

Interprofessional Gender Bias During Emergency Medicine Residency Training

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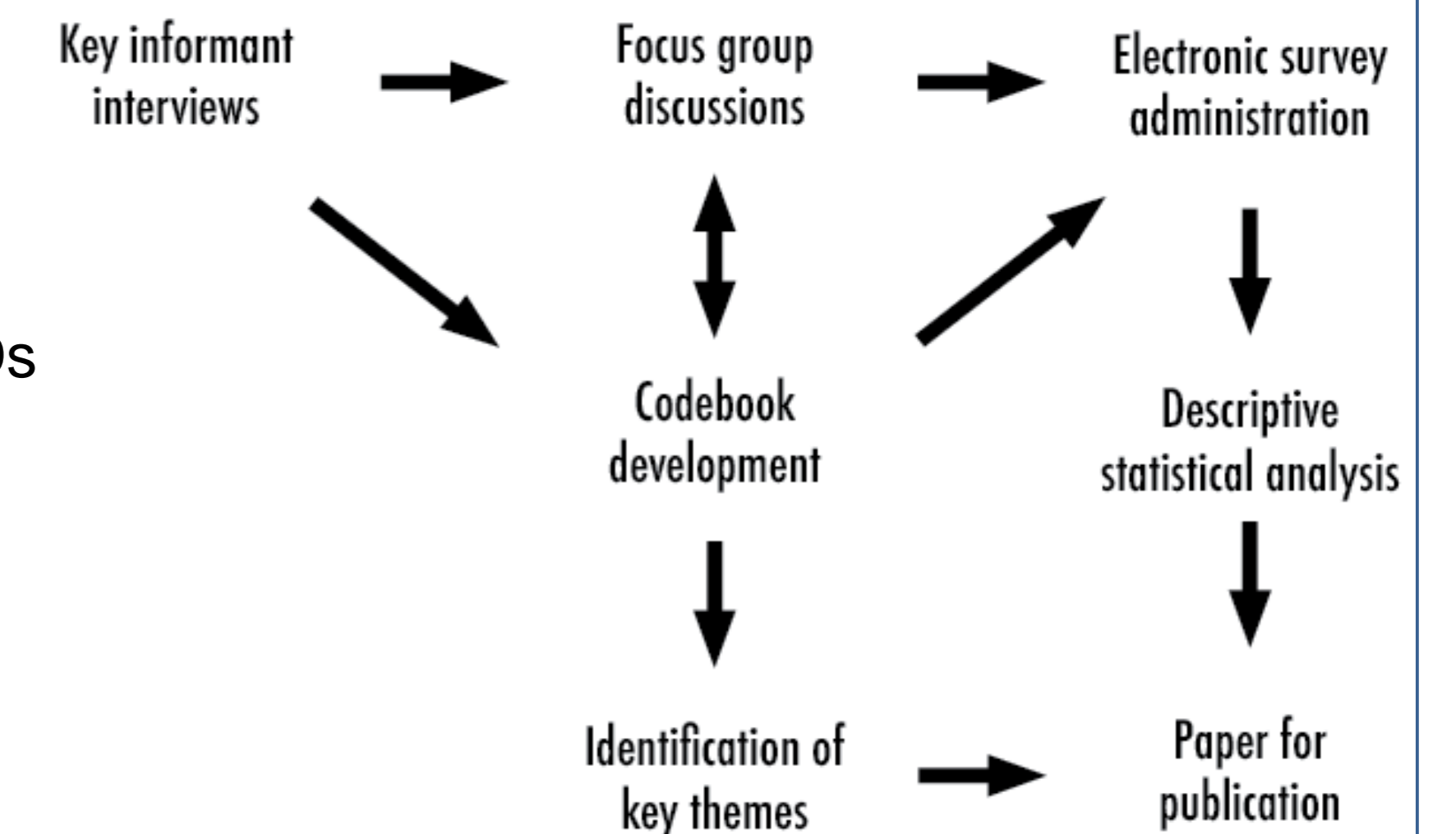


Background & Aim

- Gender disparities continue to persist within the medical field.
- The adverse effects of gender bias have been well documented, including among trainees in Emergency Medicine (EM).
- The extent to which gender-based discrimination occurs in the context of interprofessional interactions is not well understood.
- The **aim** of this study is to explore and understand perceptions and experiences of bias in the context of interprofessional relationships between EM residents and emergency department (ED) nurses.

Methods

- Mixed-methods study exploring perceptions of gender bias in the workplace.
- Qualitative: Key informant interviews and focus groups with EM residents and nurses
- Quantitative: Anonymous web-based survey to all EM residents and nurses in EDs at Brigham and Women's and Massachusetts General Hospitals
- Analysis:
 - Two-tailed t-tests for comparison of continuous data
 - Wilcoxon rank-sum (Mann-Whitney) tests for comparison of ordinal data
 - Simple thematic analysis for qualitative data



Quantitative & Qualitative

A total of 134 individuals (32%) completed the entirety of the survey, including 104 nurses (28.7%) and 30 resident physicians (52.6%).

