Words Matter: Examining Gender Differences in the Language Used to Evaluate Pediatrics Residents

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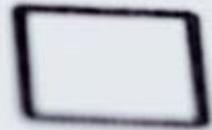
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Prior Qualitative Analysis of Evaluations

TABLE 1

Characteristics of Ideal Emergency Medicine Residents

Personality	Practice Style	Management Style
Team leader/takes charge[a]	Aggressive with treatment	Efficient
Independent/autonomous[a]	Performs under pressure	Manages whole department
Decisive[a]	Curious/receptive to learning	Multitasking
Confident[a]	Documents well	Problem solver
Professional	Takes on big enough patient load	Focused
Open to feedback	Evidenced based/well reasoned	Excellent communication skills
Hardworking	Strong sense of ownership	Resourceful
Stoic	Patient advocate	Proactive
Calm	Good planning (anticipates contingencies)	Team player
Thoughtful	Thorough differential diagnoses	Anticipates bottlenecks
Mature	Superlative clinical skills	Prompt
Positive attitude	Thorough	Coordinates with consultants
Compassionate	Acknowledges and learns from errors	Good teaching, oversight
Accountable	Communicates with patients	Maximizes throughput
Reliable	Good prioritization skills	Helpful
Trustworthy		
Dedicated/committed		
Responsible		
Takes initiative[a]		
Diplomatic		
Tireless		
Motivated[a]		
Doesn't complain[a]		
Doesn't get frustrated[a]		

[a] Indicates characteristics identified as stereotypically masculine by prior literature.[22]
Note: Some of these characteristics map directly onto the 23 subcompetencies (eg, multitasking), but many span various competencies.

Mueller et al, JGME 2017

Study Aim

To examine language used in evaluations of pediatrics residents by faculty to determine if there are differences in language used with respect to gender of resident.

Methods

- Qualitative content analysis of faculty evaluations of residents
- Inclusion:
  - All faculty evaluations of residents in each of 3 subsequent intern classes (2016-17, 2017-18, 2018-19)
- Evaluations were redacted by a research assistant for resident and faculty name and all gender identifiers (ie: she/her, he/his)
  - Separate code maintained with gender, as well as faculty gender
- Qualitative analysis of 2 mandatory comment sections:
  - Best aspects of this resident's performance
  - Suggestions for Improvement

Methods

- Text coded at the level of the evaluation.

  - Four authors coded a subset of evaluations to generate initial code book.

  - Pairs then coded the remainder of data, adding to the code book.

  - Code book finalized by consensus, and 2nd pass coding completed individually to apply finalized codes.

  - Questions discussed until reaching consensus.

- Evaluations unblinded to gender once coding was complete.

- Code applications aggregated by resident, and frequencies of code application by resident were compared by standardized mean differences (SMD).

Results

- 448 unique evaluations
  - Representing 87 unique residents
  - 103 faculty
  - 17 residents were men, with 88 total evaluations
  - 70 residents were women, with 360 evaluations
- Men: 5.17 evals/resident
- Women: 5.14 evals/resident

Top 10 most frequent codes applied

- Good clinical skills (206)

- Constructive feedback given that was specific to learner (158)

- Positive personality traits/behaviors (142)

- Good communication (103)

- Non-specific feedback given (91)

- Attention to Detail (79)

- Interested in Learning (78)

- Hard-working (75)

- Likeability (74)

- Efficiency—good (71)

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Differences in code application by gender

Code	Female Residents with Code Applied (%)	Male Residents with Code Applied (%)	SMD
Codes with a Female-predominant Imbalance			
Compared to Peers, Above level of Peers	27 (38.6)	3 (17.6)	0.479
Trustworthy	27 (38.6)	3 (17.6)	0.479
Helpful and/or Proactive	30 (42.9)	4 (23.5)	0.419
Constructive feedback given was NOT specific	47 (67.1)	8 (47.1)	0.414
Hardworking	42 (60.0)	7 (41.2)	0.383
Caring	39 (55.7)	7 (41.2)	0.294
Presentations have opportunity for improvement	10 (14.3)	1 (5.9)	0.282
Enthusiasm	33 (47.1)	6 (35.3)	0.242
Codes with a Male-predominant Imbalance			
Constructive feedback given was specific to specialty	18 (25.7)	10 (58.8)	0.711
Use of evidence-based medicine	11 (15.7)	7 (41.2)	0.588
Prepared	16 (22.9)	8 (47.1)	0.525
Demonstrated interest in learning	35 (50.0)	11 (64.7)	0.301
Good clinical skills	60 (85.7)	16 (94.1)	0.282
Intelligent	24 (34.3)	8 (47.1)	0.262
Efficient	41 (58.6)	12 (70.6)	0.253
Constructive feedback given that was specific to the resident	56 (80.0)	15 (88.2)	0.227
Independent	7 (10.0)	3 (17.6)	0.223

Codes with Imbalance in Application by Gender

Codes with a Female-predominant Imbalance	Codes with a Male-predominant Imbalance
Compared to Peers, Above level of Peers	Constructive feedback given was specific to specialty
Trustworthy	Use of evidence-based medicine
Helpful and/or Proactive	Prepared
Constructive feedback given was NOT specific	Demonstrated interest in learning
Hardworking	Good clinical skills
Caring	Intelligent
Presentations have opportunity for improvement	Efficient
Enthusiasm	Constructive feedback given that was specific to the resident
	Independent

Limitations

- Single center study of one residency program, and one year of training only

- Only classified gender in binary terms, which may not represent the full spectrum of gender identities in the residency program

- Did not assess other identities, including race/ethnicity, sexual orientation, religion, and others

- Have not yet evaluated faculty gender

Conclusions

- There are differences in the way male and female residents are evaluated by faculty, including:

  - Comments on performance

  - Comments on innate characteristics such as enthusiasm and intelligence

  - Specificity of feedback given

- Future endeavors should seek to promote equity in evaluations of residents through faculty development or development of more specific criteria with which to complete evaluations.

- Identifying and addressing gender bias in resident evaluations could lead to greater interest in pursuing academic careers among female pediatricians.

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