service providers who served this immigrant group. The elders and adult children were not related to one another, and providers were not matched to respondents. Elders were initially recruited through two social service agencies that target Chinese elders in the greater Boston area, including one agency in Boston's Chinatown and one agency in a neighboring suburb. Providers from various disciplines and practice areas were identified by case workers at these two social service agencies. Because recruiting elders from social service agencies was likely to yield elders more likely to use services, we also sought additional respondents through network sampling. People already participating in the study were asked to refer elders who were not using services at the two initial recruitment sites. Nine of the 27 elders and 3 of the 11 adult children were recruited using this alternative approach.

Table 1. Demographic Characteristics for Elders and Adult Children

	Elderly n (27)	Adult Children n (11)
Age		
Median	78	44
Range	62-93	35-51
Sex		
Female	63.0%	63.6%
Male	37%	36.4%
Marital status		
Married	81.5%	81.8%
Single/widowed	18.5%	18.2%
Education		
High school or less	63.0%	54.5%
College or graduate degree	37.0%	45.5%
Years in US		
Median	16	14
Range	1-46	3-27
Government assistance	81.5%	18.2%
US citizenship	70.4%	72.7%

Criteria for participation for elders included being from China or Taiwan, residing in community dwellings in the greater Boston area, and not being cognitively impaired. Homeland was restricted because most local Chinese immigrant elders are from China and Taiwan (U.S. Census, 2000). Criteria for inclusion in the elder and adult children groups, respectively, included (a) being age 60 or older or (b) caring for a local, community-dwelling parent who was age 60 or older, even if the child was not living with the parent.

Demographic characteristics of the elders and adult children are displayed in Table 1. Most of the elders immigrated to the US as older adults. Slightly over half of the elders (51.9%) had emigrated from Taiwan, but most of them were originally from China. The majority of elders in our study had government assistance because of low income, including housing subsidies and/or Medicaid. The sex distribution of adult children (36.4% men) was different from caregivers in the general population, but consistent with Chinese family values, where sons are expected to be more active in parental caregiving (Wu, 2000).

The providers included four physicians three social workers; two case managers from home care agencies; one Chinese acupuncturist; one clinical psychologist; and one executive director of a Chinese home care agency. Of the four physicians, two were in primary care one, in internal medicine, and one in psychiatry. Most (75%) of

the providers were themselves Chinese immigrants. Chinese immigrants comprised at least half of the caseloads for 58.3% of these providers.

Data Collection

After obtaining informed consent, semi-structured, open-ended interviews were conducted either individually or in a focus group format. Topics for discussion were derived from the behavioral model, and the same interview guide was used in the individual and focus group interviews. Open-ended questions about the kinds of health problems prevalent among Chinese elders were intended to elicit discussions of need. Questions about what "makes it easier or gets in the way of getting/giving services" were intended to elicit descriptions of health beliefs and access and barriers, which comprise predisposing characteristics and enabling factors in the behavioral model. Respondents were told that we were interested in their impressions of Chinese immigrant elders as a group. If respondents offered information about their personal experiences, they were asked how their personal experiences were similar to, or different from most other Chinese immigrant elders.

Data were collected from elders in 15 individual interviews and in one focus group with 12 participants. Data from adult children (n = 11) were obtained through individual interviews. Data from providers (n = 12) were collected in a single focus group. Many of the focus group participants knew one another because of the interconnected nature of the local Chinese immigrant community. Focus groups were designed to obtain general perceptions and to explore areas of consensus or difference concerning Chinese immigrant elders' health and social service use. Individual interviews with elders were to supplement group data. We anticipated that elders might have difficulty offering dissenting opinions in a group because interpersonal harmony is highly valued in the Chinese culture. However, reports from individual interviews corroborated the focus group data. A focus group with adult children was part of the original design, but individual interviews were scheduled because of problems finding a mutually convenient group time. Focus group interviews lasted 2 1/2 hours. Individual interviews lasted about 1 hour.

