

RESEARCH ARTICLE

Nursing students' attitudes and associated factors towards older people in Heilongjiang Province, northern China: A cross-sectional study

Yang Fu¹ | Jiarui Zhang² | Lei Cao³ | Junling Ma¹ | Hong Zhu⁴ | Yan Dong⁵ | Mei Yin¹ | Lei Shi⁶ 

¹School of Humanities, Harbin Medical University, Harbin, China

²Office of the Party Committee, Shenzhen Second People's Hospital, Shenzhen, China

³Department of Nursing, Heilongjiang Nursing College, Harbin, China

⁴Renji Hospital Affiliated to Medical College of Shanghai Jiaotong University, Shanghai, China

⁵College of Foreign Language Teaching and Research, Heilongjiang University of Chinese Medicine, Harbin, China

⁶School of Health Management, Southern Medical University, Guangzhou, China

Correspondence

Mei Yin, School of Humanities, Harbin Medical University, Harbin, Heilongjiang, China.

Email: dryinmei@163.com

Lei Shi, School of Health Management, Southern Medical University, Guangzhou, China.

Email: hydleishi@126.com

Funding information

Innovative Research Projects of Graduate Students at Harbin Medical University, Grant/Award Number: YJSKYCX2019-31HYD; Research Project of Sichuan Medical and Health Law Research Center in 2021, Grant/Award Number: YF21-Y12; Directive Project of Medical Scientific Research Foundation in Guangdong, Grant/Award Number: A2022379; Guangdong Basic and Applied Basic Research Foundation, Grant/Award Number: 2020A1515110369; Project funded by China Postdoctoral Science Foundation, Grant/Award Number: 2021M701592; Scientific Research Project of Humanities College of Harbin Medical University, Grant/Award Number: HMURW20210203

Abstract

Aim: Attitudes toward older persons could affect services that are provided to them and change the value of the care they receive. The attitude of nursing students toward older persons is very important as it will affect their care of older patients in future. However, in China, the attitude of higher vocational nursing students toward older persons has not been widely studied. The purpose of this study is to explore the attitudes and factors toward older people among nursing students in higher vocational colleges in Heilongjiang Province.

Design: A cross-sectional study.

Methods: A cross-sectional study was conducted using cluster sampling. A total of 1106 nursing students from two higher vocational colleges in Heilongjiang Province participated. Multiple linear regression analysis was conducted to identify the factors influencing nursing students' attitudes toward older people.

Conclusion: This study showed that the vocational college nursing students have a positive attitude toward older persons. However, the proportion of respondents taking care of older persons as their first choice in their future career needs to be increased. Advanced vocational colleges should pay attention to the attitudes of nursing students toward older persons, and strengthen the education of career development planning, which has practical significance in meeting the diversified health needs of older persons and ensuring healthy aging.

Yang Fu and Jiarui Zhang, contributed equally.

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KEYWORDS

aging, associated factors, attitudes, China, nursing students, older people

1 | INTRODUCTION

Due to an increase in life expectancy in the 21st century, ageing has become an important phenomenon worldwide (Sakineh et al., 2018). According to the statistics released by WHO, it has been estimated that the global population aged 60 and above will reach 1.2 billion by 2025 and 2 billion by 2050 (World Health Organization, 2018). According to data from the National Bureau of Statistics, in China, by the end of 2019, the number of people aged 60 and above reached 254 million, accounting for 18.1% of the total population. The rapid growth of the older population and its vulnerability to various health disorders (multiple chronic conditions, depression, cognitive impairment, etc.) have led to an increase in the number of older patients who need healthcare services (Gholamzadeh et al., 2017; Ko et al., 2018). Moreover, the ageing population poses a challenge for health care and long-term care systems for older persons (Yinan, 2016).

