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A Study To Assess Effectiveness Of Structured Teaching Programme On Knowledge And Attitude Regarding Use Of Physical Restraints Among Staff Nurses In Selected Hospitals Of Mandi, Himachal Pradesh 2023

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ABSTRACT

Introduction:

Physical restraints are commonly used in healthcare settings to ensure patient safety, but inappropriate use can lead to serious physical and psychological complications. Nurses play a crucial role in decision-making regarding restraint use; hence adequate knowledge and a positive attitude are essential.

Aim:

To assess the effectiveness of a structured teaching programme (STP) on knowledge and attitude regarding the use of physical restraints among staff nurses.

Methodology:

A quantitative approach with a quasi-experimental non-randomized control group pre-test post-test design was used. A total of 60 staff nurses were selected using non-probability convenient sampling (30 experimental, 30 control). Data were collected using a structured knowledge questionnaire and Likert attitude scale. The experimental group received STP, while the control group did not. Data were analysed using descriptive and inferential statistics.

Results:

The experimental group showed a significant increase in knowledge scores from mean 10.73±1.741 to 20.27±1.461 ($t=53.654$, $p<0.001$). Attitude scores also improved significantly from 51.60±7.035 to 75.10±5.641 ($t=19.184$, $p<0.001$). No significant change was observed in the control group. A significant difference was found between experimental and control groups in post-test scores.

Conclusion:

The structured teaching programme was highly effective in improving knowledge and attitude of staff nurses regarding physical restraints. Regular training programmes should be implemented to ensure safe and ethical use of restraints.

Keywords: Physical Restraints, Structured Teaching Programme, Knowledge, Attitude, Staff Nurses

BACKGROUND OF THE STUDY

"Absolute liberty is the absence of restraint; responsibility is restraint; therefore, the ideally free individual is responsible to himself."

Henery Adams

INTRODUCTION

With regard to the Hippocratic saying, "first do no damage", currently, the need to administer methodologies that promote safety, quality, excellence, humanized treatment of others, and compliance with ethical aspects in health care settings would appear to be accomplished.[1]

Physical restraints are defined as the operation of bias (including belts, harnesses, irons, wastes, and strips) near or to a person's body to circumscribe their movement and to help the person from harming themselves or venturing others, or to ensure that essential treatment can be handed. The efficacity of these styles has extensively been bandied especially regarding their ethical, physical, and cerebral counteraccusations and intended effect. also, their operation differs extensively, making comparisons delicate.[2]

In spite of the need of prove to favour the viability and security of physical restrictions and its conceivable dangers, the utilize of physical restrictions continues. The by and large frequency of physical controlling has been detailed to shift from 6% to 13% in different clinics in India as well as around the world. In spite of the need of substantiation to authorize the efficacity and safety of physical conditions and its possible pitfalls, the use of physical conditions continues. The overall prevalence of physical restraining has been reported to vary from 6 to 13 in colourful hospitals in India as well as worldwide. [3]

Multitudinous situations indeed live in which a case may be a peril to, and injure, him or herself, and/ or others, if not physically restrained. The restraint action also leads to physical goods similar as **dehumidification, choking, asphyxia, aspiration, urinary incontinence, injuries and indeed deaths**. Changed internal status may render a patient unfit to comprehend the purpose of treatments necessary for his or her safe care (Irish nursers Organisation).[4]

Advance, there were no formal thinks about on this issue from India. Since nursers' information and station towards physical conditions is about related to their hone, it's basic to survey nursers information, station and hone towards utilize of physical conditions to create standardized rules in inside wellbeing care settings. Assist, there were no formal ponders on this issue from India.

Nurses are the primary healthcare professionals responsible for applying and monitoring restraints. Their knowledge and attitude significantly influence safe practice. Therefore, structured educational interventions are essential to improve their competency.

NEED OF THE STUDY

Healthcare workers should be apprehensive that restraint and insulation can have significant adverse counteraccusations on cases and should be supposed a last resort. It's the duty of healthcare professionals to follow the four introductory ethical healthcare principles autonomy, justice, beneficence, Andon-maleficence. In agreement with both beneficence the act of doing good- Andon-maleficence- do no detriment, healthcare providers must in sure the administration of restraint is enforced as a last resort. A 2019 meta- analysis on the goods of restraint and insulation estimated that the rush of posttraumatic stress complaint following restraint interventions ranged from 25 to 47.[5]

Studies have reported that nurses often have inadequate knowledge and mixed attitudes regarding physical restraints. Lack of proper training can result in misuse, ethical violations, and adverse patient outcomes.

In India, there is limited research and lack of standardized guidelines regarding restraint use. Therefore, it is necessary to assess and improve nurses' knowledge and attitude through structured teaching programmes.

STATEMENT OF PROBLEM

A Study to assess the Effectiveness of Structured Teaching Programme on Knowledge and Attitude Regarding Use of Physical Restraints Among Staff Nurses in Selected Hospitals of Mandi, Himachal Pradesh.

OBJECTIVES:

1. To assess the knowledge regarding use of physical restraints among staff nurses in Selected Hospitals of Mandi, Himachal Pradesh.

2. To assess the attitude regarding use of physical restraints among staff nurses in Selected Hospitals of Mandi, Himachal Pradesh.
3. To develop and administer structured teaching programme regarding use of physical restraints among staff nurses in Selected Hospitals of Mandi, Himachal Pradesh.
4. To assess the effectiveness of structured teaching plan regarding use of physical restraints among staff nurses in Selected Hospitals of Mandi, Himachal Pradesh.
5. To determine the correlation between knowledge and attitude regarding use of physical restraints among staff nurses in Selected Hospitals of Mandi, Himachal Pradesh.
6. To find out the association between knowledge and attitude regarding use of physical restraints among staff nurses with their selected demographic variables.

1. Structured Teaching Programme: A planned educational intervention consisting of a series of organized sessions, workshops, or lectures designed to impart knowledge and skills to staff nurses regarding the use of physical restraints. The teaching programme may include instructional materials, interactive discussions, demonstrations, and practical exercises aimed at enhancing the nurses' understanding and competence in the subject.

2. Knowledge: Refers to the cognitive understanding and awareness of staff nurses regarding the use of physical restraints. It includes factual information, principles, guidelines, and best practices related to the appropriate use, indications, contraindications, benefits, risks, and alternatives to physical restraints in patient care.

3. Attitude: Refers to the nurses' opinions, feelings, and beliefs towards the use of physical restraints. It encompasses their personal values, perceptions, and emotional responses related to the use of physical restraints in patient care, including their acceptance, resistance, concerns, and willingness to adopt alternative strategies.

4. Physical Restraints: Refers to any devices or techniques used to restrict the movement or behaviour of patients, including but not limited to limb restraints, waist restraints, bed rails, vests, and belts. It includes both mechanical and physical methods employed to ensure patient safety, prevent falls, manage agitation or aggressive behaviour, and maintain therapeutic interventions.

