

Knowledge of Ageing, Attitude towards and Willingness to Work with Older People among Malaysian Undergraduate Nursing Students

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ABSTRACT

Background: Nursing students are the future care providers for the aged population. Thus, they need to be prepared for quality care delivery during their study period at universities or colleges. **Objectives:** This study aims to determine undergraduate nursing students' knowledge of ageing, attitudes towards older people and willingness to work with older people. **Methods:** A cross-sectional study was conducted among 141 undergraduate nursing students in a public university in Malaysia. Knowledge of ageing, attitudes towards older people and willingness to work with older people were assessed using standardised tools, namely the Palmore Facts on Aging Quiz, Kogan's Attitudes towards Older People Scale and Nolan's Intent to Work with Older People Questionnaire, respectively. **Results:** The results showed that 83.7% and 85.8% of the participants had high knowledge of ageing and willingness to work with older people, respectively. Meanwhile, 90.1% of the participants had a negative attitude towards older people. The attitude towards older people and knowledge of ageing were significantly associated with willingness to work with older people. Knowledge of ageing has no significant association with the attitude towards older people. Similarly, there was no significant association between demographic characteristics and knowledge of ageing, attitudes towards older adults and willingness to work with older people. **Conclusion:** Gerontological nursing education should emphasise clinical experience with older people, specifically in geriatric wards or nursing homes, to create a more positive attitudes towards older adults.

Keywords: Knowledge; Attitude; Willingness; Older People; Nursing Students

INTRODUCTION

The ageing population is a worldwide phenomenon. A report highlighted that the world population will increase from 8 billion to 9.6 billion by 2050, which will post a significant challenge in all countries across the globe (Amiri, 2018). According to recent statistics, Malaysia's population was estimated at 32.72 million, out of which over 2.26 million is composed of the 65 years old and above age group in the first quarter of 2020 as compared to 2.16 million in the first quarter of 2019. An increase of about 0.3% of older people population and a decline in the 14 years old and below age-group population indicate that the Malaysian population is slightly becoming an ageing population (Department of Statistics, 2020).

The rise in the ageing population may also be

correlated with the increase of healthcare workers' demands and responsibilities as older people tend to be associated with numerous health problems. This trend affects generations of younger nurses and nearly all future nursing students are expected to predominantly work with older people after completing their primary education. Thus, nursing students must be adequately prepared for taking care of the growing older people population.

Diverse studies have explored nursing students' knowledge and attitude towards ageing and willingness to care for and work with older people. A past study that explored nursing students' knowledge reported that nursing students' knowledge of ageing was at a low level (Ghimire *et al.*, 2019). In addition, a study conducted by McCloskey *et al.*, (2020) showed a normal range in nursing students' knowledge of ageing,

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which was also insignificantly related to their attitudes towards older people. The results showed nursing students' knowledge of ageing was alarming as they are the future healthcare provider responsible for caring for older people.

Although nursing students' level of knowledge is worrying, many studies reported nursing students' positive attitudes towards the ageing process and older people in general (Ghimire *et al.*, 2019). However, there is still a knowledge gap in nursing students' attitudes towards a specific group of older people such as those who need special care or have a disability. In contrast, another past study (Abreu & Caldevilla, 2015) reported nursing students' negative attitudes towards older people.

In relation to ageing and older people, Ben Natan *et al.*, (2015) studied nursing students' willingness to work in geriatric wards. The results showed that the students had low intention to work in geriatric wards and were affected significantly by others around them, such as their clinical instructors. Two past studies carried out in China (Chi *et al.*, 2016; Zhang *et al.*, 2016) reported nursing students' neutral level of willingness to care for older people. However, a study conducted in Nepal (Ghimire *et al.*, 2019) reported nursing students' positive attitudes towards and willingness to work with older people.

Very few studies have been conducted in Malaysia regarding nursing students' knowledge and attitudes towards older people. A study was conducted to determine the relationship between nursing students' attitudes and work preference towards older people. The results revealed that most students had a positive attitude towards older people. Nevertheless, most of them were not interested in working in geriatric care (Syed Elias *et al.*, 2020). Another study conducted among healthcare students in a Malaysian public university found that a majority of them had a high level of knowledge of ageing (Panmial *et al.*, 2015).

Nevertheless, no studies have been conducted in Malaysia with regards to the relationship between knowledge of ageing, attitudes towards and willingness to work with older people. Thus, the researcher sought to study this potentially important aspect of patient care among future nurses. Therefore, the purpose of this study was to determine undergraduate nursing students' knowledge of ageing, attitudes towards older adults and willingness to work with older people.

