Journal Homepage: - www.journalijar.com

INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)

Article DOI: 10.21474/IJAR01/20625
DOI URL: http://dx.doi.org/10.21474/IJAR01/20625

RESEARCH ARTICLE

"ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAM ON KNOWLEDGE REGARDING RESTRAINTS FOR CHILDREN AMONG BSC NURSING STUDENT IN SELECTED COLLEGE OF NURSING DD AND DNH"

Potinda Surekha[1], Priyanka[2], Srushti Choudhari[3] and Leana Phebe Wilson[4]

1. M.Sc. Nursing Department of Child Health Nursing, Shri Vinoba Bhave College of Nursing Silvassa.
2. Assistant Professor, Department of Child Health Nursing, Shri Vinoba Bhave College of Nursing Silvassa.
3. Sister Tutor Department of Mental Health Nursing, Shri Vinoba Bhave College of Nursing Silvassa.
4. Associate Professor Head of the Department of Child Health Nursing, Shri Vinoba Bhave College of Nursing Silvassa.

Manuscript Info

Manuscript History
Received: 18 January 2025
Final Accepted: 21 February 2025
Published: March 2025

Key words:-
Assess, Effectiveness, Knowledge, Structured Teaching Programme, Restrains, Children

Abstract

Introduction:Restraints are devices used for partially or completely immobilizing children for various medical and nursing procedures. The common type of restraints includes Jacket restraint, Mummy restraint, Extremity restraint, abdominal restraint, elbow restraint and Crib with Dome. The main purpose of restraints includes immobilizing the children, to quieten the child, to examine the specific body parts and to perform medical and nursing procedure.

Aim: The aim of the study was to identify the effectiveness of the of structured teaching program in the improvement of knowledge of the B.Sc. nursing students regarding restraints for children.

Methodology: A quasi-Experimental Pre-test Post-test One Group Design with Nonprobability Convenient Sampling Technique was used to selected 50 samples, data was collected through self-administered method and conducted pre-test followed by administered structure teaching program regarding restraints for children and after 7th days post-test was conducted

Result: This study finding showed that the pre-test mean knowledge score was 13.48and the post-test mean knowledge score was24.46 ant t value 2,012which was significant at 0.05 level of significance.

Conclusion: The study concludes that there was a significant increase in level of knowledge among BSC nursing students in the experimental group after administration of STP regarding restraint for children

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Introduction:-

All infants and children have physiologic and physiological needs, children need to be mobile. Just as in the adult, prolonged immobility of children may result in physiologic loss of muscular strength and flexibility. It may also affect the physiologic functioning of the body in other ways, such as influencing respiratory volume and peripheral circulation, psychologically; long period of restraint may result in the child's inability to develop motor and psychosocial skills owing to a lack of motor sensory contacts with the surrounding environment.[1]

Corresponding Author:- Potinda Surekha
Address:- M.Sc. Nursing Department of Child Health Nursing, Shri Vinoba Bhave College of Nursing Silvassa.

Restraints are devices used for partially or completely immobilizing infants & children for various medical and nursing procedures. The common type of restraints includes Jacket restraint, Mummy restraint, Extremity restraint, abdominal restraint, elbow restraint and Crib with Dome. The main purpose of restraints includes immobilizing the children, to quieten the child, to examine the specific body parts and to perform medical and nursing procedures.[2]

A simple paediatric restraint for restraining movement makes procedure with paediatric patient much easier. The method uses a standard, readily available bed sheet, which is easy to learn, can be modified for use on various body areas, and makes short procedures possible with minimal nursing assistance. Procedures are made safer by keeping children still, without sedatives. Because wrapping in a bed sheet is less threatening to a young child than a standard Velcro restraint system, the entire procedure proceeds more smoothly than with commercially available restraints.[3]

