

Relation between Nursing Students' Knowledge of Aging and Attitude towards Elderly People and Their Will and Intent to Work with the Elderly

Soad Hassan Abd Elhameed Eltantawy

Lecturer, Gerontological Nursing, Faculty of Nursing, Mansoura University, 60 Elgomhouria St., Mansoura City, Egypt

E-mail: drsoadhassan@mans.edu.eg

Abstract

The changing population structure has many implications for the elderly and nurses must be prepared to meet the challenges of caring for this rapidly increasing segment of population. **Aim:** Assess nursing students' knowledge of aging, attitude towards elderly people, will and intent to work with the elderly and determine the relation between nursing students' knowledge of aging, attitude towards elderly and their will and intent to work with the elderly. **Method:** A descriptive co-relational study was used via self reported questionnaire, completed by 596 students from the faculty of nursing-Mansoura University. Students' responses were analyzed using factor analysis, correlation coefficients, T-test, and Anova test. **Results:** Mansoura nursing students have a lack of knowledge of aging and held a positive attitude toward the elderly. As well they showed a high score of intent and will to work and care for the elderly people. A statistically significant correlation was found between knowledge of aging, attitude toward elderly, intent and will to work and care for the elderly. **Conclusion:** knowledge of aging of the nursing student should be increased in order to improve quality of care and to provide effective care services to the elderly people using new teaching and educational strategies.

Key Words: Knowledge of aging, Attitude, Elderly people, Nursing students, Will, Intent.

1. Introduction

Aging is an important part of all human societies reflecting the biological changes that occur, but also reflecting cultural and societal convention (Aubrey & Grey, 2012). The world population is rapidly ageing. According to World Health Organization (2012), between 2000 and 2050, the proportion of the world over 60 years will double from about 11% to 22%. The absolute number of persons aged 60 years and over is expected to increase from 605 million to 2 billion over the same period. In the WHO Eastern Mediterranean Region, every country is facing the challenge of population ageing, with minor variations in magnitude and pace. As declining fertility rates and improvements in life expectancy translate into greater population segments of older people. Currently, 5.8% of the population in the Region is over the age of 60. By 2025 that number will increase to 8.7%, and by 2050, to approximately 15% of the total population (WHO, 2012). According to the Central Agency for Public Mobilization and Statistics (2010), the number of elderly in Egypt was 3.3 million by 4.2% of the total population and this percentage are expected to increase to 8% by the year 2030. So the nurses must be prepared to meet the challenges of caring for this rapidly increasing segment of population and be aware of the characteristics of the aging population, special concerns and issues of importance to those individuals who will most likely dominate nursing practice in the 21st century.

Our nation's health care is significantly in need of more gerontologically trained nursing faculty and registered nurses, remains woefully unprepared to address the complex health care needs of its older citizens, whose numbers continue to grow at an unprecedented rate. Nurses play an essential role in the provision of acute and chronic care, health education, and health promotion for these older people. Nursing students who plan to be care providers could have a lack of knowledge of aging or hold unfavorable attitudes toward working with elderly people that could influence their willingness to care for or intention to work with them (Fox 2013 & Flood, Clark 2009). Significantly, Alsenany (2007) pointed out that in the past 30 years, student nurses have developed stereotypes and misconceptions about older people, and that nurses tended to have minimal interest in working at nursing homes caring for older people; they preferred to work with children and adult patients. The number of nurses interested in

working with older people has decreased (Herdman 2002, Söderhamn et al.2001& Happle 1999). Because of inexperience with old age and vulnerability to social stereotypes of the old age, many college students have been targeted for education programs designed to produce attitudinal change. Several studies have been conducted to examine and improve attitude toward elderly. Koh (2011), Bringle (1993)& Lusky (1986), employed in their assessment of attitudinal change usually found the students to be positive in their attitudes which mean that attitude are more likely to be neutral rather than negative. However, some investigators disagree with these results. Unlike other socially stigmatized groups, most persons anticipate that they too will one day join the aged population. However, research indicates that negative attitudes toward older adults are becoming increasingly prevalent across cultures (Gallbraith 1987).

