



## Knowledge and Practices of Physical Restraints among Nurses

Brar Jasleen Kaur\*

\*Assistant Professor, Department of Psychiatry, MSINE, Birmi, Ludhiana, Punjab, India



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## ABSTRACT

A restraint is one of the numerous devices used to immobilize a client or an extremity. Physical restraints are commonly used in clinical settings to control disruptive behavior, wandering and maintaining treatment plans. Nurses need to have adequate knowledge to incorporate while performing physical restraint procedure. A descriptive study was conducted on 60 nurses working in selected areas of DMCH, Ludhiana by using convenience sampling technique. The purpose of study was to assess the knowledge and practice of physical restraints among nurses. Data was collected by using Socio-demographic profile, Structured knowledge Questionnaire regarding physical restraints and Observational checklist to assess the practice of Physical Restraints. Results have shown that majority (83.33%) of nurses belonged to  $\leq 30$  years. 91.66% were female, 66.67% of nurses belonged to non-medical and other stream at their 10+2 level of education, majority of (83.33%) of nurses were GNMs. Majority (61.66%) of the nurses were working in ICU's, 63.3% of nurses had work experience of  $> 2$  years. It was revealed that 76.66% of nurses had average knowledge, 21.66% nurses had poor knowledge and only 1.66% had good knowledge regarding physical restraints. Mean knowledge score was found to be  $14.2 \pm 3.9$ . As per the practice, it was found that no physician written prescription order were documented for the patients, Clove hitch restraint with cotton and bandages were the most common type of physical restraints used.

## KEYWORDS

*Physical Restraints, Nurses, Knowledge, Practice*

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## INTRODUCTION

Physical restraints are commonly used in clinical settings to control disruptive behaviour, maintaining treatment plans and prevent fall. It shall not be employed for the purpose of punishment, staff convenience or as a substitute for adequate staffing<sup>1</sup>. A study conducted in Turkey on practice of physical restraints revealed that prevalence of physical restraints is used commonly in all ICU's and gauze bandage was most commonly used for restraining patients in all ICU's<sup>2</sup>. Nurses have tremendous responsibility while caring of patients in physical restraints<sup>3</sup>. The level of knowledge about restraints and the underlying attitudes of nurses towards the use of restraints should be identified

because knowledge and attitudes can directly or indirectly affect practice. Physical restraining is a common procedure so that there are chances of common errors due to negligence, knowledge deficit and working in a busy schedule. Nurses play an important role in the use of physical restraints so they should have adequate knowledge of physical restraints and incorporate in their practice to limit the negative consequences<sup>4</sup>.

## MATERIALS AND METHODS

A descriptive research design was employed in the study to assess the level of knowledge and practices of Physical Restraints among nurses working in ICU's, Neuro-Surgery wards and Emergency area



of DMCH, Ludhiana. A total of 60 nurses were selected using convenience sampling technique. Tool for data collection consisted of Socio-Demographic profile,

Structured Questionnaire to assess the knowledge and Observational checklist to assess the practice of Physical Restraints.

**Table 1** Frequency and percentage distribution of nurses as per age, gender, religion, marital status and habitat. N=60

Socio-demographic variables	f (%)
<b>Age (in years)</b>	
≤30 years	50 (83.3)
>30 years	10 (16.7)
<b>Gender</b>	
Male	05 (08.3)
Female	55 (91.6)
<b>Religion</b>	
Hindu	16 (26.6)
Sikhism	40 (66.6)
Christian	04 (06.6)
<b>Marital status</b>	
Married	23 (38.3)
Unmarried	37 (61.6)
<b>Habitat</b>	
Rural	28 (46.6)
Urban	32 (53.3)
<b>Stream of education at 10+2</b>	
Medical	20 (33.3)
Non Medical and others	40 (66.6)
<b>Professional qualification</b>	
G.N.M.	50 (83.4)
B.Sc.(N)	10 (16.6)
<b>Area of work</b>	
ICUs	37 (61.6)
Emergency	14 (23.4)
Neuro Surgery ward	08 (15.0)
<b>Experience of work</b>	
≤2 years	22 (36.6)
>2 years	38 (63.4)