In extreme cases, a client who is at risk for injury need to be restrained. A restraint is any one of numerous devices used to immobilize a client. Physical restraints are any manual method or mechanical device, material or equipment attached or adjacent to a client's body that the client cannot easily remove and that restricts freedom of movement or normal access to one's body. The use of restraints must be part of the client's medical treatment, all less restrictive interventions must be tried first, other discipline must be used and supporting documentation must be provided.[4]

Children use movement to express themselves to test reality, to master their own bodies and to seek pleasure experiences by themselves or with others. When children are able to move, they are able to some degree to protect themselves from harm. When their arms are restrained, infants and young children cannot even suck their thumb as a means of comfort during period of frustration.[5]

Use of physical restraints in hospitals is often considered to be an accepted and perhaps unquestioned practice related to patient safety. In the elderly care settings, prevention of injury to patients themselves or others (Choi & Song 2003), and prevention of patient falls are the most frequently cited rationales given by nursing professionals.[6]

Physical restraint may be also considered by nurses to make care-giving more efficient and less worrisome, and prevent lawsuits whether restraint use is in the best interests, and for the greatest benefit, of patients or of the nurses is an open question.[7]

In spite of a range of practice myths among nurses that the use of physical restraints can protect patients from any harm or injury, a range of serious adverse effects and consequences, such as physical problems and even accidental death by strangulation have been reported in previous studies.[8]

There are also psychosocial effects on patients who had one or more restraint experiences, such as low social functioning, increasing confusion and adverse emotional reactions.[9]

It is commonly agreed by health professionals in the literature that physical restraint should not be the first choice among methods intended to ensure patient safety or treatment compliance.[10]

Whenever nurses have to make decisions regarding the use of restraints, they may find themselves in the midst of conflicts between their professional obligation to care for a patient's well-being and concerns about a patient's right to make an informed choice.[11] In the 1970s two American studies discussed the long-term consequences of restraint on hospitalized children. Sibling and Friedman (1971) identified that language deficits and delayed speech may occur as a result of restraint use, and Dowd et al (1977) suggested 160Journal of Children's and Young People's Nursing August 2007 Vol 01 No 04 that a relationship existed between use of restraint and negative body image. Nineteen years later, Selekman and Snyder (1996) proposed that other consequences of restraint could include psychological problems such as future fears and difficulty forming trusting relationships, and physical consequences such as a link between increased stress and the disease process. They also suggested that a negative experience may have long-lasting effects, making repeat healthcare trips more difficult. However, no further research has been published which addresses this issue.[12]

Many restraints are available to provide safety for the patient. Each restraint has a specific purpose; using the least restrictive device that maintains adequate protection is a legal and professional standard for the nurse. The manufacturer s directions for use must be followed. All restraints are considered medical devices and therefore must

receive FDA approval. Facility-produced devices do not have FDA approval and therefore do not meet this standard.[13]

By using nursing process, nurses can help reduce the risk of injury and in the patient's immediate environment. Specific interventions can help ensure a safe environment by removing potential treats to safety is treated; guidelines are available to handle the situation.[14]

Need For The Study

The use of restraints is common and this use may be hazardous, it is important that the education of health-care providers include acquiring knowledge, skills, and attitudes related to restraint use. Teaching method includes lectures, demonstrations, case study, simulation, interactive videos, films, discussion, debate, clinical assignment and examination.[15]

The use of restraints is widespread in the North America. From 7% to 10% of the hospital population is restrained approximately 50% of the time. Most of the health care facilities have specific policies and procedures related to the use of restraints. Most facilities require a specific order from a physician. The nurse should be familiar with the policies regarding the application of restraints. If any question arises, the nurse should consult the supervisor.[16]

Nurses frequently have ambivalent feelings about using restraints or protective devices. Despite of all efforts, restraints may be the only solution in some situations. It is important to explain the client and his/her family that the restraints are being applied as a protective device, not as a punishment measure. Documentation should include alternative strategies that are ineffective, the reason for restraining the client, the type of restraint, pertinent nursing assessments and the regular intervals when the restraints were removed.[17]

Restraints are devices used for partially or completely immobilizing infants for various medical and nursing procedures. The main purpose of restraints includes immobilizing the infant, to quieten the child, to examine the specific body parts and to perform medical and nursing procedures. A simple paediatric restraint for restraining movement makes procedure with paediatric patient much easier. The method uses a standard readily available bed sheet, which is easy to learn, can be modified for use on various body areas, and makes short procedures possible with minimal nursing assistance. Whenever nurses have to make decisions regarding the use of restraints, they may find themselves in the midst of conflicts between their professional obligation to care for a patient's well-being and concerns about a patient's right to make an informed choice. Nurses are most intimately involved in the decision to restrain and in its implementation.

