

**“A STUDY TO EVALUATE THE EFFECTIVENESS OF STRUCTURED
TEACHING PROGRAMME ON KNOWLEDGE REGARDING THE
MODIFIED EARLY WARNING SCORE (MEWS) AMONG NURSING
STUDENTS IN SELECTED NURSING COLLEGES AT UTTARA KANNADA
DISTRICT”**

BY

MS. DEVIKA K K

Submitted to



Rajiv Gandhi University of Health Sciences, Bangalore, Karnataka

Under Short term Research Grants for Undergraduate Students of Institutions Affiliated to

RGHUS for the year 2025-26

And

In Partial fulfillment of the requirements for the degree of

Bachelor of Sciences in Nursing

Under the guidance of

Mrs. R Devaneethi



St. Ignatius Institute of Health Sciences,

Honavar, Uttar Kannada

2025-26

DECLARATION BY THE CANDIDATE

I hereby declare that this project titled “A study to evaluate the effectiveness of structured teaching programme on knowledge regarding the Modified Early Warning Score (MEWS) among nursing students in selected nursing colleges at Uttara Kannada District” is a bonafide and genuine work to carried out under the guidance of Mrs. R Devaneethi, Professor, St. Ignatius Institute of Health Sciences, Honavar.

Date:

Signature of the candidate

Place:

Ms. Devika K K

CERTIFICATE BY GUIDE

This is to certify that project “A study to evaluate the effectiveness of structured teaching programme on knowledge regarding the Modified Early Warning Score (MEWS) among nursing students in selected nursing colleges at Uttara Kannada District” is a bonafide and genuine work to carried out by Ms. Devika K K under the Short-term Research Grants for Undergraduate Students of Institutions affiliated to RGUHS for the year 2025-26.

Date:

Signature of the guide

Place:

Mrs. R Devaneethi

Professor

Dept. of Medical Surgical Nursing

ENDORSEMENT BY THE PRINCIPAL/ HEAD OF THE INSTITUTION

This is to certify that the project entitled “A study to evaluate the effectiveness of structured teaching programme on knowledge regarding the Modified Early Warning Score (MEWS) among nursing students in selected nursing colleges at Uttara Kannada District” is a bonafide and genuine work to carried out by Ms. Devika K K under the Short-term Research Grants for Undergraduate Students of Institutions Affiliated to RGUHS for the year 2025-26 under the guidance of Mrs. R Devaneethi, Professor, St. Ignatius Institute of Health Sciences, Honavar.

Date:

Seal & Signature of the Principal

Place:

A. Sagaya Arockia Mary

RAJIV GANDHI UNIVERSITY OF HEALTH SCIENCES

UNDERGRADUATE RESEARCH 2024 - 2025

FINAL REPORT

- Title of the Project:** “A study to assess the effectiveness of structured teaching programme on the knowledge regarding Modified Early Warning Score (MEWS)in a selected college, Uttara Kannada District”
- Project code of the Project** (provided by RGHUS):**UG25NUR0642**
- Name of the Student, email and mobile number:** Ms. Devika K K,
Email Id: devikakk289@gmail.com, Mobile No: 9778328762
- Name of the Guide, Designation, email and mobile number:** Mrs. R Devaneethi,
Professor, Email Id: devastephen23@gmail.com, Mobile No: 7892071170
- Name of the Department:** Department of Medical Surgical Nursing, St. Ignatius Institute of Health Sciences, Honavar.
- Date of commencement of research activity:****13.01.2026**
- Date of completion:****18.04.2025**
- Objectives stated and objectives achieved:**

Objectives stated

1. To assess the pretest and post-test knowledge regarding Modified Early Warning Score (MEWS) among nursing students.
2. To determine the effectiveness of structured teaching programme on knowledge regarding Modified Early Warning Score (MEWS) among nursing students.
3. To find out the association between knowledge regarding Modified Early Warning Score (MEWS) and selected demographic variables among nursing students.

Objectives achieved

The above stated objectives were achieved.

9. Field/ Experimental work giving full details of summary of methods adopted supported by necessary tables, charts, diagrams and photographs.

Statement of the problem

“A study to assess the effectiveness of structured teaching programme on the knowledge regarding Modified Early Warning Score (MEWS) in a selected college, Uttara Kannada District.”

Hypotheses

The following hypotheses were tested at 0.05 level of significance.

H₀₁: There is no significant difference between pre-test and post-test knowledge regarding Modified Early Warning Score (MEWS) among nursing students.

H₁: There is a significant difference between pre-test and post-test knowledge regarding Modified Early Warning Score (MEWS) among nursing students.

H₀₂: There is no significant association between pre-test knowledge regarding Modified Early Warning Score (MEWS) and selected demographic variables among nursing students.

H₂: There is a significant association between pre-test knowledge regarding Modified Early Warning Score (MEWS) and selected demographic variables among nursing students.

Research approach: Research approach used was Quantitative approach.

Research design: Research design adopted was pre-experimental one group pretest and posttest design.

Variables

Dependent variable: Knowledge regarding Modified Early Warning Score (MEWS).

Independent variable: Structured teaching programme on Modified Early Warning Score (MEWS).

Demographic variables: The demographic variables included age in years, gender, year of study, course of study, education of father, education of mother, occupation of father,

occupation of mother, family income per month(INR), relatives studying or working in medical or allied health education or services, and previous year grade point in theory and practical.

Setting: The study was conducted at St. Ignatius Institute of Health Sciences in Honavar taluk, Uttara Kannada District.

Target population: Target population included nursing students enrolled in nursing colleges within Honavar Taluk.

Accessible population: Accessible population consisted of nursing students at St. Ignatius Institute of Health Sciences who were available during the data collection period.

Sample: The sample included nursing students from Ignatius Institute of Health Sciences and who met inclusion and exclusion criteria.

Sampling technique: The non probability purposive sampling was used to select the samples.

Sample size: The sample size for the study was 100 nursing students.

Inclusion criteria

- Nursing students who enrolled in Basic B Sc Nursing and Diploma in General Nursing and Midwifery.
- Students studying in the 2nd, 3rd or 4th year of their respective programme
- Nursing students who provided consent to participate in the study

Exclusion criteria

- Nursing students who were absent during the study period.
- Nursing students who have attended any formal training or workshop on Modified Early Warning Score (MEWS) in last 6 months

Research tool

Section A: Structured demographic proforma to collect demographic variables among nursing students.

The demographic variables included age in years, gender, year of study, course of study, education of father, education of mother, occupation of father, occupation of mother, family income per month(INR), relatives studying or working in medical or allied health education or services, and previous year grade point in theory and practical.

Section B: Structured knowledge questionnaire on Modified Early Warning Score (MEWS).

A structured questionnaire consisted of 40 questions to assess the knowledge regarding Modified Early Warning Score (MEWS). The questionnaire consisted of 4 domains which included concepts (11 questions), scoring (11 questions), interpretation (8 questions) and nursing intervention (10 questions) in relation to MEWS. Each question consisted of a stem and 4 alternatives. Among the 4 alternatives one was the correct response and other three were incorrect responses. The rating of the alternatives was a score of 1 for correct response and score of 0 for incorrect response. For the domain 1 and 2, the minimum score was 0 and the maximum score was 11. For the domain 3, the minimum score was 0 and the maximum score was 8. For the domain 4, the minimum score was 0 and the maximum score was 10. For overall knowledge score, the minimum score was 0 and the maximum score was 40. Knowledge levels were interpreted using Bloom's cut-off (criterion-referenced measures) and classified into three categories: Poor (<60%), Average (60%–79%), and Good (80%–100%). For domain 1 and 2, the scores were classified and interpreted into 3 categories as a score of 0 to 6 for poor knowledge, a score of 7 to 8 for average knowledge, and a score of 9 to 11 for good knowledge. For domain 3, scores were interpreted as a score of 0 to 4 for poor knowledge, a score of 5 to 6 for average knowledge, and a score of 7 to 8 for good

knowledge, and for domain 4, the scores were interpreted as a score of 0 to 5 for poor knowledge, a score of 6 to 7 for average knowledge, and a score of 8 to 10 for good knowledge. For overall knowledge score, scores were interpreted as a score of 0 to 23 for poor knowledge, a score of 24 to 31 for average knowledge, and a score of 32 to 40 for good knowledge.

Validity and reliability of the tool

The content validity of the research tool and the lesson plan was obtained from 8 experts. The experts were a Surgeon, Physician, and specialists from the Departments of Obstetrical and Gynecological Nursing, Medical-Surgical Nursing, Child Health Nursing, and Community Health Nursing. The content validity index for the structured knowledge questionnaire was 0.98, and for lesson plan, it was 1. The reliability for the structured knowledge questionnaire was calculated using test- retest method. The correlation between pretest and post test scores was calculated using Karl Pearson correlation coefficient. The reliability of the full scale was calculated using the Spearman-Brown prophecy formula. The reliability of the structured knowledge questionnaire was 0.96.