Review of the related literature showed that nurses' attitudes and knowledge of ageing may affect their expectations about their working lives and the ways in which they care for and approach their clients. Therefore, education, including gerontological nursing, is an important issue in the nursing profession, with a focus on assessing the perceptions and attitudes of student nurses towards gaining knowledge and skills in geriatric care in order to feel competent in the care of elderly people at different institutions. Studies on the attitudes of nursing students, staff, and other health professionals toward the elderly and elder care revealed that many of them have negative attitude toward the elderly (Timms 1996, Lookinalnd 1995& Sheffer 1995). This is an important finding since other studies on the relationship between attitude and quality of care suggest that the more negative the attitude, the poorer the quality of care (Pursey & Luker 1995). Attempts to provide high quality elder care must take into consideration both the attitude of the nurses toward the elderly and their knowledge of the aging process. Educational promotion of knowledge about aging is emphasized for the formation of positive attitudes toward older adults (Huang 2013). Zakari (2005), in a study of Saudi nursing students found that Knowledge and attitude may affect nurses' expectations of their working lives and influence the way in which they care for the elderly. Research on this relationship indicates that adequate education and preparation in meeting the needs of the aging population are necessary to develop the positive attitudes and approaches needed for the provision of quality care (Slevin 1991). Gaps in this knowledge can lead to elder abuse, a decrease in the quality of life of the elderly and increased anxiety and tension for the nurse (Huber et al. 1992).

2. Aims of the study: This study was conducted in order to:

1. Assess nursing students' knowledge of aging and attitude toward the elderly and will and intent to work with the elderly.
2. Determine the relation between nursing students' knowledge of aging, attitude toward the elderly people and their will and intent to work with the elderly.

Research question:

What is the relationship between nursing students' knowledge of aging, attitude toward elderly people and their will and intent to work with the elderly?

3. Materials and Method:

Study design: A descriptive, co-relational study was used via a self-reported questionnaire.

Setting: The study was carried out at the faculty of nursing Mansoura University.

Subjects: This study was accomplished using a non-probability, voluntary, and convenience sampling method. This method was chosen to mitigate the potential for low response rate, and recruit a broad survey sample. The study included the nursing students enrolled in the baccalaureate nursing program. The total number was 596 students from the following academic year:

- | | |
|-------------------------|-------------|
| 1. 1st year | 139 student |
| 2. 2nd year | 57 student |
| 3. 3 rd year | 107 student |
| 4. 4 th year | 205 student |
| 5. Internship year | 88 student |

Tools: Five tools were used in the study.

Tool I: Nursing students' socio-demographic characteristics and educational background questionnaire.

It was developed by the researcher and consists of two parts: Part I: Socio-demographic characteristic of the study sample such as age, sex, marital status, no. of children, religion, academic year level, and family income level. Part II: it includes questions related to previous knowledge of aging and experiences of caring such experience living with elderly, interest in elderly care/ issues, communication with elderly, previous knowledge of aging or training and source of this knowledge.

Tool II: Facts on Aging Quiz 2 (FAQ2)

The FAQ2 was developed by Palmore (1981) and was used in different studies to test knowledge about. It consists of 25 true-false statements which measure knowledge related to basic physical, psychological, and social facts on aging. Scoring system of student's knowledge is one grade for the correct answer and score zero for incorrect or no answer. The knowledge score for each participant is the sum of the correct answer, with possible score ranged from 0 to 25 and expressed as mean correct scores. The higher total knowledge score indicates greater knowledge of aging.

Tool III: Attitude Toward Old People scale (ATOP)

The ATOP scale was developed by Kogan (1961). This tool was translated and modified by Zakari (2005) and consists of 17 matched-pair statements, each with a positive and negative element. Participant responses are arranged on a 5 points likert scale. The negative statements were coded in the reverse. The total score ranged from 34 to 170. The higher scores indicates positive student attitude toward the elderly people.

Tool IV: Willingness to Take care of the Elderly Inventory

The willingness to take care of the elderly inventory was developed by Aday and Campbell (1995) to measure the will of nursing students to care for the elderly. It includes 12 statements and answers are arranged on a 5 points likert scale. The negative statements were coded in the reverse. The total score ranged from 12 to 60. The higher scores indicate a greater willingness to take care for the elderly people.

