1565 - Gender Differences in Self-Perception of Surgical Competence Relative to Faculty Feedback

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Introduction

Gender has been associated with perception of performance in the workplace. The meta-cognitive skill of self-reflection is necessary to education. The Surgical Autonomy Program (SAP) has allowed chronicling and analysis of meta-cognitive perceptions of surgical performance. This study demonstrates gender-based disparities in self-perception of surgical performance.
Methods

The SAP is an app-based self- and attending assessment of resident surgical skills and competence performed after each index case. We examined resident and faculty use for index neurosurgical cases in a 12-month pilot at Duke University Hospital. Between January and December of 2018, Duke Neurosurgery implemented the IRB-approved SAP, which was made available to all Duke neurosurgical faculty and residents. Every index neurosurgical case is divided into four sequential Zones of Proximal Development (ZPDs) and scored based on perceived autonomy with a TAGS (Teach and Demonstrate, Advise and Scaffold, Guide and Monitor, Solo and Observe) value (T=1, A=2, G=3, S=4). We present data from 1388 operations, focusing on residents’ self-perception relative to attending perception of surgical competence for the ZPD of focus during that case, stratified by gender.
Results

The SAP provides a scalable and efficient approach that divides each surgical procedure into four Zones of Proximal Development (ZPD). Furthermore, the TAGS scale provides insights into resident and faculty perceptions.
Results

• For easier ZPDs, there was no statistical significance between genders (ZPD 1: -0.67 (female) vs. -0.64 (male), p>.05).

• However as the case’s zone increased in difficulty, females self-graded their performance harder. This was most pronounced during the most challenging part of the case, ZPD 3. (ZPD 2: -0.59 vs. -0.52, p<.05; ZPD 3: -0.76 vs. -0.42, p<.05).

• As the difficulty decreased (ZPD 4), females actually scored themselves easier (-0.21 vs. -0.34, p<.05).
Discussion

There appears to be a statistically significant difference in self-perception of surgical competence as a function of gender, and the disparity increases as the level of difficulty increases.
Summary Points

1. The Surgical Autonomy Program (SAP) has facilitated a mechanism to better understand meta-cognitive learning skills.

2. The project demonstrates there is a significant difference in self-perception of surgical competence by gender and ZPD of the procedure.

3. Females graded themselves harder during more challenging ZPDs and easier during more straightforward ZPDs. For the most challenging ZPD, women were the most critical of their performance.