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Levels of Acculturation of Chinese Older Adults in the Greater Chicago Area — The Population Study of Chinese Elderly in Chicago

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Abstract

Acculturation is a difficult process for minority older adults for a variety of reasons, including access and exposure to mainstream culture, competing ethnic identities, and linguistic ability and preference. There is a paucity of research regarding overall level of acculturation for Chinese older adults in the United States. This study aimed to provide an overall estimate of level of acculturation of Chinese older adults in the United States and to examine correlations between sociodemographic characteristics, self-reported health measures, and level of acculturation. Data were collected through the Population Study of Chinese Elderly in Chicago (PINE) study. This community-based participatory research study surveyed 3,159 Chinese older adults aged 60 and older. The PINE Study Acculturation Scale was used to assess level of acculturation in three dimensions: language preference, media use, and ethnic social relations. Mean acculturation level for all items was 15.3 ± 5.1, indicating low levels of acculturation. Older age, more offspring, lower income, fewer years living in the United States, lower overall health status, and lower quality of life were associated with lower levels of acculturation. Level of acculturation was low in Chinese older adults, and certain subsets of the population were more likely to have a lower level of acculturation. Future research should investigate causality and effects of level of acculturation.

Keywords

Chinese; older adults; acculturation; United States; population study

Like all ethnically diverse minority groups in the United States, Chinese immigrants are expected to adjust to mainstream U.S. culture. This complex process of individualized internal adaptation of beliefs, practices, and values to a host culture is known as

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acculturation.[1] Acculturation has been studied in a myriad of fields, such as psychology and anthropology. Over the past 100 years, there has been much debate on how to define the processes of acculturation and the best way to quantitatively measure it.[1] Numerous factors, including language, media use, and ethnic social relations, affect acculturation. These three factors have been used to measure acculturation in Asian populations because of the relationship between external factors, such as social and environmental conditions; individual preference; and their changing status after immigration.[2] In the United States, the ability and preference to speak English, use and engage in American media, and socialize with Americans are vital parts of dominant, mainstream "American" culture and are considered to mediate health outcomes through greater access to health care.[2] Ethnic culture and mainstream culture have been conceptualized in academia and popular rhetoric as opposite sides of the spectrum in the United States,[3] and despite individual aspects such as personality and life experiences, which greatly influence adaptation to a new environment, group factors such as race, culture, social status, and age are also known to influence the acculturative process.[1,4–7]

Older immigrants in the United States often have less access to mainstream cultural and institutional systems because of linguistic and cultural differences.[8,9] Furthermore, immigrants often live in neighborhoods with a similar ethnic identity,[10] which may increase exposure to the home country's culture while diminishing the influence of the host country's.[5] Older immigrants are likely to immigrate for, live with, and socialize with their kin, who often share an ethnic identity.[11] Their relative social isolation may contribute to lower levels of acculturation.[12] Researchers also examine linguistic abilities when discussing levels of acculturation, because language is a large part of culture.[5] Because more than one in eight older adults in the United States are immigrants[13] and considered vulnerable because of limited English proficiency,[14] they also are likely to have low levels of acculturation.

Older Chinese adults in particular have experienced great difficulty adjusting to U.S. culture.[15,16] According to the U.S. Census Bureau, 88.6% of Chinese adults aged 55 and older were born outside the United States, and approximately 30% immigrated to the United States after the age of 60.[14] Furthermore, 69% have limited English proficiency.[14] The Chinese population in the United States is the oldest and largest Asian-American subgroup,[17] but despite the development of an acculturation scale for Asians[18] and a growing recognition that Chinese older adults are a vulnerable population,[19] there is a paucity of research estimating levels of acculturation of Chinese older adults in the United States.