Tool V: Intent to work with the elderly scale

The intent to work with the elderly scale was developed by Ajzen& Fishbein (1980) to measure the intent of nursing students to work with the elderly persons. It consists of 14 items and the answers are arranged on a 5 points likert scale. The negative statements were coded in the reverse. The negative statements were coded in the reverse. The total score ranged from 14 to 70. The higher scores indicate a greater intent of students to work with the elderly people.

Method:

1. An official letter was issued from the researcher to the dean of the faculty of nursing Mansoura University to obtain his approval to carry out the study.
2. Tool II (FAQ2), tool IV (Willingness to Take care of the Elderly Inventory) and tool V (Intent to work with the elderly scale) were translated into Arabic language by the researcher. Tested for content validity by 5 experts in the field and the recommended modifications were done. The reliability was assured by Spearman's correlation coefficient $r = 0.966$ for tool II, $r = 0.861$ for tool IV and $r = 0.925$ for tool V.
3. Written consent of the subjects was obtained after explanation of the purpose of the study.
4. Participation in the study was voluntary, all of the information collected was confidential, and anonymity was assured.
5. A pilot study was carried out on 10 students before starting the data collection to test the feasibility of the tools and based on the results the necessary modifications were made.
6. Data was collected using the study 5 tools in the same time for the all academic years.
7. The researcher meets the students in the classroom according to the available time in the lectures schedule for each academic year (November 2011 to January 2012). The researcher meets the internship students during their annual meeting in the faculty (December 2011).
8. The student takes 30 to 60 minutes to complete the questionnaire sheet.
9. The researcher was available during data collection in the class room.

Statistical analysis

Data were analyzed using PC with statistical package for social science (SPSS) version 16. The 0.05 and 0.01 level was used as the cut off value for statistical significance and the following statistical measures were used: Descriptive statistics as frequency, percentage, minimum, maximum, mean and standard deviation were used for describing and summarizing data. Statistical tests included Chi Square (X^2), Independent T-test of significance, ANOVA test of significance, and Pearson correlation test also was used.

4. Results

Data analysis of the sociodemographic characteristics of the studied subjects (table 1) revealed that, the age ranged from 18 to 24 year with a mean of 19.92 ± 1.13 year. More than three quarter (84.6%) of the students were female, the majority of the students (98.5%) were Muslim, only 9.7% were married, and 86.6% of the student had enough family income. Regarding academic year level, students in the 4th year constituted 34.6% followed by 23 for 1st year students, 17.9% for 3rd year, 14.6% for internship year, and 9.4% for 2nd year students.

Table 1. Sociodemographic characteristics of the studied subjects

Variable	Frequency (n=596)	Percent (%)
Age (in years):		
18-	195	32.7
20-	360	60.4
22-24	41	6.9
Mean \pm SD = 19.92 \pm 1.13		
Sex :		
Male	92	15.4
Female	504	84.6
Religion:		
Moslem	587	98.5
Christian	9	1.5
Marital status :		
Single	538	90.3
Married	58	9.7
No. of children:	(n=58)	
Non	42	72.4
1-	15	25.9
2+	1	1.7
Academic year level:		
1 st year	140	23.5
2 nd year	56	9.4
3 rd year	107	17.9
4 th year	206	34.6
Internship year	87	14.6
Family income:		
Not enough	55	9.2
Enough	516	86.6
High income	25	4.2

Table 2. Distribution of the studied subjects by items related to elderly care

Item	Frequency (n=596)	Percent (%)
Experience living with elderly:		
Yes	261	43.8
No	335	56.2
Interest in elder care\issues:		
Yes	467	78.4
No	129	21.6
Caring experience in home:		
Children	397	66.6
Adults	150	25.2
Elderly	49	8.2
Communication with elderly :		
Frequent	252	42.3
Occasionally	145	24.3
Rare	126	21.1
Never	73	12.3
Training on geriatric care:		
Yes	215	36.1
No	381	63.9
Lectures on Gerontological nursing :		
Yes	435	73
No	161	27
Source of knowledge on aging:		
Nursing school	51	8.6
Faculty of nursing	247	41.4
Family/ friends	87	14.6
Media	49	8.2
No knowledge	162	27.2