METHODOLOGY

Research Design, Target Population and Setting

A cross-sectional study was conducted from November 2020 to February 2021. The research population consisted of undergraduate nursing students from a public university located on the East Coast of Peninsular Malaysia. Two inclusion criteria were set for participation in the study: 1) participants were undergraduate nursing students; 2) participants had already registered for the academic year 2020/2021 before the data collection period started. The students were recruited using a convenience sampling method. The sample size was measured by using Raosoft Sample Size Calculator. A minimum sample size of 216 was required to achieve a confidence level of 95% and a margin error of 5%. However, a total 141 participants students were achieved in this study.

Research Instrument

The data for this study were gathered using online questionnaires consisting of four sections. Section 1 consisted of questions on demographic data of the participants, including age, gender, year of studies, race, marital status, type of family, the frequency of contact with older people, and the length of clinical posting.

Section 2 consisted of a survey on the participants' knowledge of older people, which contained 50 questions. An updated Palmore's Facts on Aging Quiz was used in this section (Breyspraak & Badura, 2015). The revised version consisted of 50 statements that needed to be answered by the respondents with either 'True' or 'False'. The scores had been classified into two categories, namely 0-25 and 26-50, indicating a low level and a high level of knowledge, respectively. Some items in the questionnaire were reviewed and modified by the researcher in order to suit the Malaysian scenario. For example, 60 years old was termed old age in Malaysia instead of 65 years old.

Section 3 consisted of the Kogan's Attitudes towards Older People Scale (KAOP), used to measure attitudes towards senior citizens. This version contained 34 items with a 6-point Likert scale, consisting of 17 matched pairs of positive and negative statements; the negative statements were reversely scored. The cumulative KAOP score ranges from 34 to 204, with higher total scores indicating a positive attitude (Kogan, 1961).

Section 4 consisted of the Intent to Work with Older People questionnaire, used to measure perceptions of working with older adults. This 15-item questionnaire utilised a five-point Likert scale for agreement; nine of the 15 items were negative statements that had been reversely coded prior to calculating a cumulative score. The cumulative score ranged from 15 to 75, whereby higher scores indicated greater intent to work with older adults (Nolan *et al.*, 2002).

Ethical Consideration

Ethical approval was obtained from the Kulliyyah of Nursing Post Graduate Research Committee (KNPGRC) and International Islamic University Malaysia Research Ethics Committee (IREC) with the reference number IIUM/504/14/11/2/IREC 2020-KON2, on 20 October 2020 and consent from the participants was also taken.

Method of Data Analysis

The data collected were analysed using Statistical Package for Social Sciences (SPSS) Version 22.0 (IBM, Inc., Armonk, NY, USA) to obtain descriptive and inferential statistics. Statistical methods employed were frequency count, percentage and chi-square. The chi-square test was used to analyse the association between the demographic characteristics and knowledge of ageing, attitude towards and willingness to work with older people and the association between knowledge, attitude and willingness. For the statistical test, a two-tailed *p*-value <0.05 should be considered statistically significant.

RESULTS

Demographic Characteristics of Participants

Table 1 shows the distribution of the participants’ demographic characteristics. Out of 141 participants in this study, the vast majority of them were 121 female participants (85.8%) and only 20 male participants (12.2%). The age range of participants were from 19 to 29 years old, with the largest group of the respondents indicating their age between 19 and 22 years old (86, 61%). A vast majority (97.9%) of the participants consisted of Malay students, while the remaining participants were non-Malay students. Out of 141 participants, 26 (18.4%) were from Year 1, 18 (12.8%) from Year 2, 32 (22.7%) from Year 3 and 65 (46.1%) from Year 4. A majority (128, 90.8%) of the participants live in a nuclear family. Less than a half (60, 42.6%) of the participants stated that they had met with older

people once a month. It was found out that approximately half (71, 50.4%) of participants had been through a clinical posting for more than 22 weeks.

