Knowledge of Nursing School Students and their Willingness to Work with Older Adults

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Abstract:

Background: The older adults are the vulnerable group but may still be one of the powerful groups in the society with great influence. **Aim of the study:** Was to assess knowledge of nursing school students and their willingness to work with older adults. **Study Design:** A descriptive, cross-sectional design. **Setting:** The study was conducted at four nursing schools (Tulrak, Fakous, Awlad Saker and Kafer Saker) in Sharkia Governorate from seventeen nursing schools. **Study sample:** Two hundred nursing school students were selected by using random sample from mentioned settings. **Tools of data collection:** Two tools were used to collect data: Self-administered questionnaire: socio-demographic characteristic of the nursing school students, The Palmore Facts on Ageing Quiz, and Willingness to work with Elderly People Scale (WEPS). **Results:** 76.0% of the nursing school students had unsatisfactory level of knowledge regarding older adults. Additionally, 71.0% of them had negative willingness to work with older adults. **Conclusion:** The majority of nursing school students had unsatisfactory level of knowledge and willingness to work with older adults. **Recommendations:** Gerontological education should be involved into nursing schools curricula with meaningful service-learning components in nursing schools, and further studies especially qualitative ones should be conducted to explore factors that influence knowledge, and willingness of nursing school students towards the older adults.

Keywords: Knowledge, Nursing Schools Students, Older Adult, Willingness.

Introduction:

Older adults with non-communicable diseases can be more vulnerable to other diseases. For instance, hypertension, diabetes and lipid disorders are clustered with cerebrovascular and cardiovascular diseases. As a result, an ageing population may create a high demand in the healthcare system and induce a substantial economic and healthcare burden. Even after hospital discharge, burdens on healthcare can be observed in hospital re-admissions due to the limited capacity of the outpatient services, and inadequate staff and training in older adults care. When the resources for outpatient service are insufficient, it will create a burden on inpatient services [(1)].

So, decisions should be taken to manage loss of older adults` autonomy, meet their health care and social service needs, and ensure their safety and well-being, many older adults consider receiving hospital care, which typically includes nursing care, therapy (physical, occupational, and speech-language), and medical and social services. Others consider assisted living or moving to residential health care facilities, such as nursing homes [(2)].

Knowledge is fundamental to providing competent care, in geriatric care is mandated to be included in the nursing school curricula by the Nursing Council. Nursing students gain knowledge about common disorders and nursing care of older adults from the nursing program. It has been reported that knowledge is positively related to positive willingness [is defined as a person's relative readiness and absence of reluctance to work with them] toward care of the older adults [(3, 4)].

However, it is known that the willingness to take care of older adults is also influenced by attitude. Attitude is a

feeling about something or someone. The nursing school student's willingness to perform an action is dependent on the attitude toward a given behavior. Further proposed that change in attitude affects behavioral willingness. If nursing students embrace positive attitudes toward older adult care, they will be more willingness to take care of older adults [5].

Common reasons cited by nursing students for not wanting a career in institutionalized care of older adults include; perceptions of unexciting work, an unpleasant environment, a negative view of older adults, and previous employment in this area. Even when studies have identified positive student attitudes, they still choose not to work with older adults. Both the clinical practice area and the theoretical environment can have an influence on nursing student's career willingness to work with older adults after graduation. Therefore, the need for collaboration between nursing educational providers and health service providers is greater than ever [6].

The motivational factors that influence a behavior, they are indicators of how hard people are willing to try and how much effort they are planning to exert in order to perform the behavior. A similarly research demonstrated willingness can predict an individual behavior, and additional studies have shown a significant connection between willingness and behavior. Factors influencing willingness and behavior include: behavioral beliefs, attitude, normative beliefs, subjective norm, perceived behavioral control beliefs, and perceived behavioral control. In the theory of planned behavior, attitudes are based on the individual's beliefs around the outcomes of behavior. Application of this theory requires the attitude being measured to be clearly specified [7].

Using career motivation as, a potential influencing factor is the reason for the nursing school students to choose older adults career profession, and it is the direct driving force for behavior. One way to explore the nursing school students' motivation to choose to work with older adults is through a lens of expectancy value theory. Expectancy-value theory identifies two key independent factors that influence behavior: the degree to which individuals believe they will be successful if they try (expectancy of success), and the degree to which they perceive that there is a personal importance, extrinsic value, intrinsic interest or cost in doing the task (task value) [8].

