

Nurses Knowledge, Intention and Attitude towards the Use of Physical Restraint in Geriatric Care

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Abstract:

Background: The use of physical restraints with elderly is a common practice in many countries. It is frequently used in the management of hospitalized elderly to ensure safety, facilitate treatment and to compensate for understaffing. There was a lack of studies concentrated on nurse's knowledge, attitude and intention towards physical restraint use with geriatric patients. **Aim:** Assess nurses' knowledge, intention and attitude towards the use of physical restraint in geriatric care. **Method:** A descriptive correlation research design was used. The study was conducted at the medical and surgical inpatient's units and intensive care units at Mansoura University hospitals. The study included a convenient sample of 150 nurses dealing with geriatric patients in the previously mentioned settings. **Tools:** Four tools were used: Nurses' demographic and professional characteristics structured questionnaire sheet, Nurses' knowledge about the use of physical restraint questionnaire, Nurses' intention towards the use of physical restraint questionnaire, and Nurses' attitude towards the use of physical restraint questionnaire. **Results:** The age of 72.7% of the studied nurses ranged between 20 and 30 years old. 71% of the studied nurses have good knowledge about the physical restraint of geriatric patients. The total mean score of the studied nurses' intention and attitude towards the use of physical restraint is 19.05 ± 3.67 and 25.4 ± 5.67 respectively. Moreover, a statistically significant positive correlation was found between the knowledge and attitude score of the studied nurses ($P=0.001$). **Conclusion:** Most of the studied nurses have good knowledge, neutral attitude and a high intention to use physical restraint in geriatric care. **Recommendation:** In-service training programs should be applied in hospitals to improve nurses' attitude and intention toward restraint use with geriatric patients as well as update their knowledge.

Keywords: Nurses, Knowledge, Intention, Attitude, Physical Restraint, geriatric care.

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I. Introduction

Maintain a high quality of care for elderly comprises a future challenge for many countries, because of the growing number of elders combined with scarce resources^{1,2}. Reviewing the related literature, indicated that, nurses' knowledge and attitudes of ageing might influence their anticipations about the ways in which they care for and their working lives and approach their patients^{3,4}. In spite of the growth of the elderly populations, there have been few attempts to protect the elderly rights in relation to appropriate care while in hospital. In addition, physical restraint use with hospitalized elderly remains an important issue⁵. Also, one of the factors that influence care practices is ageism which involves stereotypical beliefs and negative perceptions that describe older people as less attractive and less competent. It is surprisingly common for health professionals to hold such stereotypes of older people⁶.

Physical restraint is any device, method or equipment that reduces or immobilizes the ability of the patients to move their body, legs, arms or head freely⁷. Although, evidence indicates that restraint can be harmful, health care professionals continue to use physical restraint under the name of safety⁵. Implementation of physical restraint becomes more common; its prevalence raises from 18% to 20% among those 65 years or older, and up to 22% for those 75 years or older. One out of five geriatric patients on medical or surgical unit is restrained at some point during hospitalization⁸. Moreover, physical restraint is a common practice with a prevalence rates ranging between 33% and 68% in psychiatric hospitals and are 56% more frequently used in intensive care units^{9,10}. As well, the use of physical restraint is very popular in care of elderly people in the long-term care facilities and hospital¹¹. The most reasons for their use are to reduce risk of falls, preventing removal of medical device and control disruptive or other behaviors^{12,13}.

Physical restraint use with geriatric patients has been accompanied by several psychological, physical and social adverse effects². Among the adverse physical effects such as impaired balance and mobility, muscle

function deterioration, constipation, incontinence, pressure ulcers, infections, increased morbidity and mortality rates^{14,15}. Psychological and social adverse effects include low self-esteem, anxiety, depression, impaired in socialization, disorientation and agitation and withdrawal^{16,17}. So, the geriatric patient's dignity should be maintained if the physical restraint device is used. The international guidelines on restraint use mention that, both patients and caregivers must be given appropriate information on the need for restraint therapy¹⁵. Subsequently, the patient/elderly must be assessed very carefully regarding the benefits when deciding using of physical restraints. At this stage having knowledge about physical restraints use becomes very important¹⁸.