Knowledge of Ageing, Attitude towards and Willingness to Work with Older People

Table 2 shows the results of the analysis of the variables knowledge of ageing, attitude towards older people and willingness to work with older people. The mean total knowledge score was 29.1±4.2. A large majority (83.7%) of the participants depicted a high level of knowledge, whereas a small minority (16.3%) of the participants depicted a low level of knowledge on FAQ2. The mean total attitude score was 154.3±17.4. The results showed a significant majority (90.1%) of the participants’ perceived negative attitude and an insignificant minority (9.9%) of the participants’ perceived positive attitude towards older people. Besides, the results showed that the majority (85.8%) of the participants were willing to work with older people, and less than a quarter (14.2%) of the participants scored low. The mean total willingness to work with older people score was 52.8±6.0.

Table 1: Demographic Characteristics of Participants (N=141)

Characteristics	Number	Percentage
Age		
19 – 22	86	61.0
23 – 29	55	39.0
Gender		
Male	20	14.2
Female	121	85.8
Race		
Malay	138	97.9
Non-Malay	3	2.1
Year of studies		
First year	26	18.4
Second year	18	12.8
Third year	32	22.7
Fourth year	65	26.1
Type of family		
Nuclear	128	90.8
Single-parent	5	3.5
Extended	8	5.7
Frequency of contact with older people		
Daily	41	29.1
Twice per week	15	10.6
Once per week	17	12.1
Once per month	60	42.6
Never	8	5.7
Length of clinical posting		
Less than 22 weeks	70	49.6
More than 22 weeks	71	50.4

Note: SD= Standard deviation

Table 2: Summary Score of Knowledge of Ageing, Attitude towards and Willingness to Work with Older People (N=141)

Variables	Number	Percentage
Knowledge (Mean = 29.1, SD = ±4.2)		
High knowledge	118	83.7
Low knowledge	25	16.3
Attitude (Mean = 154.3, SD = ±17.4)		
Positive attitude	14	9.9
Negative attitude	127	90.1
Willingness (Mean = 52.8, SD = ±6.0)		
High willingness	121	85.8
Low willingness	20	14.2

Association between Knowledge of Ageing, Attitude towards and Willingness to Work with Older People

The association between knowledge of ageing, attitude towards and willingness to work with older people revealed that knowledge of ageing and attitude towards older people were significantly associated with willingness to work with older people as $p < 0.05$. Nevertheless, no significant association was identified between knowledge of ageing and attitude towards older people as $p > 0.05$, as shown in Table 3.

Table 3: Association between Knowledge of Ageing, Attitude towards and Willingness to Work with Older People

Variables	Level of attitudes		X^2	p-value
	Negative (%)	Positive (%)		
Level of knowledge			4.286	0.054
Low	18 (78.3)	5 (21.7)		
High	109 (92.4)	9 (7.6)		
Variables	Level of willingness		X^2	p-value
	Low (%)	High (%)		
Level of attitude			10.498	0.006*
Negative	14 (11.0)	113 (89.0)		
Positive	6 (42.9)	8 (57.1)		
Variables	Level of willingness		X^2	p-value
	Low (%)	High (%)		
Level of knowledge			9.580	0.005*
Low	8 (34.8)	15 (65.2)		
High	12 (10.2)	106 (89.8)		

Note: $X^2 =$ Chi-square, * $p < 0.05$

Association between the demographic variables and knowledge of ageing, attitude towards and willingness to work with older people

Tables 4, 5 and 6 show the demographic variables associated with knowledge of ageing, attitude towards and willingness to work with older people. However, no significant association was identified between any of the demographic characteristics and knowledge of ageing, attitude towards and willingness to work with older people.

Table 4: Association between Demographic Variables and Knowledge of Ageing

Variables	Level of knowledge		X^2	p-value
	Low (%)	High (%)		
Age			0.231	0.631
19 – 22	13 (15.1)	73 (84.9)		
23 – 29	10 (18.2)	45 (81.1)		
Gender			0.232	0.743
Male	4 (20.0)	16 (80.0)		
Female	19 (15.7)	102 (84.3)		
Race			0.597	1.000
Malay	23 (16.7)	115 (83.3)		
Non-Malay	0 (0.0)	3 (100.0)		
Year of studies			1.534	0.674
First year	3 (11.5)	23 (88.5)		

Second year	2 (11.1)	16 (88.9)		
Third year	7 (21.9)	25 (78.1)		
Fourth year	11 (16.9)	54 (83.1)		
Type of family			2.791	0.248
Nuclear	23 (18.0)	105 (82.0)		
Single-parent	0 (0.0)	5 (100.0)		
Extended	0 (0.0)	8 (100.0)		
Frequency of contact with older people			1.992	0.737
Daily	8 (19.5)	33 (80.5)		
Twice per week	2 (13.3)	13 (86.7)		
Once per week	3 (17.6)	14 (82.4)		
Once per month	10 (16.7)	50 (83.3)		
Never	0 (0.0)	8 (100.0)		
Length of clinical posting			0.036	0.849
Less than 22 weeks	11 (15.7)	59 (84.3)		
More than 22 weeks	12 (16.9)	59 (83.1)		