Pilot study

The ethical clearance was obtained from the institutional ethics committee. Formal permission was obtained from the Principal, RNS College of Nursing, and Murudeshwar. The study was conducted from 09/03/2026 to 17/03/2026. Non probability purposive sampling was used to select 10 subjects based on inclusion and exclusion criteria. The researcher introduced herself and explained the nature of the study. Written informed consent was obtained. **Pretest:** A structured demographic proforma was used to collect demographic variables and a structured knowledge questionnaire was used to assess the knowledge regarding modified early warning scores. The tool was self administered. The subjects took 15-20 minutes to complete the tool. **Administration of intervention (Structured Teaching**

Programme): The definition, parameters, scoring system, clinical interpretation, clinical illustration, clinical significance and nursing intervention on Modified Early Warning Score (MEWS) were taught for 2 hours using Chart and LCD with PPT. **Post test:** The post test was conducted after 7 days of intervention using the same tool.

Data collection method

The ethical clearance was obtained from the institutional ethics committee. Formal permission was obtained from the Principal, St. Ignatius Institute of Health Sciences, Honavar. The study was conducted from 21/03/2026 to 28/03/2026. Non probability purposive sampling was used to select 100 subjects based on inclusion and exclusion criteria. The researcher introduced herself and explained the nature of the study. Written informed consent was obtained. **Pretest:** A structured demographic proforma was used to collect demographic variables and a structured knowledge questionnaire was used to assess the knowledge regarding modified early warning score. The tool was self administered. The subjects took 15-20 minutes to complete the tool. **Administration of intervention (Structured Teaching Programme):** The definition, parameters, scoring system, clinical interpretation, clinical illustration, clinical significance and nursing intervention on Modified Early Warning Score (MEWS) were taught for 2 hours using Chart and LCD with PPT. **Post test:** The post test was conducted after 7 days of intervention using the same tool.

Data analysis plan

Descriptive statistics

- The frequency and percentage was used to describe the demographic variables among nursing students.
- The frequency, percentage, range of score, mean, mean percentage and standard deviation were used to assess the item wise, domain wise, and overall knowledge regarding Modified Early Warning Score (MEWS) among nursing students.

Inferential statistics

- Paired t test was used to determine the effectiveness of structured teaching programme on knowledge regarding Modified Early Warning Score (MEWS) among nursing students.
- The Chi-square test and Fisher's exact test were used to find the significant association between knowledge regarding Modified Early Warning Score (MEWS) and demographic variables among nursing students.

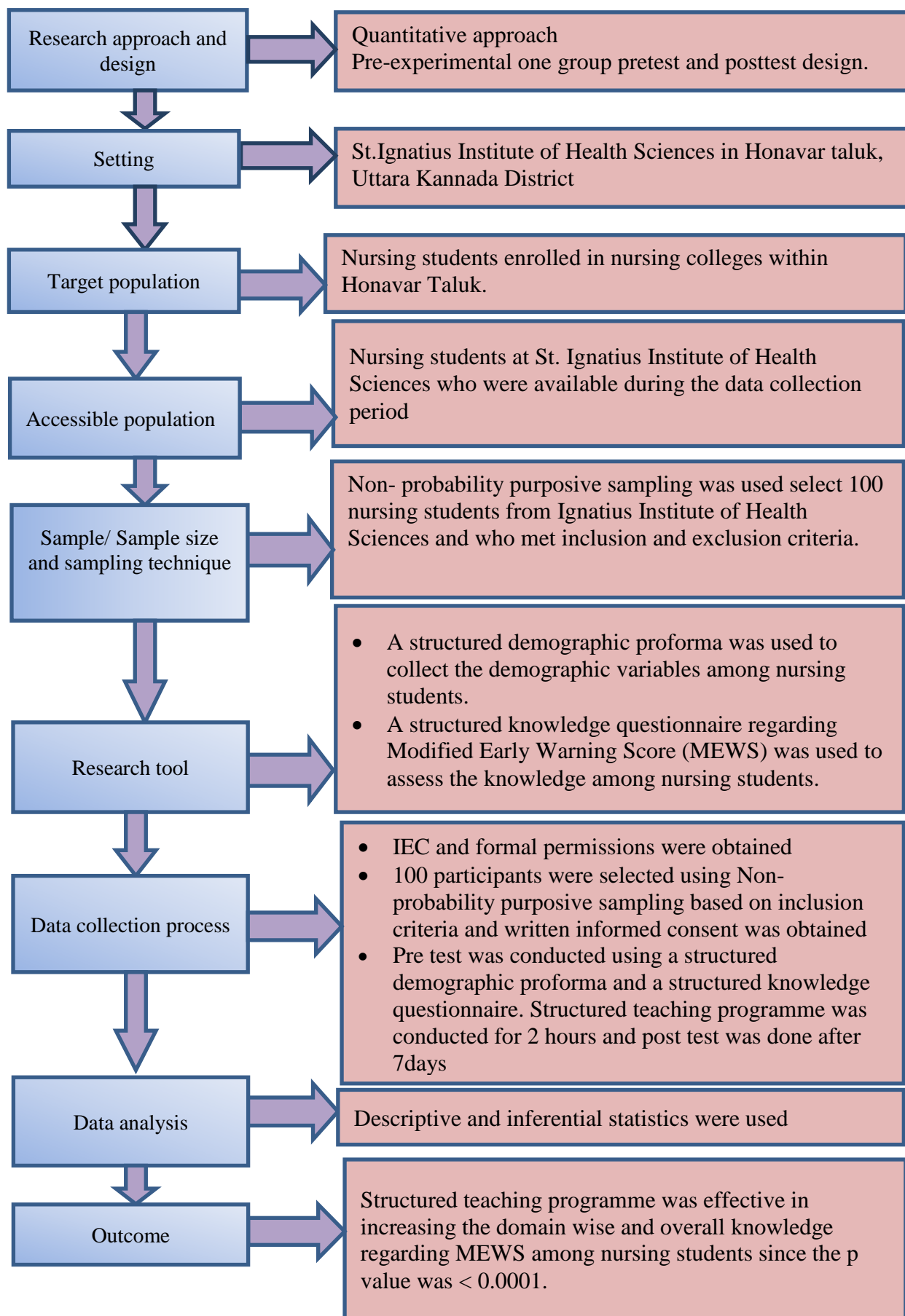


Figure1: Schematic representation of research methodology

10. Detailed analysis of results: This section deals with the analysis and interpretation of data collected from 100 nursing students to assess the effectiveness of structured teaching programme on the knowledge regarding Modified Early Warning Score (MEWS) among them.

Presentation of data

Section1: Description of baseline variables among nursing students

Section 2: Description of knowledge regarding Modified Early Warning Score (MEWS) among nursing students.

Section3: Determining the effectiveness of structured teaching programme on knowledge regarding Modified Early Warning Score (MEWS) among nursing students.

Section 4: Association between pre-test knowledge regarding Modified Early Warning Score (MEWS) and selected demographic variables among nursing students

Objectives of the study

1. To assess the pretest and post-test knowledge regarding Modified Early Warning Score (MEWS) among nursing students.
2. To determine the effectiveness of structured teaching programme on knowledge regarding Modified Early Warning Score (MEWS) among nursing students.
3. To find out the association between knowledge regarding Modified Early Warning Score (MEWS) and selected demographic variables among nursing students.

Hypotheses

The following hypotheses were tested at 0.05 level of significance

H₀: There is no significant difference between pre-test and post-test knowledge regarding Modified Early Warning Score (MEWS) among nursing students.

H₁: There is a significant difference between pre-test and post-test knowledge regarding Modified Early Warning Score (MEWS) among nursing students.

H₀: There is no significant association between pre-test knowledge regarding Modified Early Warning Score (MEWS) and selected demographic variables among nursing students.

H₂: There is a significant association between pre-test knowledge regarding Modified Early Warning Score (MEWS) and selected demographic variables among nursing student.

Section 1: Description of baseline variables among nursing students

Table1.1: Frequency and percentage distribution of nursing students by age in years, gender, course and year of study. **n=100**

| S No | Demographic variables | Frequency (f) | Percentage (%) |
|------|---------------------------------------------|----------------|----------------|
| 1 | Age in years | | |
| | 19 - 21Year | 75 | 75 |
| | 22 - 24 Years | 25 | 25 |
| 2 | Gender | | |
| | Male | 0 | 0 |
| | Female | 100 | 100 |
| 3 | Course of study | | |
| | DGNM | 20 | 20 |
| | Basic B Sc Nursing | 80 | 80 |
| 4 | Year of study | | |
| | 2 nd Year DGNM | 20 | 20 |
| | 5 th Semester Basic B Sc Nursing | 30 | 30 |
| | 7 th Semester Basic B Sc Nursing | 50 | 50 |

Table 1.1 indicates that the majority (75 %) of the subjects was in the 19 - 21 years age group, all (100%) were female, 80% enrolled in Basic B Sc nursing, and 50 % were studying in the 7th semester of Basic B Sc nursing.

