



Published in final edited form as:

J Hum Behav Soc Environ. 2012 ; 22(1): 20–38. doi:10.1080/15433714.2011.597303.

Acculturation and Post-Migration Stress in Middle-Aged Chinese Immigrant Women in Philadelphia: Variation between the Fujianese and the non-Fujianese women

Yu-Wen Ying^{*}, Meekyung Han^{**}, and Marilyn Tseng^{***}

^{*}University of California, Berkeley

^{**}San Jose State University

^{***}California Polytechnic State University

Abstract

The experience of acculturation in Chinese immigrant women from the rural coastal province of Fujian has not been well studied despite of their growing numbers in American cities. This exploratory study is an attempt to examine the experience of acculturation and post-migration stress in Fujianese immigrant women as compared to those from other parts of China. The study is based on a convenience sample 240 Fujianese and 162 non-Fujianese Chinese immigrant women living in Philadelphia.

Results from bivariate analyses showed that the variation in demographic characteristics between Fujianese and non-Fujianese women was marginal; that all Chinese women in this study reported experiencing a unidimensional process of acculturation and a domain-generic model of acculturation; and that the Fujianese women showed a higher level of post-migration stress than the non-Fujianese women. In multiple regression controlling for demographic characteristics and including all the women in our sample, more acculturated women reported a higher level of post-migration stress. However, separate multiple regression analyses for Fujianese and non-Fujianese women revealed a different pattern of post-migration stress models. The findings suggest the importance of further research to understand acculturation and post-migration stress among Fujianese immigrant women.

Keywords

Acculturation; Post-migration stress; Chinese immigrant women; Fujianese women

Immigrants comprise 12% of the American population (U.S. Census Bureau, 2003), and given the ethnic plurality in America, social scientists have long been interested in the process of cultural change, described as *acculturation*, that occurs secondary to immigration (Gordon, 1964; Berry, 1997; Tsai, Chentsova-Dutton, & Wong, 2002). Currently, the number of Chinese immigrants ranks second only to those from Mexico (Migration Policy Institute, 2008), with a total of 1.6 million Chinese immigrants residing in the United States in 2006 (Terrazas & Devani, 2008). Among them, women comprise 54% (Terrazas & Devani, 2008). Accordingly, a good deal of the extant research has examined the process of acculturation in Chinese immigrant women and their experience of post-migration stress

(Goodwin & Tang, 1996; Oh, Koeske, & Sales, 2002; Tang & Dion, 1999; Tsai, Chentsova-Dutton, & Wong, 2002; Ying, 2005). However, significant gaps remain in three areas.

First, the experience of acculturation in Chinese immigrant women outside of the major American cities with the largest number of Chinese residents has not been well studied (Logan, Zhang, & Alba, 2002; Ying, 1996). The majority of Chinese immigrants settle in three major American metropolitan cities: New York, Los Angeles, and San Francisco, where 100,000 to 200,000 Chinese immigrants reside per city (Rebert, 2008; Terrazas & Devani, 2008). Since ethnic density has long been recognized to exert a significant influence on acculturation (Birman, Tirckett, & Buchanan, 2005; Logan, et al., 2002; Portes & Schauflyer, 1994; Schnittker, 2002), more research is needed to understand the experience of Chinese immigrant women residing in cities with a lower ethnic density.

Second, while Chinese immigrants traditionally migrated from big cities such as Shanghai and Beijing or from Guangdong province (Takaki, 1989), a growing number of immigrants now arrive from the rural coastal province of Fujian in Southeast China (Liang, 2001; Liang & Morooka, 2004; Wang, 2001). Similarity between the contexts of origin and destination is a significant factor explaining the acculturation process (Barry, 1987). As such, Chinese immigrant women from Fujian province may experience a different level of acculturation and acculturative stress. However, our knowledge of Fujianese immigrants' acculturation and post-migration lives is very sparse.

Third, immigrants are exposed to numerous post-migration stresses due to cultural, social, and environmental differences between their countries of origin and resettlement (Berry, 1997). The experience of this stress may be especially pronounced among middle aged immigrants with limited education because of fewer opportunities to interact with the new culture (Ying, 1996). Very little research has examined the acculturation and post-migration stress of middle-aged Chinese immigrant women, whose experience may be unique.

The current study addresses these limitations by examining acculturation, its meaning, and association with post-migration stress in a community sample of middle-aged Chinese immigrant women who reside in Philadelphia, where less than 50,000 (1.8% of the population) Chinese immigrants reside (Rebert, 2008). More specifically, this study sought to assess Fujianese women's experience of acculturation and post-migration stress as compared to women from other parts of China. The population of interest, the acculturation process, post-migration stress, and the study questions are further discussed below.