The current system of healthcare services for older persons in low-income developing countries is unable to meet the demand, mainly due to the lack of medical personnel (Feng, 2019). Nurses, as members of the medical team, are responsible for taking care of older population (Sakineh et al., 2018); however, they face difficulties related to communication, heavy workload, imperfect social security system, lower benefits, poor working environment and lower social status, resulting in more nursing staff unwilling to engage in care work for older persons (Carlson, 2015; Gould, Dupuis-Blanchard, & MacLennan, 2015). Moreover, apart from shortage of nurses, there are other issues of low quality services and inefficiency owing to nurses being older in age, with low education level and without requisite qualifications (Ed et al., 2013). The nursing industry has no choice but to supplement the professional talent reserve of nurses for the older population, to meet the latter's diverse needs and improve the quality of care (Rejeh et al., 2011).

Nursing education in China is divided into basic nursing education, nursing education after graduation and continuing nursing education. Basic nursing education mainly includes secondary nursing education (technical secondary school) and higher nursing education (including college and undergraduate students). Both technical secondary schools and junior colleges are three-year courses. The purpose of basic nursing education is to prepare students for clinical nursing, community nursing or follow-up education after graduation. This study focused on the attitudes of nursing students in technical secondary schools and junior colleges towards older adults.

Nursing students with a positive attitude towards older persons can enhance their willingness to care for them with respect (Cherry et al., 2016; King et al., 2013), and thus improve the quality of care and well-being of older persons. A negative attitude may lead to social problems such as discrimination, humiliation and even abuse of the older persons (Hsu & Ling, 2018). Previous studies have

indicated that many factors such as age, gender, education level and culture could influence nursing students' attitudes towards older adults (Hweidi and Al-Hassan, 2006; Usta et al., 2012).

Substantial studies have shown that nursing students are not interested in care of older persons (Natan et al., 2015), since they find it physically exhausting, boring and being unskilled work (Hovey et al., 2018). Meanwhile, there are few studies on the attitudes of nursing students towards the older population in higher vocational colleges of China and are characterized by young age and strong plasticity. Therefore, in the context of the ageing population rising rapidly, it is urgent to carry out research on nursing students' attitudes towards older people.

The purpose of this study was to explore nursing students' attitudes and associated factors towards older people with the intention of improving their positive attitude and preventing possible negative beliefs and opinions about older people while working with them in the future.

2 | METHODS

2.1 | Study design, setting and participants

This was a cross-sectional study conducted on nursing students in two higher vocational colleges in Heilongjiang Province. The participants of the study consisted of 1,106 students enrolled in the nursing department using the cluster sampling method. Data were collected from August to December of 2019. A total of 1,106 questionnaires were distributed, and 978 nursing students completed and returned the questionnaire; the effective response rate was 88.4%.

The respondents were selected based on the following criteria: the respondents volunteered for the study and consent was sought prior to administration of the questionnaire.

2.2 | Instruments

The self-administered questionnaire consisted of two sections:

1. Socio-demographics of nursing students included gender: (male/female), religion: (yes/no), residence: (city/village), educational level: (technical/secondary school), only child in the family: (yes/no), living with older people: (yes/no), having close relationships with older relatives: (yes/no), experience participating in volunteer activities related to older people: (yes/no), experience of visiting nursing homes: (yes/no), level of willingness to work with older people: (strongly agree/agree/unsure/disagree/strongly disagree); selection of caring for older people as a

future career choice: (first choice/second choice/third choice/fourth choice/fifth choice/sixth choice/seventh choice).

2. Kogan Attitudes towards Older People (KAOP) Scale (Kogan 1961).

The KAOP was developed by Kogan and has been widely used to measure attitudes towards older people among nursing students (Kogan, 1961). The scale has been translated into Chinese and has been confirmed to have good content validity, structural validity and internal consistency. It consists of 34 items about older people, including 17 positive and negative items each. Responses are graded using a 6-point Likert scale ranging from "strongly agree = 6" to "strongly disagree = 1." The total score was between 34 and 204, with a higher score indicating a more positive attitude. A score of 102 was considered a neutral attitude towards older people (Kogan, 1961). In this study, the Cronbach's alpha coefficient of the scale was 0.897.

