Acculturation and Activity Engagement Among Older Chinese Americans

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Abstract

Using data from the Population Study of Chinese Elderly in Chicago (PINE) conducted from 2011 to 2013, this study aims to examine the role of acculturation in engagement in cognitive, social, and religious activities among older Chinese Americans. Activity engagement and acculturation levels were relatively low in the study sample. Multivariate regression analyses showed that high levels of acculturation in general, and particularly media use (e.g., TV and radio) and ethnic social relations (i.e., preferred ethnicity of those with whom one interacts) were associated with more engagement in cognitive and social activities, respectively. High levels of acculturation in general and ethnic social relation in particular increased the likelihood of engaging in religious activities. Language use was not related to engagement in any activity, probably because only 2% of the PINE participants preferred to speak English. Findings indicate that acculturation can promote activity engagement probably through media use and social relations, whereby older adults may acquire information about opportunities for various activities. Active participation with life may improve older adults' well-being and help address the widening health disparities among minority older populations in American society.

Keywords

activity engagement, acculturation, older Chinese Americans, PINE

Introduction

The overall health benefits of activity engagement for older adults have been well established in the literature, including physiologic benefits, delayed physical health decline, reduced depressive symptoms, lowered mortality, increased self-efficacy, sense of belonging, purpose of life, and life satisfaction (e.g., Jang & Chiriboga, 2011; Morrow-Howell & Gehlert, 2012). Yet, older adult immigrants may have different experiences in activity engagement than native-born Americans due to limited access to socioeconomic resources as well as language and cultural barriers. Particularly for those who immigrated later in the life course, activity engagement may present a challenge, conditional on acculturation and availability of culture- or ethnic-specific resources (Treas & Mazumdar, 2002). Acculturation, broadly described as an individual's experience of change in identity, values, and behaviors (Fox, Thayer, & Wadhwa, 2017), has been identified as an important determinant of health behaviors and outcomes among ethnic minorities (Choi & Reed, 2011). Indeed, the acculturation process may present numerous challenges and life changes that could either benefit or deteriorate the health of immigrants and subsequent U.S.-born generations (e.g., Abraído-Lanza, Armbrister, Flórez, & Aguirre, 2006; Fox et al., 2017). Acculturation is associated with healthy behaviors, such as greater exercise and leisure physical activity; yet, high levels of acculturation are also associated with increased rates of cancer, infant mortality, and poor physical and mental health among Latinos (see Abraído-Lanza et al., 2006). The literature inconsistence implies that the immigrant health paradox may be explained by health selection, sociocultural protection, and other mechanisms (Jasso, Massey, Rosenzweig, & Smith, 2004; Weden et al., 2017).

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Despite a recent rapid increase in the U.S. older Chinese population, there is a paucity of research examining how they are engaged with life in the new cultural context and how acculturation is associated with activity engagement in this population. Understanding the role of acculturation in activity engagement is critical to social integration and health promotion. Older Chinese immigrants in particular have experienced great difficulty in the acculturation process (Mui & Kang, 2006). According to the U.S. Census Bureau, nearly 90% of Chinese older adults were foreign born; 30% immigrated to the United States after the age of 60; and nearly 70% have limited English proficiency (American Community Survey, 2011). Recent immigrants are at specific risk for mental illnesses (Dong, Bergren, & Chang, 2014; Mui, 1996). A few studies indicate that loneliness and social isolation are common among older Chinese immigrants, which may further lead to depression and other mental illnesses (Dong et al., 2011).

This study draws on social integration theory, which posits social integration is shaped by context, such as gender and geographic location (Pillemer, Moen, Wethington, & Glasgow, 2000). Literature shows that activity engagement is patterned according to sociodemographics, health, and contextual factors (Harwood, Pound, & Ebrahim, 2000). Thus, it is important to examine the role of acculturation, as a proxy of context, in activity engagement. The acculturative process may affect individual involvement with cognitive activities of information processing (e.g., reading, playing games), social activities of interaction with people (e.g., visiting friends, community center), and religious activity of church attendance (Dong et al., 2014). Engagement in activity is essential, even if it is solitary activity that one does alone like reading, watching TV, and hobbies, which can still influence well-being (Adams, Leibbrandt, & Moon, 2011). Activity engagement may protect and promote well-being of older adult immigrants, particularly the vulnerable and less acculturated (Jang & Chiriboga, 2011). While older adult immigrants may experience limited social boundary and opportunities for social engagement due to less acculturation, activity participation would greatly benefit their psychological well-being (Jang & Chiriboga, 2011). A study among older Korean immigrants suggests that participation in culturally meaningful activities helps maintain their cultural identity and adjust to the host society (Kim, Kim, Han, & Chin, 2015).

