Cross Cultural Comparison of Attitudes and Preferences for Care of the Elderly among Australian and Chinese Nursing Students

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Cross Cultural Comparison of Attitudes and Preferences for Care of the Elderly among Australian and Chinese Nursing Students

The ageing of the world’s population is a global concern that requires a prompt response from nursing educators. The number of older people is expected to increase steadily from 700 million in the year 2009 to 2 billion by 2050 (United Nations, 2009). Despite the increased demand for a competent nursing workforce to deliver care to older people, studies in Western countries show a general lack of interest in caring for the elderly among students enrolled in courses related to a health care profession (Gutheil, Heyman, & Chernesky, 2009; Henderson, Xiao, Siegloff, Kelton, & Paterson, 2008). Socially and culturally constructed ageism has been blamed for this phenomenon (Henderson, et al., 2008; Holroyd, Dahlke, Fehr, Jung, & Hunter, 2009). Studies on ageism among nursing students and their intention to care for the elderly have been abundant in Western societies, yet these studies are scarce in Eastern societies. By providing a comparison between China and Australia, this study may improve our understanding of how cultural differences might have contributed to the differences in nursing students’ attitudes toward and their intention to care for the elderly. The rationale for selecting first-year students is to identify how cultural factors affect the students’ attitudes and intentions regarding caring for the elderly without the influence of a nursing education; these students had not been exposed to nursing topics before the survey.

People raised in a Western culture usually hold individualist values that tend to encourage and emphasize individual achievements and independence (Bodner & Lazar, 2008). In such a cultural context, older people generally desire to live independently without their adult children in the same household (Bodner & Lazar, 2008; Li & Buechel, 2007; Zhou, 2007). The chance of inter-generational interaction is relatively low compared to that of an Eastern society. Eastern cultures endorse collectivist values that rate group achievements higher than individual ones (Bodner & Lazar, 2008). Individuals are quite actively encouraged to make sacrifices to
satisfy the group goal. In addition, people from East Asia are strongly influenced by Confucianism, which strongly promotes the value of filial piety (Tan, Zhang, & Fan, 2004; Zhan, Liu, Guan, & Bai, 2006). The core values of collectivism and Confucianism impose the duties of caring for older people on family members (Bodner & Lazar, 2008; Li & Buechel, 2007; Zhou, 2007).

Studies have reported that people from different cultural backgrounds may show different types or levels of ageist attitudes (Cuddy, Norton, & Fiske, 2005). The word “ageism” originally targeted a Western culture that systematically stereotyped and discriminated against older people (Butler, 1995). Based on a range of questionnaire surveys aiming to define ageist attitudes, different dimensions of ageism were identified and described, such as separation (or avoidance), prejudice (or discrimination) and affective attitudes (Bodner & Lazar, 2008; Holroyd, et al., 2009; Rupp, Vodanovich, & Crede, 2005). According to these studies, the attitude of separation is associated with behaviors that result in a virtual withdrawal from social contact with older people, and the attitude of prejudice contributes to discriminatory opinions regarding older people’s rights or a failure to recognize the individual needs of older people (Bodner & Lazar, 2008, p. 338; Holroyd, et al., 2009; Rupp, et al., 2005).

The differences inferred from the population patterns revealed some unique challenges for each country. In Australia longevity and low birth-rates are the main contributors to the ageing population with the population growth remaining negative since the late 1970s (United Nations, 2008). In fact, Australia is one of the few developed countries that relies heavily on immigration to maintain population growth and productivity. International recruitment of registered nurses (RNs) has been widely used to fill the numerous health-care vacancies due to nursing shortages (National Health Workforce Taskforce, 2009). The 2007 annual Nursing Workforce survey indicates that about one in six nurses (15.5%) was trained outside of Australia and that the actual proportion of international nurses is even higher owing to the use of Skill
Stream visas onshore to attract Australian-trained international nursing students (Australian Department of Immigration and Citizenship, 2009). An understanding of the attributes of nursing students from Eastern cultures will help inform the design of student-centered learning in Australia.

China’s “one child policy”, which is now known as the “4-2-1” family, has mandated that a couple must support their child as well as their four parents (Zhan, et al., 2006). China’s rapid industrialization has generated migration patterns that further impact the family structure (CNCA, 2007). In 2009, the number of older people living in an empty nest situation had increased significantly to 50% in both urban and rural areas (CNCA, 2007). The practice of family care based on filial piety is now considerably weakened in China (CNCA, 2007).