5. Staff Nurses: Refers to registered nurses employed in selected hospitals of Mandi, Himachal Pradesh, who are directly involved in providing care and treatment to patients. They possess the necessary qualifications, training, and experience to administer physical restraints, and they are responsible for making decisions regarding their appropriate use.

HYPOTHESIS

Null Hypothesis

Following hypothesis will be tested at 0.05 level of significance.

H01: - There will be no significant difference between mean pre-test and post-test Knowledge and attitude score among staff nurses of selected hospitals in experimental group.

H02: - There will be no significant correlation between level of knowledge and attitude regarding physical restraint among staff nurses of selected hospitals in experimental group.

H03: - There will be no significant association between level of knowledge and attitude regarding physical restraint among staff nurses with their selected socio-demographic variables.

Research hypothesis

Following hypothesis will be tested at 0.05 level of significance.

H1: - There will be significant difference between mean pre-test and post-test Knowledge and attitude score among staff nurses of selected hospitals in experimental group.

H2: - There will be significant correlation between level of knowledge and attitude regarding physical restraint among staff nurses of selected hospitals in experimental group.

H3: - There will be significant association between level of knowledge and attitude regarding physical restraint among staff nurses with their selected socio-demographic variables.

ASSUMPTIONS

The study assumed that: -

• Staff Nurses of selected hospitals may have some knowledge and appropriate attitude regarding use of physical restraints.

• Staff Nurses may not give honest answers to the questions.

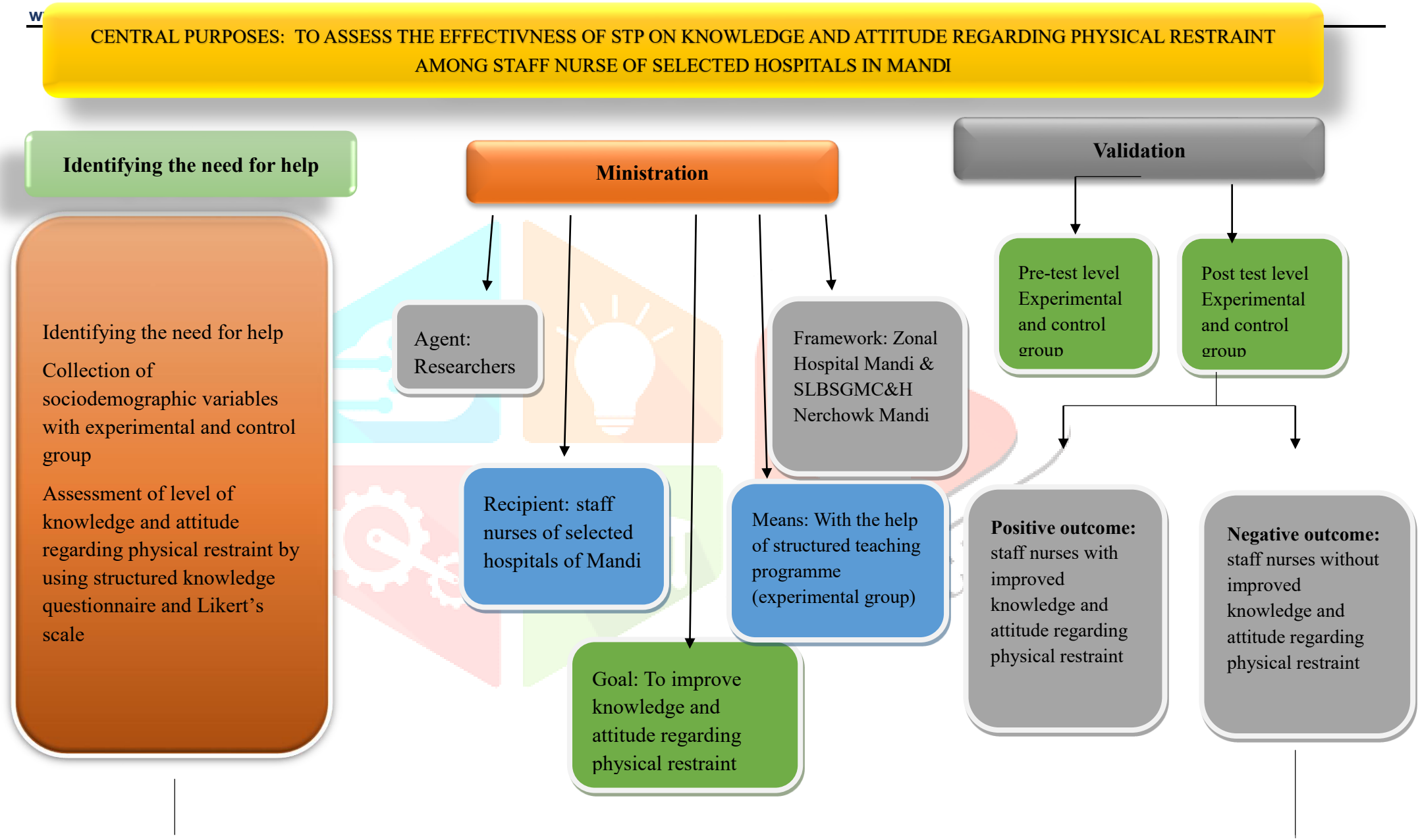


Figure 1.2: Conceptual Framework based on Ernestine Widenbech Model of clinical nursing theory

The dotted line (------) not included in the study

Janisha Kavumpurath, Fatma Refaat, Navin Devaraj, Aneesa, Abdul Rashid, Noor Airini Ibrahim (2023):

This study aimed to assess recent evidence on the use of physical restraints (PR) in adult critical care. Conducted as an integrative review, it covered studies published from January 2009 to December 2019, with a literature search performed in July 2020 across databases including EBSCOhost, Ovid, ProQuest, PubMed, Wiley Online Library, SCOPUS, and ScienceDirect. Keywords such as restraint, critical care, ICU, mechanical ventilation, and nursing were utilized. Methodological quality was evaluated using the CASP checklist and JBI Critical Appraisal Tool. Findings from twenty-one publications were synthesized into seven key topics: prevalence, determinants, types, decision-making, ethical concerns, guidelines, and complications of PR in adult critical care. It was concluded that longer PR duration correlates with higher adverse event risks, underscoring the need for standardized nursing practices and enhanced training to guide PR use effectively in ICUs.[6]

Elmas Yılmaz Selda Karaveli Çakır Işıl Işık Andsoy 2023

A quasi-experimental ponder utilized a single-group pretest-post-test plan to evaluate the effect of physical limitation (PR) preparing on the information, demeanours, and hones of seriously care medical attendants. The think about included 81 medical caretakers who completed "The Person Information" and the "Levels of Information, States of mind and Hones of Staff With respect to Physical Restrictions Survey." Expressive insights were utilized to analyse test characteristics, and Friedman's numerous comparison test assessed the training's viability. Comes about demonstrated that all medical caretakers connected PR, especially on disturbed patients, and decision-making with doctors was common. A noteworthy advancement in nurses' states of mind and hones towards PR was watched post-training and in follow-ups at 1 and 3 months (p=.000). The ponder concludes that PR preparing was viable, prescribing progressing in-service preparing to upgrade nurses' information and abilities in PR application, and normal assessment of preparing adequacy.[7]