Data were collected in Chinese, with the exception of data collected from providers. Inter- views in Chinese were conducted by one of three research assistants who were bilingual in Cantonese, Mandarin, or Taiwanese dialects and matched to study participants according to dialect. Interviews were audiotaped, and those conducted in English were transcribed verbatim. Interviews conducted in Chinese were translated verbally onto a second set of audiotapes, and the translated English versions were transcribed. Translations were as close to verbatim as possible, and explanations were provided for idioms, metaphors, phrases, and medical terms that were not readily interpretable in English. The translations were not formally back-translated but checked for accuracy by the interviewers by comparing the original Chinese audiotapes against the English transcriptions.

Data Analysis

Descriptive statistics were used to summarize demographic data. Qualitative content analysis of the interview transcripts included coding data with descriptive codes or codes that entailed little interpretation (Miles & Huberman, 1994). First, codes were generated according to the topical areas or broad categories elicited by the interview questions. Next, more specific descriptive sub-codes were assigned to data grouped under these broad categories. For example, during initial coding, data addressing what made getting or giving health care difficult were coded as barriers. During the next level of coding, these data were assigned subcodes such as language or cost. Data displays were organized in the form of data matrices for each subcode to determine patterns in the data according to source and to summarize perceptions of how and why Chinese elders used or did not use health and social services. Data about personal experiences were treated as perceptions of Chinese elders as a group or as individual variation, depending on whether these data corroborated descriptions of Chinese elders as a group. Individual variation was noted, but the study design did not permit analyzing these differences in depth. In the final stage of analysis, the subcodes were compared with the behavioral model for fit, according to how the subcodes fit Andersen's conceptual categories of predisposing, enabling, and need characteristics as well as his proposed linkages about how these conceptual categories lead to health and social service use. For example, data about Chinese elders' criteria for illness were examined for fit with Andersen's (1995)

conceptualization of health beliefs as a predisposing characteristic and its hypothesized linkage with perceived need.

FINDINGS

All three groups of study participants—providers, adult children, and elders—had similar perceptions about Chinese elders as a group. When asked about group characteristics, providers, adult children, and elders described similar health problems, patterns of service use, and reasons for why Chinese elders use or do not use selected services. With few exceptions, reports of personal experiences were consistent with perceptions of Chinese elders as group. Exceptions are noted below.

everyone agreed that Chinese elders generally have faith in both types of health care. As they did in China, most Chinese elders used Western or traditional approaches, depending on the nature of the health problem. Traditional approaches were considered best for getting to the root of an imbalance or disease, but slower acting and not optimal when a quick response was needed. An elder explained: "For some situations, such as heart attack or injuries when you need stitches; you cannot sit there waiting for some good result from Chinese medicine. In these situations, Western medicine will have better results." If Western or traditional health care did not yield anticipated results, most elders switched and used the other type of health care for the same illness episode.

Patterns of Health and Social Service Use

Study participants described Chinese elders as having many physical as well as mental health and social problems. These problems included hyper-tension, stroke, diabetes, depression, social isolation, loneliness, and conflict with and dependence on adult children.

Despite these problems, elders, adult children, and providers agreed that Chinese elders under-utilize health care, including not having routine check-ups as well as not seeking professional care when not feeling well. Even the few elderly respondents who acknowledged that they personally had yearly check-ups emphasized that their peers do not. All three groups of study participants agreed that Chinese elders do not use formal mental health services even though they are often depressed, socially isolated, and concerned about conflict with and dependence on their adult children. Chinese elders instead use selected social services, such as elder housing, adult day care, and transportation services to alleviate their social isolation and dependence on their adult children. Other social services, such as home-maker services, home health aides, and nursing homes, are seldom, if ever, used.

When Chinese elders do use professional health care, they seek either Western biomedical health care or health care provided by practitioners formally trained in traditional Chinese medicine, such as acupuncture and herbal medicine (Traditional practitioners, originally trained in China, set up practices in Boston's Chinatown after they immigrated). Although a few elders reported that they preferred Western over traditional medicine.

Explanations for Low Use of Professional Health Care and Social Services

Explanations for Chinese elders' service use fall into two broad categories: (a) service delivery problems and (b) cultural norms/values. Service delivery problems included language barriers, long waits for appointments, transportation, and cost. Some of these barriers were common to Western and traditional health care and social services, whereas other service delivery problems were specific to type of service. Transportation difficulty was common to all three types of service. Language was a problem primarily for Western health care and social services. Long waits for appointments were specific to Western health care. Cost was a barrier for traditional health care and, for elders without Medicaid, for social services. Although most of these service delivery problems are also present in the general population, language, transportation, and cost are influenced by the nature and structure of the local Chinese immigrant community and characteristics of the local health care system.

