

The Prevalence of Physicians' Burnout Syndrome in Ibrahim Malik Teaching Hospital, Khartoum, Sudan, 2020

Abstract:

Background: Burnout is described as exploratory and qualitatively as a state of emotional exhaustion due to excessive demands on energy, strength or sources in workplace. It is characterized by physical symptoms such as exhaustion, fatigue, frequent headache, and gastrointestinal disorders, sleeplessness and behavioral signs include frustration, anger, a suspicious attitude omnipotence or overconfidence, cynicism and signs of depression.

Methods: This is a descriptive cross-sectional hospital-based study. The data was collected from 100 Physicians by a questionnaire specially prepared for the purposes of this study. Filling out the questionnaires was distributed by the research team in person. The questionnaire consisted of 27 questions, with 9 questions attributed to each of the 3 risk factors (Depersonalization, Emotional Exhaustion, and Personal Accomplishment). Data was analyzed by using SPSS program version 26 and the result was represented in tables and figures.

Results: (72%) of the participant were females and (28 %) were males, age ranged between 2 and more than 51 years, age was categorized into three groups 20–30 (73%), 31–40 (20%) and 41–50 (5%) and more than 50 (2%). Participants were distributed in 6 different specialties with Pediatrics as the most represented specialty (18 %). In the level of profession most of the participant were house officer (42%) followed by registrar (32%) and the least were specialist (4%). Levels of emotional exhaustion, depersonalization, (77 %) of the sample had a high level of (EE), (54 %) had a high level of (DP), and (14 %) had a low level of (PA). (19 %) of the residents included in this study had a high level of burnout in all three domains of the index, and (93 %) had a high level in at least one of the three. The high level of each burnout components distributed according to the research different demographic variables and the results of the inferential statistical tests. Males had higher levels of EE (82.8%), and DP (55%), and lower levels of PA (14.9%) than females (71.6%), (54%), (12.1%) respectively.

Conclusion: In conclusion, our study showed that burn out is highly prevalent among Ibrahim Malik hospital doctors, while female doctors had a higher degree burnout than males. Among the different professional levels, the highest percentage of burnout belonged to GPs and the lowest belonged to consultants. ER doctors suffered the most from burnout, whereas surgeons suffered the least. Several factors attributing to the burnout symptoms of these doctors have been identified.

Key words: Burnout, emotional exhaustion, depersonalization, personal accomplishment

1. Introduction

Collapse is described as exploratory and qualitatively as a state of emotional prostration due to inordinate demands on energy, strength or sources in plant. It's characterized by physical symptoms similar as prostration, fatigue, frequent headache, and gastrointestinal diseases, wakefulness and behavioral signs include frustration, wrathfulness, a suspicious station omnipotence or overconfidence, cynicism and signs of depression (1). Maslach description "collapse as a cerebral pattern arising as a prolonged response to habitual interpersonal stressors on the job" (2). Collapse pattern is characterized by three confines' emotional prostration EE (energy reduction, emotional and physical fatigue or reduction), depersonalization DP (cynicism, loss of empathy, detachment from the job or subject or responsibility), and particular accomplishment (PA) inefficacy, ineffectiveness and sense lack of accomplishment or capability. Maslach Burnout Inventory (MBI), is the most extensively used tone- reported questionnaire to measure the three confines of collapse quantitatively (3). The three confines of collapse are emotional prostration (EE), depersonalization (DP) (cynicism), and particular accomplishment (PA) (low sense of particular accomplishment) (3). The world health association (WHO) defined collapse as an occupational pattern that affect from habitual plant stress that has not been successfully managed (4). It's characterized by three confines passions of energy reduction or prostration, increased internal distance from one's job, or passions of negativism or cynicism related to one's job; and reduced professional efficacy. Collapse honored in the edition of International Bracket of Disease (ICD- 11- the Official Compendium of conditions 11th edition), WHO. Collapse wasn't classified as a medical condition, also honored plant collapse as the diagnosable condition (Diagnostic Code QD85) performing from habitual plant stress and encompassing a constellation of prostration, cynicism, and reduced efficacy (4).

