

**KNOWLEDGE REGARDING MODIFIED EARLY WARNING SYSTEM (MEWS)
AMONG FOURTH-YEAR B.Sc. NURSING STUDENTS IN SELECTED NURSING
COLLEGES, KURNOOL: A DESCRIPTIVE STUDY**

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ABSTRACT:

The findings of this research show that there is a need for enhanced instructional support on MEWS in the curriculum of B.Sc. in Nursing at both undergraduate level through focused teaching, clinical demonstrations, and repeated reinforcement during clinical training. The overall knowledge score shows that the students have poor knowledge about MEWS as shown by the Mean = 8.7 & SD = 3.2. There was no statistically significant relationship found between the scores of knowledge and demographic characteristics. Adequate knowledge of MEWS is necessary among nursing students because they are required to recognize signs of abnormal physiological changes during their postings in clinical settings and subsequent professional practice. Methods: Quantitative descriptive study was conducted with 60 fourth year B.Sc. Nursing students from selected nursing schools in Kurnool. Convenient sampling method was adopted and the data collection instrument was a self-constructed questionnaire on MEWS. Results: Majority of the respondents belonged to age group 20 – 21 years (60%) and females (66.6%), single (63.4%), hostel residents (63.4%) and most of them were exposed to medical wards (43.4%). Majority of the students reported previous experience with MEWS or early warning systems training (66.7%), while clinical demonstrations were most frequently used as a source of information (51.6%).

KEY WORDS: Modified Early Warning System, MEWS, knowledge, nursing students, patient deterioration, and nursing education.

INTRODUCTION TO THE STUDY:

The Nursing profession places an emphasis on the earliest possible identification of patient deterioration¹. The Modified Early Warning System (MEWS), a method of translating multiple physiologic parameters into one number, is a widely accepted, evidence-based bedside measurement to aid

in this process². Five physiologic parameters: respiratory rate, heart rate, systolic blood pressure, body temperature, and level of consciousness are most frequently used as indicators to provide early indication of a patients' deteriorating condition and thereby allow for expedited medical evaluation³. Knowledge of MEWS

will impact student nurses both theoretically and practically⁴. Practically, knowledge of MEWS will impact how well a nurse observes a patient's physical status, clinical decision-making, communication with other nursing staff and whether they will identify a patient's NEED for immediate medical review⁵. As such, knowledge of MEWS is critical to patient safety and quality care for final year bachelor of science in nursing (B.Sc .N) Students who are nearing graduation from their program and entering the workforce⁶.

Significance of knowledge of MEWS for nursing practice and education Because MEWS provides a structured approach to systematic assessment and early intervention for patient deterioration in hospital units, emergency departments, and other acute care environments, it has emerged as a leading patient-safety tool⁷. A lack of understanding about MEWS by nursing students can result in late detection of patient deterioration, delayed communication with other members of the healthcare team, and inconsistencies in clinical decision making⁸. Assessments conducted by faculty to evaluate students' knowledge related to MEWS assist faculty in identifying learning deficits and improving educational approaches⁹. These assessments are particularly important for fourth-year nursing students who are

integrating classroom learning with clinical experiences; enhanced knowledge regarding MEWS can lead to increased confidence, competence, and preparation for providing safe clinical care¹⁰.

STATEMENT OF PROBLEM:

"A Study to evaluate the knowledge regarding MEWS (modified early warning system) among fourth year B.sc. Nursing students in selected colleges of Kurnool."

OBJECTIVES:

- * To determine the level of knowledge about the MEWS among fourth-year bsc nursing students
- * To categorize students based on their level of knowledge as below average, average or above average
- * To find out association between knowledge level & selected demographic variables

Null hypothesis:

H₀: There is no significant association between knowledge concerning The Modified Early Warning System (MEWS) and the selected demographic variables of fourth year BSc. Nursing students in the selected colleges of Kurnool.

RESEARCH HYPOTHESIS:

H₁ : There is a significant association between knowledge concerning The Modified Early Warning System (MEWS) and the selected demographic variables of fourth year BSc. Nursing students in the selected colleges of Kurnool

METHODOLOGY:

Research Approach: A quantitative research approach was adopted to assess the knowledge regarding MEWS among fourth-year B.Sc. Nursing students.

