

Assess Nurses' Knowledge, Attitudes and Practice toward Physical Restraint for Psychiatric Patients

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Abstract

This study **aimed** to assess nurses' knowledge, attitude and practice toward physical restraint for psychiatric patients. **Subjects and Methods:** A descriptive study was conducted at psychiatric emergency departments at El-Abbassia Mental Health Hospital in Cairo. **Sampling:** A convenience sample of 100 nurses who are working in the previously mentioned settings. **Tools:** A structured questionnaire sheet to assess nurses' characteristics, their knowledge and their attitudes toward physical restraint. The second tool was an observational checklist to assess nurses' practice toward physical restraint. **Results:** revealed that nearly half of the studied nurses were aged between 20 to 30 years and nearly two thirds of them were females. Nearly half of the studied nurses were graduated from technical nursing institute and more than two fifths of them had less than 5 years of experience. Also, it was clear that more than two fifths of them had satisfactory level of knowledge about physical restraint. While two thirds of the studied nurses had incompetent level of practice regarding physical restraint and more than three quarters of them had negative attitude toward physical restraint. **Conclusion:** The study concluded that, the majority of the studied nurses had unsatisfactory level of knowledge, negative attitudes and incompetent level of practice regarding physical restraint. **Recommendations:** The study recommended that, implementation of training program for nurses regarding physical restraint. Continuous monitoring and teaching on spot from nurse supervisor is needed to ensure quality of care provided by nurses for physical restraint of psychiatric patient.

Key words: Physical Restraint, Nurses' Knowledge, Attitudes, Practice, Psychiatric patients.

Introduction

Physical restraints are commonly used in acute care settings especially in psychiatric care settings to control disruptive behavior, wandering, maintain treatment plans, and reduce the risk of injury (*Huang et al., 2014*).

Physical restraint is defined as 'any action or procedure that prevents a person's free body movement to a position of choice and/or normal access to

his/her body by the use of any method that is attached or adjacent to a person's body and that he/she cannot control or remove easily (*Bleijlevens et al., 2016*).

The most overwhelmingly identified reason for using physical restraint is the protection of the patient. In other terms "patient oriented reasons", by preventing injury to the patient and others in case of violent behavior. Sometimes to control patient behavior as in case of altered

mental status and confusion and to prevent patients from wandering (*Sadock, 2015*).

Although physical restraints were considered as care assistance to prevent falling, maintain gait control, or prevent accidental removal of endotracheal or nasogastric tubes. However, the overuse of physical restraints can have adverse effects that are biochemical, physiological, perceptual, behavioral, emotional and social in nature. For example, physical restraints may impair circulation and damage nerves (*Lan et al., 2017*).

Physical restraint use can cause physical injuries, death, psychological complications and deleterious social effects. Use of physical restraints also influences the patient's milieu and distracts nursing staff from other therapeutic procedures (*Eskandari and Abdullah, 2017*).

Both the Joint Commission and CMS limit the use of patient restraint (physical, mechanical, and chemical) to situations in which the patient is an immediate danger to himself/herself or others. This means that patients cannot be restrained as punishment, reprisal, for rowdy behavior, or because of refusal to follow rules or to take medications (*Masters, 2017*).

The decision to use physical restraints are affected by external and internal factors, such as institutional policies, family and society pressures, residents' behaviors and nurses' professional and personal values, dilemmas and attitudes. Nurses' knowledge and attitude may influence their decisions on physical restraints (*Lan et al., 2017*).

Nurses are closely involved in caring for restrained patients. The common absence of medical orders for starting or removing physical restraints

indicates that these decisions are mostly made by the nurses. Their roles start with the selection of the least restricting arm restraint device available. Then, they are the ones responsible for modifying the care plan based on hourly assessment of patient's response, and removing the restraints every two hours (*De Jonghe et al., 2013*).

Since nurses' knowledge and attitudes play an important role in this care practice, it was deemed important to develop a restraint policy and educate nurses to implement it because hospitals in Egypt have not any policies and there are illegal uses of restraint (*Taha & Ali, 2013*).