Cultural norms and values for Chinese elders' under use of health and social services included having different criteria for need, a preference for self—care, fear and distrust of Western biomedicine, and a perceived obligation to rely on self or family rather than to use formal services. These reasons also varied according to type of service. Different criteria for need and a preference for self-care over professional care accounted for elders' low use of both Western and traditional health care. Fear and distrust were specific to elders' low use of Western health care. A perceived obligation not to rely on formal services accounted for Chinese elders not using some social services and using other social services with ambivalence. With the exception of long waits for appointments, which are not unique to Chinese elders, each of these reasons will be discussed next in more depth.

Service Delivery Problems

Language. Boston's Chinatown has a major medical center and many elder social service programs (e.g., adult day care, social programs at senior centers) with Chinese–speaking professionals and translators. Nonetheless, language was identified as a reason for Chinese elders' low use of Western health care and social services. First, not all Chinese elders from the greater Boston area live in, or can easily travel to, Chinatown. Many Chinese elders lived with their adult children in suburbs where Chinese-speaking health care professionals and interpreters were not readily available. Elder housing in the suburbs also posed language problems. A provider explained:

When elders ask for public housing, they say: "We have to be in Chinatown." We tell them: "You can get it quick in suburban areas. They have plenty of space." But they say: "No, we cannot communicate and have a social life there." Another aspect of the language barrier is that there are many Chinese dialects, and the dialects spoken by an elder and a health care professional or interpreter does not always match. Most services, including traditional health care, are provided in Cantonese. Yet, some elders exclusively speak other dialects. An adult child explained: "What prevents my parents from going to [medical center in Chinatown] is that most doctors there speak Cantonese. My parents do not speak Cantonese." Logistical problems with using interpreters, such as scheduling, availability, and accuracy of the translation, were further complicated by the existence of multiple Chinese dialects.

Transportation. Many major medical centers and social service programs in greater Boston, including ones located in Chinatown, are accessible via public transportation. Traditional practitioners are also located in Chinatown and are, therefore, accessible by public transportation. Even so, transportation is problematic for Chinese elders who do not live in Chinatown. An elder explained: "When we do not feel well, it is not convenient for us to go all the way to Chinatown to see a doctor. I would rather stay home and rest to feel better." Taking public transportation was also difficult for elders who did not know the language. An elder explained: "If I take transportation by myself, I am afraid I will get lost and not know how to return back home." Rides to and from health care and social service appointments are covered by need-based programs, such as Medicaid. Nonetheless, elders were hesitant to ride with drivers who did not speak their language. A provider described a particularly unfortunate experience:

I arranged for an interpreter for an elder to see an eye doctor. I had the elder go downstairs to wait for the transportation. But the driver made a mistake and took him to the wrong hospital. No interpreter was waiting for him there. The elder said: "No more. I will not see the eye doctor. I am fine." A solution was for family members to drive elders to health care appointments, which disrupted adult children's work schedules. An adult child explained: "Usually, I take a vacation day to take my parents to the doctor. I borrow my husband's car and he takes the subway to work." Elders did not want to trouble their children. An elder explained: "Most of us will do self-treatment and not bother the family." Cost. Cost was problematic for traditional health care. An elder explained: "Most traditional treatments are not covered by health insurance. Elders have to pay for these visits." An adult child elaborated: "To see a traditional physician is expensive because the illness is not treated in one or two times. You have to go several times and it is \$40 for each visit." Cost was not an issue, however, when using Western health care because most Chinese elders had insurance coverage. Nonetheless, having health insurance was not a sufficient motivation for many elders to use Western health care. An elder commented:

"My daughter got a Medicaid card for me. Now she wants me to get a physical exam. I do not need this exam." Another elder corroborated: "Although I have free medical insurance, I have never used it." Cost also was not an issue for social service use if elders were receiving government subsidies, such as Medicaid. Elders who were not covered by Medicaid, however, did not use social services that they might have otherwise wanted.