Hina Aslam, Tahira Shoukat, Sidra Shumshir Ali, Shama Tanveer. Aqsa Aslam, Saba Iqbal;(2022):

An expressive ponder at Punjab Established of Mental Wellbeing in Lahore from January to Walk 2022 surveyed information, states of mind, and hones of 150 psychiatric medical attendants with respect to physical limitations. The cruel age of medical caretakers was 27.86±3.55 a long time, with cruel encounter of 4.80±2.53 a long time. Scores for information, state of mind, and hones were 7.01±0.89, 35.04±3.62, and 36.26±1.54, individually, appearing no critical affiliation with sociodemographic variables ($p > 0.05$). Be that as it may, hones related with sexual orientation, conjugal status, uncommon courses, and earlier preparing ($p < 0.05$). By and large, medical attendants illustrated great information and positive demeanours toward physical limitations, adjusting with their hones.[8]

RESEARCH METHODOLOGY

Research Approach and Design

Quantitative research approach with quasi-experimental non-randomized control group pre-test post-test design.

Setting and Sample

The study was conducted in selected hospitals of Mandi, Himachal Pradesh. Sample size: 60 staff nurses (30 experimental, 30 control) Sampling technique: Non-probability convenient sampling

Tools

- Structured Knowledge Questionnaire
- Likert Attitude Scale

Intervention

Structured Teaching Programme (STP) administered to experimental group.

Data Analysis

Descriptive and inferential statistics (mean, SD, t-test, correlation).

1.8 DESCRIPTION OF TOOL

Description of the tool refers to the explanation of the content of the tool. The researcher listed the number of items and the scoring for each item in the tool.

Section -A: - Socio-Demographic variables. The item was age, marital status, and area of residence, type of family, working experiences, educational status, income, department of working, previous knowledge and source of knowledge, received any in-service training programme.

Section B: - Structured knowledge questionnaires to assess the knowledge of staff nurses regarding use of physical restraints. This part is consisting of 24 questions which will be very helpful to assess the knowledge regarding use of physical restraints before and after the Structured Teaching Program.

Knowledge regarding physical restraint was measured in terms of knowledge score. Each correct answer was given a score of one mark and wrong answer or unanswered was given a score of zero. The maximum score was 24 and the minimum score was Zero. To interpret the level of knowledge the scores were distributed as follows:

Table no. 3.2 Interpretation of scores of structured knowledge questionnaire

CRITERIA MEASURE FOR KNOWLEDGE SCORE	
Score Level	**Score**
Below Average	**0-10**
Average	**11-16**
Good	**17-24**

MAXIMUM=24	MINIMUM =0

Part III: Attitude rating scale to assess the attitude of staff nurses of selected Government Hospitals, of Mandi (H.P) regarding physical restraints.

It allows the participants to express their opinion regarding physical restraints. The scale consists of 18 statements to assess the tendency of the participants towards physical restraints. Each statement has five options like Strongly Agree, Agree, Neutral, Disagree, Strongly disagree and the maximum score is 90 and the minimum score is 18. Scoring is as follow:

Scoring for Positive Statement:

Attitude	Score
Strongly Agree	5
Agree	4
Neutral	3
Disagree	2
Strongly Disagree	1

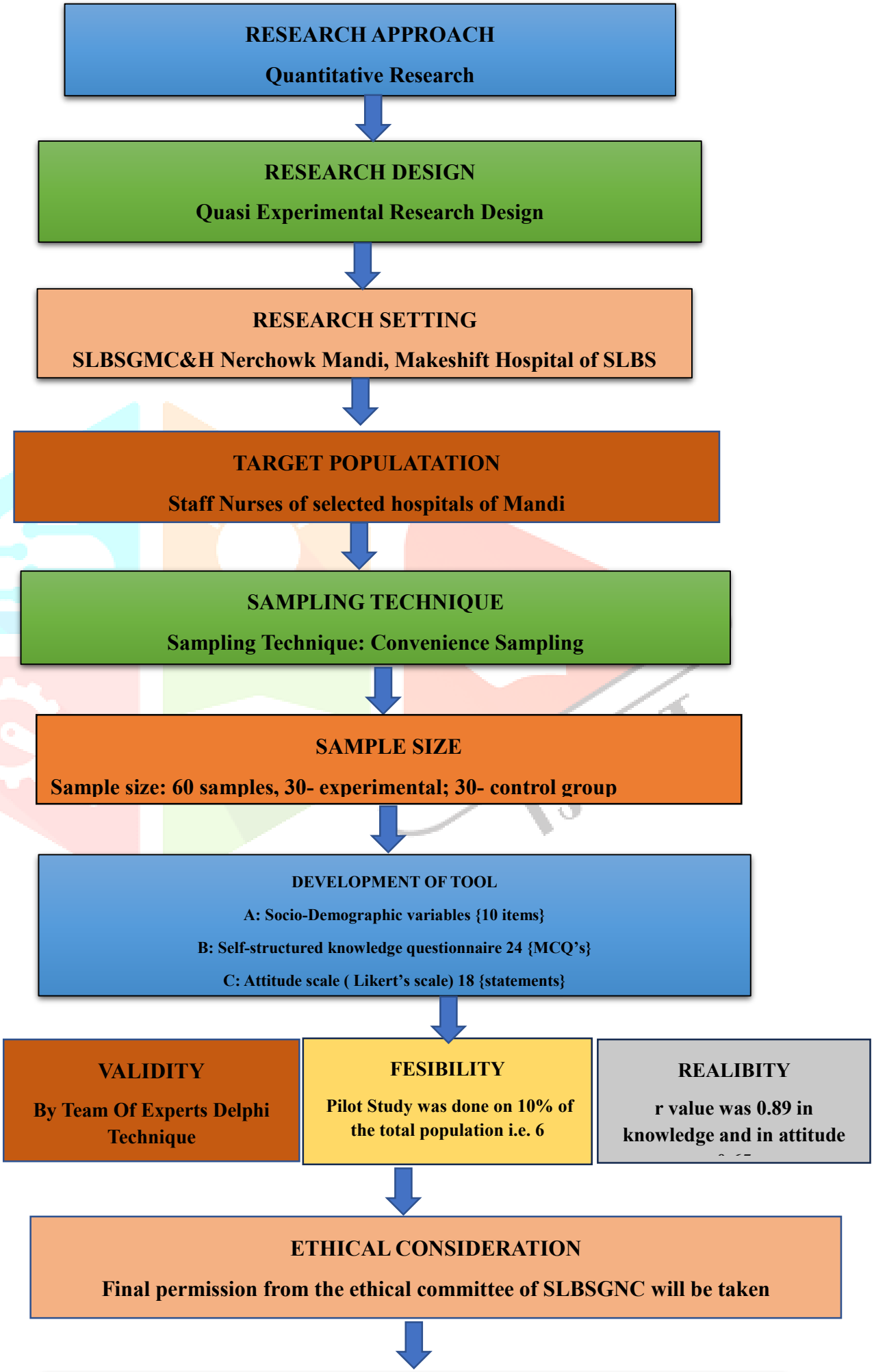
Scoring for Negative Statement:

