

Original Research Article

Prevalence of burnout among pediatric and obstetrics a gynecology resident at Al-Yamamah hospital in Riyadh

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Received: 27 July 2022

Revised: 19 August 2022

Accepted: 25 August 2022

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ABSTRACT

Background: Burnout is a common, under-recognized problem amongst health workers. It is defined by three elements; emotional drain, depersonalization, and decreased professional productivity. Healthcare workers are particularly at risk, due to prolonged working hours, decreased physician autonomy, and extreme administrative burdens. The purpose of this study is to estimate the prevalence of workplace burnout among pediatric and obstetrics and gynecology residents in Al-Yamamah hospital.

Methods: A cross-sectional study was performed on pediatric and obstetrics and gynecology residents at Al-Yamamah hospital in Riyadh. Data were collected through a previously validated questionnaire. The questionnaire involved two parts; the 1st which included demographic data, and the 2nd Maslach burnout inventory for health services workers (MBI-HSS).

Results: Fifty-four percent (54%) of the respondents were male and the mean age was 29 years. Thirty-seven percent (37%) of respondents stated that they work 61 to 70 hours per week and 30% of respondents reported to work 51 to 60 hours per week. Ten percent of the participants showed high depersonalization, 17% reported to have low personal achievements and 12% had high emotional exhaustion.

Conclusions: Even though the burnout rate in our study is still of concern, it was found to be much lower compared to the burnout rate of other local studies. Appropriate measures should be taken to deal with the existing burnout amongst residents, such as spreading awareness, counselling, and social support.

Keywords: Burnout, Residents, Anxiety, Saudi Arabia

INTRODUCTION

Burnout is common, under-recognized problem amongst health workers. It is defined by three elements; emotional drain, bitterness toward's one's job, and decreased professional productivity.¹ Healthcare workers are particularly at risk, due to prolonged working hours, decreased physician autonomy and extreme administrative burdens.²

Amongst medical workers, certain risk factors have found to be associated with higher levels of stress and burnout

including; younger age, female sex, lower income, and higher number of on-calls per month.^{3,4} Individual traits and personal expectations also increase the risk of burnout, such as guilt, empathy, and the need to strive for perfectionism.^{5,6} Together, both external and internal stressors come together to contribute to the existing and apparent increase in burnout amongst physicians.

Burnout is a serious problem, as it results in significant consequences to both the patient and practicing physician. In regards to patients, burnout results in patient harm, medical mistakes, and lower quality care. While

concerning the physician, it can lead to depression, suicidal ideation and substance abuse.⁷

Alternatively, physician well-being has been found to be associated with better performance and greater patient outcomes.⁸

Study focuses particularly on burnout amongst medical residents, as they are likely to experience immense stress due to numerous precipitating factors including; increased workload, sleeplessness, peer competition, medical lawsuits, and training expectations.^{9,10}

A study conducted in Canada, with an aim of assessing prevalence of burnout amongst Canadian residents, revealed that 69.4% of participating residents reported burnout.¹¹

Another study performed in Jordan, showed that 77.5% of studied residents have burnout.¹²

A study that took place in Saudi Arabia, with data collected from Riyadh and Buraidah, revealed that 81% of residents reported burnout.¹³

This study was performed on pediatric and obstetrics and gynecology residents at Al-Yamamah hospital in Riyadh. Apparently, studies regarding burnout in specific residency specialties in Saudi-Arabia are limited. In this study, we aim to evaluate the prevalence of burnout amongst pediatric and obstetrics and gynecology residents, along with a secondary aim of possible contributing factors.

METHODS

A cross-sectional study was performed on pediatric and obstetrics and gynecology residents at Al-Yamamah hospital in Riyadh. Al-Yamamah hospital is a 310-bed specialized care center located in Riyadh city, Saudi Arabia, which is affiliated with the Saudi commission for health specialties. The purpose and process of the study was explained to suitable participants and they were given a previously validated questionnaire to fill-out. Data were collected between 15 May 2022 and 31 May 2022. The questionnaire involved 2 parts; the first which included demographic data, and the second MBI-HSS.