Table (2) shows the distribution of the studied subject by items related to elderly care. It appears that more than half (56.2%) had an experience living with the elderly 78.4% had an interest in elder care/issues, 66.6% had experience in caring for children followed by 25.2% and 8.2% for adults and elderly respectively. 42.3% of the students reported frequently communication with elderly persons, while 12.2% never communicate with them. Moreover, only 36.7% of the studied subjects take training on geriatric care, nearly three quarter (73%) took lectures on gerontological nursing and the dominant source of knowledge of aging were from faculty of nursing by 41.4% of the students, 14.6% from family and friends, and 8.5% were from the nursing school. Concerning description of the study variables (table 3), it appears that mean score of students' knowledge of aging, attitude toward elderly, willingness to care for elderly and intent to work with the elderly was 13.19 ± 2.73 , 108.7 ± 9.7 , 41.4 ± 6.16 , and 43.18 ± 8.55 respectively.

Table (4) shows the distribution of the studied subjects by their academic year level in relation to items of elderly care. A statistically significant difference was found between training on geriatric care, taking lectures on gerontological nursing and students' academic year level ($X^2 = 156.54$, $X^2 = 167.078$ respectively and $P = 0.000$).

Table 3. Description of the study variables (n= 596)

Study variable	Minimum	Maximum	Mean ±SD
Students' knowledge of aging	0.00	25	13.19±2.73
Students' attitude toward elderly people	70	175	108.71±9.88
Students' willingness to care for elderly	16	60	41.4±6.15
Students' intent to work with elderly	22	91	43.24±8.83

Table 4. Mansoura Nursing students' by academic year level in relation to items of elderly care

Study variable		Academic year level (n= 596)					X ²
		1st year (N= 140)	2nd year (n=56)	3rd year (n=107)	4th year (n=206)	5th year (n=87)	
Interest in elderly care:	Yes	119 85.0%	47 83.9%	78 72.9%	157 76.2%	66 75.9%	X ² = 7.426 P= 0.115
	No	21 15.0%	9 16.1%	29 27.1%	49 23.8%	21 24.1%	
Experience living with elderly:	Yes	59 42.1%	16 28.6%	51 47.7%	95 46.1%	40 64.0%	X ² = 6.698 P= 0.153
	No	81 57.9%	40 71.4%	56 52.3%	111 53.9%	47 54.0%	
Training on geriatric care:	Yes	4 2.9%	19 33.9%	22 20.6%	104 50.5%	66 75.9%	X ² = 156.54 P= 0.000
	No	136 97.1%	37 66.1%	85 79.4%	102 49.5%	21 24.1%	
Taking lectures on Gerontological nursing	Yes	60 42.9%	47 83.9%	52 48.6%	195 94.7%	81 93.1%	X ² =167.078 P= 0.000
	No	80 57.1%	9 16.1%	55 51.4%	11 5.3%	6 6.9%	

Table 5. Correlation matrix of the study variables (n=596)

Variables	Knowledge	Attitude	Willingness	Intent
Knowledge		.091*	.114**	.131**
Attitude			.320**	.236**
Willingness				.548**
Intent				-

*. Correlation is significant at the 0.05 level (2 tailed).

**, Correlation is significant at the 0.01 level (2-tailed).

The matrix correlation table (5) revealed that, a strong correlation exists between intent to work with the elderly and willingness to take care of the elderly ($r= 0.565$). The students who were willing to take care for the elderly tended to have a greater intention to work with the elderly. A weak correlation exists between knowledge of aging and attitude of the nursing students. The reported Pearson correlation coefficient value was 0.089 with a statistically significant level of $P<0.05$. Another statistically significant correlation was found ($P<0.01$) between knowledge and willingness to take care of the elderly ($r= 0.114$) and intent to work with elderly ($r= 0.125$). There was a tendency for the student with a positive attitude toward the elderly to have more knowledge of aging, and for the students with a less positive attitude to have less knowledge of aging. The more knowledge of aging that student has, the more their willingness to take care for the elderly and intent to work with them. A significant correlation between will of the students to take care for the elderly, intention to work with the elderly and students' attitude toward elderly ($r= 0.322$, $r= 0.244$ respectively and $P<0.01$). this means that, the more positive attitude of the nursing students toward elderly, the more willingness and intention to take care and work with elderly.