Communication skills are critical in order to learn, work, form relationships, and participate in social communities. Communication serves many functions, including the sharing of feelings and ideas, conveying information, the expression of identity, and facilitating social closeness; it exploits multiple modalities including speech, manual sign, gesture, and facial expression; and it engages both linguistic and non-linguistic forms [9]. So any defect in previous functions leads to communication barrier between nursing school students and older adults.

Gerontological nurses are required to be adequately prepared with a sufficient theoretical knowledge base which guides their clinical practices and provision of comprehensive nursing care to older adults. Evidence suggests that adequately prepared nurses with better knowledge and skills, and positive attitudes towards older adults increase nurses and nursing school students` willingness and improve their outcomes such as reduced hospital length of stay, reduced readmission rates, and older adults and family satisfaction [10].

Significance of the study:
The nursing school students should have sufficient knowledge, willingness and appropriate attitudes toward older adults. Additionally, there is a lack of educational training focusing on gerontological nursing for all nursing school students who will work with older adults [11]. Several complaints also surfaced about difficulties in communicating with the older adults as a result of the cognitive changes of nursing school students and their lack of respect for the decisions and privacy of older adults patients; Moreover, this had an impact on

the care that nursing school students provide to the older adults [12]. Thus, so the present study aimed to assess knowledge of nursing school students and their willingness to work with older adults.

Aim of the study was to:

Assess knowledge of nursing school students and their willingness to work with older adults.

Research questions:

1. What is the level of knowledge of nursing schools students about older adults?

2. What is the willingness of the nursing schools students to work with older adults?

Subjects and methods:
Research design:

A descriptive, cross-sectional design was used to conduct this study.

Study setting:

The study was conducted at four settings. This were namely the Tulrak, Fakous, Awlad Saker and Kafer Saker nursing school which were randomly selected from 17 nursing schools in Sharkia Governorate.

Study subjects:
Sample size calculation:

The sample size was calculated by software Epi-info package, assuming a prevalence of knowledge and willingness to work with older adults is 82.2% among 450 nursing school students. Four secondary nursing schools were selected from 17 schools at Sharkia Governorate, level of confidence 95%, margin of error 5% and power of test were 80%. The sample size was 200 students.

Sampling technique:

The sampling technique employed a multiple-stage approach. First, four nursing schools were randomly selected from a pool of fifteen nursing schools. Subsequently, the third-grade students from the chosen nursing schools were specifically targeted to align with the criteria established for the tools used in the study.

Tools for data collection:

The study utilized two distinct instruments for data collection:

▪ Tool I: Self-administered Questionnaire

This tool comprised the following components:

Part 1: Socio-demographic Characteristics of Nursing School Students

This section included 15 questions related to socio-demographic data, covering aspects such as age, gender, residence, parental education, parental occupation, home environment, family possessions, and social class, among others. The scoring system for socio-economic status categorized students into high (≥70%, [33.6 – 48]), medium (40- < 70%, [19.2 - < 33.6]), and low (< 40%, [< 19.2]) classes. The questionnaire was adapted from **El-Gilany et al.** [13].

▪ Part 2: Self-administered Palmore Facts on Ageing Quiz

This segment aimed to assess nursing school students' knowledge regarding older adults. It comprised 50 questions across four domains: physical, psychological, social, and general information. The knowledge scoring system assigned 1 point for a correct response and 0 for an incorrect one. The total score of 50 was converted into a percent score, with knowledge considered satisfactory if the percent score was (>30) 60% or more and unsatisfactory if less than (<30) 60%. The quiz was adapted from **Palmore** [14].

▪ Tool II: Willingness to Work with Elderly People Scale (WEPS)

This tool, adapted from **Fadayevatan et al.** [15], assessed nursing school students' willingness to work with older adults. It consisted of 18 questions distributed across four domains: Attitude Willingness, Subjective Norms, Perceived Behavioral Control, and Intention. The scoring system employed a 3-point Likert scale, with responses of "Agree," "Agree to some extent," and "Disagree" scored as 3, 2, and 1, respectively. The scoring was reversed

for negative statements. The total score of 54 was converted into a percent score, with a positive attitude considered if the percent score was 60% (>32.4) or more and negative if less than 60% (<32.4).

