

# The Knowledge on Practice Regarding Physical Restraining of Patients among Staff Nurses

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## ABSTRACT

**Background:** Restraining is one of the common procedures performed in various health care setting especially in ICU's and psychiatry wards. Restraining can be done in various forms like Verbal restraints, Chemical restraints and Physical restraints. Physical restraints are commonly used in clinical settings to control aggressive behavior, to maintain treatment protocols like IV Canulation, NG tube etc. and to prevent fall. However the utilization of physical restraining must be avoided as a purpose of punishment, staff convenience or as a substitute for in adequate staff.

**Aim:** To assess knowledge on practice regarding physical restraining of patients among staff nurses and to find the association between knowledge on practice regarding physical restraining of patients with demographic variables.

**Method:** A descriptive study design was used with non probability purposive sampling technique to recruit 188 staff nurses. A structured knowledge questionnaire on physical restraining was used to collect the data. The staff nurses completed the knowledge questionnaire on physical restraining during the duty time. The obtained data used analyzed using Descriptive study design and inferential statistics. The obtained data was analyzed using SPSS 16.

**Results:** The results of the study shows that majority of the nurses i.e. Among 188 staff nurses 149 (79.3%) nurses had good knowledge on physical restraining and only 39(20.7%) nurses had average knowledge on physical restraining. Overall nurses had good knowledge on practice of physical restraining with mean percentage knowledge score of 76.61%.

**Conclusion:** In conclusion, it is clear that with frequent updating of knowledge from various sources like in service programme. Review of literature etc will not only increases our theoretical knowledge but also improves our skills

**Key words-**Physical restraining, Knowledge on practice, staff nurses

## INTRODUCTION

In a health care system, patient safety is considered to be one among the major priorities and is also important element of an effective and efficient health care system where quality prevails. [1]

Among the health care professionals, nurses play a vital role as primary care takers in a hospital setting due to which the nurses are given integral role in promoting patient safety. [2] However patient safety has

become a major concern worldwide. Improving safety measures will protect patients, and also create a better working environment for nurses and nurse managers, which can help in alleviating many risk associated with patient care. [3]

Restraint is defined as 'the intentional restriction of a person's voluntary movement or behavior and physical restraint is anything near or on the body which restricts movement. Physical

restraint includes devices designed to limit a patient's physical movements such as limb holders, safety vests and bandages. The use of physical restraint as an intervention in the care of psychiatric patients dates back to the beginning of the science in psychiatry. It was used to handle violent and maladaptive behaviours, manage patients with severe mental disorders, prevent injury and reduce agitation and aggression. [4]

The use of physical restraints is relevant to nursing practice because restraints continue to be used in the majority of healthcare settings. Since the nurses are the primary caregivers there is a need to educate and assess their knowledge on the use of restraints, its benefits and the consequences that restraints can have on a patient because it will help the nurses to make decision on whether the patient actually needs physical restraints or if alternative methods can be implemented. The knowledge on physical restraints are required because the nurse will be competent enough to provide care to the patients as well as will be able to do accurate documentation. The nurse with adequate knowledge will be aware of all the hospital policies on physical restraining which will avoid legal complications. [4]

There are many reasons for physically restraining the patients, for e.g.; patients at risk for fall, to protect the patient from injury, to prevent disruption of medical treatment, and to maintain proper body position. However the patient with physical restraints must be continuously monitored and must be discontinued as soon as possible. The maximum amount of time that a patient can be restrained per order is 24 hours. After the 24 hours, a licensed practitioner must reassess the patient to determine if the restraints are still necessary. While Monitoring of the restrained patient the nurse should give equal priority to documentation as it is essential for evidence of compliance. [5]

Recent studies show that about 7-17 % of hospital patients having been subjected to physical restraints daily. Studies have

also found that in many countries more than 20% of psychiatric patients are restrained physically in a period during their hospitalization. Recent research studies worldwide, revealed that patients with Schizophrenia were the most frequently restrained (42.5%) and the commonest indication for restraint was for being physically assaultive (25.3%). Approximately 50% of patients on electro convulsive therapy (ECT) were also restrained prior to ECT. Restraints are not only used in psychiatry settings but also in the critical care units and medical wards. The main use of physical restraints in various units is to the control violent behaviour or to prevent the removal of medical equipment, such as end tracheal tubes, intra-arterial devices, and catheters. [5] So the investigators felt the need to assess knowledge on practice regarding physical restraining of patients among staff nurses