Attitude	Score
Strongly Disagree	5
Disagree	4
Neutral	3
Agree	2
Strongly Agree	1

Table no. 3.3 Interpretation of Attitude scores of Likert's Scale

Score	Percentage	Interpretation
18-32	20%-46.6%	Negative attitude
33-46	48.3%-73.3%	Neutral attitude

47-90	75%-100%	Positive attitude



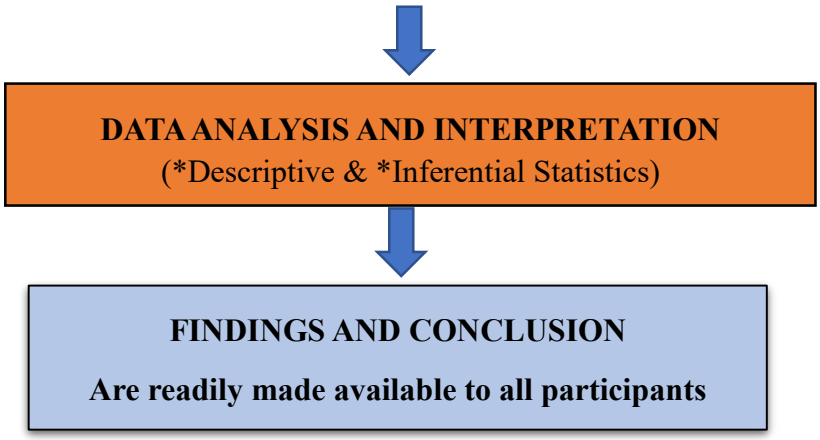


Fig. 2 SCHEMATIC REPRESENTATION OF RESEARCH METHODOLOGY

ANALYSIS AND INTERPRETATION OF DATA

The analysis of the obtained data was done using descriptive and inferential statistics based on the objectives of the study organized under the following headings: -

- **Section A:** Frequency & percentage distribution of socio-demographic variables of staff nurses.
- **Section B:** Effectiveness of structured teaching programme on knowledge and attitude regarding use of physical restraints
- **Section C:** Correlation between knowledge and attitude score regarding use of physical restraints among staff nurses of selected hospitals of Mandi Himachal Pradesh.
- **Section D:** Association between pre-test and post-test attitude score regarding use of physical restraints among staff nurses with their selected demographic variables.

Section – A

TABLE: 4.1 (A) FREQUENCY & PERCENTAGE DISTRIBUTION OF SOCIO DEMOGRAPHIC VARIABLES.

S. No	Sociodemographic	Variable	Experimental frequency (%)	Control frequency (%)
1.	Age in years	21 - 25 years	6 (20%)	4 (13%)
		26 - 30 years	3 (10%)	6 (20%)

		31 - 35 years	9 (30%)	**12 (40%)**
		≥ 36 years	**12 (40%)**	8 (27%)
2.	Marital status	Unmarried	6 (20%)	6 (20%)
		Married	**13 (43%)**	**17 (57%)**
		Separated	4 (13%)	4 (13%
		Widowed	7 (23%)	3 (10%)
3.	Residential area	Urban	14 (47%)	14 (47%)
		Rural	**16 (53%)**	**16 (53%)**
4.	Type of family	Nuclear Family	12 (42%)	10 (33%)
		Joint Family	**16 (52%)**	**17 (57%)**
		Extended Family	02 (06%)	3 (10%)
5.	Working experience	1 - 5 years	7 (23%)	9 (30%)
		6 – 10 years	7 (23%)	9 (30%)
		11 – 15 years	**12 (40%)**	**10 (33%)**
		≥ 16 years	4 (13%)	2 (7%)
6.	Professional qualifications	GNM General Nursing Midwifery	**12 (40%)**	8 (27%)
		Basic B.Sc. (N)	3 (10%)	5 (17%)
		Post-basic B.Sc. (N)	10 (33%)	**11 (37%)**
		Masters in Nursing	5 (17%)	6 (20%)
		PhD in nursing	0%	0%
7.	Income per month	≤ 20.000	5 (17%)	1 (3%)
		21.000-30.000	7 (23%)	7 (23%)
		31.000-40.000	**11 (37%)**	**11 (43%)**
		≥ 41.000	7 (23%)	9 (30%)
8.	Department of working	General ward	8 (27%)	10 (33%)
		Surgical ward	**11 (37%)**	6 (20%)
		Any specialized ward	**11 (37%)**	**14 (47%)**
9	Source of information	Mass Media & Books	6 (20%)	5 (17%)
		Peer Groups	3 (10%)	6 (20%)
		Health Personnels	**12 (40%)**	7 (23%)

		Any others	9 (30%)	**12 (40%)**
10	Received in-service training programs	Yes	10 (33%)	**15 (50%)**
		No	**20 (67%)**	**15 (50%)**

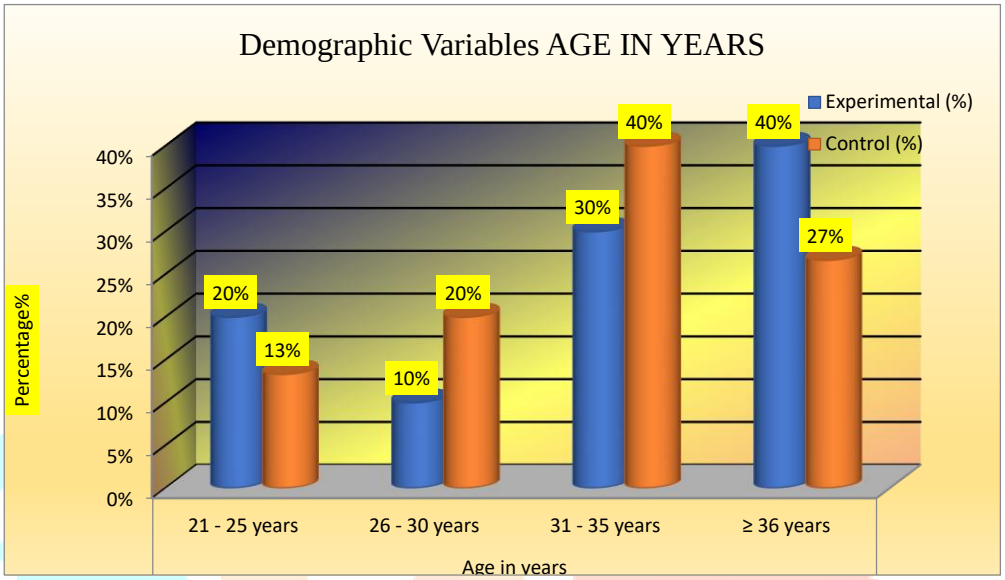


Figure 3 Cylindrical Diagram Depicts Percentage Distribution of Staff Nurses According to Their Age in Years.