Studies of students in healthcare professions using diverse tools and methods of measurement are abundant. In Johnson’s (Johnson, 1992) study, two consecutive groups of first-year students in a university in Australia demonstrated positive attitudes. However, the study found no association between the frequency of contact with older people and these attitudes. Two longitudinal studies in Australia using the same methods found that students in their first year of university study demonstrated a relatively higher interest in caring for the elderly than they did in the subsequent years of their education (Happell, 2002; Stevens & Crouch, 1998). This finding was attributed to the nursing education, which promoted a medical model using high-end technology while overlooking basic nursing skills. However, there was a convincing argument in the literature that multiple factors would affect students’ low level of interest in caring for the elderly. These factors included ageist attitudes, working experience with older people, concerns of social status, financial stability, work environment issues and opportunities to advance one’s career (Gutheil, et al., 2009; Herdman, 2002).
Design and Methods

The aim of this study was to compare Australian and Chinese nursing students’ attitudes and intentions to care for the elderly and the factors affecting these intentions.

Design and Setting

A cross-sectional comparative study based on two survey questionnaires was conducted at one university in Australia and one university in China. This study is an extension of a major research project entitled the ”Partnership in Aged Care Education (PACE)” project, which has been reported elsewhere (Henderson, et al., 2008; Shen & Xiao, 2012; L. Xiao, Kelton, & Paterson, 2012; L. Xiao, Paterson, Henderson, & Kelton, 2008). The ethics committee of the Australian university approved this study, and the Chinese university agreed to participate. A letter of introduction was provided to the participants at each university prior to the survey explaining volunteer participation and the intention of maintaining respect, discretion and privacy. The data were collected by research team members who were not the lecturers or tutors of these students at that time.

Participants

All new nursing students enrolled in a 3-year Bachelor of Nursing program at the Australian university in 2007 were invited to participate in the survey in their first week. Among 330 students, 262 completed the survey with a response rate of 79.3%. All new nursing students enrolled in a 4-year Bachelor of Nursing program at the Chinese university in 2008 were invited to participate before the commencement of their nursing courses. Of the 294 students at the Chinese university, 204 completed the survey with a response rate of 69.3%. After a missing data analysis, the final number of participants was 256 at the Australian university and 204 at the Chinese university. Although there were 28 (11%) overseas students from countries in Asia and Africa in the Australian sample (see Table 2), a decision was made to keep these students in the Australian sample as they clearly represented the reality of the nursing student population in the
Australian university; therefore, the results from the study would provide more reliable information about gerontological nursing education.

*Instruments*

The 9-item “Career Choice Questionnaire in Nursing Practice” (Stevens & Crouch, 1998) was adopted. The questionnaire was translated from English to Chinese and then back translated to English by a bilingual person and reviewed by a native English speaker to ensure that the core meanings of each statement was maintained between the two versions of the questionnaire. The Chinese version of the questionnaire was administered twice to 20 first-year university Chinese students with 2 weeks in between the testing sessions. The test-retest reliability was acceptable (Polit, 2010), with a correlation coefficient of $r=0.92$ ($p < 0.00$). The students were asked to rank their choices from nine predetermined practice areas, with 1 as the most preferred and 9 as the least preferred area. They were also asked to provide reasons for their first and last preferences using open-ended questions.

The 16-item “Nursing Students’ Attitudes Towards the Elderly” (Johnson, 1992) was modified for this study. This questionnaire was rated on a 5-point Likert scale with 1 for strongly agree and 5 for strongly disagree. Demographic data were collected on gender, age, country of birth and previous experience in performing either paid or unpaid work with older people. The attitudes questionnaire was translated from English to Chinese and then back translated to English by a bilingual person and reviewed by a native English speaker to ensure that the core meanings of each item was maintained between the two versions of the questionnaire. The Chinese version of the questionnaire was administered twice to 20 first-year university Chinese students with 2 weeks in between the testing sessions. The test-retest reliability was acceptable (Polit, 2010), with a correlation coefficient of $r=0.79$ ($p < 0.00$). The actual survey in the Chinese university was undertaken after completion of the reliability test.
**Statistical Analysis Methods**