## MATERIALS AND METHODS

A descriptive research approach was selected for the study; with the main objective to assess the knowledge on practice regarding physical restraining of patients among staff nurses after obtaining institutional ethical clearance The variables included in this study were demographic variables and Knowledge on practice regarding physical restraining. Demographic variables were age, gender, qualification, experience, area employed, information on physical restraints, hospital policy awareness, read article on physical restraints, in-service program me on physical restraints, physical restraints in last one year, number of times physical restraints and reasons for physical restraints. The study was conducted among 188 staff nurses in psychiatric ward, critical care units, emergency and medical surgical wards of a multispecialty hospital with the bed strength of 1250 bed. The study participants were selected by non probability purposive sampling technique Before initiating data collection the information sheet and informed consent was

obtained from the staff nurses .Staff nurses working in paediatric wards, private wards, OPD, dialysis and other general wards are excluded in this study. In this study two research data collection tools were prepared by the investigators. Tool one was the Demographic Performa which consists of 13 items for obtaining information regarding age, gender, qualification, experience, area employed, information on physical restraints etc. The staff nurses were requested to place a tick mark against the appropriate answer in the space provided. The second tool used was multiple choice questionnaires on knowledge on practice regarding physical restraining of patients among staff nurses. The multiple choice questionnaire had 21 questions. For each items options were given. The staff nurses were instructed to place a tick mark against the appropriate option given. For every

correct answer one mark was allotted and for every wrong answers zero marks. The total score was 21. The blueprint of the multiple choice questionnaire had four main areas that is, Pre-restraining practice (7 items), During restraining practice (6 items), Post restraining practice (8 items).The scoring was divide into three section that is Good is equal to or above 15, Average is from 8 to 14, Satisfactory is less than or equal to 7.

**STATISTICAL ANALYSIS**

Data was analyzed by using statistical package for social sciences (SPSS-16.0). The analysis of data involves translation of information collected during the course of the research project into descriptive, interpretable and convenient terms and to draw inferences from these using statistical methods. Comparisons were, made by using Descriptive and inferential statistics

**RESULTS**

**Table No 1- Description of demographic variables n=188**

Sl.NO	Demographic variables	Frequency	Percentage	Mean / SD	
1.	Age in years	21-25	90	47.9	1.6 / ±0.64
		26-30	84	44.7	
		31-35	13	6.9	
		36-40	1	.5	
2.	Gender	Male	58	30.9	
		Female	130	69.1	
3	Qualification	Gnm	34	18.1	
		Pbbsc(N)	49	26.1	
		B.sc(N)	101	53.7	
		Msc(N)	4	2.1	
4	Years of experience	≤10 years	178	94.7	1.05 / ±0.22
		>10 years	10	5.3	
5	Area employed	ICU	41	21.8	
		Emergency ward	30	16.0	
		Medical/surgical ward	67	35.6	
		Psychiatry	50	26.6	
6	Information on physical restraining during nursing education	YES	183	97.3	
		NO	5	2.7	
7	Awareness on hospital policy on physical restraining	YES	184	97.9	
		NO	4	2.1	
8	Read any article on physical restraints	YES	152	80.9	
		NO	36	19.1	
9	Attended Inservice programme on physical restraints	YES	147	78.2	
		NO	41	21.8	
10	Whether physical restraining is done in last one year	YES	171	91	
		NO	17	9	
10a	No of times physical restraining done in last 1 year(approximately)	1-10	122	64.9	(n=171) 1.3 / ±0.71
		11-20	38	20.2	
		21-30	5	2.7	
		≥31	6	3.2	
10 b	Reasons for physical restraining	Restlessness	99	53.7	
		Aggressiveness	32	17	
		Violent behavior	24	12.8	
		Protecting medical instruments and patients position	16	8.5	

Description of demographic variables is shown in Table no 1 which is analyzed by using descriptive statistics. Among 188 staff nurses, majority of staff nurses were between the age group 21 to 25(47.9%), 69.9% were females,53.7% were B.Sc.(N) graduates,94.7% of staff nurses had more than 10 years of clinical experience,97.3% of them had previous information on physical restraints,97.9% were aware about the hospital policies on physical restraining,80.9% read article on physical restraining,78.2% have attended in-service

education on physical restraining.91 % of staff nurses have done physical restraining in past 1 year

**Table .2. Knowledge on practice regarding physical restraining among nurses n =188**

Knowledge Level	Frequency	Percentage(%)
Good	149	79.3
Average	39	20.7

The above table no 2 depicts that around 79.3 % of staff nurses have good knowledge on practice regarding physical restraining

**Table no 3: Area wise , Maximum score, Mean, SD, Mean percentage of knowledge questionnaire. n=188**

Area	Item	Maximum score	Mean	SD	Mean percentage
Pre-restraining practice	7	7	5.485	±1.20	78.35%
During restraining practice	6	6	4.338	±1.072	72.3%
Post-restraining practice	8	8	6.3015	±1.219	78.76%

The above table no 3 shows that the mean percentage of the staff nurses knowledge on pre restraining practice is 78.35% where as the knowledge of staff nurses during restraining is 72.3% and knowledge on post restraining practice is 78.76%

**Table 4.Association between knowledge on practice regarding physical restraining among staff nurses and selected demographic variables n = 188**