Several studies showed that, nurses' knowledge about the use of physical restraint was inadequate and their attitudes were negative^{9,19,20}. Furthermore, practices of nurses towards restraint use are indirectly and directly related to nurse's knowledge level and the underlying attitude towards restraints²¹. To eliminate physical restraint use, measures such as implementing relevant institutional policies and raising the sense of social support between nurses were recommended²².

Nurses play an important role; they are usually those who initiate the decision and draw physicians' attention to the need to use or remove of physical restraint. Moreover, attitude of nurses is considered one of the main factors affecting the decision to use or not to use physical restraint^{19,23}. Attitude is the tendency to evaluate an "attitude object," which may include; persons, objects, ideas, or events, either favorably or unfavorably²⁴. In addition, intention can be described as a function of attitudes and subjective norms. According to the theory of planned behavior, intention towards behavior has been rated as a predictor of behavior²³. Therefore, this study was consequently undertaken to identify the nurse's knowledge, attitude and intention to use physical restraint with geriatric patients to help in preparing for staff education and training programs and to reduce the use of restraint in geriatric care.

Aims of the study:

1. Assess nurses' knowledge, intention and attitude towards the use of physical restraint in geriatric care.
2. Determine the type of relationship between nurses' knowledge, intention and attitude towards the use of physical restraint in geriatric care.

Research questions:

1. What is the level of knowledge, intention, and attitude of nurses towards the use of physical restraint in geriatric care?
2. What is the type of relationship between nurses' knowledge, intention, and attitude towards the use of physical restraint in geriatric care?

II. Subjects and Method

Design: The study followed a descriptive correlational research design.

Settings: The study was conducted at the Medical and Surgical Inpatients Units and Intensive Care Units at Mansoura University Hospitals (Emergency Hospital, Specialized Medical Hospital and Mansoura Main University Hospital).

Subjects: The study included a convenient sample of 150 nurses dealing with geriatric patients in the previously mentioned settings. The following criteria were used to select the participants for the study: nurses with at least 6 months of working experience in hospital, willing to participate in the study and available at the selected settings during the time of data collection.

The sample size adequacy ($n = 120$) was estimated based on alpha level (5%), beta error 20%, with test value 41.4, sample average (40.48), SD (4.05)²³. Therefore, the sample size in the study ($n = 150$) was adequate.

Tools: In order to fulfill the objectives of the study, four tools were used.

Tool I: Nurses' Demographic and Professional Characteristics Structured Questionnaire Sheet

This tool was designed by the researchers based on review of relevant literature and covered two parts:

Part 1: Demographic characteristics of nurses such as age, sex, marital status and academic qualifications.

Part 2: Professional characteristics of nurses such as work setting/unit and years of experience.

Tool II: Nurses' Knowledge about the Use of Physical Restraint Questionnaire

This tool was developed by the researchers after review of the relevant literature^{14,25,26}. It was used to assess nurse's knowledge towards the use of physical restraint with geriatric patients. It consists of 25 questions about physical restraint such as definition, indications, alternatives, types, contraindications, precautions, barriers and complications for use. Nurses responses were checked with model answers and each answer was scored by using a dichotomous scale of (correct = 1 and incorrect = 0). The total score was summed up and

converted into percent score and was judged as the following: less than 50% categorized as poor knowledge, from 50% to less than 75% categorized as fair knowledge and more or equal than 75% categorized as good knowledge.

Tool III: Nurses' Intention towards the Use of Physical Restraint Questionnaire

This tool was developed by the researchers after review of the relevant literature^{23,27,28}. It was used to measure nurse's intention toward use of physical restraint with geriatric patients. The participated nurses were asked to report their intention in 6 hypothetical situations (using a scenario of geriatric patients with Alzheimer disease, cerebral stroke, schizophrenia, falls, malnutrition, and hepatic coma). The situations were cited based on the most commonly cited reasons for the use of physical restraints by nurses as reported in the literature. Nurses responses were scored on a four-point likert scale ranging from 1 (not definitely) which means very weak intention to physical restraint use to 4 (yes definitely) which means very strong intention to use physical restraint. The total score of the questionnaire is 24. Higher mean score implies that, there was a strong intention to physical restraint use with geriatric patients.