Fujianese Emigrants

A total of 1.6 million Chinese immigrants reside in the United States today (Terrazas & Devani, 2008). However, these numbers are likely to be underestimates as they exclude undocumented migrants. Currently, the overwhelming majority of illegal Chinese immigrants come from Fujian province (Wang, 2001), and their number has been estimated to lie between 200,000 (Kwong, 1997) and 300,000 (Guest, 2003). As definitive information on Fujianese immigrants to the United States is not available, Liang (2001) utilized Chinese census data to study its emigrants and found that the Fujianese comprised the largest group of emigrants from China (28.1%) in 1995. While not all of these emigrants are headed to the United States, the following data does provide a useful glimpse of Fujianese emigrants. Liang's research (2001) shows that Fujianese emigrants varied from other Chinese emigrants in the following two significant ways. First, two-thirds of Fujianese emigrants (65.6%) were rural residents as compared to only 17.6% of the other Chinese emigrants (Liang, 2001; Liang & Morooka, 2004). Second, the Fujianese emigrants were less educated, with only 5% having had any college education as compared to 46.6% of the other Chinese emigrants (Liang, 2001). This limited education contributes to their inability to

participate in China's economic boom and their need to seek employment elsewhere (Liang, 2001; Wang, 2001). However, the current information about Fujianese immigrants is estimated based on Chinese census data, and very little is known about this particular group in comparison to immigrants from other Chinese groups in America.

Regardless, it is clear that the Fujianese immigrant community deserves attention because of its size and unique characteristics. Available scholarly studies have focused on the trends of immigration (Kwong, 1997; Liang, 2001; Liang & Morooka, 2004; Wang, 2001), but Fujianese immigrants' acculturation process and post-migration stress have been understudied. Knowing that personal characteristics such as educational level and occupation status increase receptivity to the new context and enhance the probability and speed of acculturation (Kuo & Roysircar, 2004; Phinney, 1990; Tsai et al., 2000), Fujianese emigrants may be poorly prepared for acculturation. As such, they may encounter significant challenges in adapting to the United States. The current investigation sought to address this gap in the literature.

Acculturation Process

Unidimensional vs. bidimensional—Scholars have long been interested in migration and the process of individual change secondary to immigration (Redfield, Linton & Herskovits, 1936). From an ecological perspective (Bronfenbrenner, 1979), the phenomenon of acculturation may be understood as an attempt to adjust to the new post-migration context in order to re-establish a person-environment fit. Originally, acculturation was postulated to be a unidimensional process such that endorsement of the new culture implies withdrawal from the culture of origin (Gordon, 1964; Stonequist, 1964). However, with the Civil Rights Movement and a growing recognition and celebration of cultural plurality, acculturation came to be viewed as a bidimensional and orthogonal process, where espousal of the cultures of origin and resettlement may co-exist independently and endorsement of one does not implicate rejection of the other (Berry, 2005; LaFromboise, Coleman, & Gerton, 1993; Phinney, 1990).

The question of unidimensionality or bidimensionality of acculturation has recently been subjected to empirical investigation. Study findings suggest that the bidimensional model fits American-born ethnic minorities whose endorsement of ethnic and American cultures is unrelated (Tsai, Chentsova-Dutton, & Wong, 2002; Tsai et al., 2000). This may be because they are concurrently socialized into ethnic and American cultures in different, non-competing contexts (i.e., home versus school, Tsai et al., 2002). In contrast, acculturation among immigrants has been shown to be unidimensional, as endorsement of ethnic and American cultures is negatively associated (Birman, Trickett, & Vinokurov, 2002; Tsai et al., 2000; Ying & Han, 2008). This suggests that when immigrants endorse American culture, they concurrently relinquish aspects of their culture of origin or vice versa (Tsai et al., 2002). However, studies on the acculturation process have primarily been conducted among immigrants in large cities with a high Chinese ethnic density. Building upon this literature, we examined the acculturation experience among Chinese immigrant women in a city with a lower Chinese ethnic density than in larger metropolitan centers.

Domain-specific vs. domain-generic acculturation process—Furthermore, acculturation entails change in a myriad of behaviors and values. Several commonly identified acculturation domains relevant to Asian Americans include identity, pride, language use, social affiliation, mass media, and recreational activities (Phinney, 2003; Tsai & Chentsova-Dutton, 2002). However, findings regarding whether acculturation is a domain-generic or domain-specific process in Asian American immigrants have been inconsistent, with some research showing that the acculturation process occurs across broad

behavioral and value domains, indicating the domain-generic model (Kim, 2007; Miller, 2007, 2010), and others suggesting that acculturation is domain-specific (Kim, Li, & Ng, 2005; Tsai et al., 2000; Ying & Han, 2008). With the domain-specific model, researchers asserted that, unlike the other behavioral domains (e.g., language and affiliation), cultural/ethnic pride is attitudinal and reflects a general affinity and endorsement of the ethnic and/or majority cultures (Phinney, 1990; Sue, Mak, & Sue, 1998; Tsai et al., 2002). However, to the authors' knowledge, few studies have examined the mode of acculturation with Chinese immigrant women. Thus, the current study examined the acculturation process to better understand variation in embracing ethnic and American cultures across domains.

