OPTIMIZING SURGICAL TEACHING THROUGH THE LENS OF SOCIOCULTURAL LEARNING THEORY

Gary Sutkin[a], MD; Eliza B. Littleton[b], PhD; Louise Arnold[c], PhD; Steven L. Kanter[d], MD

Corresponding author: Gary Sutkin, MD
Female Pelvic Medicine and Reconstructive Surgery
University Missouri Kansas City School of Medicine
2411 Holmes Street, Kansas City, MO 64108
phone 816-235-6785
email sutking@umkc.edu

date: April 14, 2021
NCT number: not available

MATERIAL AND METHODS

from draft of manuscript to be submitted:

2.1 Setting, Participants and Data Collection

In this qualitative study we examined authentic examples of intraoperative teaching exchanges between attending and resident surgeons. These examples were taken from two previous studies conducted at a large women's hospital: the objectives of those studies were to compare attending and resident responses regarding avoiding intraoperative errors[31] and to develop the previously mentioned Intelligent Cooperation framework.[10] The 10 surgical cases were gynecologic, representing open abdominal, laparoscopic, and vaginal approaches. Surgical cases were chosen by convenience, according to the schedule of the filmographer. Participants included ten surgical attendings, four fellows, and eleven Obstetrics and Gynecology residents, ranging from PGY1 to PGY4. We conducted interviews with all ten attending surgeons and five of the residents. The data for this study included the case video, deidentified transcripts of the cases, and deidentified transcripts of the interviews. Our qualitative approach was most informed by Sandelowski's concept of developing rich qualitative descriptions.[32]

2.2 Research Team

Our interdisciplinary research team consisted of a female pelvic surgeon with twenty years of surgical teaching experience (GS), a medical education researcher and educational sociologist (LA), a neurosurgeon and administrator with 30 years of experience across the continuum of medical education (SK), and a cognitive psychologist with expertise in surgical education research (EBL).

2.3 Data Analysis

We reviewed and discussed the works of key sociocultural learning scholars, as described in our Introduction. Our discussions were converted into a list of "key tenets" of the SCLTs, with associated examples from K-12 and Higher Education. (see Table 1) We then independently coded all transcripts according to the key tenets and examples from our list, noting which exchanges reflected various sociocultural theories. Counting themes was not part of the methodological approach in this study because it was inconsistent with the intent of the study to develop deep, rich, and comprehensive insights about teaching in the OR.[33] We subsequently met as a group to review our coding, convert them into themes of teaching and learning advanced surgical skills, and select notable examples from our data. (see Table 2) These themes were then transformed into instructional strategies to improve surgical teaching, based on the sociocultural theories. (see Table 3) Disagreements were settled by group discussion. Data saturation was determined according to our study objective[34], to identify intraoperative instructional strategies related to the social cultural learning theories. We stopped analyzing transcripts when we had generated no new instructional strategies.

2.4 Reflexivity and Ethics

During our meetings, we maintained a reflexive atmosphere, reflecting on our backgrounds, experience, and biases and how those might affect our interpretation of the data. We challenged those biases often. We reached consensus regarding differences in data interpretation through group discussion. Our University IRB approved this study as exempt.