Tool IV: Nurses' Attitude towards the Use of Physical Restraint Questionnaire

This tool was developed by Janelli et al. (1991)²⁹. The questionnaire was used to assess the nurses' attitude towards physical restraint use. It consists of twelve statements. Nurses responses were rating on three-point Likert scale from agree (3), I am not sure score (2), to disagree (1) and vice versa for negatively phrased items. The scoring system ranges from 12-36. Scores ranging between 12-19 denote negative attitudes, scores ranging between "20-27" denote neutral attitudes and scores ranging between "28-36" denote positive attitudes towards physical restraint use with geriatric patients.

Method

1. Official letters were issued to from the Faculty of Nursing, Mansoura University Dean to the responsible authorities to obtain their approval to collect the data, and were informed about the aim of the study, date and time of starting data collection.
2. Tool I, tool II, and tool III were developed by the researchers based on recent and relevant literature review.
3. Tool IV (Nurses' Attitude towards the Use of Physical Restraint Questionnaire) was translated by the researchers into Arabic language and tested for reliability using Spearman's correlation coefficient ($r = 0.871$).
4. The study tools content validity was obtained by a jury of 5 experts in the field of medical surgical nursing and gerontological nursing. The required corrections and modifications were done accordingly.
5. A pilot study was conducted on 10% of nurses to test and ascertain clarity and feasibility of the study tools and the necessary modifications were done. The nurses who included in the pilot study were excluded from the study sample.
6. The researchers visited the selected setting all days of the week except Saturday and Friday, either in the morning or afternoon. It took from 30-45 minutes from each of the participated nurse to complete the data collection sheet after explaining the purpose of the study in order to gain their cooperation.
7. Data collection started from September 2018 to January 2019.

Ethical considerations:

Ethical approval was obtained from Mansoura University, Faculty of Nursing Ethic Committee. Written informed consent was obtained from the studied nurses after explanation of the nature and aim of the study. The nurses were informed that, their participation is voluntary and they can withdraw from the study at any time. Confidentiality and anonymity of the collected data were assured.

Statistical analysis:

Data was analyzed using SPSS (Statistical Package for Social Sciences) version 20.0. Descriptive statistics were done using numbers, percentages, arithmetic mean and standard deviation. While, analytical statistics was done using Independent t-test and one-way Anova test. Pearson's correlation coefficient was used to quantify association between different variables. $P \leq 0.05$ was considered statistically significant. Graphs were done for data visualization using Microsoft Excel.

III. Results

Table 1 illustrates that, 72.7% of the nurses aged between 20 and 30 years old, 92.7% are females, 76.7% married and 51.3% educated in the technical institute of nursing. Nurses working in the intensive care units constitutes 44.7% and 42.7% of nurses have less than 5 years of working experience. Moreover, it was observed that 68.7 % of the nurses have previous knowledge about physical restraint.

Figure 1 shows that, 71% of the studied nurses have good knowledge about the physical restraint of geriatric patients, and only 4% have poor level of knowledge. The total means score of nurses' knowledge is 19.93 ± 9.93 .

Table 2 illustrates that, the total mean score of the studied nurses' intention towards the use of physical restraint is 19.05 ± 3.67 , which indicates a high intention to use physical restraint with geriatric patients. In situation of geriatric patients with hepatic coma, 66.7% of the participants definitely intended to use physical restraint followed by falls (39.7%) and Alzheimer disease (38.5%).

Table 3 shows that the total mean score of the studied nurses' attitude is 28.3 ± 5.61 , which indicates a neutral attitude toward use of physical restraint with geriatric patients. 88.7% of studied nurses agreed that hospital is responsible to ensure safety of the patient by adhering to the laws on restraint use, followed by 60.0% of nurses who agree that shortage of nursing staff is the main reason of physical restraint use with geriatric patients. While, 53.3% of nurses disagree with the statement of "patients suffer from feeling inferior when they are restrained", and 45.3% of nurse mentioned that they are not sure about "feeling embarrassed when family members enter the restraint patient's room and they have not been informed about it".