Research Design: A **descriptive research design** was used for the study, as it helped in describing and analyzing the existing level of knowledge among the students.

Setting of the Study: The study was conducted At selected nursing colleges in **Kurnool**.

Population: The target population of the study comprised **fourth-year B.Sc. Nursing students** studying in the selected nursing colleges of Kurnool.

Sample Size: The total sample size for the study was **60 students**.

Sampling Technique: The samples were selected by using a **convenience sampling technique**, based on the availability and willingness of the students.

Tool for Data Collection: The data were collected using a **self-structured questionnaire** on MEWS, which included two sections: **demographic variables** and **knowledge-related items**.

Data Analysis:

The collected data were analysed by using **frequency, percentage, mean, standard deviation, and chi-square test** to interpret the findings of the study.

Data collection procedure:

The formal permission was obtained from the principals of selected Nursing colleges, Kurnool. The investigator introduce herself to the nursing students and informed them about the purpose of the study and the formal consent was obtained from the sample before conducting study.

INTERPRETATION OF FINDINGS:

The frequency and percentage of demographic variables of Nursing students to assess the knowledge regarding MEWS score.

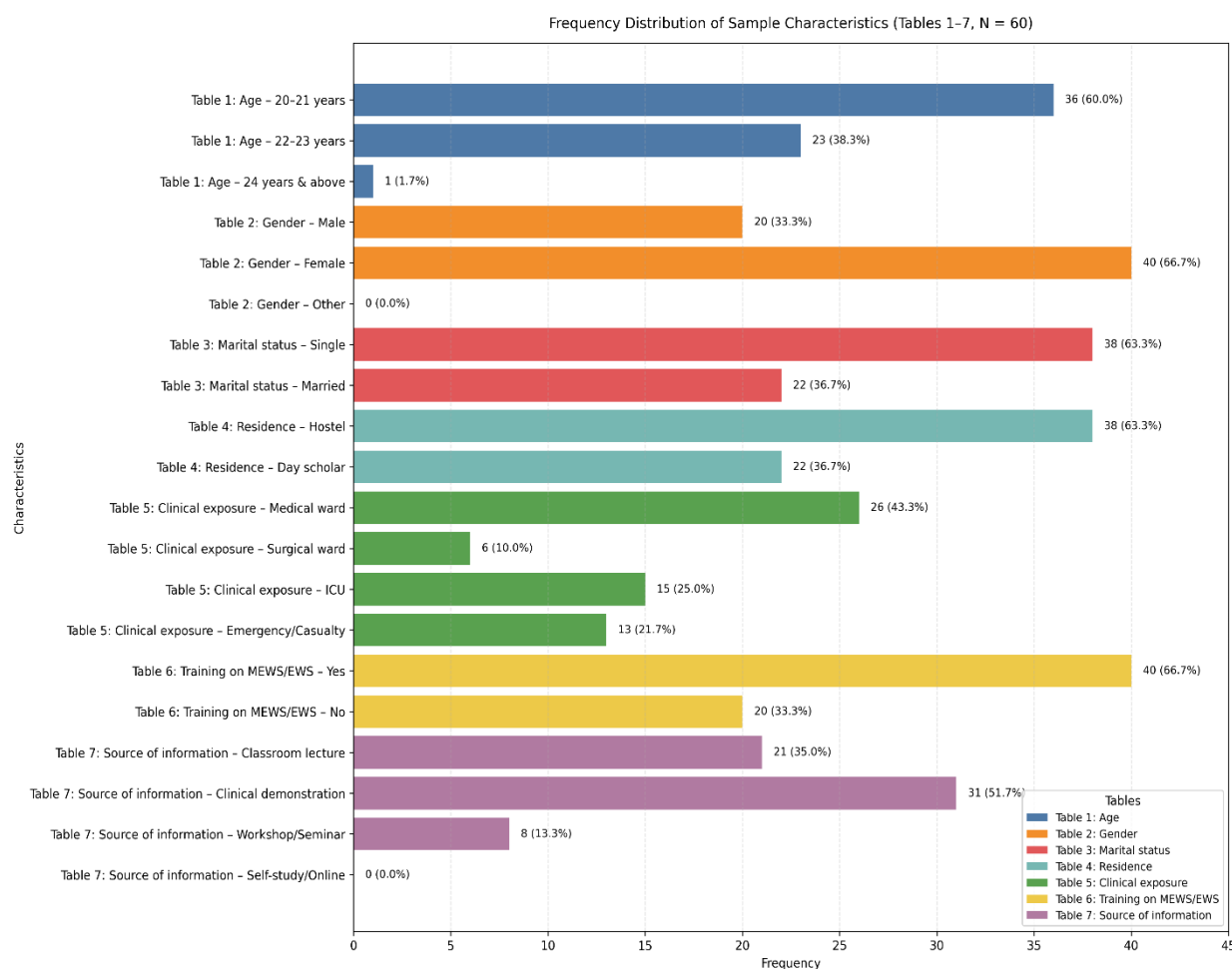
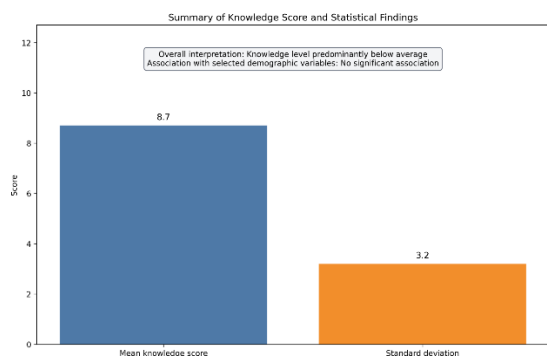