Validity & Reliability:

Validity was done by a panel of 3 experts from nursing and medical staff in Gerontological and Community departments; they reviewed the tools for face and content validations through ascertaining, clarity, relevance, comprehensiveness, and understandability. The tools were modified according to their comments and suggestions. Reliability of proposed tools was done by Cronbach's Alpha test; it was 0.904 for tool (I) and 0.816 for tool (II).

Field work:

Upon securing all official permission, the process of data collection was started in October 2022 and continued through January. The investigator was visiting the study setting at 9.00 a.m. - 2.00 p.m., met with the students individually, explained to them study aim and procedures, and invited them to participate. Those who give their oral consent were interviewed using three data collection tools. The time needed to file-in three formed ranged between 35 and 40 minutes for each nursing school students and the investigator performed the field work two days weekly (Sundays & Wednesdays).

Pilot study:

The pilot study was conducted on 20 students those represent 10% of the study sample, to test the applicability of the constructed tools and the clarity of the included questions related to students' knowledge, willingness to work with older adults. Necessary modifications were done according to the pilot results, and the tools were finalized accordingly the nursing school students who shared in the pilot study whose excluded in the main study sample.

Administrative and ethical consideration:

An official request to conduct the study was issued directed from Faculty of Nursing Zagazig University to the directors of the selected nursing schools, explaining the aim of the study in order to obtain their permissions and cooperation.

The research protocol was approved by Ethics Committee at the Faculty of Nursing Zagazig University. All necessary official permissions to conduct the study were secured. The investigator provided a sample explanation of the aim of the study to each student to obtain his¬/her oral consent to participate in the study. The investigator emphasized that the nursing school students was voluntary, and the student could withdraw at any time without any need to justify his¬/her decision, and that any raised question would be answered. They were also informed that any collected data would be treated confidentially and used only in the research without harmful effects expected from nursing school students.

Statistical analysis:

Data entry and statistical analysis were done using The Statistical Package for the Social Sciences (SPSS) 22.0 statistical software package. Data were presented using descriptive statistics in the form of frequencies and percentages for qualitative variables, and means and standard deviations and medians for quantitative variables. The Cronbach alpha coefficient was calculated to assess the reliability of the developed tools through their internal consistency. Quantitative continuous data were compared using ANOVA test. Qualitative categorical variables were compared using a chi-square test ($X2$). Whenever the expected values in one or more of the cells in a 2x2 tables was less than 5, Fisher exact test was used. The Spearman rank correlation was used for assessment of the interrelationships among quantitative variables and ranked ones. In order to identify the independent predictors of the knowledge, and willingness scores multiple linear regression analysis was used after testing for normality, and homoscedasticity, and analysis of variance for the full regression models was done. Statistical significance was considered at p-value <0.05 and high statistical significance p-value <0.001.

Results:

Table (1) describes that the study sample involved 200 of nursing schools students, their age ranged between 18 and 19 years, with mean 18.33 ± 0.47. Furthermore, 71.0% and 81.0% of them were female and resided rural areas respectively.

Table (2) reveals that 36.5% of the nursing school students` fathers and mothers had secondary education, and the highest percentage of their fathers and mothers` job were 47.0% and 76.0% (employee & housewife respectively). Moreover, 79.0% of them had family size ranged between five and six members with sufficient and saving income 48.0%.

Table (3) indicates that 74.0% of the nursing schools students lived in their ownership home which consisted of four rooms. Regarding home environment and family properties, 100% of them had clear water, electricity, refrigerator, television, washing machine and phone in their homes. Additionally, 98.0% and 89.0% of students went to private clinics, and governmental hospital for health care respectively.

Figure (1) illustrates that, 86.0% of the nursing school students were in the moderate class of socio-economic level.

Table (4) shows that the highest total knowledge of information domains among the nursing school students was physical (24.0%), followed by psychological information (23.0%), and social information (16.0%), while the lowest domain was general information (9.5%). Additionally, the total knowledge means score was 16.93 ± 9.73.