Principal component analysis (PCA) was utilized to identify latent factors using PASW (Predictive Analysis Software) version 17. A factor model identified in the PCA was tested for its invariance across the two cultural groups by applying confirmatory factor analysis (CFA) using Amos version 17. The invariance of factor loadings is viewed as a valid condition for the comparisons of latent variable means across different cultural groups (Meredith & Teresi, 2006). A cut-off point of the students’ ranking on the “Career Choice Questionnaire in Nursing Practice” was used as a dependent variable in a logistic regression model, with lower ratings ranging from 1 to 7 indicating that the participants are more likely to work with older people, and ratings of 8 and 9 indicating that the participants are less likely to work with older people. Three independent variables: including prejudice, separation and appreciation, obtained from factor analysis of the Nursing Students’ Attitudes Towards the Elderly (Johnson, 1992) questionnaire were tested in the logistic regression model. In addition, two demographic variables: working experience and age, were also tested in the logistic regression model. These independent variables were chosen as their correlations with intention to care for the elderly were significant in the present study.

**Results**

**The Characteristics of the Sample**

The Australian sample comprised nearly 25% of students from overseas countries, which reflects the proportion of international nursing students in the country due to the Skill Stream Visa program. There was no statistically significant difference between the two groups in gender, but the Australian sample had a higher proportion (77.7% versus 49.0%) of participants in the under-20 age group (p<0.001), while a higher percentage of the Chinese students (48.0% versus 33.6%) had experience in caring for the elderly (p=0.01). Fifty-four (20.6%) of the Australian
students had provided personal care services to older people in a paid capacity in a residential aged care facility and/or community services, while 32 (13%) had experience caring for older relatives. In contrast, 98 (48%) of the Chinese students had cared for their grandparents or worked as volunteers to provide care for the elderly in welfare institutes.

Preferences for Care of the Elderly

“Working with older people” was chosen as the least preferred by 97 (37.9%) of Australian students, and by 18 (8.8%) of Chinese students. On the other hand, working with children was the most preferred option among both groups. Only 4 Australian students (1.6%) and 9 Chinese students (4.4%) ranked “working with older people” as their first preference. The percentage of students who ranked “more likely to work with older people” was significantly higher among Chinese students (147 [72.1%]) than Australian students (116 [45.3%]) with $X^2=32.1$ and $p<0.001$.

Open-ended questions revealed the reasons behind the choices of the least preferred areas of practice (see Table 1). Both samples demonstrated similar concerns about caring for the elderly, which included a wide range of issues. It is worth noting that Australian students mentioned “little experience with older people” as a contributing factor for not feeling comfortable working with this population. However, this was not a concern among Chinese students.

Attitudes Toward Older People

Prior to performing the principal component analysis (PCA), the suitability of the data for factor analysis was assessed [Kaise-Meyer-Oklin (KMO)=0.68 and 0.65 for the Australian and Chinese groups respectively, $p<0.001$ in the KMO and Bartlett test in both groups]. Initially, five factors were identified in both groups. The factors were extracted based on examinations of interpretability, the agreement of the factors between the two groups and a loading value $> 0.40$
on a factor (Polit, 2010, p. 348). High loadings were found for three items on Factor 1, three items on Factor 2, and two items on Factor 3. The researchers interpreted Factor 1 as prejudice, Factor 2 as separation, and Factor 3 as appreciation (see Table 2). The reliability test of the attitudes scale indicates an acceptable internal consistency based on inter-item correlation, as suggested by Briggs and Cheek (1986).

A good fit of the three-factor model across the two groups was tested using the factorial invariance test. The path and standardised regression weight from the factorial invariance test were shown in Figure 1 using Australian samples (N= 256) and Chinese samples (N=204) respectively. If the two models fit, X2 test should not be significant, CFI (Comparative Fit Index) should be greater than 0.90 and RMSEA (Root Mean Square Error of Approximation) should be less than 0.05 (Garson, 2009). The test indicated no statistical significance between the two models (P=0.51 X2=116.30, df=53). These results suggest an acceptable structure validity of the attitudes scale with three factors.