In addition, processes of acculturation and corresponding acculturative stress may pose serious health and psychosocial consequences for immigrants. Current research has found higher levels of acculturation to influence mental and physical health for Asian immigrants in the United States positively[20,21] and negatively.[22] The relationship between health and acculturation needs to be examined more closely. Lower levels of acculturation signal greater risk of physical and mental health problems and poorer access to and use of healthcare services.[9] Chinese adults in San Francisco who had no regular source of health care cited cultural and linguistic differences as reasons for not using health services.[23]

Chinese adults are also more likely to seek traditional forms of medicine and be unfamiliar with Western medicine.[24] Acculturation levels of Chinese older adults is worth investigation because of the myriad positive and negative health effects suggested in current acculturation literature in Asian immigrants combined with known higher barriers to healthcare and social services.[2]

To provide an overall estimate on the levels of acculturation of Chinese older adults in the United States, this study aimed to evaluate levels of acculturation based on language use, media use, and ethnic social relations and examine correlations between level of acculturation, sociodemographic characteristics, and self-reported health and quality-of-life measures.

METHODS

Population and Settings

The Population Study of Chinese Elderly in Chicago (PINE) is a population-based epidemiological study of U.S. Chinese older adults aged 60 and older in the greater Chicago area. The purpose is to collect community-level data of U.S. Chinese older adults to examine the cultural determinants of health and well-being. The project was initiated by a community–academic collaboration of Rush Institute for Healthy Aging, Northwestern University, and many community-based social service organizations throughout the greater Chicago area.[19]

The PINE study implemented culturally and linguistically appropriate community recruitment strategies strictly guided by a community-based participatory research approach. Eligible participants were approached during routine social service and outreach efforts serving Chinese-Americans families in the greater Chicago area. After participants provided consent trained bicultural research assistants (RAs) interviewed them in their preferential language. Questions were administered orally; RAs could speak English and at least one dialect of Chinese and had access to the survey questions in English, simplified Chinese characters, and traditional Chinese characters during the interview. The response rate was 91.9%.

The PINE study is representative of the Chinese aging population in the greater Chicago area.[25] The institutional review boards of the Rush University Medical Center approved the study.

MEASUREMENTS

Sociodemographics

Basic demographic information was collected (age, sex, years of education, annual personal income (<$5,000, $5,000–9,999, ≥$10,000), marital status (married, widowed, divorced, separated), number of children, number of grandchildren, living arrangement (alone or with 1, 2–3, or ≥4 persons), country of origin (China, Hong Kong or Macau, Taiwan, other), years residing in the United States and in the current community, preferred language, and language abilities.

Overall Health Status, Quality of Life, and Health Changes over the Last Year—Overall health status was measured on a 4-point scale according to the answer to the question, “In general, how would you rate your health?” Quality of life was assessed on a 4-point scale according to the answer to the question, “In general, how would you rate your quality of life?” Health change in last year was measured on a 5-point scale according to the answer to the question, “Compared with 1 year ago, how would you rate your health now?”

Acculturation—The research team conducted a thorough global literature review of existing acculturation scales that have been used with Chinese participants. The PINE Study Acculturation Scale was derived from a validated acculturation scale used in minority populations with an overall alpha of 0.92, a language alpha of 0.90, a media alpha of 0.86, and a social relations alpha of 0.78.[26] This scale was also adapted for use in Chinese immigrants in the United States, with a Cronbach alpha of 0.94.[27,28] The scale was selected for adaptation because of its brevity and inclusion of relevant factors in the study population, such as language, media use, and ethnic social relations. This instrument lessens the burden on the participant during the survey while gathering relevant data regarding acculturation. Once the questions were altered to address the population, bilingual research assistants translated the questions into Chinese, which the research team then examined and presented to the Community Advisory Board, which consists of community leaders and elderly members of the Chicago Chinese community, who approved content and translations. The scale was then tested with Chinese older adults to ensure validity.

The PINE Study Acculturation Scale is multidimensional, focusing on language use, media use, and ethnic social relations. It uses 12 questions, each on a 5-point Likert-type scale. For language use, the questions address proficiency and preferences for speaking a given language in five different settings (read and speak, as a child, at home, while thinking, with friends) on a 5-point scale (1 = only Chinese, 5 = only English). For media, the questions address use and preference of English and Chinese media (television and radio) on a 5-point scale (1 = only Chinese, 5 = only English). For ethnic social relations, the questions address preferred ethnicity of those with whom the participant interacts (close friends, people at parties, visitors, children’s friends) on a 5-point scale (1 = only Chinese, 5 = only Americans). Answers to ethnic social relation questions were based on the participant’s perception and were subjective. Higher numbers correspond to higher levels of acculturation. For each participant, total acculturation scores ranged from 12 to 60. The Cronbach alpha was 0.88.