Figure 3 depicts that the distribution across age groups shows a varied representation in both groups. The experimental group has a higher proportion of participants aged 31-35 years (30%) and ≥ 36 years (40%), compared to the control group which has more participants in the 26-30 years (20%) and 31-35 years (40%) age brackets.

SECTION -B

Table 4.2: Comparison of Frequency & Percentage Distribution of Experimental and Control Groups Pre-test & Post-test Knowledge Score

CRITERIA MEASURE OF PRETEST & POST-TEST KNOWLEDGE SCORE				
SCORE LEVEL	**EXPERIMENTAL GROUP**	**CONTROL GROUP**	**EXPERIMENTAL GROUP**	**CONTROL GROUP**
GOOD (17-24)	0(0%)	1(3.3%)	28(93.3%)	0(0%)
AVERAGE (9-16)	28(93.3%)	24(80%)	2(6.7%)	28(98.3%)
BELOW AVERAGE (0-8)	2(6.7%)	5(16.7%)	0(0%)	2(6.7%)
Maximum=24				**Minimum =0**

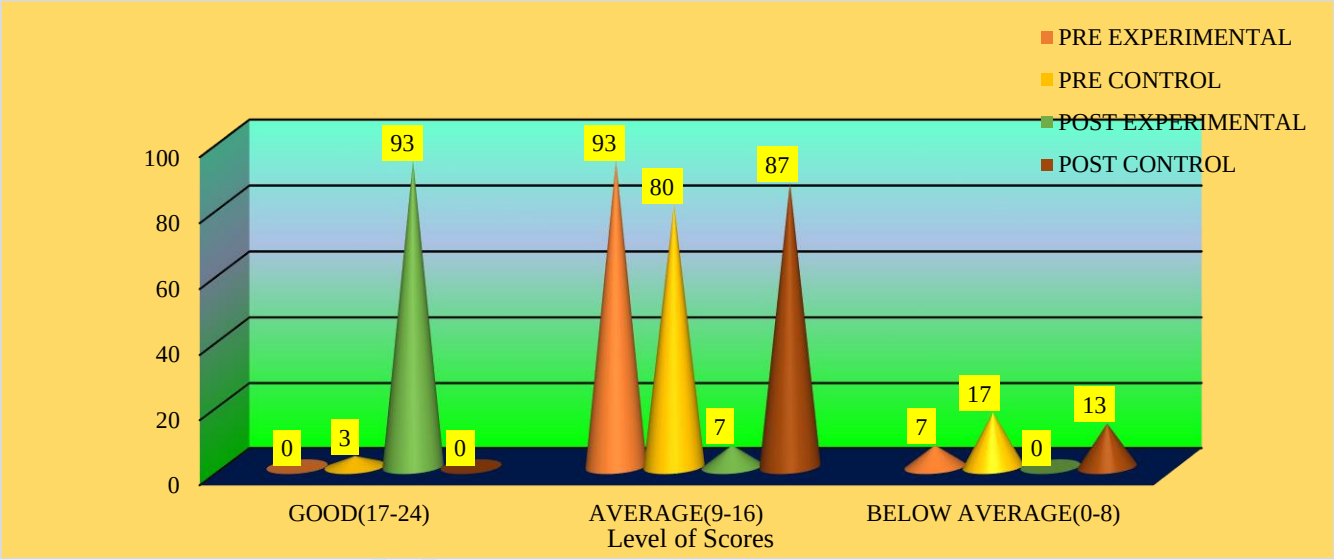


Table 4.2 depicts that Before the intervention, none of the participants in the Experimental Group scored within the "Good" range (17-24), while only 3.3% of the Control Group did. After the intervention, a significant majority of 93.3% in the Experimental Group achieved scores in the "Good" range, whereas none in the Control Group did.

In terms of the "Average" range (9-16) before the intervention, 93.3% of the Experimental Group and 80% of the Control Group scored within this range. After the intervention, the Experimental Group saw a decrease to 6.7% within the "Average" range, while the Control Group remained high at 86.7%.

Regarding the "Below Average" range (0-8) before the intervention, 6.7% of the Experimental Group and 16.7% of the Control Group scored within this range. Post-intervention, none of the Experimental Group participants scored in this range, but 6.7%% of the Control Group remained in the "Below Average" range.

Table 4.3: Showing comparison within the Group with Paired & Unpaired T Test of Knowledge Scores.

		KNOWLEDGE SCORE				Paired T Test		
		Pretest		Post test				
Group	**N**	**Mean**	**SD**	**Mean**	**SD**	**Df**	**T**	**Result**
Experimental Group	30	10.73	1.741	20.27	1.461	29	53.654	P value=<0.001 **
Control Group	30	11.600	3.180	11.17	2.743	29	3.067	P value=0.005 **
Unpaired T Test	df	58		Df	58			
	T	1.310		T	16.040			
	Result	P value=0.196		Result	P value=<0.001 **			
**Significant - ** **						**Highly-significant**		

Table 4.3 depicts that According to the paired t-test results, both the Experimental Group and the Control Group showed significant increases in knowledge scores. In the Experimental Group, the mean score rose significantly from 10.73 (SD = 1.741) before the intervention to 20.27 (SD = 1.461) afterward ($t(29) = 53.654$, $p < 0.001$). Similarly, the Control Group also saw a significant increase from 11.60 (SD = 3.180) to 11.17 (SD = 2.743) ($t(29) = 3.067$, $p = 0.005$). When comparing between the groups using an unpaired t-test, there was a significant difference in post-intervention knowledge scores ($t(58) = 16.040$, $p < 0.001$). This indicates that the Experimental Group achieved significantly higher post-test knowledge scores compared to the Control Group.

Table 4.4: Comparison of frequency & percentage distribution of pre-test and post-test of experimental and control groups of Attitude.