Figure (2) illustrates that 24.0% of the nursing school students in the study sample had satisfactory level of knowledge.

Table (5) concerning attitude willingness among students to work with older adults. Table 5 demonstrates 96% of nursing school students agreed that the care of older adults is a waste of financial resources, while 11.5% of them agreed that the working with the older adults is a highly useful experience. Regarding subjective norm among students to work with older adults, 66.5% of them agreed that the caring for the older adults is a human duty, while 18.5 agreed that there is

enough encouragement to work with the older adults. Furthermore, the total mean score of subjective norm (11.53 ± 1.85) was more positive than attitude willingness (8.12 ± 1.75) to work with older adults.

Table (6) as regards to perceived behavioral control willingness. The table indicates that 15.5% of the students in the study sample had professional competences on older adults` care and 3.0% of them do not have enough curriculums in older adults care training. Concerning intention willingness, 15.0% of students agreed that one of career priorities after graduation is elderly care. Furthermore, the total mean score of perceived behavioral control (9.14 ± 2. 21) was more positive than intention willingness (4.38 ± 1.63). Overall, total mean score willingness to work with older adults was 33.17 ± 5.35.

Figure (3) illustrates that 29% of nursing school students had positive willingness to work with older adults.

Table (7) shows that, the only highly statistically significant relation between the nursing school students` knowledge regarding older adults care and their residence in rural areas (P= < 0.001).

Table (8) demonstrates that, the only highly statistically significant relation between the nursing school students` willingness to working with older adults and their residence in rural areas at (P= < 0.001).

Table (9) reveals that, there were highly statistically significant relations between the nursing school students` total knowledge regarding older adults and their positive total willingness (P= < 0.001).

Table (10) illustrates that statistically significant independent positive predictor of nursing school students` knowledge score was their urban residence. The model explains 28% of variation in this score.

Discussion:

According to **Teater and Chonody** [16], revealed that the older adults who are with good health, freedom from disability, have life satisfaction, personal relationships, staying active and involved, maintaining independence, meeting needs, adapting to aging-related changes, self-acceptance, and

mastery, they are supporting the successful aging. As well, aging is a lifelong process of growing up and growing old. It begins at conception and ends with death. So, in this sense, all aging from the time of birth. In the younger years, aging is called by other names. For example, in the infant years, we call aging "growth and development." In the teenage and young adult years, studies refer to aging as "maturation." After age 30, the physical body begins to wear out and the functioning declines. This is called "senescence" **Hassan et al.** [17].

As regards age of the nursing school students, the present study showed that the mean age of the nursing students was 18.33 ± 0.47. From the investigator point of view; this result might be due to the nursing school targeting the top students of third year reparatory schools. According to socio-demographic characteristic, this study reported the majority of nursing students was females.

From investigator view point, this result may be due to female get the highest scores in third grade preparatory, and are having a greater desire than male to enroll in nursing schools. These findings are approved with the study performed by **Meriç et al.** [12] in Turkey which entitled "Relationship between Nursing Students' Attitudes toward Elderly Discrimination and Opinions About Home Care Services", which indicated that the percentage of female to male was 69.5% to 30.5%.

In relation to residence and type of home, the results of the current study indicated that the majority of the nursing school students resided in rural areas and around three quarters of them live in their own houses. These findings might attributed to the setting of data collection at Sharkia governorate which characterized by its agricultural nature and most of its cities are rural areas.

These results supported with those of the study performed by **Fadayevatan et al.** [15] in Minia, Egypt, who carried out their study to assess knowledge about elderly care and its relation to ageism attitude among undergraduate nursing students and mentioned that 68.85% of the studied sample

residing in rural areas and more than three quarters of them live in their own houses.

One of the main research questions of this study was about identifying nursing schools students' knowledge regarding older adults, the result of current study revealed that the highest domain of knowledge was representing slightly less than quarter: physical followed by psychological and social. Overall, less than one quarter of nursing school students had satisfactory level of total knowledge regarding older adults care, with mean 16.93 ± 9.73.