Post-Migration Stress

Research suggests that with a longer stay and greater acculturation, migration-related stress diminishes (Castillo, Cano, Chen, Blucker, & Olds, 2008; Oh, Koeske, & Sales, 2002). However, before cross-cultural competence is achieved, the process of acculturation is stressful as it necessitates encounters with the unfamiliar and requires significant personal change. Like the acculturation process, the contexts of origin (e.g., Fujian vs. non-Fujian) and destination can be a significant factor explaining the experience of post-migration stress.

This study is an attempt to address this gap in the literature by comparing the experience of post-migration stress in Chinese immigrant women from Fujian and other areas of China. Also, the study examines the post-migration stressors most commonly cited in the literature, i.e., cultural, environmental, lifestyle, and social challenges (Ben-Sira, 1997; Berry, Kim, Minde, & Mok, 1987; Ritsner, Modai, & Ponizovsk, 2000; Ying, 2005). Cultural stressors are challenges associated with cultural differences between the country of origin and the United States (Ben-Sira, 1997; Ritsner et al., 2000; Ying, 1996, 2005). Environmental challenges include climate change, unfamiliar setting, and safety (Ben-Sira, 1997; Ritsner et al., 2000; Ying, 2005). Social challenges include homesickness for the country of origin, loneliness due to family and friends left behind, or difficulty forming new friendships (Ben-Sira, 1997; Ritsner et al., 2000; Ying, 2005). Lifestyle challenges include language (Berry et al., 1987; Ying, 1996, 2005), work (Ben-Sira, 1997; Ritsner et al., 2000; Ying, 1996, 2005), and finances (Ben-Sira, 1997; Ritsner et al., 2000).

Research Questions

Given that relatively little is known about the acculturation process and the post-migration stress among Chinese immigrant women residing in Philadelphia in general and among Fujianese immigrants in particular, the current investigation takes an exploratory approach to answer the following four research questions:

1. What are the characteristics of middle-aged Chinese immigrant women residing in Philadelphia? And how do the Fujianese and the non-Fujianese vary in the demographic characteristics?
2. What does acculturation mean to these two groups?
3. What level of post-migration stress do these two groups experience?
4. How do demographic characteristics and the acculturation process predict post-migration stress in Fujianese and non-Fujianese Chinese immigrant women?

Methods

Sample and Procedure

The sample of convenience is comprised of immigrant women from mainland China. They were recruited in Philadelphia through community organizations, newspaper advertisement,

medical practices, word-of-mouth, and personal contacts and invited to participate in a study on acculturation, diet, and mammographic breast density. To obtain a substantial sample of Fujianese women, two female interviewers who migrated from Fujian during their teens reached out to recruit from this community.

Because the current study was part of a larger study on lifestyle factors associated with breast cancer risk in pre-menopausal women, exclusion criteria included postmenopausal status, and conditions contributing to unreliable measurement of breast density, such as current pregnancy and breastfeeding within the last nine months. These exclusionary criteria yielded a middle aged sample. Also, the respondents were offered free annual mammograms over the next three years in exchange for study participation since they were likely to be uninsured and/or from a low socioeconomic background. All interviews were administered over the telephone or in person, and in the language of the participant's preference, i.e., English or Chinese (i.e., Fujianese, Mandarin or Cantonese).

Of 436 women enrolled in the study, we excluded women for whom baseline questionnaire data were not available ($n=6$), women not born in China ($n=13$), and women for whom province of origin could not be determined because of an incomplete residential history ($n=15$), leaving a sample of 402 women. Of these, 240 migrated from Fujian (59.7%), and the remainder (40.3%) originated from other provinces in China. The whole sample's mean age was 43.83 ($SD=4.55$). At enrollment, the women had resided in the United States for an average of 7.14 years ($SD=4.81$). The overwhelming majority was married (93%), with the remainder being single, widowed or divorced. On the whole, participants had limited education. Over two-thirds (67.2%) have not completed high school. Of the remainder, 15.9% graduated from high school or vocational school and 16.9% had some college education or beyond. In terms of current occupation, 9.3% were unemployed, 31.3% were service workers, 6.3% held clerical or sales positions, 43.3% were machine operators and craftworkers, and only 10% worked as professionals or managers. Their occupations in China were as follows: 28% unemployed, 10.1% service workers, 13.1% farmers, 9.3% clerical/sale positions, 19.4% machine operator/craftworker, and 20.2% professional/managerial.