The present study aims to explore the associations between acculturation and engagement in cognitive, social, and religious activities using a sample from a community-engaged, population-based epidemiologic study of Chinese Americans aged 60 and older in the Greater Chicago area. Acculturation was assessed through language preference, media use, and ethnic social relations. Demographics, physical health (i.e., self-rated health, mobility, and chronic conditions), psychosocial stress, and discrimination were controlled in the analysis because these covariates are linked to activity engagement (e.g., Harwood et al., 2000; Treas & Mazumdar, 2002). It is hypothesized that high levels of acculturation in terms of language use, media use, and ethnic social relations are associated with high levels of engagement in cognitive and social activity and the likelihood of engagement in religious activity.

Method

Data

To test the study hypothesis, we used data retrieved from the Population Study of Chinese Elderly in Chicago (PINE) Wave 1 that was collected between 2011 and 2013. Study methods and procedures have been described elsewhere (e.g., Dong et al., 2014).

Dependent Variables

Activity engagement. It was assessed through engagement in social, cognitive, and religious activities. Social activities included going out, visiting friends, going on trips, and visiting community centers. Cognitive activities included watching TV, listening to radio, reading, and playing games. Social activities require relatively more social interaction and physical strength, whereas cognitive activities require more mental exercise and help acquire information and knowledge (Dong et al., 2014). Responses were scaled from 0 (*once a year or less/never*) to 4 (*every day or almost every day/20 or more times*). Summary scores of social activity and cognitive activity were used in the analyses. Religious activity was measured by the frequency of attending organized religious services, ranging from 0 (*never*) to 6 (*almost daily*). Due to its uneven distribution, it was re-coded into a binary measure (0 = no or 1 = yes) in the multivariate logistic regression analysis.

Independent Variables

Acculturation. The multidimensional index contains 12 items that focus on language use, media use, and ethnic social relations, which have been tested and validated in minority populations (Dong et al., 2014). Language use asks about proficiency and preference for speaking a given language in five settings (read and speak, as a child, at home, while thinking, with friends) on a 5-point scale (1 = *only Chinese*, 5 = *only English*). Media use asks about use and preference of English and Chinese media such as TV and radio on a 5-point scale (1 = *only Chinese*, 5 = *only English*). Items of ethnic social relations ask about 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*). Higher scores indicate higher levels of acculturation. A total summary

Table 1. Descriptive of the PINE Participants (N = 3,157).

Variables	M (SD)/%
Age (range: 59-105)	72.81 (8.30)
Female (%)	57.97
Education (range: 0-26)	8.72 (5.05)
Income (range: 1-10)	1.95 (1.14)
Years living in the United States (range: 0.1-90)	20.02 (13.18)
Number of household members (range:0-10)	1.87 (1.89)
Married (%)	70.96
Self-rated health (1-4)	2.75 (.81)
Mobility (range: 0-3)	0.72 (1.05)
Chronic conditions (range: 0-7)	2.06 (4.13)
Perceived stress (range: 0-39)	10.11 (6.55)
Discrimination (range: 0-8)	0.29 (3.43)
Acculturation (range: 12-48)	15.25 (5.12)
Language use (range: 5-25)	5.67 (1.89)
Media use (range: 3-15)	3.99 (2.44)
Ethnic social relation (range:4-20)	5.66 (1.73)
Activity engagement	
Social activity (range: 0-15)	8.87 (4.81)
Cognitive activity (range: 0-33)	11.92 (5.90)
Religious activity (range: 0-6)	0.91 (1.80)

Note. PINE = Population Study of Chinese Elderly.

score of acculturation and three sub-scales were used in multivariate regression analyses, respectively.

Covariates

Three variables of health were included, that is, *self-rated health* (1 = *very good* to 4 = *poor*), *mobility*, and *chronic conditions. Mobility* was an index based on work by Rosow and Breslau (1966). Three items measured the help needed to do heavy housework, to walk up and downstairs, and to walk half a mile (Cronbach's α = .80). Index of *Chronic conditions* is a summary score of medical conditions (i.e., heart disease, stroke or brain hemorrhage, cancer, high cholesterol, diabetes, high blood pressure, a broken or fractured hip, thyroid disease, osteoarthritis, inflammation, or problems with joints) that had been diagnosed by health care providers.

