Effects of MEET (Medication Error-Encouragement Training) on medication safety confidence and learning motivation among nursing undergraduates

Kyang [Kim, PhD, RN, INSOG, Lee, PhD, RN. [Department of Nursing, Hanyang University, Deogyang, South Korea]

Background: Medication errors are the most common clinical errors and can lead to serious safety consequences. However, as most medication errors are preventable, a more active approach to medication error management is necessary. As such, adequate training in medication administration has become highly important. In reality, the medication training of nursing students is insufficient to provide the necessary medication competency for nurses in a clinical setting. Currently, most seasoned nurses who implemented the nursing curricula, including pharmacology, pharmacokinetics and pharmacodynamic calculation, and medication practice, are not enough to provide safe and accurate medication in a clinical setting. Medication administration in a clinical setting requires the ability to use one's medication knowledge to the patient's conditions while considering current clinical and environmental conditions. Therefore, nursing student training that enhances medication safety competency and is applicable to real-life clinical situations. This training would combine medication skills and knowledge and use of realistic scenarios. Existing medication administration teaching, such as the “5 rights” and “7 rights,” which emphasizes “the correct patient, correct medication, correct dosage, correct route, correct timing, correct administration, and correct documentation,” Training that focuses on the “errors” puts its limitations in its inability to anticipate errors or manage errors in clinical settings. To overcome this limitation, error training could come into effect. Error-encouragement training presents possible-failed-fitting safe setting training, learners are able to identify how errors were made, derive the reasons behind the errors, and understand the knowledge and technology that are relatively sensitive to errors.

Analysis: Error avoidance training and error encouragement training were compared as the experimental training and control group training, respectively. The experiment was performed in a simulated environment. The training is divided into two groups: the control group and the experimental group. The control group received the control training, whereas the experimental group received the error-encouragement training. The training was performed by the researcher, who provided feedback and encouragement to learners to identify and implement the correct treatment. The control group received the control training, which included a brief overview of common medication errors and an opportunity to ask questions. The group was then split into two subgroups: one subgroup received the control training, and the other subgroup received the error-encouragement training. The error-encouragement Training project was designed to encourage learners to recognize and correct errors in the medication process, including patient information confirmation, drug information confirmation, prescription and communication of drug prescription, drug preparation, administration, recording, and post-administration patient monitoring.

Conclusion: This study aimed to investigate the effects of error-encouragement training on medication confidence among nursing graduates who had previously received error avoidance training. The results suggested that learners who received the error-encouragement training showed higher medication confidence and were better able to identify and correct medication errors. This study used quasi-experimental research design to determine the effect of error-encouragement training on medication safety confidence. The results showed that learners who received the error-encouragement training had significantly better medication safety confidence than those who received the control training. This indicates that error-encouragement training might be an effective way to improve medication safety confidence among nursing graduates. Further research is needed to investigate the long-term effects of MEET on medication safety confidence and learning motivation among nursing undergraduates.

Results: The medication safety confidence of the experimental group pre and post-intervention was statistically significantly higher than that of the control group (t=3.52, p<.001). With regard to individual procedures of medication, medication safety confidence among the experimental group increased significantly after training compared with the control group in patient identification (t=2.51, p=.014), drug preparation (t=2.93, p=.004), and drug administration (t=2.93, p=.004). Additionally, the effect of training on learning motivation showed that learning motivation for the experimental group was significantly enhanced compared with the control group (t=3.59, p<.001). Detailed analysis revealed that learning motivation, anxiety, stress (t=2.95, p=.004) and relevance (t=2.86, p=.005) was particularly higher in the experimental group compared with the control group.

Limitations & Further research: Lo is a lack of research on medication errors from a nursing perspective, we had limited evidence to inform the development of the MEET program.12 Broader aspects of this research is the most of intervention training on medication errors, which might also affect learners’ practice of medication administration. Therefore, instructors must actively discuss this with students and encourage them to make errors in an environment that accepts these errors. Furthermore, this research is limited to the post-training effect of error-encouragement training on medication safety confidence among nursing graduates. To overcome this limitation, error-encouragement training might be an effective way to improve medication safety confidence among nursing graduates. Future research is needed to investigate the long-term effects of MEET on medication safety confidence and learning motivation among nursing undergraduates.