Measures

Acculturation was measured by the 24 item-General Ethnicity Questionnaire – Chinese and American versions (GEQ-C and GEQ-A, Tsai et al., 2000). Allowing for the assessment of both a unidimensional and bidimensional process of acculturation, the GEQ is comprised of parallel items that assess endorsement of Chinese and American cultures in both general and specific ways. Example items assessing acculturation are “I am familiar with Chinese/American cultural practices and customs” and “Overall, I am Chinese/American.” All items are scored on a five point Likert type scale, with “1” - strongly disagree, “2” - disagree, “3” - neutral, “4” agree and “5” – strongly agree. Thus, higher scores reflect greater endorsement.

The original GEQ was intended for both immigrant and American-born Chinese college students. As such, some items are not appropriate for the current sample of immigrant adults residing in the community and were dropped (e.g. “I was raised in a way that was Chinese/American” and “How much do you speak Chinese/English at school”). A total of 12 GEQ-C and 12 GEQ-A items were retained. Alpha internal reliability was .78 for the GEQ-C items and .88 for the GEQ-A items.

Post-Migration Stress was measured by the 22 item- Migration-Acculturation Stressors Scale (MASS, Ying, 2005) that examines post-migration stress in various life domains. The items are scored on a three-point scale, with “0” – not at all, “1” – some and “2” – very much. Previous research with Chinese students suggests that the items may be grouped into

underlying factors (Ying, 2005). A principal axis factor analysis with varimax rotation was conducted to identify underlying factors in the current sample.

A total of six conceptually meaningful factors with eigenvalues greater than 1 emerged and explained 63.19% of the variance. The factors and the amount of variance they explained were: Cultural Differences (14.10%), Environmental Challenges (11.87%), Homesickness (11.57%), Lifestyle Challenges (10.29%), Social Isolation (8.16%), and Economic Challenges (7.21%). The first factor is 'Cultural Differences' which includes differences between Chinese and American cultures and differences between Chinese and American morals. The second factor is 'Environmental Challenges' which includes difficulties with language, transportation, illness, safety, and unfamiliar environment. In the Chinese worldview, health is partially determined by a fit with the environment. Thus, a change in residence may precipitate an experience of *shui-tu-bu-fu* (literally, a poor fit with water and earth) which manifests itself in physical illness (Kaptchuck, 1983). The third factor is 'Homesickness' which includes the items missing family, missing friends, missing homeland, and loneliness. The fourth factor is 'Lifestyle Challenges' which includes problems with food, housing, and making friends. The fifth factor is 'Social Isolation' and is comprised of two items: Americans are unfriendly and Chinese are unfriendly. The final factor is 'Economic Challenges' which consists of difficulties with money and work. The internal reliability of the six factors was assessed. Alpha reliability was .93 for Cultural Differences, .74 for Environmental Challenges, .81 for Homesickness, .64 for Lifestyle Challenges, .46 for Social Isolation, and .74 for Economic Challenges.

Results

Variation in Demographics between Fujianese and non-Fujianese Immigrants

In response to research question 1, as shown in Table 1, the Fujianese and the non-Fujianese immigrant women did not vary on demographic characteristics. Only a difference in occupational category in China between the Fujianese and the non-Fujianese women was marginally significant (Chi-Square = 9.96, $df=5$, $p=.08$). Compared to the non-Fujianese, the Fujianese women were more likely to have worked as farmers (16.5% versus 8.1%) and in clerical and sales positions (11.0% versus 6.8%). In contrast, the non-Fujianese women were more likely to have worked as machine operators/craftworkers than the Fujianese women (23% versus 16.9%).

The Meaning of Acculturation

To assess the meaning of acculturation in response to research question 2, we compared and contrasted the specific GEQ-Chinese and GEQ-American items for all and then between the Fujianese and the non-Fujianese women. As Table 2 shows, both the Fujianese and the non-Fujianese women endorsed Chinese culture statistically significantly much more than American culture. For example, for the whole group, mean endorsement of Chinese culture across GEQ items ranged from 3.68 (between "neutral" and "agree") to 4.82 (between "agree" and "strongly agree,") while mean endorsement of American culture ranged from 1.21 (between "disagree" and "strongly disagree") to 2.73 (between "disagree" and neutral). This pattern did not differ between the Fujianese and the non-Fujianese immigrants, nor was there a statistically significant difference in mean across the items on the GEQ-Chinese and GEQ-American between the Fujianese and non-Fujianese immigrants.