The factors of prejudice, separation and appreciation were compared between the Australian students and the Chinese students, using Mann-Whitney Test. In addition, the responses to two items, “elderly people live mostly independently” and “elderly people are generally forgotten by their families”, were compared between the two groups, because previous research found cultural differences in these two particular attitudinal areas. The Australian students demonstrated a significantly higher level of prejudice (P<0.001) and separation (p=0.02), compared with Chinese students (see Table 3). However, the Australian students demonstrated a significantly higher level of appreciation (p<0.001) and a significantly stronger agreement with the statement “elderly people live mostly independently” (p=0.001) than Chinese students (see Table 3).

In each group, the three variables of prejudice, separation and appreciation were compared between students with working experiences with older people and without working experiences.
experiences with older people. The results indicated no difference in these attitudes between the two groups.

Factors Affecting Nursing Students’ Intention to Care for the Elderly

The logistic regression model was statistically significant for both groups: Australian students ($X^2=16.70$, df=5, N=256, p=0.01) and Chinese students ($X^2=18.71$, df=5, N=204, $p\leq0.001$). Among the Australian students, two independent variables, “working experience with older people” (OR=1.89, p=0.024) and “prejudice” (OR=0.84, p=0.03), were significantly predictive of students’ intention to care for the elderly (see Table 4). The Australian students who had working experience with older people were almost twice as likely to choose to work with older people, whereas those expressing prejudiced attitudes were 0.84 times less likely to choose to work with older people. In contrast, among Chinese students, being under 20 years old (OR=1.95, p=0.47) and with separation attitudes (OR=0.79, p=0.011) were significantly predictive of their intention to care for the elderly (see Table 4). Chinese students under the age of 20 were almost twice as likely to choose to work with older people, while those having separation attitudes were 0.79 times less likely to choose to work with older people.

Discussion and Conclusions

Findings from this study support previous studies by Bodner and Lazar (2008) and Rupp et al. (2005) that identified multiple dimensions of ageism. The factors of prejudice and separation identified in the present study are similar to the stereotypes and separation described in the two previous studies. The present study also supports Cuddy et al.’s (2005) study, which found a pan-cultural nature to ageism in both collectivist and individualist cultures. The present study found that the ageist attitudes among the Australian students were significantly more prominent than in the Chinese students. The same structure, although different levels, of ageist attitudes identified among the two cultural groups in the present study suggests that nursing
education will need to work toward improving nursing students’ attitudes toward older people in both collectivist and individualist cultures.

The different levels of ageist attitudes identified in the two groups support the assumption that collectivist cultures and Confucianism have a positive influence on people’s attitudes toward older people (Bodner & Lazar, 2008; Tan, et al., 2004). The higher proportion of students who had work experiences with older people through unpaid work at the Chinese university than that at the Australian university may be an indicator of the positive influence. The finding supports that people raised in collectivist cultures have more opportunity to socialize with older people and consequently develop closer relationships with them (Bodner & Lazar, 2008; Tan, et al., 2004). Therefore, they are more likely to feel comfortable when working with older people. Qualitative data from the Australian group revealed that students felt uncomfortable working with older people. This may be due to a lack of socialization with older people. Learning activities that promote socialization with older people incorporated into the nursing curricula should be considered.

The results from the logistic regression with the data from the Australian students revealed two predictors that were statistically significant. Working experience with older people was a significant predictor for an intention to work with older people. The majority of Australian students who had work experience with older people had gained that experience from paid work, mainly in nursing homes and through community care. This finding is different from Happell’s (2002) study, which reported that nursing-home employment was a barrier for nursing students’ choosing to work with older people. However, the finding from Happell’s study was mainly based on qualitative data without an analysis of the correlation between work experience and the intention to care for the elderly. Prejudice was identified as a barrier for nursing students to choose to work with older people. The present study also found that work experience with older people actually had little association with the students’ attitudes. Together these findings suggest
that gerontological nursing education should target students’ attitudes toward working experience with older people.

The results from the logistic regression with the data from the Chinese students identified two predictors. Based on qualitative data from this group, the age-associated intention to care for the elderly may be interpreted as follows: the younger the students, the less exposure to society they have had; therefore younger students have fewer concerns regarding social issues, such as employment opportunity and the disparity of salary and resources related to the care of older people, when compared with older students. However, this predictor should be explored in future studies. Separation attitudes as a significant predictor in the Chinese group may be related to the students’ having been raised in a “4-2-1” family (Zhan, et al., 2006) without grandparents in the household. These students had fewer opportunities to socialize with older people, but they perceived the burden of caring for older people with limited health care services to be specific to older people (CNCA, 2007; Dong & Ding, 2009). This finding should raise the awareness of Chinese nursing educators. Planning learning activities that allow the students to socialize with older people and to learn to advocate on the behalf of older people should be considered.

