Decreasing Alarm Fatigue Through Alarm Management Training

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Abstract

Alarm fatigue is a notable problem in the hospital setting. Alarm fatigue can decrease nurse response time and desensitize nurses to alarms. When this occurs, patient outcomes begin to be negatively affected. To combat this, we researched multiple articles on alarm fatigue and alarm management programs. These programs would be implemented, and nurses would learn how to troubleshoot alarm equipment, how to recognize alarm fatigue, how to prevent alarm fatigue, and many more. Based on research articles, alarm management programs decrease alarm fatigue in nurses and the number of alarms.

Problem/Background

As nursing students, we have noticed alarm fatigue. Alarm fatigue is not specific to one institution or organization; it occurs with any alarm system. Oliveira et al. (2018) states "alarm fatigue is the implication of resistance/desensitization in the perception of alarm signaling" (p. 3036). Nurses become desensitized to alarms and have a delayed response or even ignore them accidentally. Many nurses do not recognize they are doing this. With ignored alarms or delayed responses, patient outcomes are affected negatively. For example, a nurse not noticing a bed alarm going off can lead to a hurtful fall and severe consequences.

Theoretical Framework

The theoretical framework of this project is Florence Nightingale. Even though she was the first nursing theorist, her work still applies today. In Nightingale's work, she focused on improving patients' physical environment. This is the experimental theory. This theory includes improving ventilation, providing adequate sunlight, maintaining a good room temperature, limiting noise, providing variety, changing linens frequently, and improving both personal and patient hygiene. Our research focused on the noise section of Nightingale's environmental theory. We hope by decreasing alarms it increases patient comfort by limiting noise.

Article Summaries

To support our problem, we have researched multiple articles. Our evidence includes three articles: "Effects of Monitor Alarm Management Training on Nurses' Alarm Fatigue", "The Effect of Implementing Clinical Alarm Nursing Intervention Program on Nurses' Knowledge, Practice and Patient Outcomes at Intensive Care Unit", and "Alarm fatigue and the Implications for Patient Safety".

Article One

"Effects of Monitor Alarm Management Training on Nurses' Alarm Fatigue" evidence level is a level 1 experimental randomized controlled trial.

- Problem
  - This study evaluated the effect of monitor alarm management training based on the theory of planned behavior for reducing alarm fatigue in intensive care units.
- Recommendations
  - It is recommended that nurse managers should implement alarm training to all ICU nurses based on clinical practice guidelines to improve nurses' ability in alarm management.

Article Two

"The Effect of Implementing Clinical Alarm Nursing Intervention Program on Nurses' Knowledge" evidence level is level 2 quasi-experimental research article.

- Problem
  - The goal of this research was to evaluate the effect of implementing a clinical alarm interventional program on nurses' knowledge, practice, and patient outcomes at an intensive care unit.
- Recommendations
  - It was recommended that an in-service training program should be conducted for nurses regarding alarm management and increase nurses' presence of alarm fatigue.

Article Three

"Alarm Fatigue and the Implications for Patient Safety" evidence level is a level 3 quantitative non-experimental study.

- Problem
  - Before the research was conducted it was suspected that relevant alarms might have been underestimated which comprised patient safety. After the research was conducted, it was found that nurses are desensitized to alarms due to not answering the alarms at all or in a certain amount of time.
- Recommendations
  - The research states "it is imperative for the multidisciplinary team to understand the importance and to become more attentive to the signs (of alarm desensitization)"

Recommendations

It was recommended by each of our journal articles that a training program should be implemented. This alarm management program could include how to troubleshoot alarms, how to recognize alarm fatigue, and how to avoid alarm fatigue.

Conclusion

In conclusion, alarm fatigue is a problem many nurses are unaware of. This issue raised our attention after shadowing nurses who were desensitized to alarms and patient care was compromised. As student nurses, we are taught patient care and safety is a priority. We believe when nurses experience alarm fatigue, patient safety and care become endangered. As proven throughout this paper, research supports that alarm fatigue is a problem and it is recommended facilities implement a training program for alarm management. We hope we have raised awareness of alarm fatigue and the chosen facility takes this into consideration. We hope change is implemented to improve patient safety and care.

References

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