Note: $X^2 = Chi-square$, * $p < 0.05$

Table 5: Association between the Demographic Variables and Attitude towards Older People

Variables	Level of attitude		X^2	p- value
	Low (%)	High (%)		
Age			0.071	0.790
19 – 22	77 (89.5)	9 (10.5)		
23 – 29	50 (90.9)	5 (9.1)		
Gender			2.643	0.115
Male	16 (80.0)	4 (20.0)		
Female	111 (91.7)	10 (8.3)		
Race			0.338	1.000
Malay	124 (89.9)	14 (10.1)		
Non-Malay	3 (100.0)	0 (0.0)		
Year of studies			0.150	0.985
First year	23 (88.5)	3 (11.5)		
Second year	16 (88.9)	2 (11.1)		
Third year	29 (90.6)	3 (9.4)		
Fourth year	59 (90.8)	6 (9.2)		
Type of family			0.618	0.734
Nuclear	115 (89.8)	13 (10.2)		
Single-parent	5 (100.0)	0 (0.0)		
Extended	7 (87.5)	1 (12.5)		
Frequency of contact with older people			2.244	0.691
Daily	37 (90.2)	4 (9.8)		
Twice per week	12 (80.0)	3 (20.0)		
Once per week	16 (94.1)	1 (5.9)		
Once per month	55 (91.7)	5 (8.3)		
Never	7 (87.5)	1 (12.5)		
Length of clinical posting			0.001	0.978
Less than 22 weeks	63 (90.0)	7 (10.0)		
More than 22 weeks	64 (90.1)	7 (9.9)		

Note: $X^2 = Chi-square$, * $p < 0.05$

Table 6: Association between Demographic Variables and Willingness to Work with Older People

Variables	Level of willingness		X ²	p- value
	Low (%)	High (%)		
Age			0.352	0.631
19 – 22	11 (12.8)	75 (87.2)		
23 – 29	9 (16.4)	46 (83.6)		
Gender			2.240	0.164
Male	5 (25.0)	15 (75.0)		
Female	15 (12.4)	106 (87.6)		
Race			0.507	1.000
Malay	20 (14.5)	118 (85.5)		
Non-Malay	0 (0.0)	3 (100.0)		
Year of studies			2.829	0.419
First year	1 (3.8)	25 (96.2)		
Second year	3 (16.7)	15 (83.3)		
Third year	5 (15.6)	27 (84.4)		
Fourth year	11 (16.9)	54 (83.1)		
Type of family			0.891	0.641
Nuclear	19 (14.8)	109 (85.2)		
Single-parent	0 (0.0)	5 (100.0)		
Extended	1 (12.5)	7 (87.5)		
Frequency of contact with older people			1.618	0.805
Daily	4 (9.8)	37 (90.2)		
Twice per week	2 (13.3)	13 (86.7)		
Once per week	2 (11.8)	15 (88.2)		
Once per month	11 (18.3)	49 (81.7)		
Never	1 (12.5)	7 (87.5)		
Length of clinical posting			0.867	0.352
Less than 22 weeks	8 (11.4)	62 (88.6)		
More than 22 weeks	12 (16.9)	59 (83.1)		

Note: X² = Chi-square, * p < 0.05

DISCUSSION

The present study was designed to determine the undergraduate nursing students' knowledge of ageing, attitudes towards older adults and willingness to work with older people. The results showed that the majority of the nursing students had a high level of knowledge of ageing and a high level of willingness to work with older people. The findings support prior studies which have obtained and reported the same results that nursing students had a high level of knowledge of ageing and a high level of willingness to work with older people (Zhang *et al.*, 2016; Ghimire *et al.*, 2019; McCloskey *et al.*, 2020; Cheng *et al.*, 2021). A possible explanation for this might be that the gerontological nursing course provides theoretical knowledge about ageing to the students in the senior year of their studies. The majority of the nursing students who participated in the current

study were in year 3 and year 4. Furthermore, the year 4 nursing students had already completed the gerontological nursing clinical attachment, exposing them to real life situations of caring for older adults that might have influenced their willingness to care for them. In addition, about half of the nursing students in the current study, who were approaching their graduation, had also experienced a longer clinical placement (50.4%), showing that they had been exposed to the working environment with older people. These results support the idea that knowledge and clinical experience of the nurses are the key elements that drive the intention to work with older people. According to Cheng *et al.*, (2021), the preparation of an adequate nursing workforce for older adult care is a cornerstone of quality care provision as lecturers and clinical instructors of nursing students are in a good position to impart knowledge about older adults and

develop related activities to increase the nursing students' preference for working with older adults.