Restraints have the potential to produce serious outcomes, including physical or psychological harm, loss of dignity, violation of patient's rights and possibility death. Health care providers need to identify opportunities to decrease the risks associated with the use of restraints through preventive strategies, innovative alternatives and process improvements to help focus on the paediatric patient's over. Nurses need to assess whether or not restraints are needed. The nurses need to take into account the child's development, mental status, potential threat to others or self and safety. In some health care institutions, the decision to apply a restraint is a nursing decision, whereas in others a physician's order is required before or within 1 to 2 hours of application. Parental consent may be required for reasons other than procedures. Nurses play an important role in the practice of using physical restraints in children. Until more research is available, nurses need to carefully assess the children in their care and apply the nursing process in the use of restraints. Also, Successful implementation was achieved in most of the hospitals irrespective of the strategy used. Restraints is one of the efficient techniques to immobilize the infant, to quieten the child, to examine the specific body parts and to perform medical and nursing procedures in the clinical settings.

As per INC Syllabus of B.Sc. Nursing, fourth year students will have 6-month internship posting in all areas of clinical including paediatric units and become a nursing officer in hospital so the investigator would like to assess the knowledge and impart the importance of restraints for children among nursing students using a structured teaching programme, since it would help them to improve their clinical practice.

Problem Statement

"ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAM ON KNOWLEDGE REGARDING RESTRAINTS FOR CHILDREN AMONG BSC NURSING STUDENT IN SELECTED COLLEGE OF NURSING DD AND

DNH."

Objectives of the Study:-

- To assess the pre- test level of knowledge regarding restraints for children among B.Sc. nursing students.
- To determine the effectiveness of structured teaching programme by comparing pretest and post-test level of knowledge regarding restraints for children among B.Sc. Nursing students
- To find out the association between pre-test level of knowledge regarding restraints for children among B.sc nursing students with their selected demographic variables.

Research Hypothesis:

Hypothesis will be tested at p<0.05 level of significant;

- **H1:** There will be significant differences in level of pre-test and post- test knowledge regarding restraints for children among B.Sc. Nursing students at 0.05 level of significance.
- **H2**: There will be significant association between the pre-test level of knowledge and selected socio-demographic variables of B.Sc. Nursing students at 0.05 level of significance.

Oprational Defination:

- **ASSESS:** In this study, assess is activity to estimate the level of the knowledge related to the STP on restraints and its use for the children.
- **EFFECTIVENESS:** In this study, it refers to the difference in knowledge level score among 4th year B.sc nursing students with use of knowledge questionnaire on structure teaching program regarding restraint.
- **KNOWLEDGE:** In this study, the knowledge refers to understanding the fact regarding restraints for children.
- **STRUCTURED TEACHING PROGRAMME**: In this study**,** it is preplanned explanatory document which help in the learning process for 4th year b.sc nursing students about restraints and its use for children.
- **B.SC NURSING STUDENTS:** the students of DD&DNH college of nursing, those who have completed 3rd year B.Sc. nursing and are presently studying in the 4th year b.sc nursing
- **RESTRAINS:** Restraints are protective devises of a clint or to immobilize a client or extremely, to protect the client in a safe environment to reduce the risk of injury.
- **CHILDREN:** In this study, children refer to a young human being below the age of full physical development, (0 to 18 years,)