This study resulted in two contrasting findings between Australian and Chinese students. Australian students, who held a higher level of ageist attitudes, demonstrated more appreciation attitudes toward older people, while Chinese students, who held a lower level of ageist attitudes, demonstrated fewer attitudes of appreciation attitudes toward older people. These findings may indicate that cultural and socio-political factors impact students’ attitudes toward older people. Inglehart and Baker (2000) believe that the course of social evolution in each individual country has a strong impact on its culture and tradition. Australia displays indicators of a post-modernized society characterized by a diversity of thoughts, ideas and cultures (Inglehart & Baker, 2000). In contrast, China is in the process of rapid modernization characterized by market economics and physical security, along with interest in materialism and new technology
In such a significant period of change, many social problems can arise, such as a high unemployment rate among young people. Several extreme policies have been implemented by the government to stabilize the country, such as forced early retirement (in the early 40s) with many job opportunities advertised only for people under the age of 35 years (Zhou, 2007). As is often associated with age discrimination, these policies may have helped to generate a unique perception of older people in China.

Limitations of This Study

There are a number of weaknesses in this study. First, a sampling bias exists because only *first year* students from two universities in two countries were included. Ideally, a cross-cultural comparative study should compare students in different years of their training to gain a more comprehensive understanding of how the nursing curricula of the two universities might have influenced the students’ attitudes toward and intentions to work with older people. Further study is needed to address this area. Second, by including overseas students from Eastern cultures in the Australian university, the findings from the Australian university do not purely represent students from Western cultures, even though the proportion of students from Eastern cultures was relatively small. In addition, while we acknowledged multiple factors, such as issues related to the work environment that contribute to students’ intention to care for the elderly, we were unable to test all of them in a single study. We suggest that the questionnaire should be further developed by adding statements to address these factors.

Recommendations for Practice

Findings from this study have implications for curricula in undergraduate nursing programs. First, promoting meaningful interaction between nursing students and older people should be considered. Activities that bring nursing students and older people together in nursing curricula may include health assessments as well as opportunities to share experience with older people who live independently in communities. Second, because working experience was
identified as a key factor that influences nursing students’ intention to care for the elderly, it is highly recommended that clinical placements in undergraduate programs should reflect the broader spectrum of caring for older people including acute care, community care and residential care settings. Caring for grandparents comprised the majority of the experiences of Chinese students. These students may not be prepared to confront older patients who they have never met before and who have severe disabilities and illnesses. Therefore, it is imperative to develop a positive clinical experience by creating supportive learning environments and presenting role models for students. In addition, the strong influence of cultural values on the care of older people suggests that gerontological nursing education should take into account the students’ cultural backgrounds. It is necessary to add learning content to prepare international students from Eastern cultures to understand older people in an Australian cultural context, with case studies and role playing to show how to accommodate older people’s desire for independence. Chinese students should also be prepared to understand different expressions of filial piety in a Chinese context using case studies and role playing.

Summary

The present study supports previous reports that a collectivist culture has a more positive influence on people’s attitudes toward the elderly compared with an individualist culture. However, inconsistencies between cultural values and nursing students’ attitudes toward the elderly were also identified in the present study, suggesting that culture is not the only factor affecting nursing students’ attitudes. Socio-political factors in a particular society may contribute to different attitudes toward the elderly. This cross-cultural study was able to identify factors contributing to nursing students’ intention to care for the elderly in two different cultural contexts, which has rarely been reported in previous studies.
References


Attitudes towards the Elderly


Figure 1

The Three Factor Model of the Nursing Students' Attitudes towards the Elderly in Chinese samples and Australian samples

Legend: a Covariances between factors, b Regression weights (factor loading on items); c Errors variances associated with the item
Prejudice includes item 4 Elderly people are out of step with the times, item 5 Elderly people are critical of young people and item 11 Elderly people are resistant to change.
Appreciation includes item 1 Elderly people are respected for their wisdom and item 12 Elderly people are a good source of knowledge.
Separation includes item 9 Elderly people are best accommodated in retirement villages, item 16 Elderly people are uninteresting to associate with and item 10 Elderly people are difficult to talk to.
Table 1