CRITERIA MEASURE OF PRETEST & POST-TEST ATTITUDE SCORE				
SCORE LEVEL	**EXPERIMENTAL GROUP**	**CONTROL GROUP**	**EXPERIMENTAL GROUP**	**CONTROL GROUP**
FAVOURABLE (67-90)	0(0%)	1(3.3%)	27(90%)	0(0%)
MODERATELY FAVOURABLE (43-66)	28(93.3%)	26(90.3%)	3(10%)	28(93.3%)
UNFAVOURABLE (18-42)	2(6.7%)	3(7.06%)	0(0%)	2(6.7%)

Maximum=90

Minimum =18

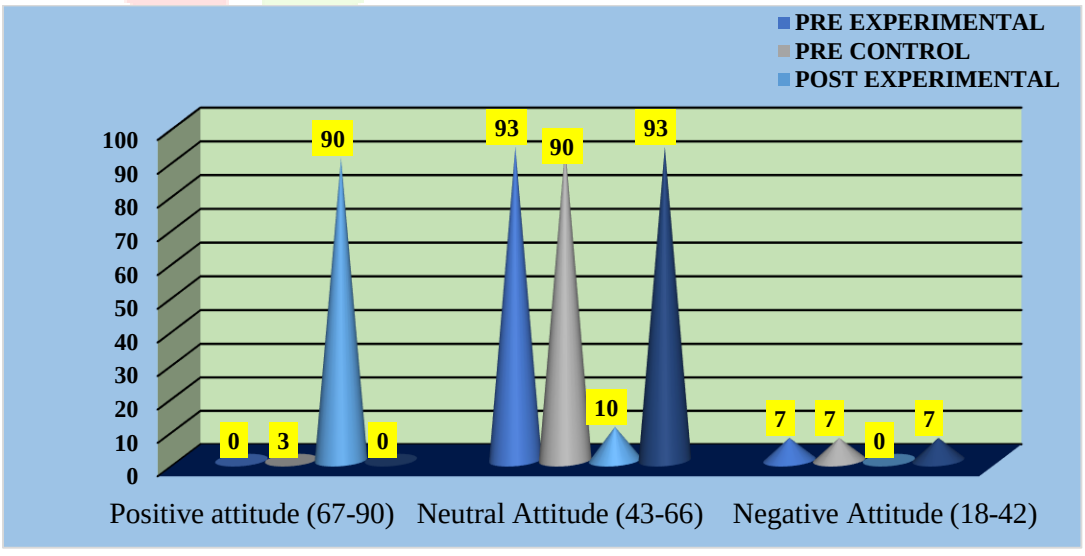


Table 4.4 depicts that before the intervention, none of the participants in either the Experimental Group or the Control Group had scores in the "Favourable" range (67-90). Most participants in both groups had moderately favourable attitudes (43-66 range), with 93.3% scoring in this range. After the intervention, the Experimental

Group saw a significant shift, with 90% now achieving scores in the "Favourable" range, while none in the Control Group reached this level. In terms of moderately favourable attitudes, only 10% of the Experimental Group remained in this category post-intervention, whereas 93.3% of the Control Group still had moderately favourable attitudes. Before the intervention, a small number of participants in both groups had unfavourable attitudes (18-42 range), but post-intervention, none in the Experimental Group had unfavourable scores, while 6.7% of the Control Group did.

Table 4.5: Showing comparison within the Group with Paired & Unpaired T Test of Attitude Scores.

		ATTITUDE SCORE				**Paired T Test**		
		Pretest		**Post-test**				
Group	**N**	**Mean**	**SD**	**Mean**	**SD**	**df**	**T**	**Result**
Experimental Group	30	51.60	7.035	75.10	5.641	29	19.184	**P value=<0.001 ****
Control Group	30	51.200	4.634	51.43	4.606	29	1.756	P value=0.09
Unpaired T Test	df	58		df	58			
	T	0.260		T	17.800			
	Result	P value=0.796		Result	**P value=<0.001 ****			
Significant - ***								**Highly-significant -- ******

Table 4.5 depicts that the results of the paired t-tests show a notable increase in attitude scores within the Experimental Group after the intervention. Before the intervention, the mean score was 51.60 (SD = 7.035), which rose to 75.10 (SD = 5.641) afterward ($t(29) = 19.184$, $p < 0.001$). This indicates a significant positive impact of the intervention on attitudes among these participants. In contrast, the Control Group showed no significant change in attitude scores before (M = 51.20, SD = 4.634) and after (M = 51.43, SD = 4.606) the study ($t(29) = 1.756$, $p = 0.09$), suggesting that attitudes remained largely unchanged without the intervention. The unpaired t-test between groups revealed a significant difference in post-intervention attitude scores ($t(58) = 17.800$, $p < 0.001$), underscoring that the intervention led to significantly higher post-test attitudes in the Experimental Group compared to the Control Group.

Experimental Group

Table 4.6 depicts the Correlation Analysis Between Various Pairs of Variables

	Variable 1	vs	Variable 2	r value	P value
Pair 1	PRE KNOWLEDGE	vs	POST KNOWLEDGE	.829***	<0.001
Pair 2	PRE KNOWLEDGE	vs	PRE ATTITUDE	.746***	<0.001
Pair 3	PRE KNOWLEDGE	vs	POST ATTITUDE	.825***	<0.001
Pair 4	POST KNOWLEDGE	vs	PRE ATTITUDE	.736***	<0.001
Pair 5	POST KNOWLEDGE	vs	POST ATTITUDE	.743***	<0.001
Pair 6	PRE ATTITUDE	vs	POST ATTITUDE	.457***	0.011

SIGNIFICANT: *** NON-SIGNIFICANT: *

Table 4.6 depicts the correlation analysis between various pairs of variables reveals several significant relationships. For the first pair (PRE KNOWLEDGE vs POST KNOWLEDGE), the r value of .829** and a P value of <0.001 indicate a very strong positive and significant correlation, suggesting that higher pre-knowledge is strongly associated with higher post-knowledge. Similarly, the second pair (PRE KNOWLEDGE vs POST ATTITUDE) shows a strong positive correlation with an r value of .746** and a P value of <0.001, indicating that greater pre-knowledge is significantly linked to a more positive post-attitude. In contrast, the third pair (PRE KNOWLEDGE vs POST ATTITUDE) also has an r value of .825** and a P value of <0.001, indicating that greater pre-knowledge is significantly linked to a more positive post-attitude. For the fourth pair (POST KNOWLEDGE vs PRE-ATTITUDE), the r value is .736** with a P value of <0.001, demonstrating a significant strong positive correlation. The fifth pair (POST KNOWLEDGE vs POST ATTITUDE) has an r value of .743** and a P value of <0.001, showing a strong positive correlation between greater post-knowledge and post-attitude. Lastly, the sixth pair (PRE-ATTITUDE vs POST ATTITUDE) has a significant moderate positive correlation with an r value of .457* and a P value of 0.011, indicating that a positive pre-attitude is moderately associated with a positive post-attitude.