Research Methodology:-

- Research approach: **Quantitative Approach**
- Research design:**Per-Experimental Pre-test Post-test One Group Research Design**
- Setting: **Shri Vinoba Bhave, College of Nursing Silvassa**
- Target population: **4TH year B.Sc. nursing student**
- Accessible population: **4th yr B.Sc. nursing students selected college of nursing DD and DNH**
- Sample size: **50**
- Sampling techniques:**Nonprobability convenient Sampling Technique**
- Intervention:**Structured Teaching program**
- Interpretation & analysis: **Descriptive Statistics (Mean, Median, Standard Deviation) Inferential Analysis (Paired t test)**

Result:-

Data Analysis And Interpretation

Section I:- Description Of Selected Socio Demographic Variables.

Table 1:- Frequency and percentage distribution of 4th year B.Sc. (N) students according to their selected socio demographic variables. **N=50**

Sr. No.	Demographic variables	Frequency (f)	Percentage (%)
1.	**AGE**		
	18-20Year	0	0%
	21-23 Year	42	84%

	24-26 Year	8	16%
	Above -26	0	0%
2.	**RELIGION**		
	Hindu	44	88%
	Muslim	1	2%
	Christian	5	10%
	Others	0	0%
3.	**TYPE OF FAMILY**		
	Nuclear	21	42%
	Joint	29	58%
	Extended		
4.	**PARENTS MONTHLY INCOME**		
	15000-20000	15	30 %
	20000-25000	30	60%
	25000-30000	0	0%
	Above -30000	5	10%
5.	**RESIDENCE**		
	Rural	31	62%
	Urban	19	38%
	Semi urban	0	0%
.	**PREVIOUS KNOWLEDGE**		
	Books	23	46%
	Journals	17	34%
	Social media	10	20%
	Self-experience	0	0%

Table No 1 Shows the frequency and Percentage wise distribution of demographic data of 4th Year B.sc Nursing Students. Age wise distribution shows that out of 50 sample the highest 42 (84%) are 21-23 years of age and 8 (16%) students are between the age group of 24-26 years. In religion wise distribution, majority of the samples 44 (88%) are of Hindu religion, 1 (2%) is of Muslim religion and 5 (10%) are of Christian religion. Type of the family wise distribution shows that Majority 29 (58%) belongs to joint family and 21 (42%) sample belongs to nuclear family. Monthly income of family wise distribution shows that Majority 30 (60%) belonged to 20,000 -25,000 rupees income range, and 15 (30%) of samples parents earned 15,000 -20,000 rupees, only 5 (10%) of samples parents had income above 30,000 rupees. Majority 31 (62%) were belonged to rural area and 19 (38%) 4th year b.sc (N) students belong to urban area. Previous Knowledge wise distribution shows that Majority (46%) of sample had knowledge from books, 34% had got knowledge from journals and, only 20% had knowledge from social media.

Section II:- Analysis Of Pre-Test Knowledge Score Of 4th Year B.Sc (N) Students Regarding Restraints For Children.

Knowledge level was assessed by using structured knowledge questionnaire and presented in table 2.

Table 2:- Pre-test knowledge score of 4th year B.Sc. Nursing students regarding restraints for Children **N=50**

Levels of knowledge (score)	Scores %	F	%	Mean score	SD
Inadequate	< 50	31	62%	11.45	0.723
Moderately adequate	50-70	19	38%	13.95	0.970
Adequate	>75	00	00	00	00

The data presented in table 2 show that 62% students have inadequate knowledge, 38% of them had moderately adequate knowledge and none of them adequate knowledge on restraints for children.

Section: III
Analysis Of Post- Test Knowledge Score Of 4th Year B.Sc(N) Students On Restraints For Children

Table 3:- Post test knowledge score of 4th year B.Sc. Nursing students regarding restraints for Children. **N=50**

Levels of knowledge (score)	Scores %	F	percentage	Mean score	SD
Inadequate (0-14)	< 50	00	00	00	00
Moderately adequate (15-23)	50-75	21	42%	13.95	0.680
Adequate (24-30)	>75	29	58%	25.69	0.806

The data presented in Table-3 show that none of the student of 4th year B.Sc. Nursing had inadequate knowledge, 42% of them had gained moderately adequate knowledge and 58% of them had gained adequate knowledge on restraints for children after administration of STP.