On the other hand, having a high level of knowledge cannot be an indication of having a positive attitude, as shown in this study. Almost all participants in this study indicated a negative attitude towards older people. This finding agrees with the findings of a study in Malaysia (Damulak *et al.*, 2015) and a study in Ajman (Sheikh *et al.*, 2013) in which female students were found to exhibit a negative attitude more towards older people. However, this conclusion is inconsistent with the findings of Faronbi *et al.*, (2017) that identified a favourable and positive attitude towards older people among nursing students who participated in their study. Although the reasons for the negative attitude indicated by the nursing students in the present study are unclear, it seems possible that the negative attitude is due to their unpleasant experience with unhealthy older adults. This is supported by a previous study on nursing students who had negative attitudes towards ageing that might have been derived from culture, experiences, observations, personal beliefs and values, which are not the reality of older people in the actual sense (Abreu & Caldevilla, 2015). Therefore, positive attitudes towards older people care are highly needed and critically important for better healthcare and the wellbeing of older people (Muhsin *et al.*, 2020). This finding is an indicator for future researchers to fill the gap in determining the reasons for the perceived negative attitude.

In the present study, the attitude towards older people and knowledge of ageing were significantly associated with willingness to work with older people. However, attitude towards older people has no association with knowledge of ageing. Contradictory to the previous study by Chu & Chu (2013), which revealed that the attitude towards older people could be regarded as an associating factor between knowledge of ageing and willingness to work with older people. There may be other reasons for this situation. In the present public university, the topic of gerontological nursing is incorporated and taught to the students along with other nursing subjects such as community health nursing and medical surgical nursing. Moreover, the hospital where these nursing students were attached for clinical placement did not provide a separate ward for older people. Thus, it is suggested that the Malaysian educational institutions provide the students with

experience at a geriatric ward or a nursing home because gerontological nursing education with positive clinical learning experiences could improve nursing students' attitudes towards older people and increase their interest in working with them (Liu *et al.*, 2013).

In addition, this study found no association between demographic characteristics and knowledge of ageing, attitude towards older people and willingness to work with older people. The present study has distinguished the prediction as no factors can be associated with knowledge of ageing, attitude towards older people and willingness to work with older people. This might be due to the small sample size of the present study compared to other studies conducted before. Furthermore, it could also be due to the homogeneity of the study participants such as gender, race, year of studies and type of family, which may contribute to these insignificant results of the study.

Several limitations to this study need to be acknowledged. First, the current study was limited by the relatively small sample size, especially the sample of male nursing students and only one institution was involved. A larger study involving more male and female nursing students from several public and private nursing institutions would confirm the results. Second, the cross-sectional study was done in a short duration of time. Thus, the changes in knowledge of ageing, attitudes towards older adults and willingness to work with older people among the nursing students over the time period of the academic years ahead could not be observed and examined. Third, this study was done in only one public institution. Hence, knowledge of ageing, attitudes towards older adults and willingness to work with older people of nursing students' in other institutions may not have the same results and cannot be generalised to the general population. Future studies may employ a mixed-method approach to investigate nursing students' opinions about their knowledge of ageing. Further research might also evaluate their attitudes towards older adults and willingness to work with older people.

CONCLUSION

The majority of nursing students involved in this study had high knowledge of ageing and willingness to work with older people; nevertheless, they had a negative attitude towards older people. Knowledge of ageing and the attitude towards older people were

significantly associated with willingness to work with older people. Nevertheless, knowledge of ageing has no significant association with the attitude towards older people. The findings suggest nursing lecturers and Malaysian educational institutions generate future nurses with better attitudes and knowledge. Given that students' attitudes affect communication with older people, gerontological nursing education should emphasise clinical experience with older people, specifically in geriatric wards or nursing homes, to create a more positive attitudes towards older adults.

Conflict of Interest

The researcher declares that there is no conflict of interests.

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