Cultural Norms and Values

Different criteria for need. Chinese elders perceived themselves as healthy if they were able to function in their daily lives and were not experiencing symptoms. Although other groups of elders also employ these criteria, providers explained that it is more pronounced among Chinese elders. An elder explained: "People think they are healthy if they still can eat, move, and do some house work." Another elder added: "I do not have serious disease so why should I go?" An adult child explained his frustration: "A routine check-up can give elders a warning sign to their health problems. But my parents disagree. I cannot get them to go." Reliance on selfoverprofessional care. Chinese elders used self-care as a major means of disease prevention. Elders also valued self-care more than professional care when they were ill. An elder explained: "The most important thing is to depend on yourself. The doctor can't do everything for you." An adult child added: "My parents will go to see a doctor only if it is serious. If it is minor, they try medicine at home." Elders also relied on themselves rather than professionals for mental health problems. An elder stated: "When I have anger in my mind, I write Chinese poems about my anger. After I write, I cry and I feel better." Chinese elders also believed that peer advice about self-care was better than professional advice. An elder stated: "Elders have constipation, so they can tell you what to do. Doctors never have constipation. They can only follow textbooks." Fear and distrust. Although Chinese elders preferred self-care, they acknowledged their limits in treating certain health problems. An elder explained: "If it seems we have to go (to a professional), then we will go." This reluctance toward professional health care was most pronounced with regard to Western biomedicine. Even when elders believed that Western approaches would be more effective than traditional ones, they feared the strength and invasive nature of Western biomedicine.

One concern pertained to Western medications. An elder explained: "Western medicine works very fast because it contains more chemicals. So it is harmful for your body. Not like Chinese medicine, which is natural." An adult child elaborated: "My mother thinks Western medicines are too strong for her. Every time she takes them, she feels uncomfortable afterwards." The diagnostic tests used in biomedicine were also considered invasive. A provider explained: "What keeps Chinese elders from seeing Western doctors is the big fear that they will take blood." In the Chinese culture, blood is seen as the source of life, and the traditional Chinese worldview is that blood is not regenerated (Ohmans, Garrett, & Treichel, 1996; Spector, 1996).

Chinese elders were also accustomed to different modes of diagnosis and distrusted Western methods. A provider explained: "Chinese elders believe that a good physician should be able to make a diagnosis simply by examining a person instead of taking blood and other painful procedures that are used in Western diagnostic work-ups." Obligation. A culturally embraced obligation among the Chinese is filial piety or the expectation that adult children will show respect by taking care of elderly parents. An adult child explained: "My mother gave birth and raised me. I have the responsibility to support her." Certain social services, specifically nursing homes, homemaker services, and home health aides, were an affront to filial piety; they represented shirking responsibility to take care of parents. An adult child explained: "If people put their parents in a nursing home, this is Chinese behaving like Americans. They think taking care of elders is the government's business." Other social services, specifically elder housing, adult day care, and transportation services, did not have the same strong negative connotations with regards to filial piety as nursing homes, home health aides, and homemaker services. Nonetheless, Chinese elders wanted public demonstration that their children cared for them. A provider explained:

They like their children to take them to the doctor, not just because of the language barrier. Older people expect their children to show that they care by taking them. Sometimes elderly are in competition ... if your children take you, it shows everybody, "Boy, I have the best family." Otherwise, they feel embarrassed.

Privately, however, many Chinese elders wanted to attend adult day care and live in public elder housing with other Chinese-speaking elders because these services allow Chinese elders to be less socially isolated and dependent on their adult children.

Nonetheless, a problem with these desired social services is that they are funded by government subsidies (e.g., Medicaid). Using government subsidies was also seen as not meeting personal or family obligations. An adult child explained: "We were born in China. We have this kind of thinking. We do not like to bother government. She can get welfare but I am her son. I have money. I should support her." An elder stated: "I am eligible for welfare but I do not want to be a taker. We should not be so greedy. We should have our morals as Chinese." Necessity, however, sometimes required putting disdain aside and using government subsidies. A provider explained: "The Chinese are very proud. They do not want the government's help. They say: 'We can take care of our parents.' But then they see their parents get old and need help. They have to accept the idea of Medicaid." The reasons for low use of Western as well as traditional health care and the reasons for low to moderate use of social services are summarized in Figures 2–4.