2.3 | Data analyses

Analyses were conducted using IBM SPSS version 25.0. A descriptive analysis was performed on the data by computing the means, standard deviations and percentages. Moreover, a normality test was conducted on the data. Group comparisons by sociodemographic variables of nursing students were performed using an independent sample *t*-test and one-way ANOVA. Multiple linear regression analysis was conducted to identify the factors influencing nursing students' attitudes towards older people. All tests were two-tailed and the level of significance was set at 0.05.

2.4 | Ethical considerations

Ethics approval for this study was granted by the research ethics committee of the university. All participants gave informed consent to the researchers before the survey, and their personal information was kept confidential.

3 | RESULTS

3.1 | Sociodemographic of participants

A total of 978 nursing students sent in valid responses in the study. The participants were mainly women, accounting for 84.15% of the sample. The majority of students did not follow any religion (91.82%, $N = 898$) and almost half of the students lived in the city (51.43%, $N = 503$). Of the 978 participants, 86.2% ($N = 843$) were enrolled in a junior college. More than half of the participants were willing to work with older persons (69.12%, $N = 676$). There were 134 (13.70%) participants who took care of older persons as their first choice for future careers. The sociodemographic characteristics of nursing students are presented in Table 1.

3.2 | Differences of KAOP scores among nursing students with different demographic characteristics

Table 2 shows KAOP scores of nursing students with different sociodemographic characteristics. There were significant differences in attitudes towards the older adults among nursing students of different gender, living with older persons, having close relationships with older relatives, experience participating in volunteer activities related to older persons, experience of visiting nursing homes, level of willingness to work with older persons and ranks distribution in selection of caring for older persons.

The mean total KAOP score of all the nursing students was 140.41 ± 23.70 . Female students (141.33 ± 21.00) had higher mean KAOP scores than male students (135.52 ± 21.60). The mean scores of those who had participated in volunteer activities related to older persons (143.18 ± 23.32) were higher than those who did not have experience participating in volunteer activities related to the older persons (139.05 ± 19.95). It also revealed that the students with experience of visiting nursing homes had more positive attitudes towards older people (141.88 ± 21.27).

3.3 | Factors associated with nursing students' attitudes towards older people

Multiple linear regression analysis indicated the factors associated with nursing students' attitudes towards older people, and the results are shown in Table 3. Among the variables, gender, having close relationships with older relatives, experience of visiting nursing homes, level of willingness to work with care for older persons, and ranking distribution in the selection of caring for older persons as a future career choice were factors influencing nursing students' attitudes towards the older population.

4 | DISCUSSION

This cross-sectional study mainly discusses nursing students' attitudes toward older persons. To the best of our knowledge, there are only a few studies on nursing students' attitudes towards older persons in China. This study has important reference significance in the education of nursing students.

The mean total KAOP score of all the nursing students was 140.41 ± 23.70 . This result was slightly higher than the scores reported in previous studies, where the KAOP sample mean score was 131.21 ± 14.40 and 132.94 ± 14.74 , respectively (Erdemir et al., 2011; Turan et al., 2016). A possible reason for this is filial piety which plays an important role in Chinese culture. In China, filial piety is not just about demonstrating respect for parents but is also an important social norm. It mainly reflects children's behaviour and attitudes towards their parents. The social significance of filial piety is to maintain harmony, that is to respect and obey elders and the ruling order. Therefore, under the influence of the Chinese filial piety culture,

TABLE 1 Socio-demographics of nursing students(N = 978)

Variables		Number	Percentage (%)
Gender	Male	155	15.85
	Female	823	84.15
Religion	Yes	80	8.18
	No	898	91.82
Place of residence	City	503	51.43
	Village	475	48.57
Educational level	Technical Secondary School	135	13.80
	Junior College	843	86.20
The only child in the family	Yes	607	62.07
	No	371	37.93
Living with elderly	Yes	806	82.41
	No	172	17.59
Having close relationships with older relatives	Yes	839	85.79
	No	139	14.21
Experience participating in volunteer activities related to the elderly	Yes	322	32.92
	No	656	67.08
Experience of visiting nursing homes	Yes	413	42.23
	No	565	57.77
Level of willingness to work with care for the elderly	Strongly agree	209	21.37
	Agree	467	47.75
	Unsure	209	21.37
	Disagree	74	7.57
	Strongly disagree	19	1.94
Ranks distribution in selection of caring for the elderly as a future career choice	First choice	134	13.70
	Second choice	248	25.36
	Third choice	348	35.58
	Fourth choice	107	10.94
	Fifth choice	56	5.73
	Sixth choice	10	1.02
	Seventh choice	75	7.67