Table 4 shows a statistically significant relation between age, educational level, years of experience, work setting and the nurses' attitude towards physical restraint use with geriatric patients ($P = 0.001$, $P = 0.000$, $P = 0.009$ and, $P = 0.011$ respectively). In addition, a statistically significant relation was found between age, work setting and the nurses' intention towards the use of physical restraint with geriatric patients ($P = 0.006$ and $P = 0.000$ respectively). As well, a statistically significant relation was observed between age, marital status, level of education, years of experience, having previous knowledge about physical restraint and nurses' knowledge about physical restraint use with geriatric patients ($P = 0.000$, $P = 0.022$, $P = 0.000$, $P = 0.000$ and $P = 0.031$ respectively).

Table 5 clarifies that; a statistically significant positive correlation was found between the total mean score of knowledge and attitude of nurses toward the use of physical restraint with geriatric patients ($P = 0.001$), which means, the increasing in knowledge score will be associated with increasing in the attitude score (positive attitude).

Table 1: Demographic and professional characteristics of the studied nurses

Characteristics	N= 150	%
Age (years):		
. 20 - < 30	109	72.7
. 30 - < 40	28	18.7
. ≥ 40 yrs.	13	8.7
Mean \pm SD = 28.20 \pm 5.9		
Sex:		
. Female	139	92.7
. Male	11	7.3
Marital status:		
. Married	115	76.7
. Single	34	22.7
. Divorced	1	0.7
Level of education:		
. Technical institute of nursing	77	51.3
. Bachelor's degree in nursing	50	33.3
. Diploma	23	15.3
Work setting/ unit:		
. Intensive care	67	44.7
. Medical	57	38.0
. Surgical	26	17.3
Experience (years):		
. < 5yrs	64	42.7
. 5- < 10yrs	50	33.3
. ≥ 10 yrs	36	24.0
Previous knowledge about physical restraint		
. Yes	103	68.7
. No	47	31.3
Source of knowledge	(N= 103)	
. Education (Faculty/Institute)	90	66.0
. Practice	10	6.7
. Clinical training	3	2.0

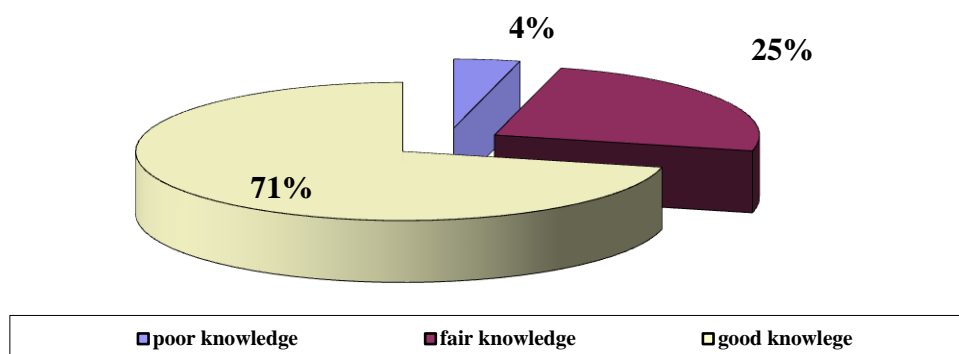


Figure 1: Nurses knowledge about physical restraint of geriatric patients (N= 150)

Table 2: Nurses' intention towards physical restraint use with geriatric patients (N= 150)

Nurses Intention	Definitely Yes		Probably Yes		Probably Not		Definitely Not	
	%	N	%	N	%	N	%	N
Situation 1: Geriatric Patient with Alzheimer	60	38.5	66	42.3	13	8.3	11	7.1
Situation 2: Geriatric Patients with cerebral stroke	52	33.3	51	32.7	30	19.2	17	10.9
Situation 3: Geriatric Patients with falls	62	39.7	59	37.8	21	13.5	8	5.1
Situation 4: Geriatric Patient with hepatic coma	100	66.0	34	22.7	10	6.7	6	4.0
Situation 5: Geriatric Patients with malnutrition	39	26.0	33	22.0	36	24.0	42	28.0
Situation 6: Geriatric Patients with schizophrenia	46	29.5	55	35.3	40	25.6	9	5.8
Total score	Minimum = 6.0				Maximum = 24.0			
	Mean ± SD =				19.05 ± 3.67			