Table1.2: Frequency and percentage distribution of nursing students by education of the father and mother. **n=100**

| S No | Demographic variables | Frequency (f) | Percentage (%) |
|----------|--------------------------------------|----------------|----------------|
| 1 | Education of father | | |
| | Post-graduate or Professional Degree | 2 | 2 |
| | Graduate Degree | 12 | 12 |
| | Higher Secondary Certificate | 29 | 29 |
| | High School Certificate | 32 | 32 |
| | Middle School Certificate | 5 | 5 |
| | Less than Middle School Certificate | 14 | 14 |
| | Illiterate | 6 | 6 |
| 2 | Education of mother | | |
| | Post-graduate or Professional Degree | 3 | 3 |
| | Graduate Degree | 16 | 16 |
| | Higher Secondary Certificate | 38 | 38 |
| | High School Certificate | 23 | 23 |
| | Middle School Certificate | 6 | 6 |
| | Less than Middle School certificate | 11 | 11 |
| | Illiterate | 3 | 3 |

Table1.2 indicates that 32% of the fathers of the nursing students had a high school certificate, and 38% of the mothers studied up to higher secondary certificate.

Table1.3: Frequency and percentage distribution of nursing students by occupation of the father and mother. **n=100**

| S No | Demographic variables | Frequency (f) | Percentage (%) |
|------|--------------------------------------------|----------------|----------------|
| 1 | Occupation of father | | |
| | Legislators, Senior Officials, Managers | 9 | 9 |
| | Professionals | 1 | 1 |
| | Technicians/Associate Professionals | 2 | 2 |
| | Clerks | 0 | 0 |
| | Skilled Worker, Shop/Market Sales | 8 | 8 |
| | Skilled Agricultural/Fishery Workers | 43 | 43 |
| | Craft and Related Trade Workers | 15 | 15 |
| | Plant and Machine Operators | 0 | 0 |
| | Elementary Occupation | 13 | 13 |
| | Unemployed | 9 | 9 |
| 2 | Occupation of mother | | |
| | Legislators, Senior Officials, Managers | 1 | 1 |
| | Professionals | 4 | 4 |
| | Technicians/Associate Professionals | 6 | 6 |
| | Clerk | 1 | 1 |
| | Skilled Worker, Shop/Market Sales | 1 | 1 |
| | Skilled Agricultural/Fishery Workers | 0 | 0 |
| | Craft and Related Trade Workers | 0 | 0 |
| | Plant and Machine Operators | 0 | 0 |
| | Elementary Occupation | 2 | 2 |
| | Unemployed | 85 | 85 |

As shown in **Table 1.3**, the most common occupation among fathers was skilled agricultural or fishery work (43%), while the vast majority of mothers (85%) were homemakers.

Table1.4: Frequency and percentage distribution of nursing students by family income per month in rupees, and relatives studying medical or allied health education.

| n=100 | | | |
|--------------|-----------------------------------------------------------------|-----------------------|-----------------------|
| S No | Demographic variables | Frequency (f) | Percentage (%) |
| 1 | Family income per month in rupees | | |
| | ₹66,007 and above | 9 | 9 |
| | ₹33,004 – ₹66,006 | 14 | 14 |
| | ₹24,753 – ₹33,003 | 20 | 20 |
| | ₹16,502 – ₹24,752 | 16 | 16 |
| | ₹9,901 – ₹16,501 | 40 | 40 |
| | ₹3,301 – ₹9,900 | 1 | 1 |
| | ≤ ₹3,300 | 0 | 0 |
| 2 | Relatives studying in medical or allied health education | | |
| | Yes | 18 | 18 |
| | No | 82 | 82 |
| | If yes: Relationship | | |
| | Cousin | 12 | 12 |
| | Sister | 6 | 6 |
| | If yes: Course and year of studying | | |
| | 2 nd Year DGNM | 2 | 2 |
| | 2 nd Year Basic B Sc Nursing | 12 | 12 |
| | 4 th Year Basic B Sc Nursing | 3 | 3 |
| | 2 nd Year M Sc Nursing | 1 | 1 |
| | If yes: State in which studying | | |
| | Karnataka | 17 | 17 |
| | Mizoram | 1 | 1 |
| | If yes: Country in which studying | | |
| | India | 18 | 18 |
| | Other | 0 | 0 |

Table 1.4 shows that 40% of the subjects had a monthly family income between ₹9,901 and ₹16,501, and 18% reported having relatives in medical or allied health courses, the majority of whom were cousins studying 2nd-year B.Sc. Nursing in Karnataka, India.

Table1.5: Frequency and percentage distribution of nursing students by relatives working in medical or allied health sciences. **n=100**

| S No | Demographic variables | Frequency (f) | Percentage (%) |
|----------|---------------------------------------------------------------|----------------|----------------|
| 1 | Relatives working in medical or allied health sciences | | |
| | Yes | 19 | 19 |
| | No | 81 | 81 |
| | If yes: Relationship | | |
| | Mother | 5 | 5 |
| | Aunty | 3 | 3 |
| | Sister | 2 | 2 |
| | Cousin | 5 | 5 |
| | Brother | 4 | 4 |
| | If yes: Course studied | | |
| | ANM | 2 | 2 |
| | DGNM | 5 | 5 |
| | B Sc Nursing | 7 | 7 |
| | B. Pharm | 2 | 2 |
| | Other | 3 | 3 |
| | If yes: Area of working | | |
| | Emergency | 8 | 8 |
| | Medical ward | 3 | 3 |
| | ICU | 2 | 2 |
| | ASHA | 3 | 3 |
| | Pharmacy | 2 | 2 |
| | OT | 1 | 1 |
| | If yes: State in which working | | |
| | Kerala | 8 | 8 |
| | Karnataka | 6 | 6 |
| | Others | 5 | 5 |
| | If yes: Country in which working | | |
| | India | 14 | 14 |
| | Ireland | 1 | 1 |
| | UK | 3 | 3 |
| | Saudi | 1 | 1 |

Table 1.5 indicates that only 19% of the subject's relatives were working in medical or allied health sciences; among them, majority were mothers and cousins, many were working in emergency department, most were working in Kerala, India.

Table1.6: Frequency and percentage distribution of nursing students by previous year grade point in theory and practical, and previous exposure to clinical area **n=100**

| S No | Demographic variables | Frequency (f) | Percentage (%) |
|----------|----------------------------------------------|----------------|----------------|
| 1 | Previous year grade point (Theory) | | |
| | 101 – 200 | 34 | 34 |
| | 201 – 300 | 51 | 51 |
| | 301 - 400 | 15 | 15 |
| 2 | Previous year grade point (Practical) | | |
| | 50 – 100 | 52 | 52 |
| | 101 – 150 | 36 | 36 |
| | 151 - 200 | 12 | 12 |
| 3 | Previous exposure to clinical area | | |
| | Yes | 100 | 100 |
| | No | 0 | 0 |
| | If yes: Area of exposure | | |
| | Intensive care unit | 28 | 28 |
| | Medical ward | 25 | 25 |
| | Pediatric ward | 7 | 7 |
| | Psychiatric ward | 5 | 5 |
| | Geriatric care unit | 1 | 1 |
| | Emergency | 20 | 20 |
| | Surgical ward | 6 | 6 |
| | Neonatal Intensive care unit | 1 | 1 |
| | Labor room | 2 | 2 |
| | Operation theater | 5 | 5 |
| | If yes: Year of exposure | | |
| | < 1 year | 20 | 20 |
| | 1 – 2 year | 80 | 80 |

Table 1.6 indicates that majority (51%) of the subject's previous year grade point in theory was 201 – 300 and in practical, 52% secured 50 – 100. All (100%) subjects had clinical exposure in most of the speciality areas; among them 28% got the experience in Intensive care unit. 80% subjects got a experience for 1 to 2 years.

Table1.7: Frequency and percentage distribution of nursing students by previous theory and practical knowledge regarding MEWS **n=100**

| S No | Demographic variables | Frequency (f) | Percentage (%) |
|------------------------------------------|------------------------------|-----------------------|-----------------------|
| Previous theory knowledge on MEWS | | | |
| | Yes | 0 | 0 |
| | No | 100 | 100 |
| Previous practical skill on MEWS | | | |
| | Yes | 0 | 0 |
| | No | 100 | 100 |

Table 1.7 indicates that none (0%) of the nursing students had a theoretical knowledge and practical skill in the concept of Modified Early Warning Score (MEWS).

Section 2: Description of knowledge regarding Modified Early Warning Score (MEWS) among nursing students.

Objective: To assess the pretest and post-test knowledge regarding Modified Early Warning Score (MEWS) among nursing students.

