A comparative study between in-person and virtual delivery of a physician case study to second-year medical students

Kari Beasley, MPH, MS, Luan Lawson, MD

METHODS

- **Quantitative Study Design:** this design will be utilized to determine if there is a significant difference between virtual and in-person delivery of a physician case study.

- **Sampling:** a convenience sample of second-year medical students will be randomized to two groups for comparison.

- **Instrumentation:** the instrument is the Connor-Davidson Resilience Scale-10 (CD-RISC-10) by Drs. Campbell-Sills and Stein (Campbell-Sills & Stein, 2007). Literature on medical student well-being includes the CD-RISC-10 as a measure for resilience (McLuckie et al., 2018).

- **Data Collection:** three sources of data will be collected in this project: 1) CD-RISC-10 questionnaire, 2) pre-/post- content quizzes and 3) a survey on the learning environment.

- **Data Analysis:** SPSS statistical software will be used for descriptive and inferential statistics. Inferential statistics will include correlation, paired t-test and two sample t-test procedures.

POTENTIAL IMPACT

- The COVID-19 pandemic will have a profound effect on medical education for the foreseeable future.

- It is important to understand if the transition to an online medical education prevents proficiency of clinical training before medical students enter clerkships.

- Although online learning does not offer a full replacement for hands-on clinical experiences, interactive virtual platforms to present patient case may prepare medical students for clinical training.

- Comfortability and user-friendliness of online platforms influence the success of online learning.

- Innovations in virtual learning represent areas of opportunity in medical education to permanently implement online learning.

- Learner satisfaction and clinical performance are needed outcomes of measurement that may be explained by this research project.

- These outcomes are necessary to understand because medical schools may have to graduate medical students sooner to fill physician shortages felt from COVID-19.

- This research to evaluate the efficacy of a virtual curriculum will benefit medical students impacted by the COVID-19 transition to online classes and in the future, the patients and community served by the medical students sooner to fill physician shortages felt from COVID-19.

EVALUATION PLAN

- **Learning Environment Survey:**
  - Will be administered after the physician case study.
  - Items on this survey will be in matrix form with interval scale responses.
  - User-friendliness of the online platforms will be assessed.
  - Evaluation will focus on the experience of the learner because physician case studies are required in the curriculum and taught by clinicians.

NEED/RATIONALE

- Across the United States, educational institutions have closed or moved to virtual solutions to combat the COVID-19 pandemic.

- Medical schools have also restricted classes to online learning platforms to comply with social distancing and enable a virtual, distant education.

- The replacement of in-person classes with online classes may create a loss of collaborative experience (Ferrel & Ryan, 2020).

- Medical trainees have experienced a dramatic drop in their in-person exposure to all aspects of their medical education (Chick et al., 2020).

- The abrupt transition from in-person delivery to online delivery of medical education presents a profound disruption to medical students.

- The quality of the audio, video and presentation platform influence the effectiveness of the learning process (Atreya & Acharya, 2020).

- Content material is updated and formatted into virtual activities for medical students; however, the evaluation of the outcomes from this transition is yet to be determined (Rose, 2020).

REFERENCES


- Davidson Resilience Scale (CD-RISC)