Data Analysis

Descriptive univariate statistics were used to summarize sociodemographic characteristics and average level of acculturation of the sample population. Chi-square tests were used to compare bivariate sociodemographic differences with average level of acculturation. Pearson correlation coefficients were used to examine correlations between sociodemographic variables and level of acculturation. Statistical analyses were conducted using SAS version 9.2 (SAS Institute, Inc., Cary, NC).

RESULTS

Sample Characteristics

Of 3,159 participants enrolled in the PINE study, 58.9% were female, 71.3% were married, and 85.1% had an annual income of less than $10,000. The participant mean acculturation level was 15.3 ± 5.1 for all 12 items, 5.7 ± 1.9 for the five-item language use dimension, 4.0 ± 2.4 for the three-item media use dimension, and 5.7 ± 1.7 for the four-item social relation dimension (Table 1). Participants aged 80 and older and those living with four or more people had lower levels of acculturation, and those who never married, had an income of more than $20,000, had no children, had no grandchildren, had lived in the United States for 31 or more years, had lived in their community 31 or more years, preferred English, had very good overall health status, and had very good quality of life had higher levels of acculturation.

Endorsement of the PINE Study Acculturation Scale

The frequency of acculturation scale items is presented in Table 2. For 11 of the 12 questions, a majority of participants endorsed only Chinese and more Chinese than English for use and preference of language, media, and ethnic social relations. In contrast, 45.8% of participants would like half of their children's friends to be Chinese and half American.

DISCUSSION

Older Chinese adults in the greater Chicago area have low levels of acculturation, especially if they are more-recent immigrants and have lower income, more offspring, poorer overall health, and lower quality of life. Few studies have estimated level of acculturation of Chinese older adults, although many studies that use acculturation proxies indicate overall low levels of acculturation of Chinese older adults.[22] In a study of Chinese older women using a similar acculturation scale, participants reported an average score of 1.61 of 5,[29] whereas the current population reported 1.28 of 5.

In examining and comparing three dimensions of acculturation, this study reflects lower levels of acculturation than other Chinese populations in the United States. Regarding language use, this study found that Chinese older adults overwhelmingly used Chinese as their primary language and preferred speaking Cantonese or Toisanese, both significantly correlated with lower levels of acculturation. In a study regarding acculturation of middle-old-aged Chinese in the United States, 87% of Chinese respondents reported speaking exclusively Chinese at home, compared with 94.4% of respondents in the current study.[30]

For media usage, participants largely used and preferred Chinese television, movies, and radio programs. In a study of Chinese Americans of all ages, 80% of respondents reported using Chinese-language radio, television, or newspaper all or most days,[31] compared with 90.5% of respondents in the current study watching majority Chinese television programs and 92.5% listening to majority Chinese radio programs. For Chinese older adults in Chicago, watching television and reading the newspaper are frequent activities.[8] The high prevalence may be because many participants live in and around ethnic Chinese enclaves, where Chinese-language media is widely available.[10]

To the knowledge of the authors of the current study, no studies have examined the ethnic social relation preference of Chinese older adults. A vast majority of participants reported preferences for Chinese rather than American relationships, although approximately half of participants wished their children to be friends with Chinese and Americans equally. In a study of acculturating groups in Australia and Canada, individuals preferred maintaining home-country and host-country cultural values,[32] which was not consistent with the current findings. Given the majority immigrant background of participants and their preference for speaking Chinese, it may be unsurprising that their social circles primarily consist of Chinese individuals, although participants may wish their children to be more acculturated, given perceived social and psychological benefits of acculturation.[6] Diverse relationships may not seem realistic individually but are desired for later generations.