Table 2.1: Domain- wise and overall scale score, range of score, mean standard deviation and mean% of pretest and post-test knowledge regarding Modified Early Warning Score (MEWS) among nursing students. **n=100**

| Dimensions of knowledge | Assessment | Scale score | Range of score | Mean | SD | Mean% | Mean% difference |
|------------------------------------|-------------------|--------------------|-----------------------|-------------|-----------|--------------|-------------------------|
| Domain 1 (Concept) | Pretest | 0-11 | 3-9 | 6.05 | 1.66 | 55 | 17.27 |
| | Posttest | 0-11 | 4-11 | 7.95 | 1.74 | 72.27 | |
| Domain 2 (Scoring) | Pretest | 0-11 | 1-8 | 4.42 | 1.66 | 40.18 | 14.36 |
| | Posttest | 0-11 | 3-10 | 6.00 | 1.75 | 54.54 | |
| Domain 3 (Interpretation) | Pretest | 0-8 | 1-6 | 3.46 | 1.55 | 43.25 | 13.87 |
| | Posttest | 0-8 | 2-8 | 4.57 | 1.27 | 57.12 | |
| Domain 4 (Nursing Intervention) | Pretest | 0-10 | 2-9 | 5.81 | 1.91 | 58.1 | 13.3 |
| | Posttest | 0-10 | 4-10 | 7.14 | 1.29 | 71.4 | |
| Overall Knowledge | Pretest | 0-40 | 12-27 | 19.73 | 2.94 | 49.32 | 14.83 |
| | Posttest | 0-40 | 18-33 | 25.66 | 3.29 | 64.15 | |

Table 2.1 reveals that in **domain 1** (Concept of MEWS), in the pretest, the mean score was 6.05 ± 1.66 but after the intervention, the mean score was increased to 7.95 ± 1.74 and the mean difference% was 17.27. In **domain 2** (Scoring of MEWS), in the pretest, the mean score was 4.42 ± 1.66 but after the intervention, the mean score was raised to 6.00 ± 1.75 and the mean difference% was 14.36. In **domain 3** (Interpretation of MEWS), in the pretest, the mean score was 3.46 ± 1.55 but after the intervention, the mean score was raised to 4.57 ± 1.27 and the mean difference% was 13.87. In **domain 4** (Nursing intervention), in the pretest, the mean score was 5.81 ± 1.91 but after the intervention, the mean score was raised to 7.14 ± 1.29 and the mean difference% was 13.3. **For overall knowledge**, in the pretest, the mean score was 19.73 ± 2.94 but after the intervention, the mean score was raised to 25.66 ± 3.29 and the mean difference% was 14.83.

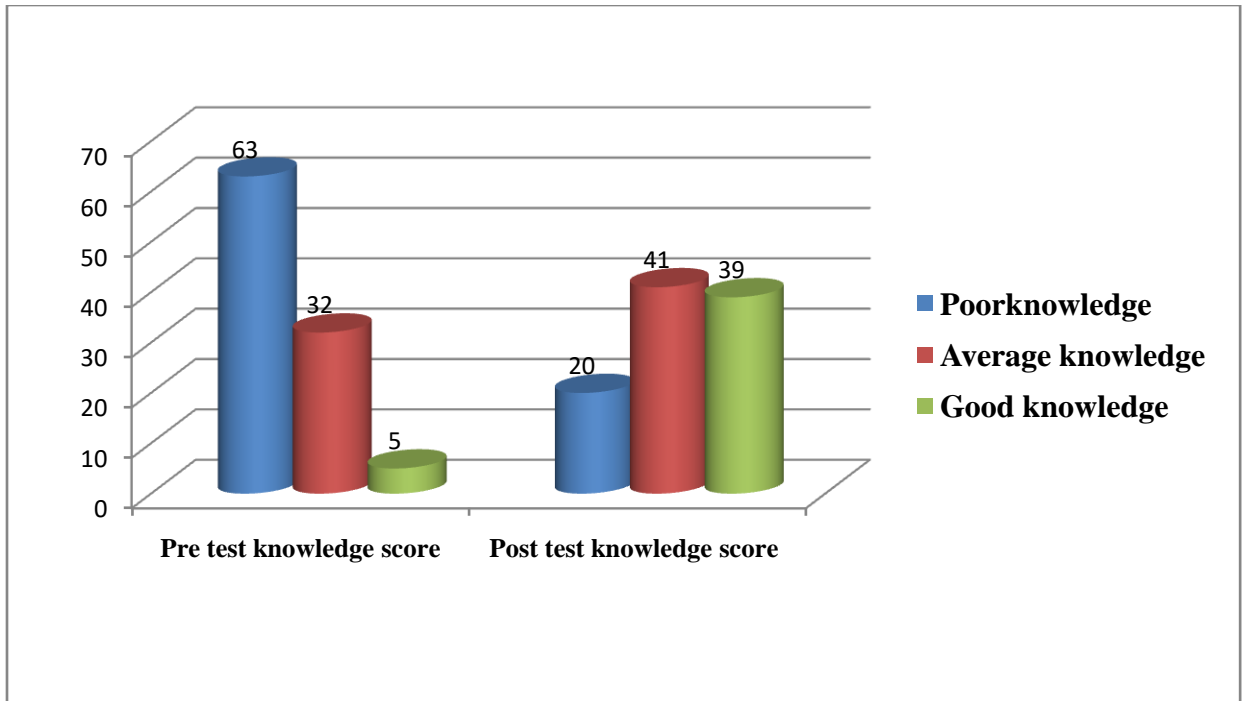


Figure 2: Domain 1: Percentage distribution of pre and post test knowledge regarding the concept of Modified Early Warning Score among nursing students.

Figure 2 illustrates that in the pretest majority (63%) of the subjects had poor knowledge, whereas after the intervention, after the structured teaching programme, this percentage dropped to 20% and At the same time, the group with good knowledge grew significantly, rising from only 5% to 39%.

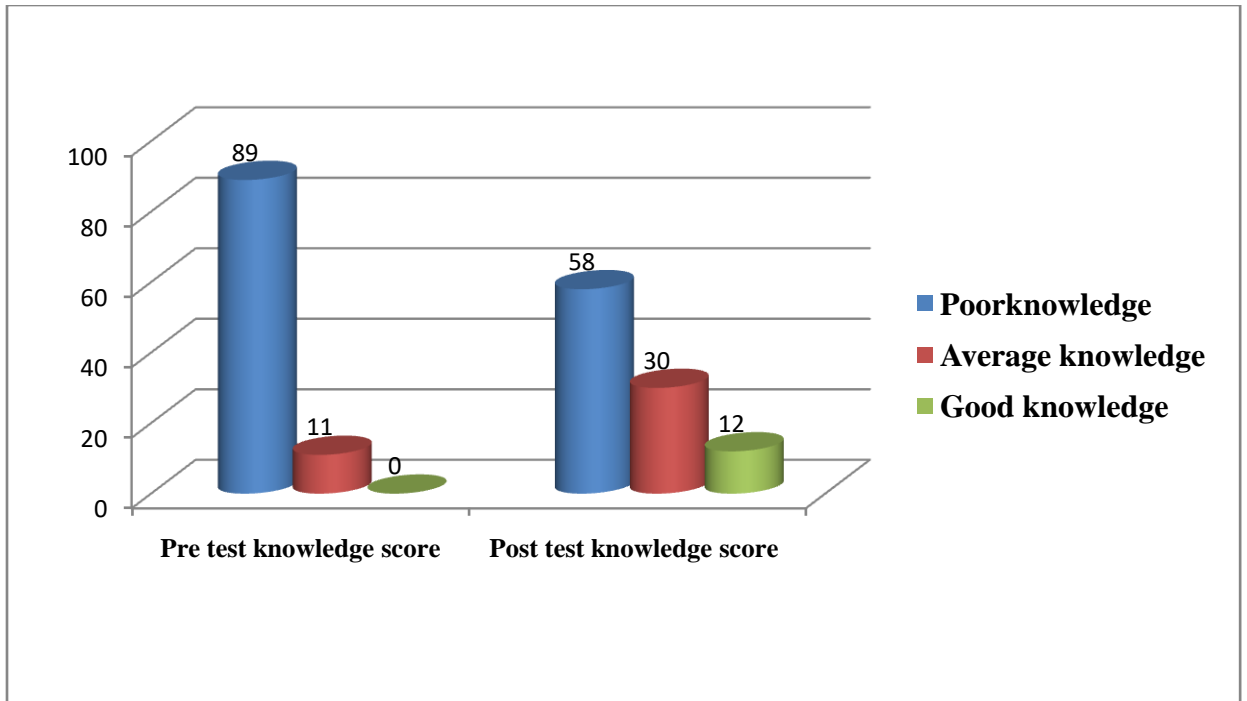


Figure 3: Domain 2: Percentage distribution of pre and post test knowledge regarding the scoring of Modified Early Warning Score among nursing students.

According to Figure 3, nearly all students (89%) had poor knowledge of MEWS scoring during the pretest. After the structured teaching programme, this percentage dropped to 58%. At the same time, the group with average knowledge grew significantly, rising from only 11% to 30%.