Furthermore, to determine whether acculturation is a unidimensional or bidimensional process, Pearson's correlation was utilized to test the association of corresponding items assessing endorsement of various aspects of Chinese and American cultures. As Table 3 shows, except for two items: a significant negative correlation ($p<.001$, two-tailed test)

between each GEQ-Chinese and GEQ-American was found. More specifically, overall affiliation with Chinese culture was negatively associated with overall affiliation with American culture on (1) exposure to the cultures, (2) going places with Chinese/American people, (3) admiration of Chinese/American people, (4) listening to Chinese/American music, (5) engaging in Chinese/American recreation, (6) eating Chinese/American food at home, (7) eating Chinese/American food in restaurants, (8) having Chinese/American friends, and (9) speaking Chinese/English at home. These findings support the unidimensional process of acculturation and the domain-generic model of acculturation in these immigrant women.

Variation in Post-Migration Stress between Fujianese and non-Fujianese women

To respond to research question 3, following a descriptive analysis to calculate the mean score of the five factors of post-migration stress for all women, we compared the five factors between the Fujianese and the non-Fujianese women to examine differences. As Table 4 shows, Homesickness (mean of 2.16, falling between “some” and “very much” stress) was the most serious source of post-migration stress for both the Fujianese and the non-Fujianese immigrants, while Lifestyle Challenges (mean of 1.23, falling between “not at all” and “some” stress) were the least serious source of stress for the women. The Fujianese women reported more post-migration stress in the areas of Cultural Challenge ($t=1.81$, $df=362.70$, $p<.05$) and Homesickness ($t=2.97$, $df=380.20$, $p<.005$) than the non-Fujianese women. Further, the Fujianese women’s mean of the sum score of post-migration stress was higher than the non-Fujianese women’s ($t=2.32$, $df=362$, $p<.005$). The two groups did not vary on Environmental Challenges, Lifestyle Challenges, or Economic Challenges.

Demographic Characteristics, Acculturation Process and Post-Migration Stress

To understand variation in post-migration stress for the Fujianese and the non-Fujianese women, we assessed the contribution of the acculturation process and demographic characteristics. First, we created a new variable to assess the general acculturation process by subtracting the overall American culture endorsement mean score from the overall Chinese culture endorsement mean score, with higher difference indicating less acculturation. Second, a mean of sum of the post-migration stress was used for the post-migration stress model. Multiple regression was conducted for all participants to detect whether being Fujianese is a significant predictor of post-migration stress, and in Fujianese and non-Fujianese women separately. As shown in Table 5, results for all Chinese women showed that being Fujianese indeed predicts a higher level of post-migration stress (standardized beta= .13, $p<.05$, two-tailed test). Furthermore, after controlling for demographic characteristics, more acculturated women (standardized beta= $-.17$, $p<.005$) reported a higher level of post-migration stress. Separate multiple regression analyses for the Fujianese and the non-Fujianese women revealed a different pattern of post-migration stress models. For the Fujianese women, being more acculturated, being older at migration and being unemployed predicted a higher level of post-migration stress (standardized beta= $-.13$, $p<.05$, standardized beta= .27, $p<.001$ and standardized beta= .19, $p<.05$, respectively). For the non-Fujianese women, in comparison, only being more acculturated predicted higher level of post-migration stress (standardized beta= $-.24$, $p<.005$ and standardized beta= .18, $p<.05$, respectively).

Discussion

Variation in Demographics between Fujianese and non-Fujianese Immigrants

Findings suggest that there is no difference in demographic characteristics between the Fujianese and the non-Fujianese women, except for a near-significant difference in occupation types in China. Consistent with Liang’s (2001) findings, a larger proportion

(16.5%) of Chinese immigrant women from Fujian province reported that they worked as farmers, compared to the non-Fujianese women (8.1%). Several other, important aspects of our sample with respect to acculturation and post-migration stress are also noteworthy. Our results show that Chinese immigrant women residing in Philadelphia are less educated than the general Chinese American population. For example, in comparison to the 2000 Census finding that 48.1% of Chinese Americans hold a bachelor's degree or more (Bauman & Graf, 2003; Reeves & Bennett, 2004), in our sample only 16.9% held a bachelor's degree or more. Previous studies have found that personal characteristics such as youth, longer length of residence, and higher educational and occupation status increase receptivity of the new context and enhance the probability and speed of acculturation (Kuo & Roysircar, 2004; Phinney, 1990; Tsai et al., 2000). Thus, based on the demographic characteristics of our sample, acculturation may be delayed among these immigrants who have low educational attainment (67.2% did not complete high school) and occupational status (only 10% held a professional or managerial position), because of limited exposure to American culture/people both pre- and post-migration (Berry, 1997). This may support the importance of pre-migration characteristics in explaining acculturation, which is the next area of discussion.