Control Group

Table 4.7 Represents Correlation Analysis Reveals Significant Relationships Across All Variable Pairs

	Variable 1	vs	Variable 2	r value	P value
Pair 1	PRE KNOWLEDGE	vs	POST KNOWLEDGE	.977***	<0.001

Pair 2	PRE KNOWLEDGE	vs	PRE ATTITUDE	.972***	<0.001
Pair 3	PRE KNOWLEDGE	vs	POST ATTITUDE	.968***	<0.001
Pair 4	POST KNOWLEDGE	vs	PRE ATTITUDE	.960***	<0.001
Pair 5	POST KNOWLEDGE	vs	POST ATTITUDE	.955***	<0.001
Pair 6	PRE ATTITUDE	vs	POST ATTITUDE	.988***	<0.001

SIGNIFICANT: *** NON-SIGNIFICANT: *

Table 4.7 depicts the correlation analysis reveals significant relationships across all variable pairs. Pair 1 (PRE KNOWLEDGE vs POST KNOWLEDGE) has an exceptionally strong positive correlation with an r value of .977** and a P value of <0.001, indicating that higher pre-knowledge is closely associated with higher post-knowledge. Similarly, Pair 2 (PRE KNOWLEDGE vs PRE-ATTITUDE) shows a very strong positive correlation (r value .972**, P < 0.001), suggesting that greater pre-knowledge is significantly linked to a more positive pre-attitude.

Pair 3 (PRE KNOWLEDGE vs POST ATTITUDE) also demonstrates a strong positive correlation with an r value of .968** and a P value of <0.001, indicating a significant association between pre-knowledge and post-attitude. Pair 4 (PRE KNOWLEDGE vs POST ATTITUDE) has an r value of .960** and a P value of <0.001, showing a strong positive correlation. Pair 5 (POST KNOWLEDGE vs POST ATTITUDE) with an r value of .955** and a P value of <0.001 is similarly significant. Finally, Pair 6 (PRE-ATTITUDE vs POST ATTITUDE) exhibits a strong positive correlation with an r value of .988** and a P value of <0.001,

Findings related to association between pre-test and post-test knowledge and attitude score regarding use of physical restraints among staff nurses with their selected demographic variables

Table 4.8 (a): Table Showing Association of knowledge Scores and Demographic Variables.

DEMOGRAPHIC VARIABLES		**ASSOCIATION OF KNOWLEDGE SCORE WITH DEMOGRAPHIC VARIABLES**						
Variables	**Opts**	**GOOD**	**AVERAGE**	**BELOW AVERAGE**	**Chi Test**	**P Value**	**df**	**Table Value**
Age in years	21 - 25 years	0	4	2	8.571	0.036***	3	7.815
	26 - 30 years	0	3	0				

	31 - 35 years	0	9	0				
	≥ 36 years	0	12	0				
Marital status	Unmarried	0	6	0	1.389	0.708*	3	7.815
	Married	0	12	1				
	Separated	0	4	0				
	Widowed	0	6	1				
Residential area	Urban	0	13	1	0.010	0.922*	1	3.841
	Rural	0	15	1				
Type of family	Nuclear Family	0	8	0	0.779	0.677*	2	5.991
	Joint Family	0	10	1				
	Extended Family	0	10	1				
Working experience	1 - 5 years	0	7	0	3.214	0.360*	3	7.815
	6 – 10 years	0	7	0				
	11 – 15 years	0	11	1				
	≥ 16 years	0	3	1				

Table 4.16 (b): Table Showing Association of Scores and Demographic Variables.

Professional qualifications	GNM General Nursing Midwifery	0	10	2	3.214	0.360*	3	7.815
	Basic B.Sc. (N)	0	3	0				
	Post-basic B.Sc. (N)	0	10	0				
	Masters in Nursing	0	5	0				
	PhD in nursing	0	0	0				
Income per month	≤ 20.000	0	3	2	10.714	0.013***	3	7.815
	21.000-30.000	0	7	0				
	31.000-40.000	0	11	0				
	≥ 41.000	0	7	0				
Department of working	General ward	0	7	1	1.327	0.515*	2	5.991
	Surgical ward	0	11	0				

	Any specialized ward	0	10	1				
Source of information	Mass Media & Books	0	6	0	4.554	0.208*	3	7.815
	Peer Groups	0	2	1				
	Health Personnels	0	11	1				
	Any others	0	9	0				
Received in-service training programs	Yes	0	8	2	4.286	0.038***	1	3.841
	No	0	20	0				

Significant* non-significant-***

Table no 4.8 depicts the study found a significant association between age and knowledge level, with participants aged 21-25 years more frequently falling into the "AVERAGE" knowledge category compared to other age groups (Chi-square = 8.571, p = 0.036). There was also a significant association between income per month and knowledge level, with participants earning ≤ 20,000 more likely to be in the "BELOW AVERAGE" knowledge category (Chi-square = 10.714, p = 0.013). Additionally, receiving in-service training programs showed a significant association with knowledge level (Chi-square = 4.286, p = 0.038). No significant associations were found for marital status, residential area, type of family, working experience, professional qualifications, department of working, or source of information.

Table 4.9 (a): Table Showing Association of Scores and Demographic Variables

DEMOGRAPHIC VARIABLES		**ASSOCIATION OF KNOWLEDGE SCORE WITH DEMOGRAPHIC VARIABLES**						
Variables	**Opts**	**GOOD**	**AVERAGE**	**BELOW AVERAGE**	**Chi Test**	**P Value**	**df**	**Table Value**
Age in years	21 - 25 years	0	4	0	3.281	0.773*	6	12.592
	26 - 30 years	0	5	1				
	31 - 35 years	1	8	3				
	≥ 36 years	0	7	1				
Marital status	Unmarried	0	5	1	2.243	0.896*	6	12.592
	Married	1	13	3				
	Separated	0	4	0				
	Widowed	0	2	1				

Residential area	Urban	0	12	2	1.071	0.585*	2	5.991
	Rural	1	12	3				
Type of family	Nuclear Family	0	8	2	1.518	0.824*	4	9.488
	Joint Family	1	13	3				
	Extended Family	0	3	0				
Working experience	1 - 5 years	0	8	1	3.456	0.750*	6	12.592
	6 – 10 years	1	6	2				
	11 – 15 years	0	8	2				
	≥ 16 years	0	2	0				
Professional qualifications	GNM General Nursing Midwifery	0	6	2	5.249	0.512*	6	12.592
	Basic B.Sc. (N)	0	4	1				
	Post-basic B.Sc. (N)	1	10	0				
	Masters in Nursing	0	4	2				
	PhD in nursing	0	0	0				
Income per month	≤ 20.000	0	1	0	5.931	0.431*	6	12.592
	21.000-30.000	0	6	1				
	31.000-40.000	0	9	4				
	≥ 41.000	1	8	0				
Department of working	General ward	1	9	0	5.119	0.275*	4	9.488
	Surgical ward	0	4	2				
	Any specialized ward	0	11	3				
Source of information	Mass Media & Books	1	3	1	7.950	0.242*	6	12.592
	Peer Groups	0	4	2				
	Health Personnels	0	7	0				
	Any others	0	10	2				
Received in-service training programs	Yes	0	13	2	1.367	0.505*	2	5.991
	No	1	11	3				

Significant* non-significant-***

Table no.4.9 depicts that the study found no significant associations between knowledge level and various demographic factors. Specifically, there were no significant associations with age (Chi-square = 3.281, p = 0.773), marital status (Chi-square = 2.243, p = 0.896), residential area (Chi-square = 1.071, p = 0.585), type of family (Chi-square = 1.518, p = 0.824), working experience (Chi-square = 3.456, p = 0.750), professional qualifications (Chi-square = 5.249, p = 0.512), income per month (Chi-square = 5.931, p = 0.431), department of working (Chi-square = 5.119, p = 0.275), source of information (Chi-square = 7.950, p = 0.242), and receipt of in-service training programs (Chi-square = 1.367, p = 0.505).