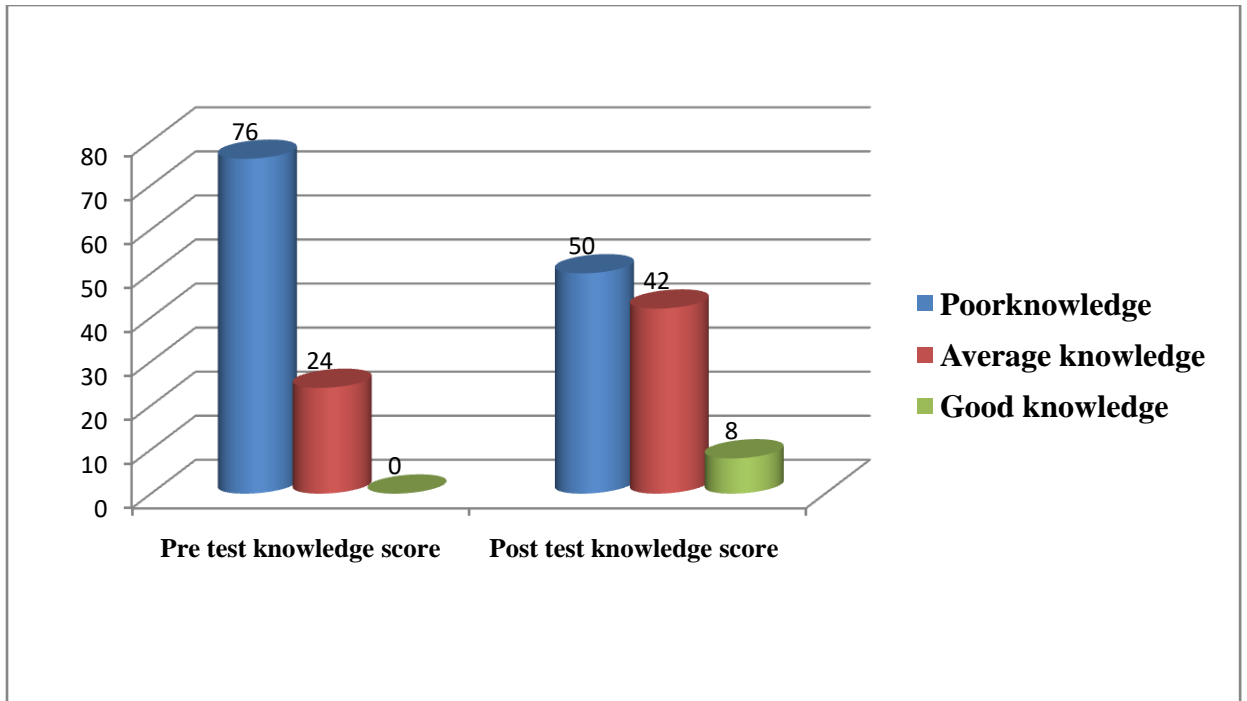


Figure 4: Domain 3: Percentage distribution of pre and post test knowledge regarding the interpretation of Modified Early Warning Score among nursing students.

According to Figure 4, nearly all students (76%) had poor knowledge regarding the interpretation of MEWS score during the pretest. After the structured teaching programme, this percentage dropped to 50%. At the same time, the group with average knowledge grew significantly, rising from only 24% to 42%.

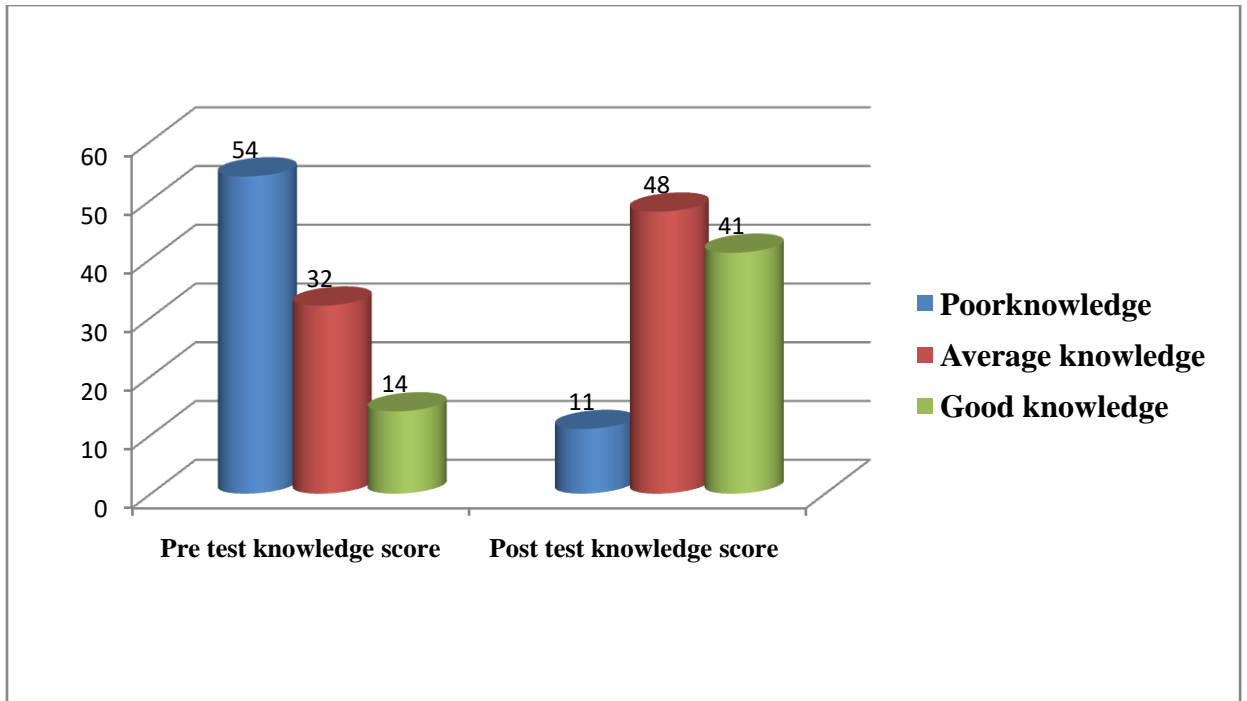


Figure 5: Domain 4: Percentage distribution of pre and post test knowledge regarding the nursing interventions for Modified Early Warning Score among nursing students.

Figure 5 illustrates that in the pretest, the majority (54%) of the subjects had poor knowledge, whereas after the structured teaching programme, this percentage dropped to 11%. At the same time, the group with good knowledge grew significantly, rising from only 14% to 41%.

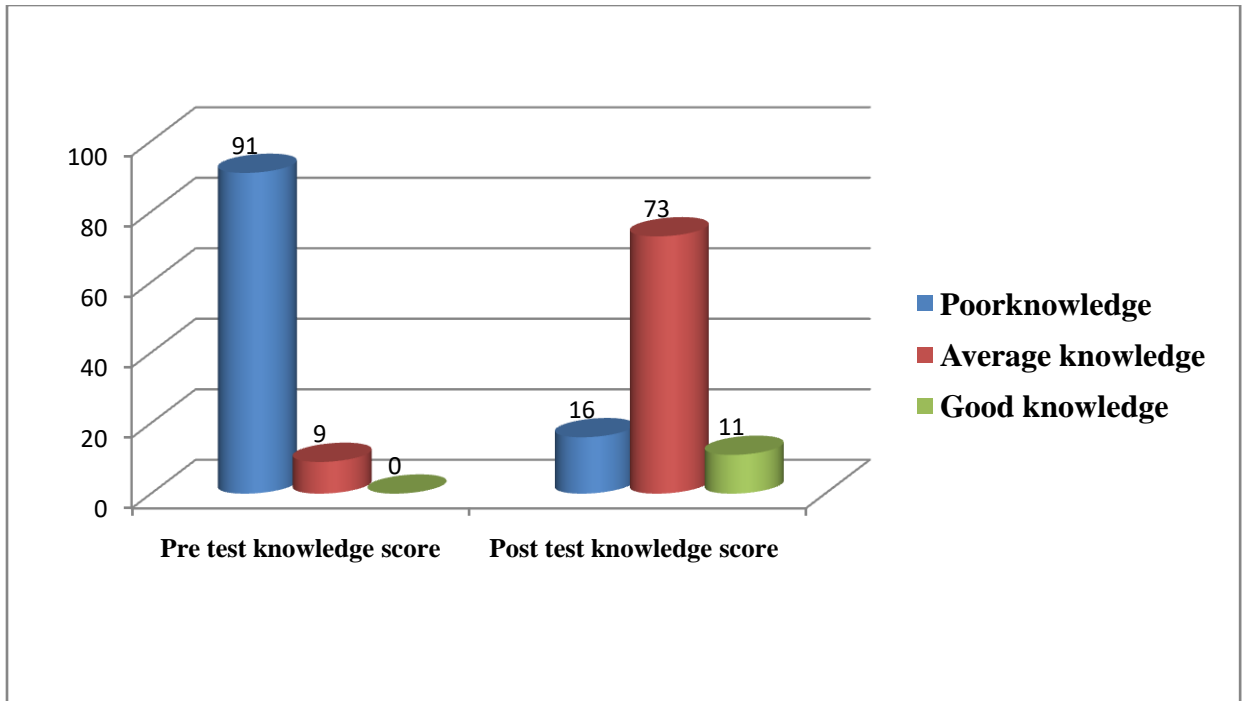


Figure 6: Overall knowledge: Percentage distribution of overall pre and post test knowledge Modified Early Warning Score among nursing students.

