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Title: *Assessment of Administrator and Teacher Knowledge and Confidence Before and After Vaping Education*

Abstract

It is no secret that vaping has become an epidemic in middle and high schools in the United States. This nonrandomized controlled study focuses on a two-part approach targeting school personnel and then students. The hope of this study is to provide a meaningful impact in the community and the health of middle and high school students. The first part focuses on providing education to teachers and administrators about vaping, the health concerns from vaping, how to best implement anti-vaping policies and enforcing those procedures when breached. Demographic information was used to find possible partner schools to provide vaping education to the students in the future. Collaboration with the Illinois Principals Association allowed this study to reach audiences across the Midwest. Over 440 teachers and administrators have taken the course. Of those, 217 completed the pre-test and 123 completed the post-test between September 26, 2019 and February 1, 2020. The primary objective of this study is to observe an improvement of vaping knowledge after receiving vaping education. The primary objective was assessed by giving a pre and post-test with the same questions and answers. The mean percent correct in the pre-test was 50.4% (95% CI, 36.3 to 64.5, $p=0.05$), while the percent correct for the post-test was 87.2% (95% CI, 78.6 to 95.8, $p=0.05$). A student t-test was used to find statistical significance or significant improvement between the pre and post-test. Calculated p-value is 0.0002 which is a statistically significant finding. The data collected shows that education is important to help alleviate the vaping epidemic. Organizations should use this study as a tool to build anti-vaping education for educators and students.