From investigator point of view, these results might be due to the insufficiency of studying geriatric curriculum and there is no separate geriatric nursing specialty and geriatric course within the nursing school the curriculum. As well, the topic of geriatric care is incorporated and taught to the students along with other nursing subjects such as medical surgical and advanced nursing practice. So there is no enough opportunity for students to have sufficient theoretical and clinical geriatric hours during the courses at nursing schools.

These study results supported by those of **Ghimire et al.** [18] who conducted study about "Knowledge and Attitudes Regarding Elderly Care among Nursing Schools Students at Fakous City, Egypt" and mentioned that the highest knowledge was physical (26.70%) and social (25%). As well, 22.20% of school students had satisfactory level of knowledge regarding older adults care.

Similarly, **Chalise** [19] who conducted study about "Undergraduate Nursing Students' Knowledge of Aging, Attitudes toward and Perceptions of Working with Older Adults in Kathmandu, Nepal" reported that there was low level of knowledge regarding older adults care. In the same line, **Zhao et al.** [20] in China who carried out a study about "Investigation and Analysis of Attitudes and Knowledge of Aging among Students in Different Majors" found that the means of the students` knowledge was 10.71 ± 3.08.

Regarding answering the second research question of this study related to explore nursing school students' willingness to work with older adults, the results of current study displayed that the highest mean of the willingness` domain was subjective norm on work with older adults (11.53 ± 1.85) followed by perceived behavioral control on work with older adults (9.14 ± 2.21), attitude towards work with older adults (8.12 ± 1.75) and the lowest domain was intention to work with older adults (4.38 ± 1.63). Overall, less than one third of the nursing school students had positive willingness to work with older adults, with mean was 33.17 ± 5.35.

From investigator point of view, these findings might be due to lack of sufficient knowledge, skills, negative experiences in clinical practice, and lack of incentives such as higher wages. Actually, Geriatric Nursing as a specialty is still in an infancy stage in Egypt. Even there is no separate subject on older adults care in the nursing curricula in all nursing schools. These results supported by those the study done by **Guo et al.** [8] who conducted study about "Willingness and Associated Factors of Working with Older people among Undergraduate Nursing Students in China" and reported that nursing students expressed a low level of willingness to work with older adults.

Regarding the relation between the nursing school student`s knowledge and their willingness regarding older adults, the present study findings showed that there was highly significant positive relations between total student`s knowledge and their willingness regarding older adults. This could be explained as whenever knowledge increases, then the willingness become more positive and the current study showed that, there was statistically significant positive correlations between total mean score knowledge, and total willingness score of nursing school students.

These mentioned results matched with those of **Cheng** [5] who carried out a study about "Roles of Knowledge and Attitude in the Willingness of Nursing Students to Care for Older Adults in Hong Kong" and demonstrated that nursing students` knowledge about ageing is related to willingness to work with older adults.

Conclusion:
In light of the current study results, it can be concluded that, relatively high percentages of nursing school students according for around three quarter of them had unsatisfactory level of knowledge and willingness to work with older adults, almost one quarter of the nursing school students had satisfactory of knowledge and less than one third of students had positive willingness. Moreover, there was statistically significant high positive correlations between total mean score knowledge, total willingness score of nursing school.

Recommendations:
In the light of the present study findings, it can be recommended that:

▪ Gerontological education should be involved into nursing schools curricula with meaningful service-learning components in nursing schools.

▪ Further studies especially qualitative ones should be conducted to further explore factors that influence knowledge, and willingness of nursing school students towards the care of the older adults.

Table (1): Socio-demographic characteristics of nursing school students (n=200)

Socio-demographic characteristics	No	%
Age:		
18	134	67.0
> 18	66	33.0
Mean±SD	**18.33 ± 0.47**	
Range	**(18 – 19)**	
Sex :		
Male	58	29.0
Female	142	71.0
Residence:		
Rural	162	81.0
Urban	38	19.0

Table (2): Socio-demographic characteristics of the nursing school students` family (n=200)