nursing students' attitudes towards older persons may be better (Huang & Chin-Shan, 2013; Zisberg et al., 2015). However, social transformation and growth of urban culture has led to less extended families and more nuclear families in Turkey (Usta et al., 2012). Therefore, the younger generation has less contact with the older population. In addition, the increasingly difficult living conditions and the reduction of resources may increase young people's prejudice and negative attitudes towards older persons (Usta et al., 2012).

Our study found that female nursing students are more interested in geriatric care than male nursing students, and the results are consistent with the findings of a large sample study (Deltisidou et al., 2015; Koskinen et al., 2012). This phenomenon may be due to the fact that women are more sensitive and emotional and often assume the responsibility of taking care of the older persons in the family; therefore, they perceive care of older persons more objectively and have a better understanding of the associated job responsibilities (Pooja and Kumar, 2020).

Our study also showed that nursing students who visited older people in nursing homes and other pension institutions had a more positive attitude towards caring for them, which is consistent with the results of previous studies (Chi et al., 2016). As expected, nursing students who have a close relationship with their older relatives have a better attitude towards older people. This may be due to the fact that as young children, they were closer to the older people, and hence, the desire to appreciate and repay them. They often interact and communicate with older people, which helps eliminate age discrimination and prejudices and forms a positive attitude towards older people. Some studies have shown that nursing students who are close to their older relatives are more likely to pay attention to the good qualities of the older people, learn from their rich life experience, tolerate their shortcomings and mistakes, listen to their needs patiently, and actively seek ways to help them (Cherry et al., 2016; Söderberg et al., 2016).

TABLE 2 Differences of KAOP scores among nursing students with different demographic characteristics (N = 978)

Variables	Mean \pm SD	t/F	p
Gender		-3.146	.002
Male	135.52 \pm 21.60		
Female	141.33 \pm 21.00		
Religion		-1.866	.062
Yes	136.18 \pm 23.20		
No	140.78 \pm 20.98		
Residency area		1.445	.149
City	141.36 \pm 21.70		
Village	139.40 \pm 20.61		
Educational background		-1.923	.055
Technical Secondary School	137.16 \pm 20.68		
Junior College	140.93 \pm 21.24		
The only child in the family		-1.042	.298
Yes	139.86 \pm 21.19		
No	141.31 \pm 21.20		
Living with elderly		2.948	.003
Yes	141.33 \pm 21.20		
No	136.10 \pm 20.67		
Having close relationships with older relatives		5.411	<.001
Yes	141.88 \pm 21.27		
No	131.53 \pm 18.42		
Experience participating in volunteer activities related to the elderly		2.875	.004
Yes	143.18 \pm 23.32		
No	139.05 \pm 19.95		
Experience of visiting nursing homes		3.646	<.001
Yes	143.28 \pm 22.22		
No	138.31 \pm 20.17		
Level of willingness to work with care for the elderly		2.234	<.001
Strongly agree	150.44 \pm 25.56		
Agree	141.08 \pm 18.69		
Unsure	133.87 \pm 16.64		
Disagree	132.20 \pm 15.48		
Strongly disagree	108.79 \pm 26.95		
Ranks distribution in selection of caring for the elderly as a future career choice		1.712	<.001
First choice	146.29 \pm 23.67		
Second choice	145.28 \pm 21.86		
Third choice	139.79 \pm 19.00		
Fourth choice	137.98 \pm 17.62		
Fifth choice	137.11 \pm 17.34		
Sixth choice	126.30 \pm 17.98		
Seventh choice	127.16 \pm 23.87		

Abbreviation: KAOP, Kogan's Attitude towards older people scale.