Collapse appears as global miracle affects croaker each over the world, collapse affects croaker, case, and health care association. Collapse affects physical health, internal health, and cerebral health and particular life of the croakers, leading to occupational consequences (5- 9). Collapse consequence negatively affect the quality of patient healthcare, case's safety and satisfaction, including medical crimes, malpractice, sub-optimal health care services (10,11). Collapse consequences overload the health care associations with a high profitable cost due high rate of

croaker development, early withdrawal, low productivity, paying compensation of malpractice and medical crimes, patient poor satisfaction with the quality of health service (12- 15).

2. Methods:

2.1.Study design and area:

This descriptive cross-sectional hospital-based study was conducted in Ibrahim Malik teaching hospital in Khartoum, Sudan. It was founded in 1977 and it is a governmental owned hospital providing many and various facilities to the general public. The hospital provides a 24/7 Emergency service, as well as many outpatient’s clinics. It also has dental clinics included in its services. It also includes residency training for doctors as well as a full vaccination program. The hospital holds a total of 326 beds with 8 different wings/departments.

2.2.Data collection and management:

The data was collected from 100 Physicians by a questionnaire specially prepared for the purposes of this study. Filling out the questionnaires was distributed by the research team in person. The questionnaire consisted of 27 questions, with 9 questions attributed to each of the 3 risk factors (Depersonalization, Emotional Exhaustion, and Personal Accomplishment). Data was analyzed by using SPSS program version 26 and the result was represented in tables and figures. Burnout was assessed as mild, moderate, serious or severe according to the following table [16]

Table (1): The Parameters to be used for measuring burnout symptoms [17]

Degree	Percentage	Comment
None-Mild	0%-25%	This Physician is unlikely to be suffering from Burnout, and they are likely content with their professional and personal life.
Moderate	25.1%-50%	This Physician is likely to be suffering from a moderate degree of Burnout syndrome, and is recommended to seek out information on methods of self-care or increase engaging in activities to increase mental and personal wellbeing

Serious	50.1%-75%	This physician is likely suffering from a serious degree of Burnout Syndrome and should seek assistance from a trusted mental health professional
Severe	75.1%-100%	This physician is likely suffering from a severe degree of Burnout Syndrome, and should seek immediate help from a trusted mental health professional

3. Results

Table 2 Distribution of the sample according to the demographic and work-related variables

Variables		Percentage	Frequency
Gender	Females	72%	72
	Males	28%	28
Age group	20–30	73%	73
	31–40	20%	20
	41–50	5%	5
	51 and more	2 %	2
Level of profession	House officer	42	42 %
	Registrar	32	32 %
	Specialist	4	4 %
	Consultant	7	7 %
	GP	15	15 %
	Specialty	Surgery	10 %
Internal Medicine		14%	14
Pediatrics		18 %	18
OB/GYN		19 %	19
ER		21%	21
Orthopedic		5%	5

Gp= general physician, OB / GYN = obstetrics and gynecology, ER = emergency

The final sample size was (100), Table 2 represents the distribution of residents according to demographic and work-related variables. (72%) of the participant were females and (28 %) were males, age ranged between 2 and more than 51 years, age was categorized into four groups 20–30 (73%), 31–40 (20%) and 41–50 (5%) and more than 50 (2%). Participants were distributed in 6 different specialties with OB/GYN as the most represented specialty (19%). In the level of profession most of the participant were house officer (42%) followed by registrar (32%) and the least were specialist (4%).

Table 3 Levels of burnout for the three dimensions of the index

EE		DP		PA	
Percent	Frequ	Percent	Frequ	Percent	Frequ

	ncy		ncy		ency	
Low level	7%	7	16.6%	16	65 %	65
Moderate	16%	16	30 %	30	21%	21
High level	77%	77	54%	54	14 %	14
					Percent	Frequ ency
High level of burnout in all domains of the index					19 %	19
High level of burnout in at least one domain of the index					93 %	93

EE = emotional exhaustion, DP = depersonalization, PA= personal accomplishment Levels of emotional exhaustion, depersonalization, and personal accomplishment are displayed in Table3 (77 %) of the sample had a high level of (EE), (54 %) had a high level of (DP), and (14 %) had a low level of (PA). (19 %) of the residents included in this study had a high level of burnout in all three domains of the index, and (93 %) had a high level in at least one of the three.