Figure 6 illustrates that in the pretest, the majority (91%) of the students had poor knowledge, after the structured teaching programme, this percentage dropped to 16%. At the same time, the group with average knowledge grew significantly, rising from only 9% to 73%.

Table 2.2.1: Domain 1: Individual item-wise frequency and percentage distribution of knowledge regarding concept of Modified Early Warning Score among nursing students.

| | | n=100 | | | | | | | |
|----------------------------------|------------------------------------------------------------------|----------------------------------|----|--------------------|----|-----------------------------------|----|--------------------|----|
| S No | Questions | Pre-test knowledge score on MEWS | | | | Post-test knowledge score on MEWS | | | |
| | | Correct response | | Incorrect response | | Correct response | | Incorrect response | |
| | | f | % | f | % | f | % | f | % |
| Domain 1: Concept of MEWS | | | | | | | | | |
| 1 | The acronym MEWS stands for | 84 | 84 | 16 | 16 | 93 | 93 | 7 | 7 |
| 2 | The primary clinical purpose of MEWS | 60 | 60 | 40 | 40 | 78 | 78 | 22 | 22 |
| 3 | A parameter NOT included in the standard MEWS is | 69 | 69 | 31 | 31 | 77 | 77 | 23 | 23 |
| 4 | The standard MEWS evaluates | 26 | 26 | 74 | 74 | 81 | 81 | 19 | 19 |
| 5 | The earliest clinical indicator of patient decline is usually | 41 | 41 | 59 | 59 | 68 | 68 | 32 | 32 |
| 6 | Tachycardia and bradycardia are assessed under the parameter of: | 71 | 71 | 29 | 29 | 80 | 80 | 20 | 20 |
| 7 | Significant hypotension in MEWS typically indicates | 64 | 64 | 36 | 36 | 67 | 67 | 33 | 33 |
| 8 | Altered body temperature in MEWS usually suggests | 59 | 59 | 41 | 41 | 74 | 74 | 26 | 26 |
| 9 | The AVPU scale is used to assess | 49 | 49 | 51 | 51 | 74 | 74 | 26 | 26 |
| 10 | Oliguria in a patient with an elevated MEWS often indicates: | 43 | 43 | 57 | 57 | 47 | 47 | 53 | 53 |
| 11 | Early identification of physiological trends via MEWS improves: | 39 | 39 | 61 | 61 | 56 | 56 | 44 | 44 |

Table 2.2.1 indicates that there was a vast improvement in knowledge in some aspects of concept of MEWS. In Q4 (Standard MEWS evaluation), the score increased from 26% to 81%. The score from 49% rose to 74% in Q9 (AVPU Scale). However, in Q10 (Oliguria), students had the lowest post-test score with only 47%. This suggests that more emphasis is needed on the renal indicators of patient decline. Overall, most items showed an improvement in knowledge, and 93% correctly identified the MEWS acronym in post test.

Table 2.2.2: Domain 2: Individual item-wise frequency and percentage distribution of knowledge regarding scoring of Modified Early Warning Score among nursing students.

n=100

| S No | Questions | Pre-test knowledge score on MEWS | | | | Post-test knowledge score on MEWS | | | |
|----------------------------------|-----------------------------------------------------------------------|----------------------------------|----|--------------------|----|-----------------------------------|----|--------------------|----|
| | | Correct response | | Incorrect response | | Correct response | | Incorrect response | |
| | | f | % | f | % | f | % | f | % |
| Domain 2: Scoring of MEWS | | | | | | | | | |
| 12 | A heart rate between 41-50 bpm corresponds to a score of | 42 | 42 | 58 | 58 | 53 | 53 | 47 | 47 |
| 13 | A systolic blood pressure of 75 mmHg corresponds to a score of | 46 | 46 | 54 | 54 | 53 | 53 | 47 | 47 |
| 14 | A respiratory rate of 32 breaths per minute corresponds to a score of | 35 | 35 | 65 | 65 | 48 | 48 | 52 | 52 |
| 15 | A core body temperature of 38.3°C corresponds to a score of | 32 | 32 | 68 | 68 | 45 | 45 | 55 | 55 |
| 16 | A patient responding only to painful stimuli receives a score of | 41 | 41 | 59 | 59 | 46 | 46 | 54 | 54 |
| 17 | In the level of consciousness assessment, a score of "0" indicates: | 44 | 44 | 56 | 56 | 75 | 75 | 25 | 25 |
| 18 | A state of anuria corresponds to a score of | 33 | 33 | 67 | 67 | 45 | 45 | 55 | 55 |
| 19 | A total MEWS of "0" indicates the patient is | 36 | 36 | 64 | 64 | 64 | 64 | 36 | 36 |
| 20 | A MEWS of "3" signifies the patient is | 39 | 39 | 61 | 61 | 60 | 60 | 40 | 40 |
| 21 | A MEWS of "5" signifies the patient is | 40 | 40 | 60 | 60 | 50 | 50 | 50 | 50 |
| 22 | A total MEWS score greater than 7 indicates a | 54 | 54 | 46 | 46 | 61 | 61 | 39 | 39 |

Table 2.2.2 shows that students still find it hard to memorize specific scores. The best improvement was in Q17, where correct answer about consciousness rose from 44% to 75%. More students understood what a total score of zero means in Q19 (64%). However, vital sign scoring was more difficult. In Q15 (Temperature) and Q18 (Anuria), over half the students (55%) still got the answers wrong in the post test. This shows that they know what is normal; they struggle to remember the exact numbers of abnormal cases. Overall scores in this domain were lower than the first domain.

Table 2.2.3: Domain 3: Individual item-wise frequency and percentage distribution of knowledge regarding interpretation of Modified Early Warning Score among nursing students.

n=100

| S No | Questions | Pre-test knowledge score on MEWS | | | | Post-test knowledge score on MEWS | | | |
|------|-------------------------------------------------------------|----------------------------------|----|--------------------|----|-----------------------------------|----|--------------------|----|
| | | Correct response | | Incorrect response | | Correct response | | Incorrect response | |
| | | f | % | f | % | f | % | f | % |
| 23 | The score range for low physiological instability is | 42 | 42 | 58 | 58 | 45 | 45 | 55 | 55 |
| 24 | Significant derangement in one or more parameters signifies | 46 | 46 | 54 | 54 | 57 | 57 | 43 | 43 |
| 25 | Parameters remaining within the normal range indicate | 55 | 55 | 45 | 45 | 70 | 70 | 30 | 30 |
| 26 | Shock or respiratory failure is clinically classified as | 38 | 38 | 62 | 62 | 64 | 64 | 36 | 36 |
| 27 | The minimum monitoring frequency for a score of 0 is | 42 | 42 | 58 | 58 | 45 | 45 | 55 | 55 |
| 28 | A patient with a MEWS of 3 - 4 is classified as | 33 | 33 | 67 | 67 | 63 | 63 | 37 | 37 |
| 29 | A patient with a MEWS of 5 - 6 is classified as | 45 | 45 | 55 | 55 | 57 | 57 | 43 | 43 |
| 30 | A MEWS of > 7 indicates | 45 | 45 | 55 | 55 | 56 | 56 | 44 | 44 |

Table 2.2.3 shows how students interpreted the scores. The best improvement was in question 28, which rose from 33% to 63%. Students also did well on Question 25, with 70% correctly identifying a stable patient.

However, Questions 23 and 27 remained difficult, with only 45% correct in the post test. This shows that while students can identify a normal patient, many still struggle to interpret specific levels of clinical stability.

Table 2.2.4: Domain 4: Individual item-wise frequency and percentage distribution of knowledge regarding nursing intervention of Modified Early Warning Score among nursing students. **n=100**

| S No | Questions | Pre-test knowledge score on MEWS | | | | Post-test knowledge score on MEWS | | | |
|------|----------------------------------------------------------------|----------------------------------|----|--------------------|----|-----------------------------------|----|--------------------|----|
| | | Correct response | | Incorrect response | | Correct response | | Incorrect response | |
| | | f | % | f | % | f | % | f | % |
| 31 | After stabilization, the nurse should prioritize | 72 | 72 | 28 | 28 | 76 | 76 | 24 | 24 |
| 32 | The priority nursing action for a score of 3 - 4 is to | 66 | 66 | 34 | 34 | 70 | 70 | 30 | 30 |
| 33 | The recommended reassessment frequency for a score of 3 - 4 is | 17 | 17 | 83 | 83 | 44 | 44 | 56 | 56 |
| 34 | Emergency equipment required for a score of 3 - 4 includes | 60 | 60 | 40 | 40 | 70 | 70 | 30 | 30 |
| 35 | Oxygen therapy should typically be initiated if SpO2 falls | 27 | 27 | 73 | 73 | 47 | 47 | 53 | 53 |
| 36 | The priority nursing action for a MEWS of 5 - 6 is to | 61 | 61 | 39 | 39 | 76 | 76 | 24 | 24 |
| 37 | The most appropriate position for acute dyspnea is | 78 | 78 | 22 | 22 | 87 | 87 | 13 | 13 |
| 38 | If a patient's MEWS exceeds 7, the nurse must immediately | 50 | 50 | 50 | 50 | 71 | 71 | 29 | 29 |
| 39 | A life-saving intervention required for a score > 7 is | 58 | 58 | 42 | 42 | 78 | 78 | 22 | 22 |
| 40 | During critical deterioration, the nurse must focus on | 92 | 92 | 8 | 8 | 95 | 95 | 5 | 5 |

Table 2.2.4 shows the results for nursing interventions. Students scored highest on Question 40 (95%) regarding critical care and Question 37 (87%) for patient positioning. However, Question 33 (reassessment) and question 35 (oxygen therapy) remained difficult with scores below 50%. Overall, students understood general nursing actions well but struggled with specific clinical protocol.

