

Nonverbal Communication in the Operating Room and Resident Surgical Autonomy



AMEE 2024, Basel, Switzerland, 24th - 28th August

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To complement our abstract, we show 3 video clips of Laban Movement Analysis applied to surgical movements, plus one movement enacted by an author

UMKC



1756 ePoster - on demand Surgery Education autonomy communication independent-practice
nonverbal operating-room surgery

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Abstract (max 350 words, excluding title and contributor's details)

We are at 348.

- Title (max 20 words)

Nonverbal Communication in the Operating Room and Resident Surgical Autonomy

- Background

Decreased surgical autonomy threatens a resident's ability to practice independently. We hypothesized that confident nonverbal communications would be associated with greater intraoperative autonomy.

- Summary of Work

We videorecorded 9 surgical cases, focusing on nonverbal communications between attending and resident surgeons prior to the decision of who will perform the critical moment. Critical moments were chosen by the attending as having the greatest risk of iatrogenic damage or most essential to the outcome. We used Laban Movement Analysis (LMA), a validated evaluation tool for nonverbal communication commonly used in theater education, to rate two sets of nonverbal communications: kinesic, or hand, arm, wrist and elbow movements; and vocal, or nonverbal utterances. Kinesic variables included time, space, plane, and rotation; vocal variables included volume, pitch, rate, and inflection. One author (CR) was trained by the Laban expert (JM), with 93% agreement. CR then rated 189 kinesic and 108 vocal variables from both the attending and the resident. Attending surgeons evaluated resident autonomy using the Zwisch scale. Correlation analysis was used to compare kinesic and vocal ratings and the Zwisch score.

- Summary of Results

Attending perception of resident autonomy was not significantly correlated with summated resident kinesic or vocal variables (kinesic Pearson Correlation -0.212, $p=0.59$; vocal -0.237, $p=0.54$); nor was it associated with attending kinesic or vocal variables (0.559, $p=0.12$; vocal -0.320, $p=0.40$). The individual variable Attending Plane 1 (rising vs. falling) displayed the most positive correlation (0.857, $p=0.003$); attending vocal volume (strong vs. light) displayed the most negative (-0.610, $p=0.08$). Attending perception of resident autonomy did not correlate with resident self-perception (-0.229, $p=0.55$).

- Discussion and Conclusion

Laban Movement Analysis of attending and resident nonverbal communication was not associated with resident autonomy. Future study can explore other factors that would influence autonomy, such as resident or attending reputation, resident display of knowledge, and organizational culture and productivity demands.

- Take-home Message

Nonverbal communication between attending and resident surgeons in the OR is understudied. Although our LMA ratings were not correlated with autonomy, we advocate for further study of how resident and attending surgeons communicate nonverbally. Residents should prepare for surgery through study and simulation and display that knowledge to gain autonomy.