## RESULTS AND DISCUSSION

**Table 1** depicts that out of 60 nurses, majority (83.33%) belonged to age group ≤30years, most (91.66%) of them were female, majority (66.6%) followed Sikh religion. Majority (61.67%) of the nurses were unmarried and 53.33% were residing in urban area. Majority (66.6%) had non medical and other subjects in 10+2, 83.4 % had G.N.M. as their professional qualification, 61.6% were working in ICUs

and 63.4% had experience of work of more than 2 years.

**Figure 1** revealed that majority (76.66%) of nurses were found to have average level of knowledge, 21.66% were having poor knowledge and only 1.66% were having good knowledge regarding Physical Restraints. The mean score of knowledge was found to be  $14.2 \pm 3.9$ .

**Table 2** depicts that for all the 30 patients observed for physical restraints, there were



no physician written order to apply restraint. Informed written consent was not taken prior to procedure and no documentation was done on any restraint part.

**Table 2** Observed practice of Physical Restraints for patients:  
N=30

Practice	Observations f (%)
<b>Ethico- legal consideration:</b>	
No physician's written order/ prescription to apply physical restraint	30(100)
Informed written consent not obtained	13(43.3)
No documentation on restrained part	30(100)
<b>Type of physical restraint applied:</b>	
Clove Hitch	30(100)
<b>Material used:</b>	
Cotton and bandage	30(100)
<b>Body part restrained:</b>	
One point	30(100)
Two point	17(56.7)
Three point	08(26.7)
Four point	02(06.7)
<b>Restraints tied with:</b>	
Side rails	03(10.0)
Bed frame	22(73.3)
<b>Appropriate knot ** applied:</b>	
Yes	08(26.7)
No	02(06.7)
<b>Tieing of knot:</b>	
Loose	28(93.3)
Tight	13(43.3)
Adequate*	02(06.7)
<b>Duration of physical restraining:</b>	
<24 hrs	15(50.0)
24-72 hrs	08(26.7)
>72 hrs	05(16.7)
<b>Physical restraint released:</b>	
q 4hrly	17(56.7)
q 6hrly	02(06.7)
q 8hrly	01(03.3)
Not released	02(06.7)
<b>Change of the site of physical restraining:</b>	
Yes	25(83.3)
No	03(10.0)
<b>Time of physical restraint used the most:</b>	
Morning	27(90.0)
All the time	04(13.3)
<b>Chemical restraints used prior to physical restraining:</b>	
Yes	26(86.7)
No	07(23.3)
	23(76.7)

\*\*reef knot \*1cm

As per the type of applied physical restraints, clove hitch was commonest (100%). More than two- third (76.7%) of patients were not given chemical restraints

prior to physical restraints. Half (50%) of patients were having adequate tying of knot. More than half (56.7%) were having one point restraint. Cotton and bandage



was the most common material used for restraints. Most (93.3%) of the patients were applied appropriate knot. Majority (73.3%) of the restraints were tied with side rails. More than half (56.7%) of patients were having duration of restraining for more than 72 hours. For majority (83.3%) of the patients, restraints were not released even once. There was no assessment done for any patient after the procedure. Majority (86.7%) of patients were applied physical restraints all the time.