Psychosocial variables included *perceived stress* and *discrimination. Perceived stress* was measured through the 10-item Perceived Stress Scale (PSS) to assess the extent to which situations in one's life are appraised as stressful (Cohen, Kamarch, & Mermelstein, 1983). Respondents were asked about feelings and thoughts during the last month, particularly how unpredictable, uncontrollable, and overloaded they felt and levels of experienced stress. Responses were scaled from 0 (*never*) to 4 (*very often*). A summary score was used, and higher scores indicate higher levels of stress (Cronbach's α = .86). *Discrimination* was measured through the Experiences of Discrimination Instrument, which has been widely used and validated in multiple studies of discrimination (e.g., Krieger, Smith, Naishadham, Hartman, & Barbeau, 2005). The summary score of five items indicates the

experience of discrimination, exclusion, hassle, or inferiority due to race or color of skin in various public settings, with responses ranging from 0 (*no*) to 3 (*four or more times*).

Sociodemographic variables included age in years (range: 59-105), gender (female = 1), education (years of schooling, range: 0-26), personal income (ranging 1 = *less than US$5,000* to 10 = *US$45,000 or more*), number of household members (range: 0-10), marital status (married = 1), and years living in the United States (range: 0.1-90).

Data Analysis

To examine the relationships of acculturation with engagement in cognitive, social, and religious activities, ordinary least squares (OLS) and logistic regression analyses were applied. In the OLS models, dependent variables of cognitive and social activity engagement were regressed on the summary score of acculturation or three sub-scales, that is, language use, media use, and ethnic social relations, respectively, after controlling for covariates. Logistic regression model was estimated to test the association between acculturation and religious activity. Statistical analyses were conducted using SAS version 9.2 (SAS Institute Inc., Cary, NC).

Results

As shown in Table 1, the study participants had a moderate level of social activity engagement (*M* = 8.9, *SD* = 4.8, range: 0-15), relatively low levels of cognitive activity engagement (M = 11.9, *SD* = 5.9, range: 0-33) and

Table 2. Correlation Coefficients Among Key Variables.

	1	2	3	4	5	6	7	8	9	10	11
1. Acculturation	1										
2. Language use	.70***	1									
3. Media use	.62***	.55***	1								
4. Ethnic social relation	.86***	.46***	.34***	1							
5. Cognitive activity	.34***	.31***	.25***	.27**	1						
6. Social activity	.26***	.23***	.19***	.20***	.47***	1					
7. Religious activity	.21***	.20***	.17***	.19***	.19***	.22***	1				
8. Discrimination	.19***	.17***	.13***	.17***	.13***	.14***	.07	1			
9. Stress	−.02	−.04*	−.05*	.01	−.15***	−.20***	.00	.09***	1		
10. Self-rated health	−.09***	−.09***	−.12***	−.04*	−.10***	−.19***	−.03	.05**	.36***	1	
11. Mobility	−.11***	−.09***	−.07***	−.08***	−.12***	−.21***	−.01	−.03	.29***	.29***	1
12. Chronic condition	.02	.03	.02	.03	.04*	−.02	.06***	.08***	.14***	.32***	.26***

*$p < .05$. **$p < .01$. ***$p < .001$.

religious activity engagement (M = .9, SD = 1.8, range: 0-6). Also their acculturation levels were relatively low (M = 15.3, SD = 5.1, range: 12-48), including language use (M = 5.7, SD = 1.9, range: 5-25), media use (M = 4.0, SD = 2.4, range: 3-15), and ethnic social relations (M = 5.7, SD = 1.7, range: 4-20).

Bivariate correlation coefficients were calculated, and results showed the absence of collinearity among the key study variables that were used in the OLS regression models. As shown in Table 2, three sub-scales were highly correlated with the summary score of acculturation, with correlation coefficients ranging from .62 to .86, but they were not used simultaneously in the same regression model. The three scales were also highly correlated to each other with correlation coefficients ranging from .34 to .55, indicating that they are under the domains of the construct of acculturation. Generally, engagement in cognitive, social, and religious activities was significantly correlated with acculturation scales, discrimination, and self-rated health.