Consistent with existing literature, higher levels of income correlated with higher levels of acculturation. In a study of Chinese American adults aged 18 to 65, the authors proposed that higher socioeconomic status may lead to more exposure to mainstream U.S. society, leading to higher acculturation,[7] although the inverse could be true; those who are more acculturated have better employment options and therefore earn more money. In the current study population, because a majority were retired or unemployed, further examination of previous occupations is warranted. Future longitudinal studies should examine the relationship between nature of employment, income level, and acculturation level.

Older Chinese adults with more offspring experienced lower levels of acculturation. To the knowledge of the authors, no other studies have examined number of offspring and level of acculturation. Because of the Chinese cultural value of filial piety, it is likely that children and grandchildren translate or provide other assistance for their parents or grandparents, diminishing the need for Chinese older adults to learn English or U.S. customs. In other words, social and familial ties to individuals who are more acculturated may diminish the need for greater acculturation for individual Chinese older adults. A study of older Asian women found that those who were less acculturated tended to live with people who were more acculturated;[33] this lower need for acculturation may be reflected in the current study population as well. Future research should examine the role of offspring or other social support in Chinese older adults' lives with regard to level of acculturation.

The finding that longer time spent living in the United States correlated with higher levels of acculturation is consistent with and divergent from existing literature. A study of Chinese Americans aged 18 to 65 found that a higher proportion of life lived in the United States corresponded with a higher level of acculturation,[7] but a study of Hong Kong immigrants aged 18 to 60 in Canada found that longer length of stay in Canada affected acculturation only when immigration happened at an earlier age.[4] For the current study, longer amount of time spent in the United States may indicate more familiarity and opportunities to become acclimated to U.S. culture and the English language. Similarly, more years living in the community was also significantly positively correlated with level of acculturation. Years in the United States and years in the community were significantly positively correlated, which suggests that Chinese older adults tend to move infrequently. It is perhaps unsurprising that more years spent in the United States was related to higher levels of acculturation. A growing body of research indicates that age at immigration may have a robust association

with acculturation level. Future research should examine and determine any relationship between age at immigration, years in the United States, and level of acculturation to provide a more-nuanced look at the mechanisms behind acculturation.

Chinese older adults were more likely to report better overall health status and quality of life if they were more acculturated, consistent with existing literature. In a study of Chinese-American older adults in the Midwest, level of acculturation was inversely related to depressive symptoms.[34] It is likely that higher levels of acculturation contribute to greater ability to navigate the healthcare system and to lower language or cultural barriers. This relationship between acculturation and help-seeking behaviors has been shown in studies of Asian Americans[35] and Chinese women in the United States,[36] although a study of Chinese-American adults aged 18 to 65 in the San Francisco area found an indirect and paradoxical relationship between level of acculturation and related stress.[7] Similar to the current findings, that study found level of acculturation and self-rated health to be positively correlated but also found that acculturation was positively correlated with levels of stress. Despite the current data indicating that better health status is related to higher levels of acculturation, the relationship between the two should be more closely examined, taking acculturative stress and other related mental health concerns into consideration.

This study has limitations. Although it was possible to determine an overall level of acculturation of Chinese older adults in Chicago, this should not be generalized to other Chinese populations in the United States, given intragroup heterogeneity. Ethnic Chinese have a variety of experiences regarding acculturation in the United States, depending on many factors, such as reasons for immigration, income, country of origin, and age. This study is representative of Chicago based on census data. Age at immigration was not record, which would have provided more-detailed information regarding immigration patterns and its effects on acculturation. Furthermore, connections between exposure to mainstream U.S. culture and level of acculturation and whether ethnic segregation plays a role in acculturation were not explored. As acculturation scholars have indicated,[1] acculturation is not unidimensional; changes occur in immigrant groups and in the host culture. Because the current study focused on Chinese older adults, it was not possible to capture any changes in the U.S. cultural environment, on a local or national scale.

Given that the survey was cross-sectional, it was not possible to capture the evolving nature of acculturation or the moderating effects of acculturation on health over time. Future longitudinal studies should examine how level of acculturation changes over time and which variables may contribute to or be affected by those changes.