Section3: Determining the effectiveness of structured teaching programme on knowledge regarding Modified Early Warning Score (MEWS) among nursing students.

Objective: To determine the effectiveness of structured teaching programme on knowledge regarding Modified Early Warning Score (MEWS) among nursing students.

Hypothesis

The following hypothesis was tested at 0.05 level of significance

H₀: There is no significant difference between pre-test and post-test knowledge regarding Modified Early Warning Score (MEWS) among nursing students.

H₁: There is a significant difference between pre-test and post-test knowledge regarding Modified Early Warning Score (MEWS) among nursing students.

Table 3: Mean \pm SD, Mean difference, paired t-value, df and p-value to determine the effectiveness of structured teaching programme on domain and overall knowledge regarding Modified Early Warning Score (MEWS) among nursing students **n=100**

| Dimensions of Knowledge | Pre-test (Mean \pm SD) | Post-test (Mean \pm SD) | Mean Diff | t-value | p-value |
|------------------------------------|------------------------------------------------|-------------------------------------------------|------------------|----------------|----------------|
| Domain 1 (Concept) | 6.05 \pm 1.66 | 7.95 \pm 1.74 | 1.90 | 7.91 | < 0.001*S |
| Domain 2 (Scoring) | 4.42 \pm 1.66 | 6.00 \pm 1.75 | 1.58 | 6.55 | < 0.001*S |
| Domain 3 (Interpretation) | 3.46 \pm 1.55 | 4.57 \pm 1.27 | 1.11 | 5.55 | < 0.001*S |
| Domain 4 (Nursing Intervention) | 5.81 \pm 1.91 | 7.14 \pm 1.29 | 1.33 | 5.78 | < 0.001*S |
| Overall knowledge | 19.73 \pm 2.94 | 25.66 \pm 3.29 | 5.93 | 13.44 | < 0.001*S |

***S: Significant at p<0.05 level; df=99**

Table 3 compares the mean knowledge scores before and after the teaching programme. The results show that the overall mean score increased from 19.73 to 25.66 with the total mean score difference of 5.93. In each domain, the post test scores were higher than the pre test scores. There was statically significant difference in pretest and post test knowledge score since the p was <0.001 for concept, scoring, interpretation, nursing intervention domain and overall knowledge score. This indicated that structured teaching programme was significant in improving knowledge regarding modified early warning score among nursing students.

Section 4: Association between pre-test knowledge regarding Modified Early Warning Score (MEWS) and selected demographic variables among nursing students

Objective: To find out the association between knowledge regarding Modified Early Warning Score (MEWS) and selected demographic variables among nursing students.

Hypothesis

The following hypotheses were tested at 0.05 level of significance

H₀₂: There is no significant association between pre-test knowledge regarding Modified Early Warning Score (MEWS) and selected demographic variables among nursing students.

H₂: There is a significant association between pre-test knowledge regarding Modified Early Warning Score (MEWS) and selected demographic variables among nursing student.

Table 4.1: Frequency, test of significance, df, and p- value to find the association between the pretest knowledge regarding Modified Early Warning Score (MEWS) and age in years among nursing students. **n=100**

| Demographic variables | Frequency | Knowledge score | | Test of significance | df | p-value |
|-----------------------|-----------|-----------------------|-----------------------|----------------------|----|---------|
| | | < Mean score 19.73 | ≥ Mean score 19.73 | | | |
| Age in years | | | | | | |
| 19-21Year | 75 | 38 | 37 | $\chi^2= 0.053$ | 1 | 0.817 |
| 22-24 Years | 25 | 12 | 13 | | | NS |

NS: Not-Significant; $\chi^2=$ Chi- square test

Table 4.1 depicts that, there was no statistically significant association between Modified Early Warning Score (MEWS) and age in years ($\chi^2= 0.053$; $df=2$; $p=0.817$) among nursing students. **H₀₂:** There is no significant association between pre-test knowledge regarding Modified Early Warning Score (MEWS) and selected demographic variables among nursing students was accepted and **H₂ was rejected.**

Table 4.2: Frequency, test of significance, df, and p- value to find the association between the pretest knowledge regarding Modified Early Warning Score (MEWS) and course and year of study among nursing students. **n=100**

| Demographic variables | Frequency | Knowledge score | | Test of significance | df | p-value |
|---------------------------------------|-----------|-----------------------|-----------------------|----------------------|----|---------|
| | | < Mean score 19.73 | ≥ Mean score 19.73 | | | |
| Course of study | | | | | | |
| DGNM | 20 | 8 | 12 | $\chi^2= 0.562$ | 1 | 0.453 |
| Basic B Sc Nursing | 80 | 42 | 38 | | | NS |
| Year of study | | | | | | |
| 2 nd Year DGNM | 20 | 8 | 12 | $\chi^2= 1.013$ | 2 | 0.602 |
| 7 th Semester B Sc Nursing | 50 | 16 | 14 | | | NS |
| 5 th Semester B Sc Nursing | 30 | 26 | 24 | | | |

NS: Not-Significant; $\chi^2=$ Chi- square test

Table 4.2 depicts that, there was no statistically significant association between Modified Early Warning Score (MEWS) and course of study ($\chi^2= 0.562$; $df=1$; $p=0.453$) and year of study ($\chi^2= 1.013$; $df=1$; $p=0.602$) among nursing students. **H₀₂**: There is no significant association between pre-test knowledge regarding Modified Early Warning Score (MEWS) and selected demographic variables among nursing students was **accepted** and **H₂ was rejected**.

Table 4.3: Frequency, test of significance, df, and p- value to find the association between the pretest knowledge regarding Modified Early Warning Score (MEWS) and education of father and mother among nursing students. **n=100**

| Demographic variables | Frequency | Knowledge score | | Test of significance | df | p-value |
|--------------------------------------|-----------|-----------------------|-----------------------|----------------------|----|---------|
| | | < Mean score 19.73 | ≥ Mean score 19.73 | | | |
| Education of father | | | | | 6 | 0.352 |
| Post-graduate or Professional Degree | 2 | 2 | 0 | Fisher's exact test | 6 | NS |
| Graduate Degree | 12 | 4 | 8 | | | |
| Higher Secondary Certificate | 29 | 11 | 18 | | | |
| High School Certificate | 32 | 18 | 14 | | | |
| Middle School Certificate | 5 | 3 | 2 | | | |
| Less than Middle School Certificate | 14 | 8 | 6 | | | |
| Illiterate | 6 | 4 | 2 | | | |
| Education of mother | | | | | | |
| Post-graduate or Professional Degree | 3 | 3 | 0 | Fisher's exact test | 6 | NS |
| Graduate Degree | 16 | 6 | 10 | | | |
| Higher Secondary Certificate | 38 | 20 | 18 | | | |
| High School Certificate | 23 | 12 | 11 | | | |
| Middle School Certificate | 6 | 3 | 3 | | | |
| Less than Middle School certificate | 11 | 5 | 6 | | | |
| Illiterate | 3 | 1 | 2 | | | |

NS: Not-Significant

Table 4.3 depicts that, there was no statistically significant association between Modified Early Warning Score (MEWS) and education of father (p=0.352; df=6) and education of mother (p=0.600; df=6) among nursing students. **H₀2**: There is no significant association between pre-test knowledge regarding Modified Early Warning Score (MEWS) and selected demographic variables among nursing students was **accepted** and **H₂** was **rejected**.