Sl.No	Demographic variables	Knowledge Level		Chi-square	P-value	
		Good	Average			
1.	Age in years	21-25	66	24	4.83 (Fishers exact)	0.18
		26-30	70	14		
		31-35	12	1		
		36-40	1	0		
2.	Gender	Male	51	7	3.84	0.05*
		Female	98	32		
3	Qualification	Gnm	11	23	4.9 (Fishers exact)	0.179
		Pbbsc	10	39		
		B.sc(N)	18	83		
		Msc(N)	0	4		
4	Years of experience	≤10 years	38	140	0.86 (Fishers exact)	0.35
		>10 years	1	9		
5	Area employed	ICU	12	29	3.93	0.26
		Emergency ward	3	27		
		Medical/surgical ward	14	53		
		Psychiatry	10	40		
6	Information on physical restraining during nursing education	YES	38	145	0.002 (Fishers exact)	1
		NO	1	4		
7	Awareness on hospital policy on physical restraining	YES	38	146	0.04 (Fishers exact)	1
		NO	1	3		
8	Read any article on physical restraints	YES	26	126	6.39	0.01**
		NO	13	23		
9	Attended Inservice programme on physical restraints	YES	24	123	8.003	0.005**
		NO	15	26		
10	Whether physical restraining is done in last one year	YES	34	34	0.790 (Fishers exact)	0.37
		NO	5	5		
11	No of times physical restraining done in last 1 year(approximately)	1-10	23	99	13.91 (fishers exact)	0.0033**
		11-20	6	32		
		21-30	0	5		
		More than 30	5	1		
12	Reasons for physical restraining	Restlessness	20	79	2.89	0.57
		Aggressiveness	6	26		
		Violent behaviour	3	21		
		Protecting medical instruments and patients position	5	11		

\*p<0.05 (significant) \*\*p<0.01 (high significant) \*\*\*p<0.001 (very high significant)

The association between demographic characteristics and knowledge on practice regarding physical restraining were analyzed by fishers exact and chi square test. The p value of Read any article on physical restraints ( $p=0.01$ ), Attended In service program me on physical restraints ( $p=0.005$ ) and No of times physical restraining done in last 1 year(approximately) ( $p=0.003$ ) And hence these variables are associated with knowledge on practice regarding physical restraining among staff nurses at the 5% level of significance. So research hypothesis is accepted and null hypothesis is rejected.

## DISCUSSION

Use of physical restraining in a clinical setting is a topic of controversy, among the health care team. Many health care professionals working in a critical care unit and psychiatry setting argue that physical restraints can cause multiple complications physically as well as psychologically. Thus a staff nurse should be well equipped with knowledge on physical restraining

The present study showed that 69.1% of staff nurses were females and 30.9% were males this finding is supported by a study done by Balci H and Arslan S. (2018) [8] were 58.2% were females. The present study finding also revealed that there is association between gender and level of knowledge on physical restraining ( $p=0.05$ ).The finding contradicts a study conducted by Balci H and Arslan S. (2018). [8] However the findings were supported by the study conducted by Suen LKP(2006). [5] that the gender was associated with knowledge level on physical restraining and also male staff nurses have more knowledge compared to females

In the present study the finding indicate that 91% of staff nurses have physically restrained the patients. This finding is supported by a study conducted by Balci H and Arslan S. (2018) [8] in which also 91% of nurses used restraints

The another finding in the present study is that the reason given by the staff nurses for physically restraining the patient is restlessness (53.7%), Aggressive behaviour (17%), Violent(12.8%) and Protecting medical instruments or to maintain patients position (8.5%) The finding contradicts a study conducted by Balci H and Arslan S. (2018) [8] were 44.9%were restrained for Protecting medical instruments or to maintain patients' position.

The first objective of the study was to assess the level of knowledge of physical restraints. It showed that around 79.3% had good knowledge on physical restraining and only 20.7% nurses had average knowledge It shows that the majority of staff nurses have good knowledge on physically restraining the patients This similar finding was found in the study done by Cunha et al. (2016) [6] and. Pradhan N et.al (2019) [7]

The another objective is to find association between the knowledge level and the demographic variables .the findings reveal that read any article on physical restraints ( $p=0.01$ ), attended In service program on physical restraints ( $p=0.005$ ) and No of times physical restraining done in last 1 year(approximately) ( $p=0.003$ ) is associated with the knowledge on Physical restraints. The finding contradicts a study conducted by Balci H and Arslan S. (2018) [8] which showed that there is no association with demographic variables

## CONCLUSION

The study findings conclude that majority of staff nurses had good knowledge on practice regarding physical restraining(79.3%) since majority of the staff nurses had attended in-service programme on physical restraining (78.2%). It is also noted that the level of knowledge was associated with the previous knowledge on physical restraining, in-service programs and experience in restraining the patient's .However the study is limed to one setting and small sample size. The investigators

suggest that similar study can be done as an observational study

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