Socio-demographic characteristics	No	%
Father's Educational level:		
Can't read & write	15	7.5
Basic education	48	24.0
Secondary	73	36.5
Two years institute	17	8.5
University	43	21.5
Post graduate	4	2.0
Father's job:		
No work	6	3.0
Craftsman	62	31.0
Farmer	27	13.5
Businessman/ tradesman	4	2.0
Employee	94	47.0
Professional (teacher, doctor, lawyer etc.)	7	3.5
Mother's Educational level:		
Can't read & write	25	12.5
Basic education	46	23.0
Secondary	73	36.5
Two years institute	18	9.0
University	36	18.0
Post graduate	2	1.0
Mother's job:		
No work (housewife)	152	76.0
Worker (craftsman- farmer)	2	1.0
Businesswomen/ tradeswomen	2	1.0
Employee	42	21.0
Professional (teacher, doctor, lawyer etc.)	2	1.0
Family size :		
< 5	19	9.5
5-6	158	79.0
≥ 7	23	11.5
Crowding index:		
<2	200	100.0
Family income:		
Insufficient & loan	13	6.5
Only sufficient daily needs	27	13.5
Sufficient daily needs & emergency	64	32.0
Sufficient & saving	96	48.0

Table (3): Home characteristics & social class of the nursing school students (n=200)

| Home characteristics	Frequency	Percent
Home type:		
Ownership of 4 rooms	148	74.0
Ownership of less than 4 rooms	49	24.5
Rent of 4 rooms	1	0.5
Rent of less than 4 rooms	2	1.0
Home environment:		
Clear water	200	100.0
Electricity	200	100.0
Natural gas	41	20.5
Sanitation	173	86.5
Garbage collected locally	108	54.0
Air condition	32	16.0
Family property:		
Refrigerator	200	100.0
Radio	98	49.0
TV	200	100.0
Washing machine	200	100.0
Phone	200	100.0
Car	39	19.5
Lands	102	51.0
Shop	39	19.5
Another home	39	19.5
Animals	50	25.0
Computer	80	40.0
Presence of all above	7	3.5
Family Health Care Places:		
Private hospital	72	36.0
Health insurance	117	58.5
Governmental hospital	178	89.0
More than one source	46	23.0
Self-care	38	19.0
Private clinics	196	98.0
Governmental clinics	53	26.5
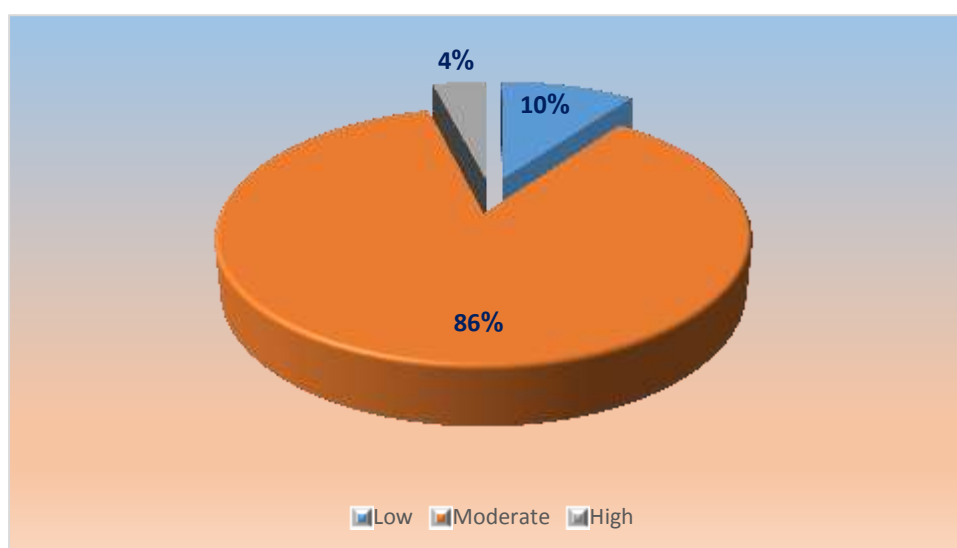
Figure (1): Socio-economic level of nursing school students in the study sample (n=200)

Table (4): Total knowledge of information domains among studied students (n=200)

Total knowledge of information domains	No	%
Physical information		
Satisfactory	48	24.0
Unsatisfactory	152	76.0
Psychological information		
Satisfactory	46	23.0
Unsatisfactory	154	77.0
Social information		
Satisfactory	32	16.0
Unsatisfactory	168	84.0
General information		
Satisfactory	19	9.5
Unsatisfactory	181	90.5
Total knowledge mean score out of 50 **Mean ± SD**	**16.93 ± 9.73**	