Examples of Reasons Given by Australian and Chinese Nursing Students for Choosing “Working With Elderly” as the Least Preferred Area of Practice (N= 460)

<table>
<thead>
<tr>
<th>Reasons</th>
<th>Australian students (N = 256)</th>
<th>Chinese students (N = 204)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Do not feel comfortable with older people</td>
<td>(a) I’m not sure how I would cope with older people and I haven’t had much experience with them.</td>
<td>(b) I don’t want to work with old people. They scare me.</td>
</tr>
<tr>
<td></td>
<td>(b) I don’t want to work with old people. They scare me.</td>
<td>(c) I’m not used to being in the company of older people. It’s quite frightening to be honest.</td>
</tr>
<tr>
<td>2. Do not feel confidence in working with older people</td>
<td>(a) I am not really good at communicating with the elderly.</td>
<td>(a) I find it difficult to communicate with older people.</td>
</tr>
<tr>
<td></td>
<td>(b) Older people like to criticise young people. It is difficult to reach an understanding with them.</td>
<td></td>
</tr>
<tr>
<td>3. The nature of the work</td>
<td>(a) There is too much heavy lifting.</td>
<td>(a) You do not feel achievements in the care of the older person, but I feel it in ICU and the operating theatre.</td>
</tr>
<tr>
<td></td>
<td>(b) I don’t want to work in a nursing home and spend my time wiping buns etc.</td>
<td>(b) It is not an exciting area, but it is boring.</td>
</tr>
<tr>
<td></td>
<td>(c) I believe working with the elderly would be unappreciated and very hard work for seemingly no reward.</td>
<td>(c) It is not a challenging area in which to develop myself. I feel that by working in ICU and the operating theatre I can obtain more new knowledge and skills to help my career development after graduation.</td>
</tr>
<tr>
<td></td>
<td>(d) I don’t find working with old people exciting, challenging or particularly interesting.</td>
<td></td>
</tr>
<tr>
<td>4. The work environments</td>
<td>(a) Nursing homes smell.</td>
<td>(a) Care of older people in the community arena is underdeveloped.</td>
</tr>
<tr>
<td></td>
<td>(b) The environment (in elderly care) doesn’t interest me.</td>
<td>(b) There are limited resources to support elderly care.</td>
</tr>
<tr>
<td>5. Negative attitudes towards older people</td>
<td>(a) I don’t like old people.</td>
<td></td>
</tr>
</tbody>
</table>
6. Financial concerns

(a) I find nursing older people is very rewarding work, but not rewarding in terms of the pay you receive.

(b) I can receive a higher wage by working in ICU, the operating theatre and surgical wards.
Table 2

Factor Loadings of “Nursing Students’ Attitudes towards the Elderly (Johnson, 1992)” by Australian students and Chinese students using PCA\(^a\) (N = 460)

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Attitude Statement</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Prejudice</td>
<td>Separation</td>
<td>Appreciation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>AS</td>
<td>CS</td>
<td>AS</td>
</tr>
<tr>
<td>4</td>
<td>Elderly people are out of step with time</td>
<td>0.77</td>
<td>0.80</td>
<td>-</td>
</tr>
<tr>
<td>11</td>
<td>Elderly people are resistant to change</td>
<td>0.71</td>
<td>0.73</td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>Elderly people are critical of young people</td>
<td>0.69</td>
<td>0.55</td>
<td>-</td>
</tr>
<tr>
<td>9</td>
<td>Elderly people are best accommodated in retirement villages</td>
<td>-</td>
<td>-</td>
<td>0.68</td>
</tr>
<tr>
<td>16</td>
<td>Elderly people are uninteresting to associate with</td>
<td>-</td>
<td>-</td>
<td>0.77</td>
</tr>
<tr>
<td>10</td>
<td>Elderly people are difficult to talk to</td>
<td>-</td>
<td>-</td>
<td>0.51</td>
</tr>
<tr>
<td>12</td>
<td>Elderly people are good source of knowledge</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1</td>
<td>Elderly people are respected for their wisdom</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
Legend: PCA = Principal component analysis. AS = Australian students. CS = Chinese students. The factors were extracted based on examinations of interpretability, the agreement of the factors between the two groups and a loading value > 0.40 on a factor (Polit, 2010, p. 348).