The Meaning of Acculturation

Our findings reveal that the Fujianese immigrant women did not differ from their non-Fujianese peers on the endorsement of Chinese culture and American culture. Consistent with previous research (Tsai et al., 2000; Ying & Han, 2008), acculturation in this middle aged immigrant women sample was found to be unidimensional, as overall endorsement and espousal of specific aspects of Chinese and American cultures were significantly inversely associated. This suggests that post-migration acquisition of American culture is accompanied by diminished engagement with the culture of origin, and the significant difference in endorsing Chinese culture and American culture indicates that they are at a very early stage of acculturation.

Further, the study indicates that the meaning of acculturation within our sample can be viewed as experiencing a "domain-generic" model rather than a "domain-specific" model. For example, except for two items of GEQ- "being familiar with Chinese/American customs" and "celebrating Chinese/American holidays", strong endorsement of Chinese culture was evidenced across almost all areas under study, including language, social, recreational, food, friendship and cultural identity. As they reside in America, particularly in urban areas, acculturation in these two items do not seem to necessitate significant change. This suggests that the acculturation process seems to occur across broad behavioral and value domains. This may be a result of being at the early stage of acculturation and experiencing the unidimensional process of acculturation within the sample. As they are exposed to and affiliate with American culture, they may experience a different pattern of acculturation process, i.e., the bidimensional and domain-specific acculturation process.

With regards to the post-migration stress, the study found that our sample reported a high level of post-migration stress. This may be because, as described above, they are still at the very early stage of acculturation and they have a relatively low socio-economic status as indicated by education level and occupation type. While no difference between the Fujianese and non-Fujianese immigrant women was detected in most aspects of post-migration stress (Environmental Challenges, Lifestyle Challenges, Social Isolation, and Economic Challenges), the Fujianese immigrant women reported greater homesickness and more problems with cultural differences than the non-Fujianese women. The difference may be due to the fact that the Fujianese women were more likely to come from a rural area and therefore encounter a greater cultural gap post-migration.

Lastly, when we examined the predictors of post-migration stress for all and differences between the Fujianese and non-Fujianese immigrant women, a few interesting findings emerged. First, being Fujianese is a significant predictor of a higher level of post-migration stress after controlling for acculturation and demographic characteristics. Second, the acculturation process measured by the difference in embracing the Chinese culture and American culture is a significant predictor of the post-migration stress for all and for both the Fujianese and the non-Fujianese women. Interestingly, unlike previous studies documenting a positive relationship between embracing both cultures and better adjustment (e.g., lower post-migration stress) (see Oh, Koeske, & Sales, 2002; Ohtsuka, 2005), our sample showed that embracing both cultures increased the level of post-migration stress. This paradoxical finding may indicate that the more Chinese immigrant women in our study embrace the American culture, the greater their consciousness and recognition of cultural differences. It is understandable that the acculturating women who reside in a predominantly American context would be experiencing cultural differences and life style changes more keenly than the less acculturating women. In contrast, by remaining marginal to the new culture, less acculturating women are temporarily protected from the stress associated with these differences, and as a result they experience a lower level of post-migration stress.

Further, in comparison to the non-Fujianese women for whom only the acculturation process predicted post-migration stress, among the Fujianese women, age at migration, being unemployed here, and being professional here also predicted the post-migration stress. Possibly, unemployment poses challenges in the areas of work and money, such that these Fujianese women continue to face finance-related stress as they build a new life in the United States.

Study Limitations and Directions for Future Research

The study suffers from several limitations that deserve mention and hold implications for future research. First, sample limitations may compromise the findings' external validity. The study utilized a sample of convenience. As such, the study sample may not be representative. For example, the non-Fujianese participants were better educated and less likely to have been farmers than the population of Fujianese emigrants (Liang, 2001; Liang & Morooka, 2004). While it may be especially difficult to obtain a more representative Fujianese sample due to their undocumented status, future research should strive to do so. Excluding postmenopausal women may also limit the generalizability of our results. Future research should strive to obtain a more representative sample.

Additionally, the study was conducted in one city, Philadelphia. In light of the important contribution of ethnic density to acculturation (Birman et al., 2005; Logan et al., 2002; Sanders, 2002), future research should compare and contrast acculturation and post-migration stress among Chinese immigrants in varying parts of the United States with differential ethnic density.

Another study limitation pertains to measurement. While self-report data are commonly utilized in acculturation research, that may be biased. Observational data are difficult to obtain but would enhance validity. Also, acculturation is a complex and multidimensional experience (Tsai et al., 2000; Ying, 1995). In the current study, behavioral changes associated with acculturation were assessed by the GEQ, a standardized, close-ended measure. To capture the full experience of acculturation, future research should incorporate an open-ended component to allow participants to report additional changes. Similarly, our understanding of post-migration stress may be enriched by the inclusion of open-ended questions.

Finally, like most existing research, the current study uses cross-sectional data and does not address how acculturation and post-migration stress varies over time. This will be remedied as we continue to follow these participants to document their dynamic experience with acculturation and post-migration stress with increasing stay in the United States.