Satisfactory ≥ 60% of total score   unsatisfactory < 60% of total score
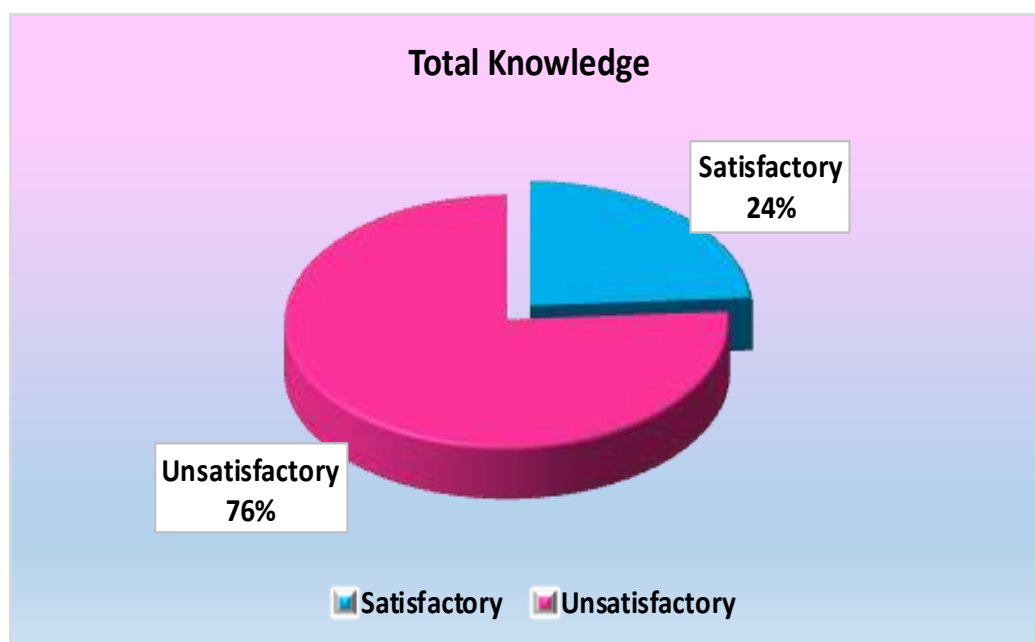

Figure (2): Total domains of knowledge of studied students among older adults (n=200)

Table (5): Willingness [attitude & subjective norms] among students (n=200)

Items	Agree		To some extent		Disagree	
	No.	%	No.	%	No.	%
Attitude willingness						
Working with the older adults is gratifying.	95	47.5	92	46.0	13	6.5
Care of older adults patients is a waste of financial resources.	192	96.0	4	2.0	4	2.0
Working with older adults patients is disappointing.	148	74.0	10	5.0	42	21.0
Working with the older adults is not a career.	114	57.0	58	29.0	28	14.0
Working with the older adults is a highly useful experience.	23	11.5	76	38.0	101	50.5
Total attitude willingness mean score out of 15 Mean ± SD			8.12 ± 1.75			
Subjective norms						
Caring for the older adults is a human duty.	133	66.5	65	32.5	2	1.0
My culture encourages me to work with the older adults.	63	31.5	132	66.0	5	2.5
There is enough encouragement to work with the older adults.	37	18.5	145	72.5	18	9.0
My professors advise me to consider a career on older adults care.	59	29.5	132	66.0	9	4.5
Working with the older adults is socially valuable.	57	28.5	134	67.0	9	4.5
Total subjective norm mean score out of 15 Mean ± SD			11.53 ± 1.85			

Table (6): willingness [Perceived Behavioral Control& Intention] among the nursing school students (n=200)