Table 6. Relation between socio-demographic characteristics and the score of different scales

Variables	Scale 1 Mean \pm SD		Scale 2 Mean \pm SD		Scale 3 Mean \pm SD		Scale 4 Mean \pm SD	
Age (in years):								
18-	13.42	± 2.27	109.75	± 10.58	41.79	± 5.99	45.09	± 9.25
20-	13.16	± 2.83	108.03	± 9.55	41.07	± 6.28	42.37	± 8.59
22-24	12.42	± 3.64	109.71	± 8.95	42.46	± 5.71	42.15	± 7.66
Statistical test (Anova test)	F	P	F	P	F	P	F	P
	2.36	0.09	2.16	0.12	1.53	0.22	6.51	0.00
Sex :								
Male	13.26	± 2.48	109.12	± 10.84	40.98	± 6.37	42.54	± 8.42
Female	13.18	± 2.77	108.64	± 9.7	41.48	± 6.12	43.37	± 8.91
Statistical test (T-test)	T	P	T	P	T	P	T	P
	0.27	0.79	0.43	0.67	0.71	0.48	0.83	0.41
Religion:								
Moslem	13.19	± 2.74	108.74	± 9.85	41.39	± 6.16	43.29	± 8.87
Christian	13.33	± 1.73	106.89	± 11.98	41.78	± 5.83	40.56	± 5.83
Statistical test (T-test)	T	P	T	P	T	P	T	P
	0.16	0.86	0.56	0.58	0.19	0.85	0.92	0.36
Marital status :								
Single	13.28	± 2.58	108.81	± 9.79	41.47	± 6.04	43.31	± 8.77
Married	12.39	± 3.78	107.78	± 10.67	40.78	± 7.16	42.67	± 9.43
Statistical test (T-test)	T	P	T	P	T	P	T	P
	2.34	0.02	0.76	0.45	0.81	0.42	0.52	0.6
Academic year level :								
1 st year	13.56	± 2.35	110.81	± 11.08	41.56	± 6.17	45.39	± 9.64
2 nd year	13.13	± 1.91	109.41	± 9.68	42.46	± 5.91	44.46	± 7.93
3 rd year	12.76	± 2.35	107.29	± 8.58	41.6	± 5.84	42.95	± 8.98
4 th year	13.71	± 2.49	108.12	± 9.85	41.08	± 6.39	42.98	± 7.92
Internship year	11.94	± 2.73	108.01	± 9.13	40.97	± 6.13	40.0	± 9.0
Statistical test (Anova test)	F	P	F	P	F	P	F	P
	8.12	0.00	2.53	0.04	0.71	0.58	5.51	0.00
Family income:								
Not enough	13.38	± 2.69	108.35	± 9.01	41.87	± 5.3	42.89	± 8.99
Enough	13.16	± 2.77	108.79	± 9.87	41.54	± 6.07	43.32	± 8.79
High income	13.44	± 1.92	107.84	± 11.96	37.36	± 8.23	42.44	± 9.44
Statistical test (Anova test)	F	P	F	P	F	P	F	P
	0.27	0.76	0.15	0.86	5.78	0.00	0.17	0.85

Table (6) represents the relation between sociodemographic characteristics and score of different scales of the studied subjects. It appears that a statistically significant relation was found between students' intent to work with the elderly and their age ($P=0.00$). The relation between students' knowledge of aging, attitude toward elderly, intent to work with the elderly and their academic year level was statistically significant ($P=0.00$, $P=0.03$, and $P=0.00$ respectively). Moreover, a statistically significant difference was found between students knowledge and the marital status ($P=0.02$). The students with not enough family income have the higher mean score (41.87 ± 5.3) and give more will to take care for the elderly than others. A statistically significant difference was observed between students' willing to take care for the elderly and their family income ($P=0.00$).