Table 3 presents results from OLS regression analyses. Those engaged in a higher level of cognitive activity were likely to be males (B = −1.15, SE = .19, p < .001), more educated (B = .25, SE = .02, p < .001), with fewer members living in the household (B = −.24, SE = .05, p < .001), in good health status (B = −.30, SE = .13, p < .05), with higher acculturation levels (B = .11, SE = .02, p < .001), especially in media use (B = .15, SE = .05, p < .001) and ethnic social relation (B = .27, SE = .07, p < .001). They also reported more discrimination experiences (B = .49, SE = .13, p < .001), and more diagnosed chronic conditions (B = .21, SE = .07, p < .01), but a lower level of perceived stress (B = −.09, SE = .01, p < .001) as compared with the less engaged.

As to social activity, acculturation in general (B = .07, SE = .02, p < .001), or media use (B = .14, SE = .04, p < .01) and ethnic social relation (B = .15, SE = .06, p < .001) in particular, boosted the engagement level. Similarly, statistically significant predictors of social activity included more education (B = .28, SE = .02, p < .001), fewer household members (B = −.18, SE = .04, p < .001), good self-rated health (B = −.63, SE = .11, p < .001), more discrimination experiences (B = .66, SE = .12, p < .001), more diagnosed chronic conditions (B = .18, SE = .06, p < .01), and less perceived stress (B = −.09, SE = .01, p < .001). Different than the cognitive activity predictors, older age in years (B = −.07, SE = .02, p < .001), more years living in the United States (B = −.02, SE = .01, p < .01), and more help needed for mobility (B = −.36, SE = .08, p < .001) reduced the engagement level.

Acculturation in general (odds ratio (OR) = 1.05, p < .001) or ethnic social relation in particular (OR = 1.14, p < .001) increased the likelihood of engaging in religious activity. In addition, being female (OR = 2.64, p < .001) and more education (OR = 1.10, p < .001) increased the likelihood; whereas more members in the household (OR = .95, p < .05), married status (OR = .66, p < .001), and more help needed for mobility (OR = .87, p < .01) reduced the likelihood of engaging in religious activity.

Discussion

Based on the first population-based survey among older Chinese Americans, this study examined the factors associated with activity engagement. Findings showed that older Chinese Americans reported relatively low levels of activity engagement and acculturation, indicating that older Chinese Americans preferred and used Chinese language in everyday communications, chose Chinese-language media, and mostly interacted with friends of the same ethnicity. Consistent with scant research (e.g., Jang & Chiriboga, 2011), we found that significant correlations between acculturation and activity engagement. Furthermore, our study implies that acculturation may promote activity engagement through media use and social relations, whereby older adults may acquire information about opportunities for various

Table 3. OLS and Logistic Regression Analyses of Activity Engagement.

	Cognitive activity		Social activity		Religious activity	
	B	SE	B	SE	OR	95% CI
Age	0.01	0.01	−0.07***	0.02	1.01	[1.00, 1.03]
Female	−1.15***	0.19	−0.05	0.17	2.64***	[2.15, 3.24]
Education	0.53***	0.02	0.28***	0.02	1.10***	[1.08, 1.12]
Income	−0.14	0.09	−0.13	0.07	1.00	[0.93, 1.09]
Years in living in the United States	0.01	0.01	−0.02**	0.01	1.00	[0.99, 1.01]
Household members	−0.24***	0.05	−0.18***	0.04	0.95*	[0.90, 1.00]
Married	−0.10	0.23	−0.84***	0.20	0.66***	[0.53, 0.81]
Self-rated health	−0.30*	0.13	−0.63***	0.11	0.95	[0.84, 1.08]
Mobility	−0.19	0.10	−0.36***	0.08	0.87**	[0.79, 0.96]
Chronic condition	0.21**	0.07	0.18**	0.06	1.06	[0.99, 1.13]
Perceived stress	−0.09***	0.01	−0.09***	0.01	1.00	[0.99, 1.02]
Discrimination	0.49***	0.13	0.66***	0.12	1.07	[0.94, 1.13]
Acculturation[a]	0.11***	0.02	0.07***	0.02	1.05***	[1.03, 1.07]
Language use[b]	−0.09	0.07	−0.07	0.06	1.00	[0.94, 1.06]
Media use[b]	0.15***	0.05	0.14***	0.04	1.04	[1.00, 1.09]
Ethnic social relation[b]	0.27***	0.07	0.15**	0.06	1.14***	[1.07, 1.21]

Note. Regression coefficients Bs on covariates were from Model 1, which were similar to those in Model 2. OLS = ordinary least squares; OR = odds ratio; CI = confidence interval.
[a]Model 1 included the summary score of acculturation and covariates.
[b]Model 2 included three sub-scales, that is, language use, media use, and ethnic social relation and covariates.
*p < .05. **p < .01. ***p < .001.

social activities. Language use was not associated with any activity engagement, probably because only a very small number of respondents (i.e., about 1%) preferred or spoke English in the PINE study sample (Dong et al., 2014).

