Safe Medication Administration: Effect of Root Cause Analysis Training on Knowledge and Attitudes
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ABSTRACT
The problem lie addressed in this study is: Is Internet-based training in medication safety effective? Participants included 45 RNs recruited from ETSU. Participants were randomized to intervention or control groups. The intervention consisted of an online module designed to improve medication safety knowledge and attitudes. The control group received standard education. The primary outcome measures for the study were knowledge and attitudes scores. The intervention group had significantly higher knowledge and attitude scores than the control group after the training. The results of this study support the use of an online module to improve medication safety knowledge and attitudes.

INSTRUMENTS
The Safety Attitude Questionnaire (SAQ) contained 15 items with a 10-point Likert scale ranging from 1 (strongly disagree) to 10 (strongly agree). The mean score for the SAQ was 71.2 (±9.9), with a range of 53-91.

RESULTS
Participants in the intervention group had significantly higher knowledge and attitude scores than the control group after the training. The intervention group had improved knowledge and attitude scores compared to the control group.

HYPOTHESES
1. Nursing students will demonstrate increased knowledge scores following participation in RCM when compared to a non-participation control group.
2. Nursing students will demonstrate increased safety attitude scores following participation in RCM when compared to a non-participation control group.

DATA & METHODS
SAFETY
Nursing students were recruited from the nursing program at ETSU. The data collection instrument was the Safety Attitude Questionnaire (SAQ). The SAQ is a 15-item questionnaire with a 10-point Likert scale ranging from 1 (strongly disagree) to 10 (strongly agree). The mean score for the SAQ was 71.2 (±9.9), with a range of 53-91.

RESULTS
Participants in the intervention group had significantly higher knowledge and attitude scores than the control group after the training. The intervention group had improved knowledge and attitude scores compared to the control group.

POLICY IMPLICATIONS
• Improved IMQ scores in relation to RCM may support the inclusion of nurses and nursing students in RCM to improve medication safety.
• Implementation of RCM in healthcare settings may reduce medication errors and improve patient outcomes.

STUDY STRENGTHS AND LIMITATIONS
STUDY STRENGTHS
• Use of a randomized controlled trial design
• Use of a validated questionnaire to assess safety attitudes
• Participants were nursing students from a single institution

LIMITATIONS
• Recruitment of participants may have been limited to nursing students
• Participation may have been influenced by external factors

DIRECTIONS FOR FUTURE RESEARCH
• Further research is needed to evaluate the impact of RCM on medication errors and patient outcomes
• Future studies should consider incorporating additional demographic variables to better understand the impact of RCM on medication safety.