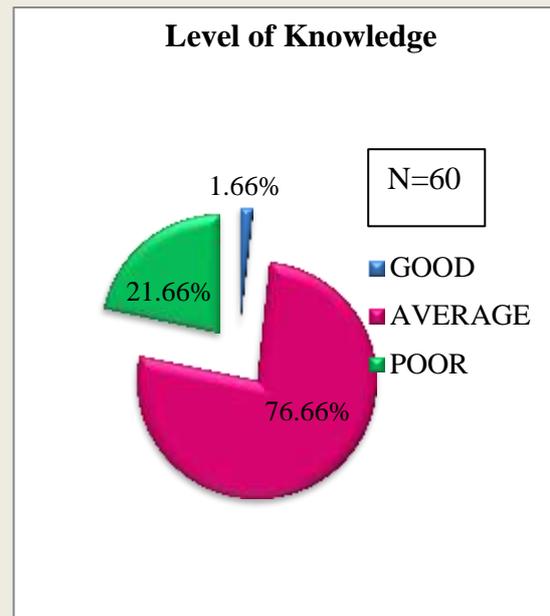
**Table 3** Association of nurses' knowledge of physical restraining with their selected socio-demographic characteristics

N=60

Variable	n	Knowledge score Mean± SD	t test (p value)
<b>Age (in years)</b>			
≤ 30 yrs	50	14.00 ± 4.09	t= 2.08
> 30 yrs	10	15.60 ± 1.65	(0.05)*
<b>Stream of education</b>			
Medical	20	15.95 ± 3.29	t= 3.01
Non medical& others	40	13.45 ± 6.83	(0.001)*
<b>Professional qualification</b>			
GNM	50	13.56 ± 0.57	t= 3.42
B.Sc.(N)	10	15.40 ± 3.73	(0.001)*

\*= significant ( $p \leq 0.05$ ),  $df = 59$

Table 3 depicts the association of nurses' knowledge with their selected socio demographic characteristics. The mean knowledge score was found to be significantly high in nurses of age group more than 30 years, who opted medical as their stream of education at 10+2 level and nurses who had B.Sc.(N) as their professional qualification.



**Figure 1** Percentage distribution of nurses as per the level of their knowledge regarding Physical Restraints

## DISCUSSION

Present study revealed that the mean knowledge score of nurses regarding physical restraints was found to be  $14.2 \pm 3.9$ . Majority of the nurses were having average level of knowledge regarding physical restraining. Similar findings were reported by **Lorna Suen (2006)** in a study conducted average level of knowledge among nurses working in rehabilitation centre of Shatin, Hongkong<sup>1</sup>. Another



similar finding was also reported by **Janelli (1992)**<sup>5</sup>. However present study also revealed that 1.66% of nurses have poor knowledge regarding physical restraining and similar findings were reported by **Stig Karlsson (1997)**<sup>6</sup>.

It was also found that physical restraining were not practiced ideally by the nurses. There was no physician's written order/prescription regarding physical restraining among 30 patients observed who were being restrained. Informed written consent was not obtained from 43.33% patients who are restrained. No assessment of restrained part was performed. These findings were supported by the finding reported by **Anke JE (2009)**<sup>2</sup>.

The present study results revealed that knowledge of physical restraints was found to be good among nurses of age group  $\leq 30$  years (0.02%) and in female group (1.81%). The knowledge was also found to be good (3.12%) among nurses residing in urban area and nurses who opted medical stream (5%) as their stream of education at secondary level. The knowledge was also found to be good (2.5%) among nurses who followed Sikhism. The knowledge was good (11.11%) among B.Sc. nurses and nurses working in ICU's (2.75%). But the association of knowledge was found to be significant with clinical experience. The

findings were supported by **Lorna Suen (2003)** who conducted a study in two rehabilitation centres. They found that staff with more clinical experiences could provide appropriate guidance to other members of staff on the decision to apply restraints.<sup>1</sup>

## CONCLUSION

The study concluded that eventhough the nurses were having average knowledge regarding physical restraints, the practice was found to be poor. Hands on skill training programme can be conducted for the improvement in the practice of physical restraints among nurses.

## Recommendation

Based on the present study findings, it is recommended that:

- This study may be replicated on large sample to validate and generalize the findings.
- Multicentre studies can be conducted involving more number of subjects and institutions.
- In-service education should be planned to increase the knowledge and skills to incorporate in practice of physical restraining among nurses to decrease the deleterious effects of restraints on patients.
- Nurses should follow the policy guidelines developed by the institute while applying physical restraints.





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