The MBI-HSS is a validated instrument that has been generally recognized as a popular measure of burnout in medical workers. The MBI-HSS includes three domains: 1) emotional exhaustion (EE), 2) depersonalization (DP), and 3) personal accomplishment (PA).¹⁴

High scores on emotional exhaustion (EE) and depersonalization (DP) or low scores on personal accomplishment (PA) signify occupational burnout.¹⁵

Pediatrics and obstetrics and gynecology residents at all levels of training in Al-Yamamah hospital were included.

The data were collected from respondents and were entered into a Microsoft excel spreadsheet. The data were then exported to IBM SPSS software where statistical analysis was performed. The results were represented using descriptive statistics, specifically measures of frequencies, measures of central tendency (mean), and measures of variability (standard deviation).

Sampling technique

All pediatrics and obstetrics and gynecology residents working in Al-Yamamah hospital were included in study.

Inclusion and exclusion criteria

Pediatrics and obstetrics and gynecology residents from all levels working in Al-Yamamah hospital were included and residents from other specialties and residents rotating in Al-Yamamah hospital from other training centers were excluded.

IRB approval

King Abdullah international medical research center (KAIMRC) approved this study, RC22/075/R.

RESULTS

The questionnaire was given to 54 residents in Al-Yamamah hospital, of which 52 finished the questionnaire. The response rate was 96.30%. Fifty-four percent of the respondents were male. The average age of the respondents was 29 years and twenty-three percent of the respondents were married. Sixty-two percent of respondents were obstetrics and gynecology residents. Twenty-three percent of the participants were in their first year of residency training and 35% were in their second year of residency training. Participants' demographics are outlined in Table 1.

Thirty-seven percent (37%) of respondents stated that they work 61 to 70 hours per week and 30% of respondents reported to work 51 to 60 hours per week. Most of the respondents have 4 to 6 on-calls per month. Sixty percent (60%) and 54% of the respondents sleep over 5 hours per day. Eighty-five percent of the residents disclosed their dissatisfaction with their salary. Ten percent of the participants showed high depersonalization, 17% reported to have low personal achievements and 12% had high emotional exhaustion. The questionnaire is summarized in Table 2.

In contrast with pediatric residents, obstetrics and gynecology residents were found to have decreased personal achievement rates. Nevertheless, both specialties appeared to have relatively similar depersonalization and emotional exhaustion rates (Table 3). Senior residents were found to have lower personal achievement rates and higher emotional exhaustion rates, when compared to junior residents (Table 4).

Table 1: Demographic characteristics of participants.

Characteristics	Residents, (n=52)
Age (mean) (years)	29
Gender (%)	
Male	54
Female	46
Marital status (%)	
Single	77
Married	23
Specialty (%)	
Pediatrics	38
Obstetrics and gynecology	62
Years of residency training (%)	
1 st Year*	23
2 nd Year*	35
3 rd Year*	15
4 th Year**	19
5 th Year**	8

*Considered as junior residents. **Considered as senior residents.

Table 2: Presumed risk factors and burnout rates of respondents.

Variables	Categories	N	Percentage (%)
How many hours do you work per week? (Hours)	41-50	4	8
	51-60	16	30
	61-70	19	37
	71-80	6	12
	More than 80	7	13
How many on-calls do you have per month?	Less than 4 on-calls	10	19
	4-6 on-calls	31	60
	More than 6 on-calls	11	21
How many hours do you sleep per day? (Hours)	Less than 5	24	46
	More than 5	28	54
Are you satisfied with your income?	Yes	8	15
	No	44	85
Do you smoke?	Yes	20	38
	No	32	62
Depersonalization	Total 5 or less	31	60
	Total 6 to 11	16	30
	Total greater than 11	5	10
Personal achievement	Total 33 or less	9	17
	Total 34 to 39	17	33
	Total greater than 39	26	50
Emotional exhaustion	Total 17 or less	28	53
	Total 18 to 29	18	35
	Total more than 29	6	12

Table 3: Burnout rates (Pediatrics residents compared to obstetrics and gynecology residents).