Table 3: Nurses attitude towards physical restraint use with geriatric patients (N= 150)

Statement	Agree		Disagree		I'm not sure	
	N	%	N	%	N	%
1. "If I were a patient, I feel that I have the right to refuse being restraint"	84	56.0	52	34.7	14	9.3
2. "I feel that family members have the right to refuse the use of physical restraint"	49	32.7	59	39.3	42	28.0
3. "I feel that nurses have the right to refuse using physical restraint on patients"	29	19.3	70	46.7	51	34.0
4. "I feel discomfort when placing a patient on restraint in front of my colleagues"	34	22.7	64	42.7	52	34.7
5. "I feel embarrassed when family members enter the restraint patient's room and they have not been informed"	24	16.0	58	38.7	68	45.3
6. "I feel that it is important to tell restraint patients that I am concerned about them"	72	48.0	20	13.3	58	38.7
7. "I feel that the main reason for restraint use is the shortage in nursing staff"	90	60.0	19	12.7	41	27.3
8. "I feel that it is important to use physical restraint after trying alternative methods"	69	46.0	37	24.7	44	29.3
9. "I feel discomfort when the patient become agitated on physical restraint"	67	44.7	41	27.3	42	28.0
10. "Generally, I feel confident to perform physical restraint for patients"	67	44.7	44	29.3	39	26.0
11. "Patients suffer from feeling inferior when they are restraint"	42	28.0	80	53.3	28	18.7
12. "The hospital is responsible to adhering to the laws on the use of restraint to ensure the safety of a patient".	133	88.7	3	2.0	14	9.3
Total score	Minimum = 12		Maximum = 36			
	Mean ± SD =		28.3 ± 5.61			

Table 4: Relation between nurses' characteristics and their knowledge, intention and attitude towards physical restraint use (N= 150)

Characteristics	Knowledge (Mean±SD)	Intention (Mean±SD)	Attitude (Mean±SD)
Age (years):			
. 20 - < 30	19.44±3.45	19.02±3.93	24.94±5.49
. 30 - <40	20.07±4.15	17.89±2.73	24.67±5.72
. ≥ 40 yrs.	23.69±1.18	21.76±0.93	31.00±4.04
Test of significance (P value)	F=8.73 (0.000) *	F=5.22(0.006) *	F=7.53 (0.001) *
Sex:			
. Male	18.30±3.69	19.90±3.96	24.09±4.36
. Female	20.02±3.63	18.98±3.66	25.52±5.75
Test of significance (P value)	T=1.22 (0.224)	T=0.80 (0.425)	T=0.81 (0.421)
Marital status:			
. Married	20.37±3.45	19.08±3.56	25.61±5.79
. Single	18.50±3.97	18.85±3.56	24.85±5.32
. Divorced	17.00±0.00	22.00±0.00	22.00±0.00
Test of significance (P value)	F=3.933 (0.022) *	F=0.373 (0.689)	F=0.419 (0.659)
Level of education:			
. Technical institute of nursing	18.83±3.23	19.19±4.01	23.49±4.73
. Bachelor's degree in nursing	21.34±3.29	18.96±3.25	29.06±5.45
. Diploma	20.52±4.55	18.78±3.48	23.95±5.36
Test of significance (P value)	F=8.26(0.000) *	F=1.34 (0.875)	F=19.36 (0.000) *
Experience (Years):			
. < 5yrs	18.39±3.76	18.35±3.81	23.96±5.17
. 5 - < 10yrs	20.26±3.26	19.84±3.85	25.78±5.47
. ≥ 10yrs	22.19±2.54	19.19±2.96	27.50±6.17
Test of significance (P value)	F=15.29 (0.000) *	F=2.35 (0.099)	F=4.87 (0.009) *
Work setting/ unit:			
. Intensive care	20.01±3.62	21.38±2.58	24.66±5.65
. Medical	19.63±3.62	16.91±3.19	26.85±5.65
. Surgical	20.34±3.86	17.73±3.63	24.23±5.27
Test of significance (P value)	F=0.95 (0.419)	F=24.92 (0.000) *	F=3.82 (0.011) *
Previous knowledge about physical restraint			
. Yes	20.36±3.25	19.23±3.83	25.78±5.58
. No	18.98±4.28	18.66±3.32	24.64±5.83
Test of significance (P value)	T=2.176 (0.031*)	T=0.885 (0.378)	T=1.142 (0.255)