Nonetheless, this study has wide implications for researchers and policy makers. To the knowledge of the authors, this is the largest epidemiological study of Chinese older adults in the United States that examines level of acculturation. The study population had a level of acculturation comparable with or lower than that of other groups of Chinese immigrants in the United States. It indicates the need to investigate the causes and effects of low acculturation levels and indicates particular areas for examination. Several subgroups of Chinese older adults, including those with lower income, with more offspring, who recently immigrated, and who have lower health status, have lower levels of acculturation. Income

may be related to occupational opportunities and exposure to U.S. culture. Offspring may be able to provide social support and ease access barriers, which may lessen the impetus for acculturation. Immigration patterns, including reasons for immigration and age at immigration, are also likely to affect the process of acculturation. Also, although health status was related to acculturation, it is unknown whether or how acculturation behaves as a protective factor (by lowering access barriers) or if the process contributes to stress or other mental health problems. Future longitudinal studies should examine these variables and their relationship to acculturation.

This study contradicts the model minority perception of Chinese Americans. The model minority myth is often used as a legitimization tool for public policies that hinder Asian-American political and social equality. The findings suggest that language and cultural barriers toward healthcare and social services are significant, and future policy decisions should reflect the needs of the Chinese older adult community.

In clinical practice, this study indicates a need for culturally specific and relevant care for Chinese older adults because of low levels of acculturation to U.S. culture and society. To promote health and healthy behaviors in Chinese older adults, it may be necessary to adjust clinical practices. Furthermore, the evolution of U.S. culture, and the changing demographics of the older Chinese population, should prompt continuous introspection on how to best mitigate disparities in quality of care and access to care. Clinicians may find it helpful to bridge cultural gaps through techniques based on cultural humility or other relevant approaches that treat culture as multidimensional and subject to change.[37] The onus does not fall on immigrants to remove these barriers to care. The growing Chinese older adult population in the United States highlights a need for healthcare professionals who can adapt to their linguistic and cultural needs.

In sum, Chinese older adults in the United States have low levels of acculturation. These findings call for further examination of the effects of level of acculturation on Chinese older adults. Several subgroups, including the oldest old; those with lower socioeconomic status, more offspring, and fewer English language skills; and recent immigrants, and the correlations and possible causations with level of acculturation, as well as policy direction, should be investigated further.

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Conflict of Interest:

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Table 1.

Overall Characteristics of Acculturation of Population Study of Chinese Elderly in Chicago Participants

Characteristic	n	Mean ± Standard Deviation	Chi-Square	Degrees of Freedom	*P*-Value
Age					
60–64	681	15.4 ± 5.3	53.3	4	<.001
65–69	642	15.5 ± 5.1			
70–74	606	15.5 ± 5.5			
75–79	556	15.3 ± 5.0			
≥80	574	14.7 ± 4.7			
Sex					
Female	1,831	15.1 ± 4.9	8.1	1	.005
Male	1,328	15.5 ± 5.4			
Education, years					
0–6	1,374	13.8 ± 3.1	492.1	2	<.001
7–12	1,103	15.2 ± 4.6			
≥13	662	18.4 ± 7.4			
Income, $					
0–4,999	1,041	14.5 ± 3.5	180.8	4	<.001
5,000–9,999	1,617	14.8 ± 4.3			
10,000–14,999	310	16.4 ± 6.3			
15,000–19,999	68	18.3 ± 8.4			
≥20,000	87	25.2 ± 10.8			
Marital status					
Married	2,237	15.2 ± 4.8	63.1	4	<.001
Separated	57	14.7 ± 3.4			
Divorced	74	17.8 ± 7.9			
Widowed	769	14.9 ± 5.0			
Never married	16	26.6 ± 13.2			
Number of people living with					
0	679	15.6 ± 6.1	23.9	3	<.001