Significance of the study

Nursing staff members at psychiatric units are likely to be involved in preventing and managing aggressive acts by patients. Thus, it's critical that psychiatric nurses able to assess patients at risk for violence and intervene effectively with patient before, during and after an aggressive episode (*Stuart, 2013*).

In Egypt, physical restraint is a more conventional practice in hospitals .There are no available guidelines or hospital polices concerning using of physical restraint. Most nursing researches in Egypt focuses on educational programs for nurses and surveying nurses' views about certain aspects of care. Physical restraints are a common practice in psychiatric hospitals, with prevalence rates ranging between 33% and 68% in hospital settings (*Kandeel & Attia, 2013*).

Therefore development of appropriate level of knowledge and practice about physical restraint is essential for psychiatric nurses to identify patients' needs and to provide appropriate health care services in the light of the best scientific evidences. It's important to

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educate nurses about restraint practice and describe ways of applying restraint that will reduce false perception about physical restraint in patient care and affecting attitudes positively (*Mahmoud, 2017*).

Aim of this study

This study aimed to assess nurses' knowledge, attitudes and practices toward physical restraint for psychiatric patients.

Research Question

This study is based on answering the following question:

-What are nurse's knowledge, attitudes and practice about physical restraint for psychiatric patient?

Subject and Methods

Research Design

An exploratory descriptive research design was adopted to fulfill the aim of the study and answer the research question. It helps the researcher to describe and document aspects of a situation as it naturally occurs. As well, this design helps to establish a database for future research.

Setting

The study was conducted at the emergency departments at El-Abbassia Mental Health Hospital in Cairo.

Subject

A convenience sample of 100 nurses who are working in the previously mentioned settings according to the following criteria: providing care for psychiatric patient at the emergency departments with experience at least one year and from both sexes.

Data Collection tools

Data were collected using the following tools:

A- Interviewing Questionnaire

It was used to determine nurses' knowledge and attitude regarding use of physical restraint. It was adapted from *Janelli, Kanski, Scherer & Neary (1992)* and modified by the researcher. The questionnaire was prepared by the researcher in Arabic language to suit the nurses' level of understanding. Then, it was revised by a panel of experts for the content validity. It included three parts as follows:

Part I - Socio demographic characteristics of the nurses such as age, sex, qualifications, years of experience and attendance of training programs related to physical restraint of psychiatric patient.

Part II – comprised 26 items to assess nurses' knowledge regarding use of physical restraint (definition, indications, types, contraindications, principles, precautions, complications, ethical issues, and nursing care for restrained psychiatric patient).

They are tallied up as a crude score on the overall correct answers identified. The minimum and maximum value range from 0 to 26. Each correct answer is scored with "1" and "0" for every wrong answer.

According to studied nurses' answer, their total level of knowledge was categorized as the following:

- Satisfactory level of knowledge $\geq 60\%$.
- Unsatisfactory level of knowledge $< 60\%$.

Part III – concerned with nurses' attitudes toward physical restraint and comprised 22 items measuring nurses' attitudes toward using of physical restraint, rated on a three point Likert-

type rating scale “disagree”, “may be” and “agree”, each item is scored from 0 to 2. It is composed of two subscales: Positive attitudes of nurses toward physical restraint (questions 1-12) and negative attitudes toward physical restraint (questions 13-22).

Each item was given (2) score for “agree”, (1) score for “may be”, (0) score for “disagree”, and vice versa for negatively phrased items. Thus, high scores reflected positive attitudes and low scores reflected negative attitudes.

According to the studied nurses' response, their total scores was categorized as the following:

- Total score of answer 60% and more indicated positive attitude.
- Less than 60% indicated negative attitude.

2-Observational checklis

It was adapted from *Mahmoud (2017)* and modified by the researcher. It comprised 19 steps to assess nurses' practice regarding physical restraint. Each nurse was observed using the observational checklist which filled by the researcher during the procedure of physical restraint of psychiatric patient.