*Significant at $P \leq 0.05$

Table 5: Correlation between nurses' knowledge, intention and attitude towards physical restraint of geriatric patients

Items	Knowledge		Intention	
	r	p	r	p
Attitude	0.258	0.001*	0.045	0.582
Intention	0.086	0.294	-	-

**Significant Correlation at 0.01 levels

IV. Discussion

The use of physical restraint for hospital patients has been extensively investigated in developed countries, but less commonly in the developing world¹⁵. Restraint use has recently become a more pressing issue and is still commonly adopted in many health care settings. The physical restraint use with geriatric patients is associated with poor outcomes such as decline in psychological and functional status, dignity loss, patient's rights violation and even death³⁰⁻³². Moreover, the literature illustrated that many studies conducted in Egypt address physical restraint nursing practice in general, but it is rare to find a study that assess physical restraint use with geriatric patients.

The demographics of this study agree in many aspects with those of many other studies among nurses. As the majority of the participants in this study were females. This reaffirms the notion that nursing is still predominantly female dominated profession. These results are consistent with Taha & Ali (2013)³³ in Egypt and Balci & Arslan (2018)³⁴ in Turkey. Regarding age of the nurses, the present study revealed that most of them were younger than 30 years old. This may be related to most of nurses were newly graduated. These findings are in agreement with Ahmed et al. (2019)³⁵ in Egypt and Suliman & Aloush (2017)³⁶ in Jordan, who mentioned that more than half of the studied nurses were in age ranged between 20 and 30 years old.

Concerning the level of education, most of nurses in this study were graduated from the technical institute of nursing followed by baccalaureate degree in nursing. This result could be due to the fact that technical institutes of nursing provide the health care agencies with large numbers of graduated nurses than nursing faculties as they graduated after 2 years of education. This is in agreement with Ahmed et al. (2019)³⁵. This result disagreed with other studies done in Egypt by Taha & Ali (2013)³³ and in Malaysia by Eskandari et al. (2017)²³, where the majority of the nurses are diploma holders. As for years of experience, around one half of the studied nurses reported having less than five years of experience in nursing. This may be rationalized as the fact that most of the studied nurses were newly graduated. Consistent with the present study, Younis & Ahmed (2017)³⁷ in Egypt indicated that most of the nurses have a work experience of 1-5 years. While, Taha & Ali (2013)³³ mentioned that all the studied nurses have less than 5 years of work experience in the unit.

The results of this study illustrated that, most of nurses have a previous knowledge about physical restraint. This may be explained by the fact that; the majority of the studied nurses were graduated from the university and the technical institute of nursing and definitely they studied this topic in the nursing courses during their education. This supports the finding of Parsons, et al (2015)³⁸, while contradicts another study carried out in Egypt by Hafez (2011)³⁹.

Enforcement of the knowledge base regarding restraint use between the nursing staff is considered the first step to improve the quality of geriatric patients care. Concerning knowledge of nurses about the use of physical restraint with geriatric patients, the result of this revealed that, most of nurses have good knowledge towards physical restraint use while few percent of them have poor knowledge. This result may be related to the high percentage of nurses in the present study who reported having previous knowledge about physical restraint and also, they mentioned the source of this knowledge was from their previous education in the nursing faculty and the technical institute of nursing. The same result was reported by studies conducted in India by Gandhi et al., (2018)⁴⁰ and Hong Kong by Celik, et al., (2012)⁴¹. On the opposite side other studies done by Orhan & Yakut (2012)⁴² & Hakverdioglu et al., (2006)⁴³ revealed that, nurses' knowledge was inadequate towards physical restraint use. Also, the present study displayed a significant relation between the nurses' knowledge and their age, marital status, educational level, years of experience, and having previous physical restraint knowledge. As nurses with baccalaureate degree in nursing, advanced age, longer years of experience and who have a previous knowledge of physical restraint have a higher level of knowledge than other nurses. This is in agreement with a study conducted by Azab & Abu Negm (2013)¹⁴. On the opposite side Terpstra, et al., (1998)⁴⁴ found that a statistically significant negative correlation was found between years of nursing experience and knowledge score.