In spite of these limitations, the current exploratory investigation makes a significant contribution to the literature on immigrants' acculturation by describing the acculturation process and the post-migration stress among Chinese immigrant women residing in Philadelphia with low immigrant Chinese concentration. In summary, after residing on average of slightly more than seven years in America, Chinese immigrant women in Philadelphia still embraced ethnic culture much more strongly than American culture. As a result, the Chinese immigrant women in this study, regardless of the province of origin, appear to be at the early stage of acculturation and to experience the unidimensional process of acculturation. Also, the acculturation process seems to occur across broad behavioral and value domains, suggesting a domain-generic model for both the Fujianese and the non-Fujianese women. While no salient difference in the acculturation process was detected by Fujianese in comparison to non-Fujianese, Fujianese women reported a higher level of post-migration stress than their counterparts. This may be due to the fact that, based on the indigenous features of the Fujian province, most Fujianese women come from rural areas that are less exposed to modernization/westernization than urban areas. As such, they encounter more post-migration cultural differences and may find the task of acculturation more daunting. All of the study findings suggest the importance of future research to better understand the acculturation and post-migration stress among this understudied population of Fujianese immigrant women. Furthermore, the study findings provide a better understanding of the experience of acculturation and post-migration stress among previously understudied groups, the Fujianese immigrant women, in comparison to the non-Fujianese immigrant women.

Acknowledgments

The study was partially supported by grants 1R01CA106606 and P30 CA006929 to Dr. Marilyn Tseng. Rufina Wu at University of California, Berkeley assisted with the literature search.

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Table 1

Demographic Characteristics of the Fujianese and non-Fujianese Immigrant Women

	All (n=402)	Fujianese (n=240)	Non-Fujianese (n=162)
Mean Age	43.83 (SD=4.55)	43.67 (SD=4.51)	44.06 (SD=4.61)
Mean Years in US	7.14 (SD=4.81)	6.96 (SD = 4.78)	7.42 (SD=4.87)
% Married	93%	92.1%	94.4%
Years of Education			
% < 12 years	67.2%	70%	63%
% High School/Vocational School	15.9%	15.4%	16.7%
% Any College	16.9%	14.6%	20.4%
Current Type of Employment			
% Unemployed	9.3%	8.8%	9.9%
% Service Worker	31.3%	32.8%	29.0%
% Clerical/Sales	6.3%	6.3%	6.2%
% Machine Operator/Craftsworker	43.3%	41.6%	45.7%
% Professional/Managerial	10%	10.5%	9.3%
Employment in China*			
% Unemployed	28.0%	26.7%	29.8%
% Service Worker	10.1%	8.9%	11.8%
% Farmer	13.1%	16.5%	8.1%
% Clerical and Sales	9.3%	11.0%	6.8%
% Machine Operator/Craftworker	19.4%	16.9%	23%
% Professional/Managerial	20.2%	19.9%	20.5%

* p=.08, two-tailed tests

Variation in the Endorsement of Chinese and American Cultures between Acculturating and non-Acculturating Fujianese and non-Fujianese Women

Table 2

	All		Fujianese		Non-Fujianese	
	Being Chinese	Being American	Being Chinese	Being American	Being Chinese	Being American
Mean (SD) endorsement of Chinese/American culture						
Exposed to Chinese/American culture*	3.76 (1.23)	2.73 (1.09)	3.83 (1.14)	2.71 (1.10)	3.63 (1.35)	2.73 (1.10)
Go to places with Chinese/American people*	4.32 (.88)	2.59 (1.09)	4.40 (.82)	2.65 (1.11)	4.23 (.94)	2.50 (1.05)
Familiar with Chinese/American customs*	4.52 (.68)	2.20 (.95)	4.52 (.69)	2.22 (.97)	4.52 (.66)	2.17 (.93)
Admire Chinese/American people*	3.68 (.97)	2.42 (1.07)	3.66 (.95)	2.43 (1.07)	3.74 (3.74)	2.39 (1.07)
Listen to Chinese/American music*	4.06 (.83)	2.18 (1.02)	4.05 (.83)	2.18 (1.03)	4.06 (.83)	2.18 (1.02)
Engage in Chinese/American recreation*	4.02 (.91)	2.23 (1.02)	4.03 (.89)	2.24 (1.02)	4.04 (.94)	2.23 (1.03)
Celebrate Chinese/American holidays*	4.29 (.87)	2.63 (1.22)	4.28 (.87)	2.68 (1.25)	4.32 (.88)	2.56 (1.19)
Eat Chinese/American food at home*	4.70 (.58)	1.59 (.75)	4.71 (.56)	1.56 (.74)	4.69 (.59)	1.62 (.77)
Eat Chinese/American food in restaurants*	4.52 (.78)	1.69 (.86)	4.55 (.71)	1.66 (.82)	4.48 (.87)	1.74 (.90)
Friends are Chinese/American*	4.62 (.69)	1.50 (.79)	4.65 (.64)	1.50 (.81)	4.56 (.75)	1.49 (.76)
Speak Chinese/English at home*	4.82 (.52)	1.38 (.67)	4.81 (.55)	1.35 (.66)	4.84 (.49)	1.43 (.69)
Overall, I am Chinese/American*	4.78 (.60)	1.21 (.56)	4.73 (.67)	1.23 (.59)	4.84 (.47)	1.18 (.50)
Mean of sum of endorsement of Chinese/American culture*	4.32 (.50)	2.10 (.71)	4.33 (.47)	2.11 (.70)	4.30 (.56)	2.08 (.71)