Nurses' practice was classified into (1) score was given for done and (0) score was given for not done. Total score was categorized as the following according to the nurses' actual practice.

- Competent level of practice $\geq 60\%$.
- Incompetent level of practice $< 60\%$.

Pilot study

was conducted on ten nurses from the hospital. They represent 10% of total

sample to ensure the appropriateness, structure, clarity of the questions applicability of the tools and the time needed to complete them. The necessary modifications were done as a result of pilot study.

Ethical considerations

Approval of the study protocol was obtained from Ethical Committee in the Faculty of Nursing at Ain Shams University before starting the study. All the collected data was used for research purpose only, also anonymity and confidentiality of the obtained data was guaranteed. The researcher clarified the aim and expected outcomes of the study to the nurses included in the study. Nurses were informed that they were allowed to choosing to participate in the study or not, and that they had the right to withdraw from the study at any time without giving any reasons.

Statistical Analysis

Data were collected and fed into the computer for analysis and presentation. Data were entered and analyzed using Statistical Package of Social Science (SPSS) software version 18. Data were presented using descriptive statistics in the form of frequencies, percentages, means and standard deviation. Chi square test was used and Bivariate Pearson correlation test to test association between variables. Statistically significant difference was considered when P-Value ≤ 0.05 .

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Results

Table (1): Socio-demographic characteristics of the studied nurses (n=100).

Socio demographic characteristics	No.	%
Age in years		
20 <30 years	48	48.0
30 <40 years	34	34.0
≥ 40 years	18	18.0
Sex		
Male	39	39.0
Female	61	61.0
Education level		
Diploma	41	41.0
Institute	48	48.0
Bachelor	11	11.0
Duration of experience in years		
<5 years	46	46.0
5-10 years	31	31.0
≥10 years	23	23.0

Table (1): illustrates that 48% of the studied nurses were aged between 20 and 30 years old, 61% of them were females, and 48% of them educated in technical nursing institution, 41% had diploma, and 11% had bachelor's degree. Regarding years of experience it was found that 46% of the studied nurses had experience for less than 5 years.

Table (2): Distribution of the studied nurses' knowledge regarding physical restraint of psychiatric patient (n=100).

Total knowledge level	No=100 (100%)	
	No	%
satisfactory	42	42.0
Unsatisfactory	58	58.0

Table (2): shows that more than half 58% of studied nurses had unsatisfying level of knowledge regarding physical restraint, while 42% of them had satisfying level of knowledge regarding physical restraint.

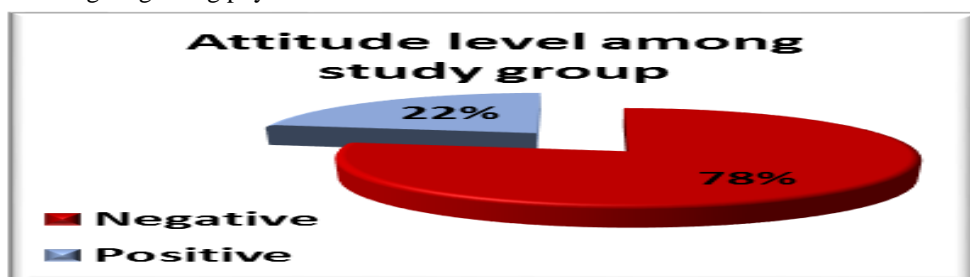


Figure (1) : Distribution of the studied nurses' attitudes toward physical restraint (n=100).

Figure (1): describes studied nurse's attitude toward the physical restraint of psychiatric patient. More than three quarter 78% of studied nurses had negative attitudes toward physical restraint, while 22% of them had positive attitudes toward physical restraint.