There is still an ongoing debate regarding the physical restraint use with geriatric patients in various long-term care settings. Also, the intention and attitude of nurses toward physical restraint use in ensuring patient safety and controlling patients' behavior may make conflicts with patients' rights⁴⁵. Concerning nurses' intention towards use of physical restraints, a high total mean score was observed. This indicates that, there was strong intention to use physical restraint with geriatric patients. This may be related to the myths that nurses have about aging and the nurses work overload. Most of the studied nurses have definitively intended to use physical restraint with geriatric patients suffering from hepatic coma followed by falls and Alzheimer disease. This finding can be explained that violent behavior of patient in hepatic coma and Alzheimer need to restrain as their agitated behavior interfere with treatment. This result supports those of Mion & Mercurio (1992)⁴⁶. Moreover, a significant association was found between nurses' intention to use of physical restraint, their age and the work setting. The same findings were reported in another study²¹.

Hantikainen (2001)⁴⁷ assert that, use of physical restraint decision is depend on some of the internal and external factors, such as; society and family pressures, institutional policies, patients' behaviors and nurses' professional and personal values, attitudes and dilemmas. A neutral attitude toward physical restraint use with geriatric patients was reported in the present study. This can be related to the good knowledge that nurses have about physical restraint use with geriatric patients. The results also revealed that; majority of the subjects agreed with the responsibility of the hospital to adhere to the laws of the use of restraint. Most of the subject agrees with the right of the patients to refuse being restrained. In this line Helmuth (1995)⁴⁸ stated a favorable attitude of nurses toward restraint use with elderly. On the opposite side Balci & Arslan (2018)³⁴ and a study done in Germany by Mohler & Mayer (2014)²⁰ who reported overall negative attitudes. A significant relation was found between age, level of education, years of experience, work settings of the studied subjects and their attitude toward physical restraint use with geriatric patients.

These findings are in agreement with Huang et al., (2009)⁴⁹ who stated that, nurses with higher levels of education had fewer positive attitudes. Moreover, Gandhi, Poreddi et al., (2018)⁴⁰ who reported that, nurses with more than ten years of experience have more favorable attitudes towards using physical restraint than nurses with less years of experience. On the opposite side Myers et al., (2001)⁵⁰ reported that, the nurses' level

of education did not have any effect on the attitude of nurses towards physical restraint. Moreover, a significant positive correlation was found between nurses' knowledge and attitude towards physical restraint use with geriatric patients. The same finding was found by a study conducted by Kargozoglu et al., (2013)²⁵ who found that nurses' knowledge about physical restraint use was at a very good level and reflected positive attitudes. Conversely, no significant correlation was noted between nurses' knowledge, intention and attitude towards physical restraint use with geriatric patients. It is clear from discussing the result of this study that, accurate and adequate knowledge is an essential facet of any attempt to change attitude. This change is required in the care of geriatric patients and in a timely fashion to meet regulatory requirements and possible improvement in hospital care.

V. Conclusion

It can be concluded from the study that most of nurses have good knowledge, neutral attitude and a high intention to use physical restraint with geriatric patients. Also, a significant association was found between the nurses' knowledge and attitude towards use of physical restraint.

VI. Recommendations

1. In-service training programs should be utilized in hospitals for nurses to improve their attitude and intention toward restraint use with geriatric patients as well as update their knowledge.
2. Development of an appropriate educational intervention and guidelines suitable for practice toward physical restraint use for nurses should be encouraged in order to ensure safety and not violating the human rights of geriatric patients.

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