Table 4:- Comparison Between Pretest Knowledge Score And Post Test Knowledge Score.

Level of Knowledge	Pretest knowledge				Post test knowledge			
	F	%	Mean Score	SD	F	%	Mean score	SD
Inadequate (0-14)	31	62%	11.45	0.723	0	0	00	00
Moderately adequate (15-23)	19	38%	13.95	0.970	21	42%	13.95	0.680
Adequate (24-30)	0	0	00	00	29	58%	25.69	0.806

This table shows the comparison between pretest knowledge score and post-test knowledge score of 4th year B.sc Nursing students regarding restraints. There are mainly 3 categories of knowledge level which is Inadequate, moderately adequate and adequate.

In pre-test knowledge score there are 31 samples (62%) who have inadequate knowledge regarding restraints in children. The mean is 11.45. Among 50 samples there are 19 (38%) students who have moderately adequate knowledge regarding restraints in children and the mean score for moderately adequate knowledge is 13.95. In adequate knowledge the number of samples is 50.

In post-test knowledge score there are 21 (42%) samples have moderately adequate knowledge regarding restraints in children and the mean score is 13.95. among the 50 samples total 29 (58%) have adequate knowledge regarding restraints after administer structure teaching program and the mean score is 25.69.

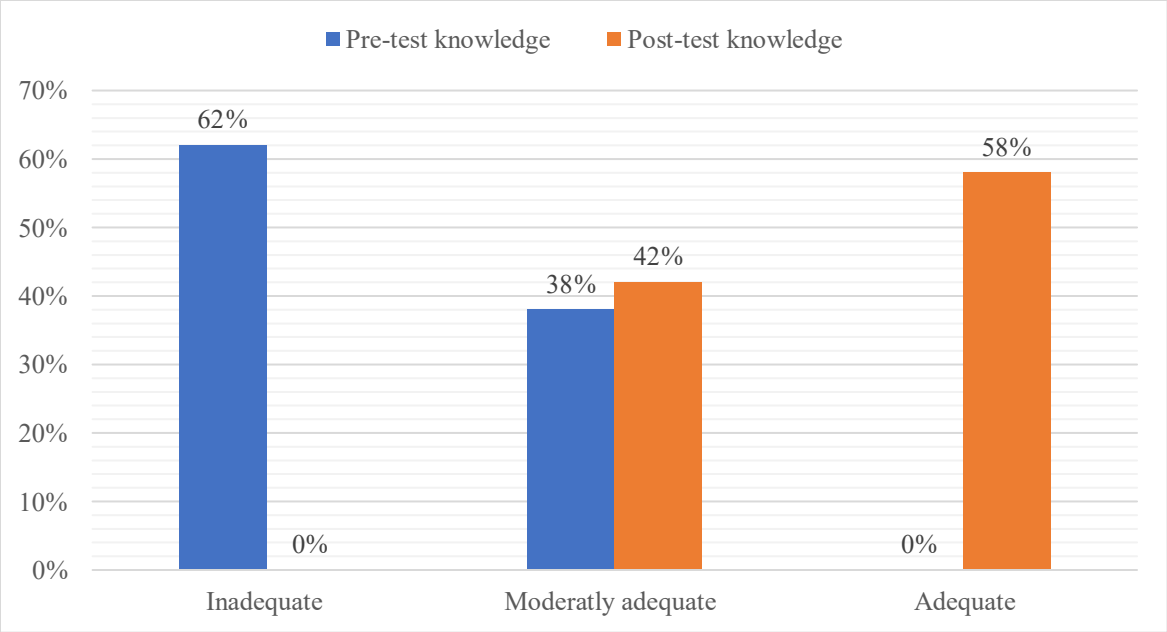

Figure 1.7:- The bar chart shows the comparison between pre-test knowledge score and post-test knowledge score of 4th year b.sc nursing students regarding knowledge of restraints for children.