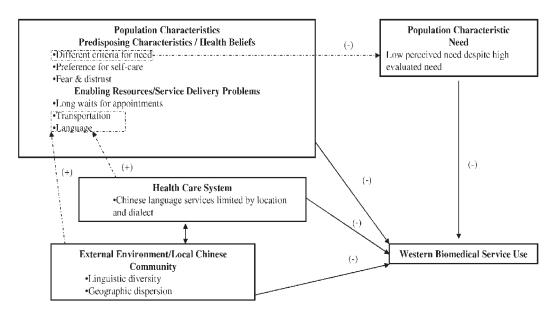


FIGURE 2. Biomedical health service use in Chinese immigrant elders.

DISCUSSION

Our findings support not only Andersen's (1995) recent additions to the behavioral model to make it more comprehensive for immigrants, but also provide greater specification and elaboration of the newly added components and hypothesized linkages in the model. The service delivery problems we found are consistent with the original conceptualization of enabling resources and are not unique to Chinese immigrant elders (Aroian et al., 2001; Damron-Rodriquez et al., 1994; LeClere et al., 1994; Portes et al., 1992). In fact, with the exception of language, none of the service delivery problems are unique to immigrants. However, we were able to elaborate on specific characteristics of two new components in the model: (a) the health care system and (b) the external environment. Our specification of the interaction between salient aspects of these two components further explains some of the service delivery problems we noted in Chinese immigrant elders. Specifically, language and transportation problems were complicated by the fact that Chinese-speaking health and social services are concentrated in Boston's Chinatown and limited to the Cantonese dialect. These aspects of the health care system were problematic because the local Chinese immigrant community has greater linguistic diversity and is geographically dispersed in suburbs where language resources are less available than they are in Chinatown.

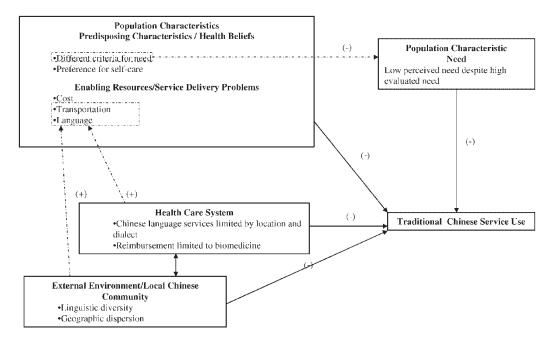


FIGURE 3. Traditional health service use in Chinese immigrant elders.

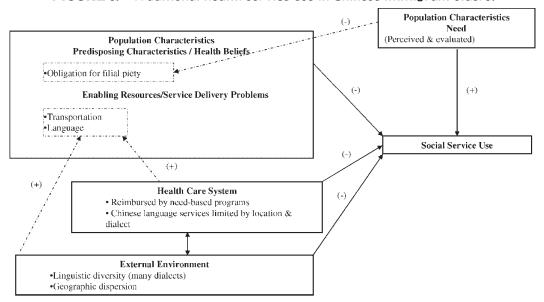


FIGURE 4. Social service use in Chinese immigrant elders.

The cultural norms and values we noted about service use are also consistent with the addition of health beliefs to the behavioral model's original set of predisposing characteristics, and the hypothesis that health beliefs provide a link to perceived need (Andersen, 1995). In our study, this link pertained mostly to one particular health belief and was limited to biomedical and traditional health care. Chinese elders' criterion for illness (i.e., problems must actively interfere with functional ability before seeking professional help) was the specific pathway whereby health beliefs affected perceived need. Need operated differently with regard to social service use. The obligations for filial piety and not to rely on government subsidies directly resulted in less use of social services unless need was sufficiently high. When need was sufficiently high, both Chinese elders and their adult children were willing, albeit reluctantly, to disregard this cultural norm and use government subsidies for social services.