Table 7. Relation between the score of different scales and items related to geriatric care

Item	Scale 1 Mean \pm SD		Scale 2 Mean \pm SD		Scale 3 Mean \pm SD		Scale 4 Mean \pm SD	
Experience living with elderly:								
Yes (n=261)	13.24 \pm 2.77		108.47 \pm 10.03		41.67 \pm 6.22		42.97 \pm 8.22	
No (n=335)	13.15 \pm 2.69		108.89 \pm 9.77		41.18 \pm 6.11		43.46 \pm 9.28	
Statistical test (T- test)	T	P	T	P	T	P	T	P
	0.4	0.69	0.52	0.6	0.95	0.34	0.67	0.5
Interest in elder care\issues:								
Yes (n=467)	13.31 \pm 2.51		109.75 \pm 9.97		42.54 \pm 5.59		44.7 \pm 8.68	
No (n=129)	12.75 \pm 3.37		104.94 \pm 8.55		37.29 \pm 6.37		37.97 \pm 7.26	
Statistical test (T- test)	T	P	T	P	T	P	T	P
	2.1	0.04	4.99	0.00	9.15	0.00	8.07	0.00
Training on geriatric care:								
Yes (n=215)	13.15 \pm 3.09		108.35 \pm 8.99		41.47 \pm 6.2		43.18 \pm 8.49	
No (n=381)	13.21 \pm 2.51		108.91 \pm 10.35		41.36 \pm 6.13		43.28 \pm 9.03	
Statistical test (T- test)	T	P	T	P	T	P	T	P
	0.25	0.8	0.67	0.5	0.22	0.82	0.14	0.89
Lectures on Gerontological nursing:								
Yes (n=435)	13.26 \pm 2.64		108.63 \pm 9.99		41.64 \pm 5.97		43.41 \pm 8.45	
No (n=161)	13.00 \pm 2.94		108.91 \pm 9.59		40.75 \pm 6.60		42.79 \pm 9.79	
Statistical test (T- test)	T	P	T	P	T	P	T	P
	1.04	0.3	0.31	0.76	1.57	0.12	0.76	0.45

Concerning relation between the score of different scales and items related to geriatric care of the studied subjects (table 7). It appears that the relation between students' knowledge of aging, attitude toward elderly, willing to take care for elderly, intent to work with elderly and students' interest in elder care/issues was statistically significant ($P=0.04$, $P=0.00$, $P=0.00$, and $P=0.00$ respectively). No statistically significant relation observed between students' knowledge of aging, attitude toward elderly, willing to take care for elderly, intent to work with elderly and experience living with elderly, training on geriatric and taking lectures on gerontological nursing.

5. Discussion

It is evident throughout our communities that the population of individuals over 60 years of age is rapidly increasing. Accompanying this population increase and change is the growing awareness of this segment of the

population. Also they experience an increase in health needs and problems that result from acute and chronic conditions. According to Rosenwaike (1985), "despite society's considerable progress in controlling the aging process and improving health care, there will usually be a period of dependency and a need for specialized care at the very end of life". Characterizing this condition will be the reality that increased contact will occur between health professionals and elderly individuals. Nurses do, and will continue to, provide a large portion of the contact and health care services to the elderly. Therefore, it is critical that the educational system in Mansoura produce competent nursing professionals who can deliver high quality elderly care.

Knowledge of aging is the amount of general factual information about physical, social, and mental health changes that occur as we age. The present study revealed that, the mean score of Facts on Ageing Quiz 2 (FAQ2) was 13.19, which is considered a low score of knowledge. This result is in line with the results of Zakari (2005) and Alsenany (2007), who points out that aging knowledge mean score was very low and insufficient (10.69 and 11.13 respectively) because the students had not taken any courses related to care of older people. According to Palmore (1988), on average, undergraduate students score was 14 and nurses in practice score was 16.5. Similarly, Sheffler (1998) found that the mean score achieved by baccalaureate nursing students was 16.5, which is a borderline score. Other researchers have also reported mean scores in the borderline range, from 17.3 to 18.3(Williams et al. 2007). When the mean FAQ score of 13.19 achieved by Mansoura BSN programme students was compared with that achieved by nursing students in other studies, the mean score in this study was low. This result may be related to insufficient courses of gerontological nursing in the curriculum as only one course is provided to the 4th year student. So it is important to presents more courses of aging and its related care in the curriculum by dividing these courses over the years of education.

