

Abstract

Background: Alarm fatigue among Registered Nurses in the workforce is well documented in the literature and a high priority safety issue. Little research has been conducted in regards to nursing students and alarm sensitivity.

Objectives: The aim of this study were to explore if alarm fatigue can develop in nursing students from the first clinical exposure to the acute care environment to the last clinical exposure in the acute care clinical environment with a comparison of each semester and if previous healthcare work history increases alarm fatigue.

Design: This study used a longitudinal quantitative survey design.

Participants: Surveys were administered to a cohort enrolled in the second semester of a Bachelor's of Nursing program at a university in the United States ($n = 89$). The data for this study was collected during the beginning of each semester and at the end of each semester.

Methods: Nursing students completed a self-reporting three area survey using a five question Likert scale consisting of common alarm noises in the acute care environment at six different time periods. Parametric tests were used to explore the comparison points. Reliability analysis was used to validate the assessment tool.

Results: The data showed the results were significant $F(5, 375) = 3.291$; $p = .006$ indicating a general decrease in sensitivity across the six time periods for intravenous pump alarms. The self-reporting survey had an overall reliability of $Alpha = .677$.

Conclusion: The aim of this study was to explore if alarm fatigue develops in nursing school. The results show that IV pump alarm fatigue develops in nursing school. This particular cohort revealed alarm fatigue to IV pump alarms. Nursing curricula need to focus not only on the use of IV pumps but how to prevent and address alarms.

Keywords: alarm fatigue; nursing students; sensitivity; noise; clinical alarms