

ABSTRACT

Purpose: The purpose of this study was to examine the relationship between the emergency response/AED training, the environment of delivery and the timing of training provided to the staff and faculty of two Hendersonville County, North Carolina, high schools, their perceptions of their own readiness to respond to a cardiac emergency, and the actual AED arrival-to-shock response time. **Design:** This was a quasi-experimental study, static group comparison using one high school staff as the study group and the staff at another Henderson County high school who attended a traditionally taught American Heart Association Heartsaver/AED course as the comparison group. **Measures:** Measuring perceptions of readiness and ability was accomplished using instrument developed by Short, Alpert, Harris and Surprenant (2006) and adapted for this study using key AED knowledge and performance steps as outlined in the Medtronic LIFEPAK CR Plus Operating Instructions and the National Center for Early Defibrillation. Knowledge of AED procedures was assessed using a Cardiopulmonary (CPR) and AED knowledge test developed by Reder, Cummings, and Quan (2005). Accurate performance in a simulation of a cardiac arrest was based on performance steps outlined in the Medtronic LIFEPAK CR Plus Operating Instructions and the National Center for Early Defibrillation and was evaluated by the researcher, an American Heart Association Instructor. **Results:** Descriptive and frequency data was obtained. Results of Mann-Whitney, Chi square, and Independent samples t-tests assessing perceptions and performance revealed members of the study group perceived themselves as less able to establish unresponsiveness and accurately apply AED electrode pads than members of the comparison group. Members of both the study and comparison groups tended to perceive themselves as prepared and able to perform all other steps required for AED defibrillation regardless of the environment or method of training. Members of

both the study and comparison groups tended to accurately perform the critical steps for AED defibrillation despite the perceptions by the study group that they were less able to do so.

Conclusions: The results of this study suggest that effective training of high school staff to provide emergency response AED defibrillation as lay rescuers can be accomplished by using alternative methods of training.