The cultural norms and values reported by our study participants have a distinct pan-Asian quality. Fear and distrust of Western biomedicine, preferences for self-care, differential use of traditional and Western health care depending on the health problem, and obligations like filial piety have been noted among a number of Asian immigrant groups, including Chinese, Korean, and Vietnamese immigrants (Jenkins, Le, McPhee, Stewart, &

Ha, 1996; Ma, 2000; Ren & Chang, 1998; Zhang & Verhoef, 2002). The pan-Asian nature of these cultural beliefs leads us to speculate that previously noted differences about service use in Asian subgroups are due to variation in the degree to which pan-Asian cultural beliefs are retained after immigration.

We emphasize a few cautionary notes. First, our sampling strategy of initially recruiting study participants from social service agencies may have yielded people who were more likely to use social services and receive government assistance. They may have perceived that other Chinese elders shared their level of social service use. Our subsequent sampling technique may not have been successful in offsetting this bias. On the other hand, the high percent of elders receiving government assistance in our study (81.5%) is similar to the percent of elders who were receiving government assistance in a random sample of Chinese people in San Francisco (Jang et al., 1998). Also of note is that we asked participants to give their perceptions of Chinese elders as a group. This approach results in generalizations and stereotypes. Although we found some individual variations in how Chinese elders themselves fit these generalizations, even more likely exist. Exploring individual variation was beyond the scope of our study.

Our findings have significance for other immigrant groups. Some of the service delivery problems we found for Chinese immigrant elders in the Boston area are likely to be similar to other groups who are geographically dispersed and/or whose native language has different dialects. At higher levels of abstraction, the cultural norms, and values we identified among Chinese immigrant elders may also be applicable to other groups. For instance, this study of Chinese elders was a replication of one we conducted with elders from the former Soviet Union (Aroian et al., 2001). We found that Soviet immigrant elders have levels of health and social service use that are unusually high relative to reports obtained from other immigrant groups, including Chinese immigrant elders. Chinese and Soviet immigrant elders have not only markedly different levels of health and social service use, but also hold opposing cultural norms and values about health and social services. Soviet elders view it as their responsibility to protect their health by seeking professional care for minor symptoms. Chinese elders believe that professional care is needed only when symptoms seriously interfere with functional ability. Soviet elders have high expectations that biomedicine can cure most, if not all, health problems. Chinese elders place greater confidence on self than professional care. Soviet elders are reassured by numerous diagnostic tests and purposefully seek additional professional consultation to obtain more tests. Chinese elders avoid biomedicine because of distrust and the belief that biomedical diagnostic tests are harmful. Like Chinese elders, Soviet elders want traditional treatments, particularly massage and therapeutic baths. However, Soviet elders readily substitute biomedical for traditional services, perhaps because they have greater faith than Chinese elders in biomedicine. Lastly, Soviet elders are willing to use government subsidized social services; their attitude was, ". . . if it is free, we have to have it" (Aroian et al., 2001, p. 268). Chinese elders view using government subsidies as shirking responsibility.

Service delivery problems are also notably absent for Soviet elders, and this absence can be explained by differences between the local Chinese and Soviet immigrant communities and their health care systems. In contrast to the Chinese, there are numerous local, Russian-speaking providers, and Russian elders are clustered in dense, geographically clustered Russian neighborhoods with highly accessible linguistically compatible services.

Recommendations for future research include replicating our design with other immigrant and non-immigrant groups of elders to identify the relevant set of health beliefs and characteristics of their local health care system and external environment that influence their service use. We anticipate that including group-specific health beliefs will enhance the precision and explanatory power of the behavioral model and, thereby, promote appropriate service use. Identifying and measuring health beliefs would also facilitate identifying intra- as well as inter-group differences: for example, testing the hypothesis that previously noted differences among Asian sub-groups may be due to differences in commonly held cultural norms and beliefs, and determining whether service delivery problems are more pronounced in immigrant than in non-immigrant elders.

Recommendations for policy include lobbying for insurance coverage for traditional therapies and flexible scheduling for health appointments to accommodate adult children's work schedules. Practice recommendations include delivering health and social services so that they are more congruent with Chinese immigrants' cultural norms and beliefs. Clinicians should present Western biomedical diagnostic screening procedures and regular check-ups for screening as adjuncts to, rather than substitutes for, self-care; use invasive diagnostic procedures only when absolutely essential; and offer social services in a manner that does not cause Chinese elders and their adult children to lose face.

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