Table 4.10: Table Showing Association of Scores and Demographic Variables.

DEMOGRAPHIC VARIABLES		ASSOCIATION OF ATTITUDE SCORE WITH DEMOGRAPHIC VARIABLES						
Variables	**Opts**	**FAVOURABLE**	**MODERATELY FAVOURABLE**	**UNFAVOURABLE**	**Chi Test**	**P Value**	**df**	**Table Value**
Age in years	21 - 25 years	0	5	1	2.321	0.508	3	7.815
	26 - 30 years	0	3	0				
	31 - 35 years	0	8	1				
	≥ 36 years	0	12	0				
Marital status	Unmarried	0	6	0	1.389	0.708	3	7.815
	Married	0	12	1				
	Separated	0	4	0				
	Widowed	0	6	1				
Residential area	Urban	0	13	1	0.010	0.922	1	3.841
	Rural	0	15	1				
Type of family	Nuclear Family	0	8	0	3.701	0.157	2	5.991
	Joint Family	0	9	2				
	Extended Family	0	11	0				
Working experience	1 - 5 years	0	7	0	3.214	0.360	3	7.815
	6 – 10 years	0	7	0				
	11 – 15 years	0	10	2				
	≥ 16 years	0	4	0				

Professional qualifications	GNM General Nursing Midwifery	0	11	1	0.804	0.849	3	7.815
	Basic B.Sc. (N)	0	3	0				
	Post-basic B.Sc. (N)	0	9	1				
	Masters in Nursing	0	5	0				
Income per month	≤ 20.000	0	4	1	2.532	0.469*	3	7.815
	21.000-30.000	0	7	0				
	31.000-40.000	0	10	1				
	≥ 41.000	0	7	0				
Department of working	General ward	0	7	1	1.327	0.515*	2	5.991
	Surgical ward	0	10	1				
	Any specialized ward	0	11	0				
Source of information	Mass Media & Books	0	6	0	4.554	0.208*	3	7.815
	Peer Groups	0	2	1				
	Health Personnels	0	11	1				
	Any others	0	9	0				
Received in-service training programs	Yes	0	9	1	0.268	0.605*	1	3.841
	No	0	19	1				

Significant-* **Non-Significant-***

Table no 4.10 depicts that None of the factors examined showed a statistically significant association with the outcomes studied. Age (Chi-square = 2.321, p = 0.508), marital status (Chi-square = 1.389, p = 0.708), residential area (Chi-square = 0.010, p = 0.922), type of family (Chi-square = 3.701, p = 0.157), working experience (Chi-square = 3.214, p = 0.360), professional qualifications (Chi-square = 0.804, p = 0.849), income per month (Chi-square = 2.532, p = 0.469), department of working (Chi-square = 1.327, p = 0.515), source of information (Chi-square = 4.554, p = 0.208), and received in-service training programs (Chi-square = 0.268, p = 0.605) all failed to demonstrate significant associations with the outcomes under investigation.

Table No 4.11: Showing Association of Scores and Demographic Variables

DEMOGRAPHIC VARIABLES		ASSOCIATION OF ATTITUDE SCORE WITH DEMOGRAPHIC VARIABLES						
Variables	**Opts**	**FAVOURABLE**	**MODERATELY FAVOURABLE**	**UNFAVOURABLE**	**Chi Test**	**P Value**	**df**	**Table Value**
Age in years	21 - 25 years	0	4	0	1.875	0.599	3	7.815
	26 - 30 years	0	5	1				
	31 - 35 years	0	11	1				
	≥ 36 years	0	8	0				
Marital status	Unmarried	0	5	1	1.481	0.687	3	7.815
	Married	0	16	1				
	Separated	0	4	0				
	Widowed	0	3	0				
Residential area	Urban	0	13	1	0.010	0.922	1	3.841
	Rural	0	15	1				
Type of family	Nuclear Family	0	9	1	0.410	0.815	2	5.991
	Joint Family	0	16	1				
	Extended Family	0	3	0				
Working experience	1 - 5 years	0	8	1	1.429	0.699	3	7.815
	6 – 10 years	0	8	1				
	11 – 15 years	0	10	0				
	≥ 16 years	0	2	0				
Professional qualifications	GNM General Nursing Midwifery	0	7	1	2.545	0.467	3	7.815
	Basic B.Sc. (N)	0	5	0				
	Post-basic B.Sc. (N)	0	11	0				
	Masters in Nursing	0	5	1				

Table No 4.11 (b): Showing Association of Scores and Demographic Variables

Income per month	≤ 20.000	0	1	0	1.389	0.708	3	7.815
	21.000-30.000	0	6	1				

	31.000-40.000	0	12	1				
	≥ 41.000	0	9	0				
Department of working	General ward	0	10	0	2.449	0.294	2	5.991
	Surgical ward	0	6	0				
	Any specialized ward	0	12	2				
Source of information	Mass Media & Books	0	5	0	3.214	0.360	3	7.815
	Peer Groups	0	6	0				
	Health Personnels	0	7	0				
	Any others	0	10	2				
Received in-service training programs	Yes	0	14	1	0.000	1.000	1	3.841
	No	0	14	1				

Significant* non-significant-***

Table no 4.21 depicts none of the factors showed a statistically significant association with the outcomes studied. Specifically, age (Chi-square = 1.875, p = 0.599), marital status (Chi-square = 1.481, p = 0.687), residential area (Chi-square = 0.010, p = 0.922), type of family (Chi-square = 0.410, p = 0.815), working experience (Chi-square = 1.429, p = 0.699), professional qualifications (Chi-square = 2.545, p = 0.467), income per month (Chi-square = 1.389, p = 0.708), department of working (Chi-square = 2.449, p = 0.294), source of information (Chi-square = 3.214, p = 0.360), and received in-service training programs (Chi-square = 0.000, p = 1.000) did not exhibit significant associations with the outcomes analyzed.

RESULTS AND DISCUSSION

The study revealed that:

- Knowledge scores significantly improved in experimental group (p<0.001)
- Attitude scores significantly improved in experimental group
- No significant change in control group
- Positive correlation between knowledge and attitude

These findings indicate that structured teaching programmes enhance nurses' competency and promote safe restraint practices.

CONCLUSION

The study concluded that structured teaching programme is highly effective in improving knowledge and attitude of staff nurses regarding physical restraints.

RECOMMENDATIONS

- Regular in-service education programmes
- Development of hospital policies
- Inclusion in nursing curriculum
- Further large-scale studies

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