Characteristic	n	Mean ± Standard Deviation	Chi-Square	Degrees of Freedom	*P*-Value
1	1,318	15.5 ± 5.1			
2–3	180	15.4 ± 5.1			
≥4	681	14.3 ± 3.7			
Number of children					
0	128	18.4 ± 8.5	152.2	2	<.001
1–2	1,271	15.8 ± 5.0			
≥3	1,752	14.6 ± 4.7			
Number of grandchildren					
0	357	17.8 ± 7.6	155.4	2	<.001
1–2	659	15.8 ± 4.7			
≥3	2,118	14.6 ± 4.5			
Years in the United States					
0–10	845	14.5 ± 3.4	180.0	3	<.001
11–20	954	14.3 ± 3.2			
21–30	767	14.5 ± 3.9			
≥31	568	18.9 ± 8.6			
Years in the community					
0–10	1,813	14.9 ± 4.1	79.8	3	<.001
11–20	738	14.7 ± 4.5			
21–30	388	15.7 ± 6.2			
≥31	210	19.4 ± 9.4			
Country of origin					
China	2,930	14.7 ± 4.0	186.1	3	<.001
Hong Kong or Macau	104	19.0 ± 7.4			
Taiwan	42	22.9 ± 8.8			
Other	83	24.8 ± 13.7			
Language preference					
Cantonese	1,975	14.9 ± 4.5	448.1	3	<.001
Toisanese	744	13.4 ± 2.3			

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Characteristic	n	Mean ± Standard Deviation	Chi-Square	Degrees of Freedom	P-Value
Mandarin	706	17.0 ± 5.3			
English	34	34.5 ± 15.1			
Overall health status					
Very good	140	17.3 ± 7.3	23.8	3	<.001
Good	1,097	15.9 ± 6.0			
Fair	1,320	14.8 ± 4.1			
Poor	602	14.7 ± 4.6			
Quality of life					
Very good	216	17.1 ± 6.7	51.7	3	<.001
Good	1,383	15.5 ± 5.6			
Fair	1,457	14.7 ± 4.0			
Poor	101	15.6 ± 6.4			
Change in health over last year					
Improved	277	15.9 ± 5.6	7.7	2	.02
Same	1,535	15.2 ± 5.3			
Worsened	1,345	15.1 ± 4.7			

Table 2.

Endorsement of the Population Study of Chinese Elderly in Chicago Acculturation Scale Items

Item	Only Chinese	More Chinese than English or Americans	Both Equally	More English or Americans than Chinese	Only English or Americans
Language use, n(%)					
1. In general, what language do you read and speak?	2,351 (74.4)	670 (21.2)	105 (3.3)	21 (0.7)	12 (0.4)
2. What was the language you used as a child?	3,084 (97.6)	43 (1.4)	14 (0.4)	9 (0.3)	9 (0.3)
3. What language do you usually speak at home?	2,979 (94.4)	108 (3.4)	42 (1.3)	8 (0.3)	20 (0.6)
4. In which language do you usually think?	2,942 (93.2)	147 (4.7)	41 (1.3)	8 (0.3)	20 (0.6)
5. What language do you usually speak with your friends?	2,902 (91.9)	186 (5.9)	44 (1.4)	9 (0.3)	17 (0.5)
Media use, n(%)					
6. In what language(s) are the television programs you usually watch?	2,554 (81.0)	300 (9.5)	112 (3.6)	53 (1.7)	133 (4.2)
7. In what language(s) are the radio programs you usually listen to?	2,758 (88.7)	118 (3.8)	62 (2.0)	34 (1.1)	136 (4.4)
8. In general, in what language(s) are the movies, television, and radio programs you prefer to watch and listen to?	2,754 (87.3)	196 (6.2)	93 (3.0)	43 (1.4)	68 (2.2)
Ethnic social relations, n(%)					
9. Your close friends are?	2,804 (88.8)	291 (9.2)	37 (1.2)	21 (0.7)	5 (0.2)
10. You prefer going to social gatherings/parties at which the people are?	2,846 (90.2)	236 (7.5)	46 (1.5)	23 (0.7)	6 (0.2)
11. The persons you visit or who visit you are?	2,858 (90.5)	237 (7.5)	43 (1.4)	18 (0.6)	2 (0.1)
12. If you could choose your children's friends, you would want them to be?	854 (28.2)	597 (19.7)	1,390 (45.8)	183 (6.0)	9 (0.3)