Fig 1 Among the 60 participants, 36 (60.0%) were in the age group of 20–21 years, 23 (38.3%) were in the age group of 22–23 years, and 1 (1.7%) was aged 24 years and above. Out of the total participants, 20 (33.3%) were male and 40 (66.7%) were female, with no participants belonging to the other gender category. Regarding marital status, 38 (63.3%) participants were single and 22 (36.7%) were married. With respect to area of residence, 38 (63.3%) participants were staying in the hostel, while 22 (36.7%) were

day scholars. In relation to area of clinical exposure, 26 (43.3%) participants had exposure in the medical ward, 6 (10.0%) in the surgical ward, 15 (25.0%) in the ICU, and 13 (21.7%) in the emergency/casualty area. Among the 60 participants, 40 (66.7%) had attended training on MEWS or the Early Warning System, whereas 20 (33.3%) had not attended any such training. Regarding the source of information, 21 (35.0%) participants reported classroom lectures as their source of information, 31 (51.7%) reported clinical demonstration, 8 (13.3%) reported workshops and seminars,

and none of the participants reported self-study or online sources.

Fig 2: General Interpretation Average knowledge scores were predominantly lower than average.



Association with Selected Demographic Factors There were no significant associations. Although a sizeable portion of the nursing students at the end of their senior year had been exposed to MEWS, and most had received some form of prior training exposure; they still demonstrated significantly poor knowledge levels. The substantial gap between what students were exposed to and how much they actually knew about MEWS indicates that just once or twice in a classroom setting or even a single short clinical experience cannot adequately support reliable confidence. There is practical significance for nursing education. Senior year nursing students are expected to know when vital sign measurements indicate abnormality, be able to detect clinical deterioration, and effectively

communicate any concern to others. Thus, poor knowledge in these areas can negatively impact monitoring of patients, patient decision making, and escalating the care provided to them. Consequently, there needs to be consistent, ongoing classroom instruction as well as structured demonstrations and supervised applications to MEWS in the wards for adequate confidence building in the nursing students.

Recommendations:

- A study utilizing a larger sample from various schools or districts may provide additional data to support the current findings.
- Experimental studies could be developed to measure the effectiveness of systematic teaching programs in enhancing knowledge of MEWS by nursing students.
- Future studies could also evaluate practice compliance and skill performance relative to MEWS.

Conclusion:

Fourth year B.Sc. Nursing students from selected colleges of nursing in Kurnool district of India demonstrated insubstantial knowledge of the Modified Early Warning System. Since MEWS is a primary method of early identification of deteriorating patients, this result is relevant

for both patient safety and nurse preparedness for safe professional practice .Focused instructional content combined with repeated demonstrations and routine reinforcement of MEWS during clinical training will enhance student understanding and increase preparedness of the nursing students for safe professional practices.

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