The use of English language TV, radio, and print media may increase the knowledge about new cultural environment and activity opportunities; similarly, Chinese language media may disseminate information about Chinese culture–related activities in the community. Social networks of friends, family members, and co-workers may also serve as an important means to be socially, cognitively, and religiously engaged, because older adults are likely to respond to a close friend inviting them to do something. Among older Chinese immigrants, while it is not easy to address language barriers in a short time period, language differences may not prevent from engaging in certain activities, like getting together with friends, attending group recreations, or attending church activities along with those who speak the same language, especially in a Chinese immigrant community such as Chinatown in Chicago, where the majority of the PINE participants were recruited and interviewed. Thus, in a sense, acculturation may play a role in expanding social networks and providing opportunities for activity engagement.

Despite our finding that there was no association between language use and activity engagement, language and cultural differences may still present challenges in resource-demanding engagement, or formal activity, such as volunteering and community work. The PINE study primarily surveyed the less resource-demanding or informal activity. Engagement in these less resource-demanding or individual-based activity does not rely heavily on English. Yet, immigrants' activity participation is often limited to passive, home-oriented, and child care–related activities due to language barriers and a lack of leisure sources (Kim et al., 2015). In addition, previous studies suggested that older East Asian immigrants often encounter numerous adaptation challenges and the associated negative psychological symptoms, such as depression, loneliness, and isolation (Lai, 2004; Weisman et al., 2005), which may further affect activity engagement.

The study findings indicated the influences of health, psychosocial factors, and demographics on activity engagement. Three measures of health had different associations with activity engagement. Consistent with the literature, we found that poorer physical health and functional ability are associated with lower participation (Jang, Mortimer, Haley, & Borenstein Graves, 2004; Sorensen, Axelsen, & Avlund, 2002). By contrast, having more chronic conditions is not a barrier to engagement in cognitive and social activity, implying that activity engagement may provide social interactions and coping strategies of dealing with minor chronic illnesses and the associated stress. This finding may also help explain why respondents with less perceived stress were actively engaged. Meanwhile, discrimination experience may serve as a reason or a consequence of activity engagement, for example, cognitive and religious activities may help to counteract the distressing effects of

discrimination, or social interactions may lead to more discrimination experiences. Future research needs to explore the reciprocal relationship between activity engagement and discrimination. Also, we found age, gender, and socioeconomic differences in activity participation. Interestingly, older adults with fewer household members tended to participate more, suggesting that they might have more free time or use activity to cope with loneliness.

The study has several limitations. First, the finding generalizability is limited to the greater Chicago area. Second, the cross-sectional design cannot establish the causal relationships between acculturation and activity engagement. It is possible that reciprocal relationship exists, that is, acculturation can promote activity engagement, and meanwhile, a high level of activity engagement may enhance acculturation. Third, only three types of activities were investigated in the study. Indeed, activity domains include but are not limited to social, leisure, productive, physical, intellectual, cultural, solitary, and spiritual (Adams et al., 2011). And activity engagement may be viewed as part of sociocultural adjustment or behavioral competence within the construct of acculturation (Nguyen & Benet-Martinez, 2013). The type of activity engaged may depend on individual ability of adjustment. Our study suggests that the content and context of activity engagement need to be examined during the acculturation process along with the participation prevalence, patterns, factors, and outcomes among older Chinese Americans. Finally, acculturation is a process by which an individual or a cultural group adopts the beliefs and practices of a host culture (Mills & Henretta, 2001). The multidimensional acculturation process includes psychosocial, physical, financial, spiritual, language, and family adjustment (Mui & Kang, 2006). However, our study focused on language use, media use, and social relations, which cannot fully illustrate the particular role of acculturation process and stress in activity engagement.

Overall, the present study contributes to the research and practice on activity engagement in older Chinese Americans and highlights the importance of acculturation in relating to active engagement with life. Given the particular benefits of social participation on mental health, and perhaps the overall well-being, among the less acculturated older immigrants (Jang & Chiriboga, 2011), it is important to help them adjust to the new cultural environment through activity engagement. Active participation in social, cognitive, and various other activities can improve individual well-being, and help to address social issues such as the widening health disparities among minority older populations in American society.

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Declaration of Conflicting Interests

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