Attitude toward elderly is a pattern of feeling and beliefs that students hold toward the elderly either in a positive or negative way (Kim et al. 2004). Attitudes toward aging may be critical for adjustment and survival. Attitudes may contribute to observed maladaptive behaviors among the aged, some of which may result in premature death. Negative views of aging, life in general, and oneself may result in an old person's unwillingness or inability to seek needed services, health care, or other types of assistance. Negative attitudes of old people may affect others in their environs, who in turn may feel free to respond negatively to or ignore old people (Eisdorfer & Lawton 1973). The present study showed a high positive attitude of the students toward elderly people. Different studies assessed attitude of nurses toward older adults and found a favorable attitude among nursing students toward elderly and this supports the result of the present study (Oyetunde et al. 2013, Usta et al. 2012, Celik et al. 2011 & Ryan et al. 2007). The result of positive attitude in this study may be related to the social and cultural perspectives of our eastern countries that Egypt is one of them. Moreover, different factors may affect the attitude of the student in these countries as, the majority of families are living in an extended family which help student to be in contact with the elderly persons. Moreover, this may be related to the respect that our society holds toward the elderly from our religious not just among Muslims but also among other religious as well. As these religious encourage its follower to respect elderly and to take care for them. In spite of the result of this study which revealed a positive attitude of Mansoura nursing students toward elderly, the results also showed a low score of knowledge of aging.

Improved training and exposure to older people may raise the status of geriatrics. Improved status may have a positive impact on attitude, which encourages more individuals to enter the field and in turn benefit the older patients (Sheikh et al 2013). A weak positive correlation existed between knowledge of aging and attitude toward elderly in the current study. This result is consistent with the results of Zakari (2005) but Cote results (2008) did not support these results, who revealed that knowledge was strongly correlated with attitude. Moreover, no statistically significant difference was observed in the students' attitudes toward elderly between those who took and those who did not take lectures or course of gerontological nursing. This is in line with the results of Kim et al. (2004). Who pointed that, the lack of significance indicates that changes in the students' attitudes toward elderly are not simply acquired by increasing knowledge in related area. This notion is supported by the former studies reporting no effect of gerontological nursing education on the attitudes in Korean students (Kong 1999 & Yoo et al. 1991). In all, it seems clear that simple provision of a gerontological nursing course cannot modify students' attitude toward elderly. Attitudes are thought to be learned by trial and error or by teaching process of socialization. We need to focus on making this socialization useful in changing students' attitudes toward elderly. Nurse educator should device teaching strategies to facilitate this type of socialization in nursing education both in lecture and clinical courses by the assistance of the college administration (Burbank et al. 2006 & Kim et al. 2004).

Will or willingness to take care of the elderly is the desire of nursing students to take care of older adults in any health care setting before or after graduating. An unwillingness to work with the elderly is regarded as an

expression of students' negative attitudes toward older people (Kim et al. 2004). The results of current study revealed that Mansoura nursing students are willing to take care of the elderly. This is consistent with results of Zakari (2005) in a study conducted in Saudi nursing students. In contrast with the findings of this study, most of the nursing literature suggests that nurses demonstrate little willingness to take care of them (Kearney et al. 2000 & Kwan & Law 1994). This discrepancy in finding is due to the differences in the social and cultural context or frequent contact with elderly. Kwan and Law (1994) argued that more frequent contacts with the elderly are associated with less negative attitude and greater desire to care for the elderly. This may have been the case in this study as the majority of the respondents have an interest in elderly care and also frequently communicated with them in a daily basis. It was observed that a strongly significant correlation existed between students' willingness and intention to work with elderly. The students who were willing to take care of the elderly tended to have a greater intention to work with the elderly. This is supported by the results of Zakari (2005). Also a significant correlation was observed between willingness to take care of the elderly and Mansoura nursing students' attitude and knowledge of aging.