* Significant difference between being Chinese and being American for all, Fujianese, and non-Fujianese, $p < .005$, two-tailed tests.

Table 3

Pearson's Correlation of Endorsement of Chinese and American Cultures (n=402)

Items	All	Fujianese	Non-Fujianese
Exposed to Chinese/American culture	$r = -.34^{***}$	$r = -.33^{***}$	$r = -.37^{***}$
Go to places with Chinese/American people	$r = -.21^{***}$	$r = -.19^{**}$	$r = -.25^{***}$
Familiar with Chinese/American customs	$r = .05$	$r = .08$	$r = -.01$
Admire Chinese/American people	$r = -.29^{***}$	$r = -.23^{***}$	$r = -.36^{***}$
Listen to Chinese/American music	$r = -.23^{***}$	$r = -.11^{**}$	$r = -.39^{***}$
Engage in Chinese/American recreation	$r = -.30^{***}$	$r = -.29^{***}$	$r = -.30^{***}$
Celebrate Chinese/American holidays	$r = -.09$	$r = -.06$	$r = -.13$
Eat Chinese/American food at home	$r = -.42^{***}$	$r = -.40^{***}$	$r = -.43^{***}$
Eat Chinese/American food in restaurants	$r = -.53^{***}$	$r = -.51^{***}$	$r = -.54^{***}$
Friends are Chinese/American	$r = -.56^{***}$	$r = -.55^{***}$	$r = -.56^{***}$
Speak Chinese/English at home	$r = -.65^{***}$	$r = -.58^{***}$	$r = -.70^{***}$
Overall, I am Chinese/American	$r = -.25^{***}$	$r = -.24^{***}$	$r = -.27^{***}$
Mean of sum of endorsement of Chinese/American Culture	$r = -.48^{***}$	$r = -.46^{***}$	$r = -.51^{***}$

p<.001

**
p<.005, two-tailed tests

Table 4

Variation in Post-Migration Stress by Acculturation Process in Fujianese (n=240) and non-Fujianese Women (n=162)

Post-Migration Stress	All	Fujianese Mean (SD)	Non-Fujianese Mean (SD)	Difference between Fujianese and Non-Fujianese
Cultural Differences	1.35 (.81)	1.41 (.89)	1.26 (.69)	P<.05
Environmental Challenges	1.94 (.96)	2.05 (1.01)	1.77 (.84)	ns
Homesickness	2.16 (.88)	2.22 (.89)	2.07 (.87)	P<.005
Lifestyle Challenges	1.23 (.43)	1.25 (.45)	1.21 (.39)	ns
Social Isolation	1.40 (.60)	1.41 (.59)	1.37 (.61)	ns
Economic Challenges	1.76 (.94)	1.78 (.99)	1.71 (.87)	ns
Mean (SD) of Sum of Post-Migration Stress	1.65 (.48)	1.70 (.50)	1.58 (.45)	P<.01

Table 5

Post-Migration Stress Models for all, Fujianese and non-Fujianese

	<i>All</i>	<i>Fujianese</i>	<i>Non-Fujianese</i>
<u>Adjusted R-Squared:</u>	.13	.13	.17
<u>F:</u>	4.42 [11, 322]	3.65 [10, 184]	1.98 [10, 128]
<u>Standardized Betas:</u>			
Fujianese	.13*	---	---
Difference in embracing the Chinese/American culture	-.17**	-.13*	-.24**
Years in US	-.09	-.13	-.04
Education level	.16*	.15	.18
Being married	.04	.06	.01
Age of migration	.20***	.27***	.18
Employment status here (service/craft/machine operator as deleted group)			
Being unemployed here	.13*	.19*	.08
Being professional here	-.07	-.18*	.08
Employment status in China (service/craft/machine operator as deleted group)			
Being unemployed in China	-.04	-.07	.02
Being farmer in China	-.05	-.01	.13
Being professional in China	.02	.04	-.05

p<.001,**
p<.005,*
p<.05, two-tailed test