Table 4.4: Frequency, test of significance, df, and p- value to find the association between the pretest knowledge regarding Modified Early Warning Score (MEWS) and occupation of father and mother among nursing students. **n=100**

| Demographic variables | Frequency | Knowledge score | | Test of significance | df | p-value |
|-----------------------------------------|-----------|-----------------------|-----------------------|----------------------|----|---------|
| | | < Mean score 19.73 | ≥ Mean score 19.73 | | | |
| Occupation of father | | | | | | |
| Legislators, Senior Officials, Managers | 9 | 3 | 6 | Fishers exact test | 7 | 0.256 |
| Professionals | 1 | 0 | 1 | | | NS |
| Technicians/Associate Professionals | 2 | 0 | 2 | | | |
| Clerks | 0 | 0 | 0 | | | |
| Skilled Worker, Shop/Market Sales | 8 | 6 | 2 | | | |
| Skilled Agricultural/Fishery Workers | 43 | 23 | 20 | | | |
| Craft and Related Trade Workers | 15 | 5 | 10 | | | |
| Plant and Machine Operators | 0 | 0 | 0 | | | |
| Elementary Occupation | 13 | 7 | 6 | | | |
| Unemployed | 9 | 6 | 3 | | | |
| Occupation of mother | | | | | | |
| Legislators, Senior Officials, Managers | 1 | 0 | 1 | Fishers exact test | 6 | 0.324 |
| Professionals | 4 | 1 | 3 | | | NS |
| Technicians/Associate Professionals | 6 | 1 | 5 | | | |
| Clerk | 1 | 1 | 0 | | | |
| Skilled Worker, Shop/Market Sales | 1 | 1 | 0 | | | |
| Skilled Agricultural/Fishery Workers | 0 | 0 | 0 | | | |
| Craft and Related Trade Workers | 0 | 0 | 0 | | | |
| Plant and Machine Operators | 0 | 0 | 0 | | | |
| Elementary Occupation | 2 | 1 | 1 | | | |
| Unemployed | 85 | 45 | 40 | | | |

NS: Not-Significant

Table 4.4 depicts that, there was no statistically significant association between Modified Early Warning Score (MEWS) and occupation of father ($p=0.256$; $df=7$) and mother ($p=0.324$; $df=6$) among nursing students. **H₀₂**: There is no significant association between pre-test knowledge regarding Modified Early Warning Score (MEWS) and selected demographic variables among nursing students was **accepted** and **H₂** was **rejected**.

Table 4.5: Frequency, test of significance, df, and p- value to find the association between the pretest knowledge regarding Modified Early Warning Score (MEWS) and family income per month (INR), relatives studying or working in medical or allied health education or services, and previous year grade point in theory and practical among nursing students. n=100

| Demographic variables | Frequency | Knowledge score | | Test of significance | df | p-value |
|-----------------------------------------------------------------|-----------|-----------------------|-----------------------|----------------------|----|-------------|
| | | < Mean score 19.73 | ≥ Mean score 19.73 | | | |
| Family income per month (INR) | | | | | | |
| ₹66,007 and above | 9 | 2 | 7 | Fisher's exact test | 5 | 0.183 NS |
| ₹33,004 – ₹66,006 | 14 | 8 | 6 | | | |
| ₹24,753 – ₹33,003 | 20 | 13 | 7 | | | |
| ₹16,502 – ₹24,752 | 16 | 5 | 11 | | | |
| ₹9,901 – ₹16,501 | 40 | 22 | 18 | | | |
| ₹3,301 – ₹9,900 | 1 | 0 | 1 | | | |
| ≤ ₹3,300 | 0 | 0 | 0 | | | |
| Relatives studying in medical or allied health education | | | | | | |
| Yes | 18 | 7 | 11 | $\chi^2= 0.676$ | 1 | 0.411 NS |
| No | 82 | 43 | 39 | | | |
| Relatives working in medical or Allied health services | | | | | | |
| Yes | 19 | 9 | 10 | $\chi^2= 0.158$ | 1 | 0.691 NS |
| No | 81 | 41 | 40 | | | |
| Previous year grade point (Theory) | | | | | | |
| 101 – 200 | 34 | 18 | 16 | $\chi^2= 0.252$ | 2 | 0.881 NS |
| 201 – 300 | 51 | 25 | 26 | | | |
| 301 - 400 | 15 | 7 | 8 | | | |
| Previous year grade point (Practical) | | | | | | |
| 50 – 100 | 52 | 25 | 27 | $\chi^2= 0.781$ | 2 | 0.677 NS |
| 101 – 150 | 36 | 20 | 16 | | | |
| 151 - 200 | 12 | 5 | 7 | | | |

NS: Not-Significant; χ^2 =Chi- Square

Table 4.5 depicts that, there was no statistically significant association between Modified Early Warning Score (MEWS) and family income per month ($p=0.183$; $df=5$), relatives studying or working in medical or allied health education or services ($\chi^2= 0.676$; $df=1$; $p=0.411$, $\chi^2= 0.158$; $df=1$; $p=0.691$), and previous year grade point in theory and practical ($\chi^2= 0.252$; $df=1$; $p=0.881$; $\chi^2= 0.781$; $df=1$; $p=0.677$). **H₀2:** There is no significant association between pre-test knowledge regarding Modified Early Warning Score (MEWS) and selected demographic variables among nursing students was **accepted** and **H₂ was rejected**

11. Contributions made towards increasing the state of knowledge in the subject

Nursing practice: The findings of the study

- Identifies knowledge gaps to help clinical staff better prepare students for bedside care.
- Highlights that nursing staff must master MEWS protocols to protect critically ill patients
- Recommends displaying MEWS posters in emergency areas for quick clinical reference

Nursing practice: The findings of the study

- Provides educators with data on difficult topic like scoring and interpretation
- Shows that teachers must be MEWS experts to effectively train the nursing students
- Encourages the use of practical drills to help students recognise the patients deteriorate.

Nursing Administration: The findings of the study

- Suggests making MEWS a compulsory module in nursing curriculum
- Supports for regular CNE workshops to keep current nursing staff updated regarding Modified Early Warning Score.

Nursing Research: The findings of the study

- Provides baseline data for future studies on Modified Early Warning score and safety
- Encourages future research on whether classroom teaching leads to better long term clinical skill

12. Conclusion, summarizing the achievements and indication of scope for future work

Conclusion, summarizing the achievements

The primary objective of this study was to evaluate the effectiveness of a structured teaching programme regarding Modified Early Warning Score (MEWS) among 100 nursing students. This study result concluded that the overall mean knowledge score increased significantly from pre-test mean of 19.73 (\pm 2.94) to a post-test mean of 25.66 (\pm 3.29). The paired t test value 13.44 with the p value $<$ 0.001 indicated that the structured teaching programme was effective in increasing the knowledge on MEWS among nursing students. Among domains, there was most significant increase in knowledge regarding the concept of MEWS when compared with other domains. The study result highlights that the hands-on formal training should be regarding scoring and interpretation of MEWS because it was challenging for the subjects comprehend the numerical application of scoring and its interpretation. The most significant achievement of this study is that knowledge gain was independent of the student's background and was primarily a result of the structured teaching programme. Ultimately, since no demographic variables significantly influenced the pre-test scores, it is recommended that MEWS training be standardized for all nursing students to enhance patient safety and prevent clinical failure to rescue incidents in hospital settings. The study provides a validated framework for assessing knowledge across four specific domains: concept, scoring, interpretation, and intervention.

Scope for future work

- Research can be conducted to train the students specifically on scoring and interpretation of MEWS by using hands-on simulation or clinical drills to help the students to master in numerical cut-offs.
- Longitudinal studies can be conducted to determine, how well this knowledge is retained and applied at the bedside 6 to 12 months after the training.
- MEWS should be a compulsory module in the nursing curriculum to ensure all students develop ability to identify patient deterioration early.
- Comparative studies can be conducted between different types of teaching methods, such as digital stimulation or digital apps based training, digital MEWS calculators versus traditional classroom lectures to see whether technology reduces scoring errors.
- Similar studies could be conducted among registered staff nurses and across different hospital settings to standardize MEWS protocols across the healthcare system.

13. Abstract (300 words for possible publication in *RGUHS Journals/Other Journals*).

Introduction: Modified Early Warning Score (MEWS) is widely adopted in hospitals worldwide as part of rapid response and patient monitoring systems. It helps healthcare providers to detect early signs of physiological instability, allowing timely interventions to enhance patient safety and prevent clinical failure to rescue incidents in hospital settings. Since nursing care is most significant in critical areas, the researcher felt the need to educate the nursing students regarding MEWS. Hence this study aims to assess the effectiveness of structured teaching programme on the knowledge regarding Modified Early Warning Score (MEWS) among nursing student in a selected college, Uttara Kannada District.


Methodology: Quantitative pre-experimental one group pretest and posttest design was adopted. IEC and formal permission was obtained. 100 nursing students were selected using non probability purposive sampling. Written informed consent was obtained. In pre-test a structured demographic proforma and a structured knowledge questionnaire were self administered. Researcher taught regarding MEWS for 2 hours and the post test was conducted after 7 days of intervention.


Result: This study result revealed that the overall mean knowledge score increased significantly from pre-test mean of 19.73 (\pm 2.94) to a post-test mean of 25.66 (\pm 3.29). Paired t test value 13.44 with the p value $<$ 0.001 indicated that the structured teaching programme was effective in increasing the knowledge on MEWS among nursing students. Among domains, there was most significant increase in knowledge regarding the concept of MEWS when compared with other domains.

Discussion: The most significant achievement of this study is that knowledge gain was independent of student's background and was primarily a result of the structured teaching programme. Ultimately, since no demographic variables significantly influenced the pre-test scores, it is recommended that MEWS training be standardized for all nursing students to enhance patient safety and prevent clinical failure to rescue incidents in hospital settings.

Key words: Modified Early Warning Score; Structured teaching programme; Nursing students

Name and signature with date

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