Official Study Title: The Effect of Microteaching-Enhanced Advanced Life Support Simulation on Students' Teamwork Skills and Satisfaction: A Quantitative Study

NCT Number: Not yet assigned

Document Title: Study Protocol

Document Date: 04 May 2025

Study Protocol

Study Design:
This study was conducted as a randomized controlled experimental trial with the participation of fourth-year nursing students from Acıbadem University School of Nursing.

Study Sample:
The study sample consisted of 64 final-year nursing students from the Turkish and English Nursing Programs at Acıbadem University. Participants were randomly assigned to the experimental and control groups through randomization.

Data Collection Procedure:
Data collection began after obtaining approval from the ethics committee. The purpose of the study was explained to the students, and informed consent was obtained from all participants.

Data Collection Steps:

1. **Pre-test:** A pre-test was administered before the theoretical training to assess students' baseline knowledge of Advanced Life Support.
2. **Theoretical Training:** After completing the pre-test, participants received the "ERC 2021 Adult Advanced Life Support Training" in accordance with the European Resuscitation Council (ERC) 2021 guidelines (Soar et al., 2021). The training lasted 2 hours.
3. **Microteaching:** Students in the experimental group were shown an Advanced Life Support Team Dynamics video. The video was uploaded to the university's learning management system, and student viewing reports ensured that the experimental group students watched it.
4. **Simulation Training:** Five days after the theoretical training, students participated in simulation training. The pre-test was repeated first, followed by skills training stations covering effective compression, ventilation, defibrillation, and intubation preparation. After skills training, students were briefed and organized into teams of six (one facilitator acting as a physician and five students) to participate in a 15-minute high-fidelity simulation, followed by a 30-minute debriefing session. The simulation was conducted following criteria developed by the INACSL Standards Committee (2021).
5. **Post-test, Student Satisfaction, and Self-confidence Assessment:** After the simulation, students completed the post-test and filled out data collection forms including the Student Satisfaction and Self-confidence Scale and the Teamwork Scale.

Data Collection Instruments:

1. **Demographic Characteristics Form:** Includes information on age, gender, and grade point average.
2. **Knowledge Level Assessment Form:** A 10-item multiple-choice questionnaire used in the Adult Advanced Life Support pre-post test, developed by expert faculty members.
3. **Advanced Life Support Scenario Skills Observation Checklist:** A checklist based on the ERC 2021 guidelines, assessing advanced life support skills, developed by expert faculty members.
4. **Student Satisfaction and Self-confidence in Learning Scale:** Originally developed by Jeffries et al. (2006), the scale was validated for Turkish nursing students by Ünver et al. (2017). Permission for use was obtained.

5. **Mayo High Performance Teamwork Scale:** Originally developed by Malec et al. (2007), the Turkish validity and reliability study was conducted by Ocaktan et al. (2023). Scale usage permission has been obtained.

Resources

1. INACSL Standards Committee, Bowler, F., Klein, M. & Wilford, A. (2021, September). Healthcare Simulation Standards of Best PracticeTM Professional Integrity. Clinical Simulation in Nursing, 58, 45-48. https://doi.org/10.1016/j.ecns.2021.08.014.

2. Malec, J. F., Torsher, L. C., Dunn, W. F., Wiegmann, D. A., Arnold, J. J., Brown, D. A., & Phatak, V. (2007). The mayo high performance teamwork scale: reliability and validity for evaluating key crew resource management skills. Simulation in Healthcare, 2(1), 4-10.

3. Ocaktan, N., Karabacak, Ü., Ünver, V., & Özbaş, A., (2023). Mayo Yüksek Performanslı Ekip Çalışması Ölçeği: Türkçe Geçerlik Güvenirlik Çalışması . 5. Uluslararası 13. Ulusal Türk Cerrahi ve Ameliyathane Hemşireleri Kongresi (pp.1160-1161). Aydın, Turkey

4. Soar, J., Böttiger, B. W., Carli, P., Couper, K., Deakin, C. D., Djärv, T., ... & Nolan, J. P. (2021). European resuscitation council guidelines 2021: adult advanced life support. Resuscitation, 161, 115-151.

5. Jeffries, P. R., & Rizzolo, M. A. (2006). Designing and implementing models for the innovative use of using simulation to teach nursing care of Ill adults and children: A national, multi-site, multi-method study. New York, NY: National League for Nursing.

6. Unver, V., Basak, T., Watts, P., Gaioso, V., Moss, J., Tastan, S., ... & Tosun, N. (2017). The reliability and validity of three questionnaires: the student satisfaction and self-confidence in learning scale, simulation design scale, and educational practices questionnaire. Contemporary nurse, 53(1), 60-74.

Official Study Title:
The Effect of Microteaching-Enhanced Advanced Life Support Simulation on Students'
Teamwork Skills and Satisfaction: A Quantitative Study

NCT Number:
Not yet assigned

Document Title:
Statistical Analysis Plan

Document Date:
04 May 2025

Statistical Analysis Plan

Data Analysis:
The study data will be analyzed using SPSS (Statistical Package for the Social Sciences). Descriptive statistics (mean, standard deviation, frequency, and percentage) will be used to summarize some characteristics. The Kolmogorov-Smirnov test will be employed to assess normality. Paired t-tests will be used to compare pre-test and post-test mean scores. A p-value of less than 0.05 ($p < .05$) will be considered statistically significant.

Official Study Title:
The Effect of Microteaching-Enhanced Advanced Life Support Simulation on Students'
Teamwork Skills and Satisfaction: A Quantitative Study

NCT Number:
Not yet assigned

Document Title:
Informed Consent Form

Document Date:
04 May 2025

<div align="center">**Informed Consent Form**</div>

CONSENT FORM FOR VOLUNTARY PARTICIPATION IN THE STUDY

This study is conducted by faculty members from the School of Nursing and CASE: Assistant Professor Dr. Şehriban Serbest, Research Assistant Emine Tuğba Yorulmaz, Lecturer Dr. Feray Güven, Assistant Professor Dr. Nermin Ocaktan, Assistant Professor Dr. İrem Özel, Specialist Instructor Canan Yüksel Acar, and Professor Dr. Vesile Ünver. This form is prepared to inform you about the conditions of the study.

What is the Purpose of the Study?
The aim of this research is to examine the effect of advanced life support simulation supported by microteaching on students' teamwork and satisfaction.

How Will We Ask You to Help?
If you agree to participate, you are expected to attend the advanced life support theoretical and simulation training sessions. The theoretical training lasts 2 hours, and the simulation training lasts 1 day. You will be asked to complete questionnaires before and after the training, which will be used in the study.

How Will We Use the Information We Collect from You?
Your participation in this study is completely voluntary. No identifying information such as your name or institution will be requested in the survey. Your answers will be kept strictly confidential and will only be evaluated by the researchers. The data collected from participants will be analyzed collectively and used in scientific publications.

What You Need to Know About Participation:
The questions we will ask do not generally cause personal discomfort or require any procedures. However, if you feel uncomfortable at any point during participation due to the questions or for any other reason, you are free to withdraw from the study at any time.

If You Want More Information About the Study:
Thank you in advance for your participation. For further information about the study, you can contact Assistant Professor Dr. Şehriban Serbest from the School of Nursing via email at sehriban.serbest@acibadem.edu.tr.

I have read the above information and voluntarily agree to participate in this study.

(Please complete the form, sign it, and return it to the researcher.)

Name and Surname   Date   Signature

<div align="center">----/----/-----</div>