Table (3): Distribution of the studied nurses' practice about physical restraint of psychiatric patient (n=100)

	Items of practice	Done	Not done
		No. (%)	No. (%)
1	Monitor patient cognitive function that leads to unsafe behavior	45.0	55.0
2	Review physician's order for application of the physical restraints	32.0	68.0
3	Explain the reason for intervention to the patient and significant other.	25.0	75.0
4	Explain the procedure to the patient and significant others	26.0	74.0
5	Prepare equipment needed.	61.0	39.0
6	Provide sufficient staff (at least 3 persons).	47.0	53.0
7	Talk with the patient during the procedure.	58.0	42.0
8	Make sure that the bed is comfortable.	43.0	57.0
9	Place patient in recumbent position with the head of the bed elevated	33.0	67.0
10	Padding bony prominences, and securing the restraint accurately	51.0	49.0
11	Fasten the straps of the restraints to the bed frame.	35.0	65.0
12	Apply the restraint in such a way that it can be released quickly.	58.0	42.0
13	Provide positive reinforcement.	66.0	34.0
14	Monitor skin and circulation frequently in restrained extremities.	41.0	59.0
15	Assessment of the patient condition every 10–15 minutes.	32.0	68.0
16	Provide adequate range of motion	39.0	61.0
17	Involve patient in making decisions to move toward less restrictive form of intervention.	35.0	65.0
18	Remove restraints gradually	49.0	51.0
19	Record the type of restraint used, time, indications, patient response to the intervention, nursing care provided and any unexpected outcomes.	36.0	64.0

Table (3): illustrates that 75% of studied nurses did not explain the reason for intervention to the patient and significant other and 59% of them did not monitor skin and circulation frequently in restrained extremities. Only 32% of studied nurses review physician's order for application of the restraints and 36% record use of physical restraint.

Table (4): Correlation between practice, knowledge and attitudes among the studied nurses regarding physical restraint (n=100)

Variables	Practice score		
	r	p-value	Sig.
Knowledge score	0.87	<0.001	HS
Attitude score	0.90	<0.001	HS
Knowledge score			
Attitude score	0.90	<0.001	HS

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Table (4): illustrates that there is statistical significant positive correlation with p-value <0.05 between practice score and each of knowledge and attitude score, also between knowledge and attitude score, which indicated increasing in knowledge and attitude score will associated with increase in practice score, also increasing in knowledge score will associated with increase in attitude score.

Discussion

The present study was carried out on one hundred of nurses, which revealed that the majority of them were females. This may be due to the fact that females are the prominent gender in the nursing practice. This finding is consistent with *Balci & Arslan (2018)*, who studied nurses' information, attitude and practices towards use of physical restraint in Intensive Care Units and found that the majority of the study sample of nurses consisted of females

Regarding age of the nurses, the present study revealed that nearly half of studied nurses were younger than 30 years old. This may be due to most of them were newly graduated. This result in agreement with *Suliman & Aloush (2017)*, who studied knowledge, attitude and practice of intensive care unit nurses about physical restraint and found that more than half of the studied nurses were in age ranged between 20 and 30 years old.

Regarding the educational level, the present study revealed that nearly half of the studied nurses had graduated from technical nursing institute and more than two fifth of nurses had nursing diploma. This result could be due to the fact that nursing diploma and technical institutes of nursing provide the health agencies with large numbers of graduated nurses than faculties of nursing. This result was disagreed with *Mahmoud (2017)*, who studied psychiatric nurses' attitude and practice toward physical restraint and stated that three quarters of the studied nurses graduated from secondary nursing school.

Concerning years of experience more than two fifths of studied nurses had less than five years of experience. This may be due to the fact that the majority of

studied sample was recently graduated. This result was agreed with *Younis & Ahmed (2017)*, who studied physical restraint and maintenance of critically ill patient's safety in intensive care unit: Effect of clinical practice guidelines on nurse's practice and attitude, and mentioned that half of the studied nurses had experience less than five years of experience.

Concerning the nurses' total knowledge about physical restraint in the present study, the result revealed that more than half of the studied nurses had insufficient level of knowledge related to physical restraint. This may be due to lack of training programs and education related to physical restraint, lack of written policies and procedures that regulate the application of physical restraint and most of nurses neglect updating their knowledge.