Table 3

Group Comparisons of Attitudes on “Nursing Students’ Attitudes Towards the Elderly” (N = 460)

<table>
<thead>
<tr>
<th>Factors/Attitudes</th>
<th>Australian students (N = 256)</th>
<th>Chinese students (N = 204)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Med (Q1-Q3)</td>
<td>Med (Q1-Q3)</td>
<td></td>
</tr>
<tr>
<td>Prejudice (3-item factor)</td>
<td>8 (7-10)</td>
<td>10 (8-11)</td>
<td>0.001*</td>
</tr>
<tr>
<td>Separation (3-item factor)</td>
<td>11 (10-12)</td>
<td>12 (10-12)</td>
<td>0.02*</td>
</tr>
<tr>
<td>Appreciation (2-item factor)</td>
<td>4 (4-5)</td>
<td>5 (4-6)</td>
<td>0.001*</td>
</tr>
<tr>
<td>Elderly people live mostly independently (item 2)</td>
<td>3 (3-4)</td>
<td>4 (2-4)</td>
<td>0.001*</td>
</tr>
<tr>
<td>Elderly people are generally forgotten by their families (item 3)</td>
<td>4 (3-4)</td>
<td>4 (2-4)</td>
<td>0.067</td>
</tr>
</tbody>
</table>

Legend: Med = median. Q1-Q3 = interquartile range. The p-value is based on Mann-Whitney test. * p ≤ 0.05
**Table 4**

Odds Ratio (OR) and 95% Confidential Intervals for Intention to Care for the Elderly among Australian and Chinese Nursing Students Derived from Logistical Regression Analysis (N=460)

<table>
<thead>
<tr>
<th>Predictor variable</th>
<th>OR</th>
<th>95% CI</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Australian students (N= 256)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≥ 20 years of age</td>
<td>1&lt;sup&gt;a&lt;/sup&gt;</td>
<td>__</td>
<td>__</td>
</tr>
<tr>
<td>&lt;20 years of age</td>
<td>1.29</td>
<td>0.76—2.18</td>
<td>0.34</td>
</tr>
<tr>
<td>Working experience with older people</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>1&lt;sup&gt;a&lt;/sup&gt;</td>
<td>__</td>
<td>__</td>
</tr>
<tr>
<td>Yes</td>
<td>1.89</td>
<td>1.09—3.28</td>
<td>0.02*</td>
</tr>
<tr>
<td>Prejudice</td>
<td>0.85</td>
<td>0.73—0.98</td>
<td>0.03*</td>
</tr>
<tr>
<td>Separation</td>
<td>0.92</td>
<td>0.79—1.08</td>
<td>0.31</td>
</tr>
<tr>
<td>Appreciation</td>
<td>1.11</td>
<td>0.89—1.39</td>
<td>0.36</td>
</tr>
<tr>
<td><strong>Chinese students (N = 204)</strong></td>
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<td></td>
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</table>
## Attitudes towards Elderly

<table>
<thead>
<tr>
<th></th>
<th>Age</th>
<th>Working experience with older people</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>≥ 20 years of age</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>1&lt;sup&gt;a&lt;/sup&gt;</td>
<td>1&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>1.95</td>
<td>1.46</td>
</tr>
<tr>
<td></td>
<td>1.01—3.77</td>
<td>0.76—2.82</td>
</tr>
<tr>
<td>&lt;20 years of age</td>
<td>1.95</td>
<td>1.01—3.77</td>
</tr>
<tr>
<td></td>
<td>&lt;20 years of age</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>1.01—3.77</td>
<td>1.46</td>
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<tr>
<td></td>
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<td>0.76—2.82</td>
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<tr>
<td></td>
<td></td>
<td>Prejudice</td>
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<td>0.88</td>
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<tr>
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<td></td>
<td>0.75—1.03</td>
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<td></td>
<td></td>
<td>Separation</td>
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<td>0.79</td>
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<td></td>
<td>0.66—0.95</td>
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<td></td>
<td></td>
<td>Appreciation</td>
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<td>0.96</td>
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<td>0.79—1.17</td>
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</table>

**Note:**<sup>a</sup> Reference category. *p ≤ 0.05