	Total		Nurses		Residents	
	n	%	n	%	n	%
Respondents	162	38.7	123	34.0	39	68.4
Complete	134	32.0	104	28.7	30	52.6
Gender						
Female	99	73.9	88	84.6	11	36.7
Male	31	23.1	12	11.5	19	63.3
Prefer not to say	4	3	4	38.5	0	0

Comparison of perceptions of the affect of gender bias in the workplace

	Nurses vs residents		Female nurse vs female resident		Female vs male residents	
	Z*	p	Z*	p	Z*	p
Job satisfaction	-3.04	0.002	-4.39	<0.001	3.50	<0.001
Patient care	-3.26	0.001	-3.98	<0.001	2.40	0.016
Wellness	-2.96	0.003	-4.24	<0.001	3.31	0.001
Burnout	-3.07	0.002	-4.41	<0.001	3.17	0.002
Self-doubt	-2.39	0.017	-3.93	<0.001	3.21	0.001
Patient safety	0.78	0.437	-0.95	0.344	0.52	0.601

*Two-sample Wilcoxon rank-sum (Mann-Whitney)

Qualitative Results

Several key themes emerged from interviews and focus groups with both female and male nurses and residents. Most participants identified gender as an important factor in interprofessional working relationships in the ED. However, the degree to which gender influenced relationships differed between participants in profession and presenting gender.

Conclusion

Gender continues to play a significant role in shaping interprofessional interactions between trainees in EM and nursing staff. Gender bias contributes to dissatisfaction in the workplace, the effects of which are felt by male and female nurses and resident physicians. Female EM residents more frequently report that gender bias has a negative impact on their interprofessional relationships.

Acknowledgements

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Qualitative Study Results



Themes	Examples
Awareness of gender bias in interprofessional relationships	<ul style="list-style-type: none"> - Report gender bias as something they hadn't previously thought about previously - Straight male colleagues oblivious to gender bias - Female nurses and residents report other females very aware of differences in treatment by gender - Nurses not aware of treating female residents differently
Communication	<ul style="list-style-type: none"> - Female nurses more open to discussion with nurses - How residents react to questions, feedback (e.g. about orders, patient safety, difficult interaction)
Gender bias towards residents (specific examples)	<ul style="list-style-type: none"> - Questioning of female residents' orders - Provider does not like to work with female residents in general - Nurses preferentially ask the male resident about the plans
Gender bias towards nurse (specific examples)	<ul style="list-style-type: none"> - Condescending tone towards female nurses - Women have to work harder to get respect - Men are taken more seriously - Female residents are more standoffish with female nurses than with male nurses
Differential treatment based on level of experience	<ul style="list-style-type: none"> - Experience level (intern vs senior resident, or new grad vs senior nurse) has an impact on trust
Responses to gender bias	<ul style="list-style-type: none"> - Safety reporting - HR complaint - Discussing with colleagues; including emotional impact
Suggestions for change	<ul style="list-style-type: none"> - Decreasing salary gap at attending level - Increased accountability/follow-up mechanisms - Publicize negative experiences to force change - Nurses allying themselves w/ the female resident - Increasing awareness – video learning

I think that male residents' orders are questioned less, their competence is questioned less."
-Male resident physician

"The friendliness factor varies...I think men get a lot more leeway to try to be 'friends' with the nurses. And it doesn't damage their professional reputation."

"Exactly. I think that it's because they can be friends, but in moments of leadership they can still be looked at as leaders, whereas **I think a lot of times the nurses don't necessarily see the women as leaders. They'll see them as peers.** Everything is a discussion and a conversation.... There's more trust in what the man is saying, what he's telling them to do."
- Female resident physicians

"Sometimes female residents, when they first start, try to assert themselves more because they're generally taken less serious by the male attendings or male residents, so I think that usually they start a little more hot-headed and then reel it in a little bit."
-Female nurse

"[Male nurses] get taken more seriously and they're not questioned as much about that they say or feel...If they said something or suggested something it was taken as the end-all be-all, and they weren't given as much of an argument."
-Female nurse



Witnessing gender-based discrimination in interprofessional interactions

	All		Nurses		Residents		Comparison of means	
	Mean	95%	Mean	95% CI	Mean	95% CI	t	p
All	31.7	(26.9, 36.5)	23.9	(19.4, 28.4)	58.7	(48.6, 68.7)	-6.997	<0.0001
Female	29.0	(23.5, 34.5)	23.4	(18.6, 28.3)	73.5	(57.3, 89.8)	-6.83	<0.0001
Male	37.5	(27.1, 48.0)	17.8	(3.6, 31.9)	50.1	(38.0, 62.1)	-3.65	0.001
	Between genders (all providers)		Between genders (nurses)		Between genders (residents)			
	t	p	t	p	t	p		
	-1.48	0.14	0.81	0.417	2.5	0.0183		

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Perceived frequency of interprofessional bias

	All		Nurses		Residents	
	Mean	95%	Mean	95% CI	Mean	95% CI
All	29.6	(25.4, 33.8)	24.8	(20.3, 29.4)	38.8	(27.4, 50.1)
Female	30.9	(25.6, 36.2)	26.4	(21.3, 31.4)	66.9	(53.8, 80.0)
Male	17.6	(10.3, 24.9)	9.9	(2.5, 17.3)	22.5	(11.6, 33.4)

Significant difference between males vs females, and between female nurses vs female residents

*Two-sample Wilcoxon rank-sum (Mann-Whitney)