This result was congruent with *Abed El-Latief (2015)*, who studied nurses' knowledge, attitude and practice toward safety physical restraints use in intensive care units and found that two thirds of the studied nurses had poor level of knowledge regarding physical restraint.

Also this finding agreed with *Khalil et al. (2017)*, who studied nurses' knowledge, attitudes, and practices toward physical restraint and seclusion in an inpatients' psychiatric ward and found that, most nurses had inadequate level of knowledge on the physical restraints and seclusion that impact their performance and attitude in caring with psychiatric patients.

Concerning nurses' total attitude toward physical restraint, it was clear that more than three quarter of the studied nurses had negative attitude about physical restraint. This result attributed to their belief that restraining procedure is

not ethically accepted to be applied with the patient. This was in agreement with *Balci & Arslan (2018)*, who mentioned that the majority of nurses had negative attitude toward physical restraint.

Also, *Ralpa, & Gabriele (2014)*, who studied attitudes of nurses towards the use of physical restraints in geriatric care: A systematic review of qualitative and quantitative studies and mentioned that the majority of nurses had negative attitude regarding physical restraint.

Concerning nurses' practice toward physical restraint, the study showed that more than three quarters of the studied nurses didn't explain the reason for intervention to the psychiatric patient and significant other. This may be due to lack of training courses which affects level of practice. This finding was in acceptance with *Suliman & Aloush. (2017)*, who stated that more than three quarters of the studied nurses didn't explain the reason for intervention to the psychiatric patient and significant other.

The result of the study illustrated that more than half of the studied nurses didn't monitor skin and circulation frequently in restrained extremities. This result may reflect nurses' inadequate skills and training on caring for physically restrained psychiatric patients. This finding was in acceptance with *Younis & Ahmed (2017)*, who stated that more than three quarters of the studied nurses didn't assess condition of patient's restrained body part at least every 30 minutes and didn't assess peripheral circulation.

The current study indicated that the majority of nurses didn't review physician's order for application of the physical restraints. This may be due to the absence of written medical order and physicians has no concern about this procedure. This result was supported by *Azab and Negm (2013)*, who stated that a small proportion of the respondent nurses use physical restraint with a physician's order. Similar, finding was reported by

De Jonghe et al. (2013), who found that physical restraint was started and removed without medical orders.

Concerning documentation, the results of this study revealed that nearly two thirds of the studied nurses didn't record the type of restraint used, time, indications, patient's response, nursing care provided and unexpected outcome. This may be due to that they may not consider restraining as an important procedure that requires documentation.

This result was in accordance with *Choi & Song (2003)*, who stated that in their study about physical restraint use in a Korean ICU" that nurse's records in a patient's chart rarely mentioned the restraint use. In addition, by *Kandeel & Attia (2013)*, reported that the majority of nurses did 'not documented the purpose of physical restraints in patient's medical records.

The findings illustrated that there was statistically significant positive correlation between nurses' knowledge, practice and attitude about physical restraint. This finding due to knowledge with practice improved quality of nursing care provided to psychiatric patient and knowledge without practice had no effect.

This finding agreed with *Taha and Ali (2013)*, who showed that there was a strong positive correlation between nurses' knowledge and practice. Also, this finding agreed with *Eskandari and Abdullah (2017)*, who found that there was a significant positive correlation between nurses' practice, knowledge and attitude. According *Azab and Abunegm (2013)*, who stated that there was significant correlation between nurses' practice and both of knowledge and attitude regarding use of physical restraint.

Conclusion

The study concluded that, the majority of the studied nurses had unsatisfactory level of knowledge, negative attitude and incompetent level of

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practice regarding physical restraint of psychiatric patient.

Recommendations

The study recommended that, implementation of training program for nurses regarding physical restraint. Continuous monitoring and teaching on spot from nurse supervisor is needed to ensure quality of care provided by nurses for physical restraint of psychiatric patient.

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