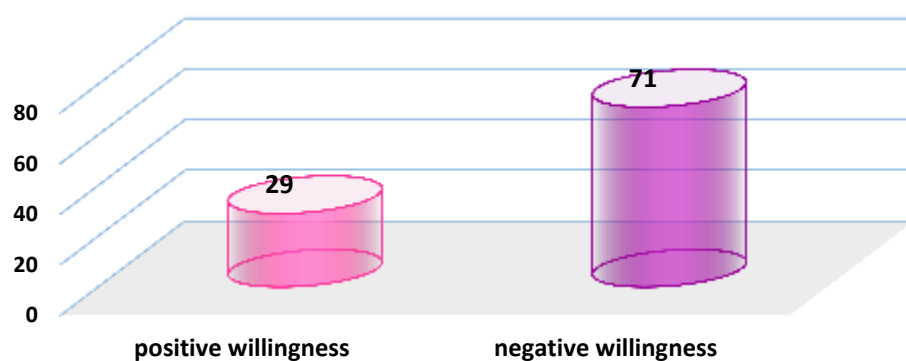| Items	Agree		To some extent		Disagree	
	No.	%	No.	%	No.	%
Perceived Behavioral Control						
Achieve competences on older adults care.	29	14.5	139	69.5	32	16.0
I have professional competences on older adults care.	31	15.5	131	65.5	38	19.0
In the curriculum there is enough older adults care training.	6	3.0	61	30.5	133	66.5
I have the skill of working with the older adults.	26	13.0	135	67.5	39	19.5
I have necessary capabilities to provide end-of-life care.	23	11.5	132	66.0	45	22.5
Total perceived behavioral mean score out of 15 Mean ± SD					9.14 ± 2.21	
Intention						
One of my career priorities after graduation is older adults care.	30	15.0	47	23.5	123	61.5
I will never consider older adults care a job.	24	12.0	14	7.0	162	81.0
I would like to work in community older adults care after graduation.	24	12.0	59	29.5	117	58.5
Total intention mean score out of 9 Mean ± SD					4.38± 1.63	
Total willingness mean score out of 54 Mean ± SD					33.17 ± 5.35	

Figure (3): Total level of willingness among studied students (n=200).

Table (7): Relations between nursing school students' knowledge and their socio-demographic characteristics (n=200)

Socio-demographic characteristics	Total knowledge				X^2 test	p-value
	Satisfactory (n=48)		Unsatisfactory (n=152)			
	No.	%	No.	%		
Age:						
18	32	23.9	102	76.1	Fisher	1.0
> 18	16	24.2	50	75.8		
Sex:						
Male	17	29.3	41	70.7	1.26	.261
Female	31	21.8	111	78.2		
Residence:						
Rural	29	17.9	133	82.1	17.39	**.000****
Urban	19	50.0	19	50.0		
Social class :						
Low	5	25.0	15	75.0		
Medium	41	23.8	131	76.2	.018	.991
High	2	25.0	6	75.0		

(*) Statistically significant at p<0.05   -- (**) highly significant at p<0.01

Table (8): Relation between nursing school students' willingness level and their socio-demographic characteristics (n=200)

socio-demographic characteristics	Total willingness				X^2 test	p-value
	Positive (n=58)		Negative (n=142)			
	No.	%	No.	%		
Age:						
18	43	32.1	91	67.9	1.88	.170
> 18	15	22.7	51	77.3		
Sex:						
Male	19	32.8	39	67.2	fisher	.560
Female	39	27.5	103	72.5		
Residence:						
Rural	27	16.7	135	83.3	62.98	**.000****
Urban	31	81.6	7	18.4		
Social class :						
Low	2	10.0	18	90.0	5.35	.069
Medium	52	30.2	120	69.8		
High	4	50.0	4	50.0		

(*) Statistically significant at p<0.05   *--(**) highly significant at p<0.01*

Table (9): Relations between nursing school students' knowledge, and willingness level (n=200)

Variables	Total knowledge				X^2 test	p-value
	Satisfactory (n=48)		Unsatisfactory (n=152)			
	No.	%	No.	%		
Total willingness						
Positive	34	58.6	24	41.4	53.68	**.000****
Negative	14	9.9	128	90.1		

(*) Statistically significant at p<0.05   *--(**) highly significant at p<0.01*

Table (10): Best fitting multiple linear regression model for nursing school students' knowledge score

Variable	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	8.670	2.114		4.102	**.000**	4.502	12.837
Residence (urban)	6.942	1.687	.281	4.115	**.000**	3.615	10.268

R-square=0.28 Model ANOVA: F=16.93, p<0.01

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