Intent to work with the elderly is the plan of nursing students to work in or avoid working in positions caring primarily for the elderly after graduation from the nursing program. The results of the present study revealed that nursing students have a positive intention to work with the elderly. This finding is consistent with the result of Makinlay and Cowna (2003) study, which revealed that the participants have a positive attitude toward and intentions to work with the elderly. The results also showed that the intension of nursing students to work with elderly people is mainly predicted by their attitudes. A significant relation was found between students' intention to work with elderly and age of the students. As the present study showed that the younger students had a higher mean score of intention to work with the elderly than other age groups. The correlation between knowledge and intention to work with the elderly in the present study was statistically significant. This is inconsistent with the results of Cote (2008). Further, intention to work with elderly was statistically correlated with students' attitude toward elderly and this is in line with the results of cote (2008) and Zakari (2005). Litwin (1994) investigated the influence of ethnicity as a source of motivation for social work students to take care of the elderly. The results showed that an Arab student is significantly more likely to intend to work with the elderly than other ethnic groups.

Findings of statistically significant difference of knowledge of aging, attitude toward the elderly, intent to work with the elderly and willingness to take care for the elderly by interest in elderly care or in issues in the study were consistent with the results of Kim et al. (2004) and Seo and Kim (1999) study; where they reported positive correlation of interest in issues of the elderly with all four dimensions of attitudes. The current study showed that mean differences score of knowledge of aging, attitude toward the elderly and intention to work with the elderly were statistically significant by the student academic year level in the program. This is supported by the results of Sodeorhamn et al. (2001), reported that there was more favorable feelings toward elderly among students at the end of their education than students in the earlier year in the program, which was inconsistent to the finding of Kim et al. (2004). Furthermore, Mc Craken et al. (1995) results of a comparative study by in which the attitudes of Norwegian and American nurses toward elderly were examined using the Kogan attitude toward old people scale is consistent with the finding of the current study. The study reported that a positive correlation existed between positive attitudes and level in the educational program.

After completing this discussion it is important to notice that the nursing education programs can play an important role in shaping the attitudes of prospective nurses toward the elderly that will result in a positive and rewarding experience throughout their professional life. So, early introducing nursing student to gerontological nursing courses in their curriculum will help students gaining adequate and accurate information of aging as well as the adequate clinical experiences in elderly care. Further, the use of creative teaching learning methods during gerontological coursework will encourage nursing students to experience and evaluate their own personal aging and biases. For example, using of experiential methods such as film, guided fantasy, group discussion, games, and role-playing were very helpful in the students' attitudinal assessment process (Galbraith & Suttie 2011). If the previous points were accomplished, the students' positive attitude toward elderly and their willingness to care for elderly will increased. As well, the increased knowledge of aging will help nursing staff to improve quality of care and to provide effective care services to the elderly people.

6. Conclusion

According the results of the present study, it can be concluded that Mansoura nursing students have a lack of knowledge of aging and held a positive attitude towards the elderly people. As well they showed high score of intent

and will to work and care for those elderly. A statistically significant positive relationship was found between knowledge of aging, attitude toward elderly and intent and will to work and care for the elderly people. Moreover, a statistically significant difference was found between nursing students' knowledge of aging, attitude toward the elderly, intent to work with the elderly, willingness to take care for the elderly and the students' interest in elderly care/ issues. Also the current study showed that mean differences score of knowledge of aging, attitude toward the elderly and intention to work with the elderly were statistically significant by the student academic year level in the program.

7. Recommendations

1. Fully infuse geriatrics into the nursing curriculum by integrating gerontology content throughout the program and developing stand-alone courses specifically focused on geriatrics
2. Develop innovative gerontology stand-alone courses that include a focus on well elders.
3. Introduce the nursing students to theoretical part of gerontological nursing course that cover the normal age related changes and how to communicate with the elderly before the beginning of their clinical practice with the elderly in different setting.
4. Enhance the curriculum with advanced technology as online gerontological courses and use of advanced teaching and learning process to motivate the students and increase their interest in elderly care.
5. Demonstrate need for gerontological curricular revision and for acquisition of geriatric nursing knowledge by outlining gaps through curriculum mapping. Invite gerontology experts to form a geriatric advisory board that provides oversight and feedback.

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