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The Effect of Simulation-Based Tracheostomy Care Training on Caregiving Competence and Self-Efficacy Among Family Caregivers of Tracheostomy-Dependent Patients

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Backgrounds

Caregiving in tracheostomy patients at home is very important in emergent situations of blocked tube or sudden decanulation, as the family caregivers need an appropriate understanding, necessary skill, and make quick decisions. Simulative training can help practice the vital skills and prepare for emergency situations.

Methods

This review was completed through the literature search in the following sources: PubMed, Scopus, Web of Science, Wiley Online Library, and Google Scholar, from 2016 to October 2026. The combination of “Tracheostomy,” “Family Caregivers,” “Simulation-Based Training,” “Clinical Competence,” and “Self-Efficacy” keywords was carried out using the Boolean keywords AND and OR. In total, 10 studies were selected according to inclusion and exclusion criteria and further evaluated descriptively and comparatively.

Findings

Overall, the studies have indicated that simulation training is connected with caregivers’ self-efficacy, confidence, and perception of their preparedness. In some cases, the improvement in the skills was considerable, but a rise in confidence in skills has not always meant full competence. In one study, it was shown that only 17% of caregivers were able to perform all assessed skills in a competent way after the instructional course. Similar results were obtained in another comparative study, which investigated emergency response, where it was revealed that most caregivers perform necessary actions but not all of them do it in the correct order.



Findings

Comparative investigations showed that both simulator-based training and digital education could result in positive psychological outcomes for caregivers, however, it is still unknown which of the approaches is more effective. Based on qualitative findings, the effect of the practice-oriented approach, feedback from the instructor, and debriefing after the scenario is regarded as extremely important. At the same time, the available data on skill retention and other training outcomes, such as hospital readmission and visits to the emergency room, is very scarce.



Conclusion

Training that utilizes simulation represents a new method for increasing family caregivers' skills and readiness for taking care of patients who require tracheostomy. However, the degree of training success should not only be measured by the self-reported self-efficacy and confidence of participants. Moreover, it is recommended to use validated instruments, evaluate step-by-step performance of interventions, perform training multiple times and reevaluate the skills after a certain period of time.

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