It is worth noting that about 70% of the participating nursing students were willing to take care of older people. At the same time, the linear analysis results also showed that nursing students'

willingness to take care of older persons was related to their attitudes towards the older people. However, only 134 (13.70%) participants took care of older persons as their first choice for their

TABLE 3 Multiple linear regression analysis of nursing students' attitudes towards older people

Variables	β	SE	t	p
Gender	0.109	1.735	3.647	<.001
Living with elderly	-0.052	1.689	-1.711	.087
Having close relationships with older relatives	-0.111	1.871	-3.614	<.001
Experience participating in volunteer activities related to the elderly	0.046	1.647	1.272	.204
Experience of visiting nursing homes	-0.082	1.527	-2.302	.022
Level of willingness to work with care for the elderly	-0.256	0.846	-6.897	<.001
Ranks distribution in selection of caring for the elderly as a future career choice	-0.081	0.484	-2.250	.025

Note: adjusted $R^2 = 0.136$, $F = 23.033$.

future career. Therefore, in higher vocational colleges, in addition to setting up long-term care nursing courses for older people, for common diseases, schools should also pay attention to training students' positive attitudes towards older persons. Moreover, the practice of nursing homes, community home-based care for older people and other links can be added to increase opportunities for students to interact with the older persons, so that students can contact them in different environments and deepen their understanding and experience related to old age care requirements. At the same time, these activities can reinforce a positive attitude towards the older population. In addition, career planning education can be carried out to enhance the professional identity of nursing students.

Psychological research has shown that in the absence of motivation, people's abilities can only play a 20%–30% role in realizing their potential; once stimulated, 80%–90% of the potential can be achieved (Dweck, 2000). Attitudes are not immutable, and nursing students in the education stage have strong plasticity; therefore, the dynamic measurement of nursing students' attitudes towards older people should be strengthened in the teaching process. Attitudes can be investigated through scales, interviews, daily behaviours and other ways to identify risk factors in time and intervention, and promote the improvement of nursing intentions for the older population. At the same time, by understanding the current situation, we can estimate the number of nursing students who will choose senile nursing in the future, predict the supply and demand of senile nursing talents in the future, and guide schools to strengthen the construction of senile or geriatric nursing curriculum.

This study has some limitations. First, this cross-sectional study was unable to explore the causal relationships among variables. The data were obtained from nursing students at only two higher vocational colleges in Heilongjiang Province. For this reason, the current findings may not be applicable to all nursing students in China. The study did not consider whether the students had received geriatric training, which may have affected their responses to attitudes towards older people. Second, in these types of research, the tendency to answer as expected may

also influence the results of this study. Finally, because of the sloppy design of age items in the questionnaire, the data collection was not accurate, necessitating age to be excluded from the data analysis.

5 | CONCLUSIONS

This study shows that vocational college nursing students have a positive attitude towards older persons. However, the proportion of respondents taking care of older people as their first choice in their future careers needs to be increased. Therefore, vocational nursing education should be strengthened positively; a second classroom should be added, professional ethics education should be increased; parents should be mobilized to participate and negative effects should be minimized to improve nursing students' employment intention and promote the sustainable development of nursing professionals.

AUTHOR CONTRIBUTIONS

All authors discussed the study design. YF, JZ, MY and LS wrote the first draft of the manuscript. YF, JZ, LC, JM, HZ and YD analysed and interpreted the research data. LC, JM, HZ and YD edited the paper. YF, JZ, MY and LS revised the manuscript.

ACKNOWLEDGEMENTS

The authors are extremely grateful to all the members who took part in this study.

CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

ORCID

Lei Shi  <https://orcid.org/0000-0002-8924-0734>

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How to cite this article: Fu, Y., Zhang, J., Cao, L., Ma, J., Zhu, H., Dong, Y., Yin, M., & Shi, L. (2022). Nursing students' attitudes and associated factors towards older people in Heilongjiang Province, northern China: A cross-sectional study. *Nursing Open*, 9, 2454–2460. <https://doi.org/10.1002/nop2.1262>