Variables	Categories	Specialty				P value
		Pediatrics, (n=20)		Obstetrics and gynecology, (n=32)		
		N	%	N	%	
Depersonalization	Total 5 or less	11	55	20	63	0.273
	Total 6 to 11	6	30	10	31	
	Total greater than 11	3	15	2	6	
		N	%	N	%	

Continued.

Variables	Categories	Specialty				P value
Personal achievement	Total 33 or less	3	15	6	20	0.001*
	Total 34 to 39	4	20	13	40	
	Total greater than 39	13	65	13	40	
Emotional exhaustion	Total 17 or less	11	55	17	53	0.239
	Total 18 to 29	7	35	11	34	
	Total more than 29	2	10	4	13	

*Denotes significant between-group differences ($p < 0.05$).

Table 4: Burnout rates (Junior residents compared to senior residents).

Variables	Categories	Year of residency training				P value
		Junior, (n=38)		Senior, (n=14)		
		N	%	N	%	
Depersonalization	Total 5 or less	18	47	7	50	0.115
	Total 6 to 11	12	32	4	29	
	Total greater than 11	8	21	3	21	
Personal achievement	Total 33 or less	5	13	5	36	0.03*
	Total 34 to 39	14	37	4	28	
	Total greater than 39	19	50	5	36	
Emotional exhaustion	Total 17 or less	17	45	4	29	0.001*
	Total 18 to 29	11	29	2	14	
	Total more than 29	10	26	8	57	

*Denotes significant between-group differences ($p < 0.05$).

DISCUSSION

There are a limited number of studies in Saudi Arabia evaluating the prevalence of burnout among specific specialties. In this study, we presented a previously validated questionnaire to the residents in Al-Yamamah hospital (n=52). We noted that the residents in Al-Yamamah hospital are experiencing mild levels of burnout. Obstetrics and gynecology residents showed greater levels of burnout compared to pediatric residents, with senior residents displaying higher levels of burnout when compared to junior residents. Most of the residents in Al-Yamamah hospital are overburdened with work and are displeased with their salary.

Burnout may result in patient harm, medical mistakes, and lower quality care.⁷ With the consequences of burnout put into account, it is worrisome that 47% of our sample displayed moderate to high levels of emotional exhaustion and 40% showed moderate to high levels of depersonalization.

Residents are likely to experience burnout throughout their training, this may be attributable to numerous factors including; increased workload, sleeplessness, peer competition, medical lawsuits, and training expectations.^{9,10}

In comparison to other studies assessing the prevalence of burnout in Saudi-Arabia, our results were found to be more favorable. For example, a local study conducted

with data collected from Riyadh and Buraidah, revealed that 81% of residents reported burnout, in comparison to 17% burnout rate in our study.¹³ As far as we know, our

study represents the largest screening of burnout for pediatrics and obstetrics and gynecology residents in Saudi Arabia, however our results are limited by selection bias seeing as we did not provide information about how many residents were present in each training program in Riyadh.

CONCLUSION

Even though the burnout rate in our study is still of concern, it was found to be much lower compared to the burnout rate of other local studies. Appropriate measures should be taken to deal with the existing burnout amongst residents, such as spreading awareness, counselling, and social support.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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Cite this article as: Almuhesseny AA, Alyamani LA, Alotaibi MM, Alhnake AW, Almomen FA, Almuradini EA. Prevalence of burnout among pediatric and obstetrics a gynecology resident at Al-Yamamah hospital in Riyadh. *Int J Community Med Public Health* 2022;9:3373-7.