Improving the Competency of Undergraduate Nursing Students in Addressing a Timely Public Health Issue

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Abstract: Recent events of the Flint Water Crisis and elevated lead levels in Detroit public school water have highlighted a specific public health disparity and shown the need for better education of healthcare providers on lead education. Identifying children and pregnant women with a high risk for lead poisoning and ensuring lead testing is completed is critical. The purpose of this study is to explore the impact of an educational intervention on knowledge and confidence levels among nursing students enrolled in the prelicensure Bachelor of Science in Nursing (BSN) and Registered Nurse to BSN program (R2B). The study used both quantitative and qualitative research methods to assess the impact of multi-modal pedagogy on knowledge and confidence of lead screening and prevention among prelicensure and R2B nursing students. The students received lead poisoning and prevention content in addition to completing an e-learning module developed by the Pediatric Environmental Health Specialty Units. A total of 115 students completed the pre-and post-test instrument that consisted of demographic, lead knowledge, and confidence items. Despite the increase of total knowledge, three dimensions of lead poisoning, and confidence from pre- to post-test scores for both groups, there was no statistical significance on the increase between prelicensure and R2B students. Thematic analysis of qualitative data showed five themes from participants' learning experiences: lead exposure, signs and symptoms of lead poisoning, screening and diagnosis, prevention, and policy and statewide issues. The study is limited by a small sample and participants recalling some correct answers from the pretest, thus, scoring higher on the posttest. The results contribute to the minimally existent literature examining a critical public health concern regarding lead health exposure and prevention education of nursing students. Incorporating such content area into the nursing curriculum is essential in ensuring that such public health disparities are mitigated.

Keywords: lead poisoning, emerging public health issue, community health, nursing edducation

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