Section IV:
Evaluation Of The Effectiveness Of Structured Teaching Program Regarding Restraints For Children.

Table 5:- Mean, Standard Deviation, 't' Value of Pre and Post Test Knowledge Score of 4th Year B.Sc. Nursing Students.

Test	Mean	Mean difference	Standard deviation	Paired 't' Test value	DF	Table 't' value	P value
Pre-test	**13.48**	**10.980**	**1.720**				
Post test	**24.46**			**45.137**	**49**	**2.021**	**0.0001**

Significant at 0.005 level of significance.

Data in Table 4 shows that the mean post-test knowledge score (24.46) was higher than the mean pre-test knowledge score (13.48). The computed t' value (45.137) was higher than the table value (2.021) at 0.05 level of significance. Hence, the research hypothesis H_1 was accepted. Therefore, it is inferred STP were effective among 4th year B.sc (N) students.

Section -V
Association Between Pre-Test Knowledge Score And Selected Variables.Table 6: Chi-Square Test Showing The Association Between The Pre-Test Knowledge Scores And Selected Variables. **N=50**

Demographic Variable	Knowledge score		Chi-square	df	p value	Level of Significance
	Inadequate	Moderately adequate				
Age						
18-20	0	0	**0.005**	**1**	**0.944**	**NS**
21-23	11	31				
24-26	2	6				
>26	0	0				
Religion			**2.396**	**2**	**0.302**	**NS**
Hindu	13	31				

Muslim	0	1				
Christian	0	5				
Type of Family			**1.012**	**1**	**0.314**	**NS**
Nuclear	7	14				
Joint	6	23				
Parents Monthly Income			**0.104**	**2**	**0.949**	**NS**
Rs. 1500020000	4	11				
Rs. 2000025000	8	22				
Above Rs. 30000	1	4				
Residence			**0.496**	**1**	**0.486**	**NS**
Rural	7	24				
Urban	6	13				
Previous Knowledge			**1.635**	**2**	**0.441**	**NS**
Book	3	14				
Journals	6	17				
Social media	4	6				

P<0.05, level of significance

This table showing the association between pre-test knowledge score with demographic variables. Between pre-test knowledge score and demographic data of 4th year B.sc Nursing student like Age (p = 0.944), religion (p = 0.302), Type of family (p = 0.314), parents' monthly income (p = 0.949), Area of Residence (p = 0.486) and Previous knowledge (p = 0.441). The p value of demographics is more than 0.05 level of significance so it indicates that no significance has been found between demographic variable and pre-test knowledge score at 0.05 level of significance. Hence H_2 that there is a significant association between demographic data and pre-test knowledge score of 4th year B.sc nursing students is rejected

Discussion:-

A study result was consistent with the study done byMahesh M. Rebinal,2020 that the difference between pre-test knowledge score and post-test knowledge score of the third year B.Sc. nursing students regarding restraints and its use for children was 26.0% (84.6 %. - 58.6 %). The overall skill score of the 3rd year B.Sc. nursing students on each aspect of observation check-list of restraints and its use for children after the information booklet and demonstration was 84.6 %.

A study result was consistent with the study done by Mrs. Pratibha 2022 to assess the effectiveness of structured teaching program on knowledge regarding use of restraints on children among staff nurses shows highly significant difference between mean pre-test and post-test knowledge score indicates structure teaching program found to be effective on knowledge of restraints. And for findings of association chi-square was done to show the association between pre-test knowledge score and demographic variable which shows no significant association at the level of p<0.0001 with all demographic variables.

Conclusion:-

The study findings showed that Samples gained significant knowledge after they exposed to structured Teaching Programme. The mean post-test knowledge score 24.46 was significantly higher than mean pre-test knowledge score 13.48, thus the structured Teaching Programme was found to be effective in enhancing the knowledge of 4th years b.sc nursing students regarding restraints for children.

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