

**Maine Medical Center
Department of Emergency Medicine
Journal Club Summary Template**

Date: 1/21/20	Presenter Name: John McNamara PGY2
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Article Citation: Brucker K, et al. Exploring Gender Bias in Nursing Evaluations of Emergency Medicine Residents. Acad Emerg Med. 2019 Nov;26(11):1266-1272. Dos: 10.1111/acem.13843. Pub 2019 Sep 23. PMID: 31373086

Country(ies): USA

Funding Source(s): none stated

Purpose
Research Question(s): Does gender bias exist in nursing evaluations?
Hypotheses: Gender bias exists in nursing evaluations and that female residents in comparison to their male counterparts would receive more negative feedback on perception of their interpersonal skills.
Study Purpose: To evaluate gender bias in nursing evaluations of residents.

Methods
Study Design: Retrospective study
Outcome(s) [or Dependent Variable]: <i>The perception of resident characteristics based on four categories standout, ability, grindstone, interpersonal</i>
Intervention [or Independent Variable]: <i>The gender of the resident being evaluated</i>
Ethics Review: IRB Review
Research Setting: Single ACGME accredited EM residency program in Indiana University
Study Subjects: Residents however unclear what speciality, PGY level
Inclusion Criteria: Not stated
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Study Interventions: Evaluations of male v female residents by nurses. No specific intervention.
Study Groups: Male and female residents
Instruments/Measures Used: Nursing evaluations looking at professionalism, interpersonal skills and communication questions as well as free-text box
Data Collection: Word lists to compare letters of recommendation into four categories based on gender. Standout (distinguished themselves above peers), Grindstone (work ethic, effort), Ability (skills, knowledge), and Interpersonal (communication with nurses, patients, families) Comments were then evaluated on valence (positive, neutral, negative) and strength (certain or tentative)
Data Analysis: Mann Whitney U test (used when comparing two groups where dependent variable is either ordinal or continuous and not normally distributed)
A priori sample size calculation? Not Described
Statistical analyses used: Descriptive
Adjustment for potential confounders? Yes If yes, list: Subject members were evaluated to see if there were any measurable difference in ability between male and female residents based off of ACGME in-training exams and relevant milestone evaluations for the same period in which the residents were evaluated by nursing staff. Do not comment on how milestone evaluations were obtained and they do note that milestone evaluations are not a surrogate for bedside behavior.

Results
Study participants: Residents however not clear what speciality and level of training and whether the level of training varied between gender.

Brief answers to research questions [key findings]: *No significant difference in interpersonal valence.*

Additional findings: *Significant difference in valence in regards to ability and grindstone with more negative comments being made towards female residents.*

Limitations:

- Do not comment on how milestones evaluations are gathered and whether there is also a bias in generating these. They are not a surrogate for bedside performance and so hard to say whether there was an actual difference in ability
- Single training environment
- Do not take into account the gender of the evaluator.
- No minimal amount of interaction between resident and nurse (random evals)
- Do not take into account preexisting relationships between resident and nurse
- Do not clearly describe participant numbers, what year of training and what specialty they were in. Seems the nurses were emergency department nurses however this is not made clear.

Clinical Implications

Applicable? They comment on this but difficult to say what the impact is on training and medical practice

Feasible? n/a, not really a specific suggestive intervention more just a general understanding of bias in regard to nursing evaluations of residents

Clinically relevant? Nursing staff bias towards residents is relevant however again we do not have a clear idea of how this effects clinical practice and training only that there is some bias in nursing evaluations of residents

Comments:

Level of evidence generated from this study

Ia: evidence obtained from meta-analysis of randomized controlled trials

Ib: evidence obtained from at least one randomized controlled trial

IIa: evidence obtained from at least one well-designed, controlled study without randomization

IIb: evidence obtained from at least one other type of well-designed quasi-experimental study

III: evidence obtained from a well-designed, non-experimental study

IV: expert committee reports; expert opinion; case study; case report

Additional Comments/Discussion/Notes