Table4 Research variables and statistical test

Research variables	Burnout variables			<i>P</i> value
Variable	Percent	High level of EE	High level of DP	
		High level of EE	High level of DP	High level of PA

Gender	Females	44.10%	71.6%	54%	12.1%	0.004
	Males	55.90%	82.8%	55%	14.9%	
Age group	21–25	34%	73.6%	56.1%	12.2%	0.037
	26–30	59.50%	79.3%	53.2%	13%	
	31–35	6.50%	86.3%	59%	27.2%	
						0.066
Specialty	General Surgery	32.6%	81.4%	58%	14.8%	
	Internal Medicine	24.2%	76.2%	54.5%	14.6%	
	Pediatric	9.2%	80%	45%	15%	
	Obstetrics	5.7%	76.9%	60%	11.5%	
	Orthopedic	5.7%	64.6%	45%	5.8%	
	Emergency Medicine		89%	34%	12.3%	

Table 4 represents the percentage of the high level of each burnout components distributed according to the research different demographic variables and the results of the inferential statistical tests. Males had higher levels of EE (82.8%), and DP (55%), and lower levels of PA (14.9%) than females (71.6%), (54%), (12.1%) respectively. Significant relation was only found between gender and level of EE ($p = 0.004$).

4. Discussion:

The present study indicate that the collapse pattern has an intimidating high frequency in the population it was made on, which could indicate the need for farther assessments and interventions for the,900 registered croakers in Sudan (18). This supported utmost of the former studies made in Africa (19) (20) (21). Contradicting the “Burnout in Australasian Youngish Fellows” study (22) and “Physician well- being frequency of collapse and associated threat factors in a tertiary sanitarium, Riyadh, Saudi Arabia” exploration results, surgeons in Ibrahim Malik Teaching Hospital had the alternate smallest probable threat of collapse, which, still, was only fairly lower than other thing. Collapse within the Internal Medicine department, had- fairly- the smallest frequencies, which was against the “Physician well- being frequencies of collapse and associated threat factors in a tertiary sanitarium, Riyadh, Saudi Arabia” exploration results (22). Despite the diversity of the relative differences between fortes, this difference may not exactly contradict the findings of those studies, due to the overall high frequency of probable collapse among all fortes, with the frequency ranging from 51 to 81. Slightly analogous to the “Collapse among gynecological resides in Lahore, Pakistan A cross- sectional check”, the

frequency of collapse in gynecologists was nearly 60 (23). Nonetheless, this attendant chance included all specialty situations of Obstetrics and Gynecology; hence comparison to that study could be fairly invalid, since it only included Gynecological resides. Alarmingly, the most affected croakers. Were those at the early stage of their medical career. Supporting the “Physician well- being frequency of collapse and associated threat factors in a tertiary sanitarium, Riyadh, Saudi Arabia” exploration, the frequency was advanced in resides than advisers (23). The results also supported the analogous pattern of advanced collapse in inferior croakers. in opposition to a dropped threat with high specialization situations shown in the “Collapse in anesthesiology and ferocious care is there a problem in Germany?” Exploration (24). Both could be linked to the allegedly dropped workload and hours of advisers in discrepancy to the prolonged GPs’ and resides’ workload and work hours. Different to the “Collapse and sources of stress among medical resides at Hammad Medical Corporation, Qatar” exploration, women scored worse in depersonalization (25) unlike their counterparts which scored much better (25). A slight difference from some of the former studies made in Africa, in which the results showed that depersonalization was fairly more affected than emotional prostration when comparing situations. particular accomplishment was the least affected factor in opposition to the result of one of the former studies (27), which could be due to the developing nature of the country with, an allegedly, increased number of people with low socioeconomic status presenting to governmental sanitarium to seek medical help due to lower prices), which could increase the feeling of accomplishment in croakers. analogous to the 2013 Medscape lifestyle Report (which was grounded on the check of over 1,000 croakers .in the US), “Burnout in Australasian Youngish Fellows” study, and “ Gender differences in the effect of grief responses and collapse on emotional torture among clinical oncologists” exploration, collapse in womanish croakers was advanced than their manly associates (27) (28), with all womanish actors likely suffering from collapse in comparison to 98 of manly actors. This could be linked to the hormonal change’s women suffer during ovulation, period, gestation and menopause or indeed due to the increased artistic burden regarding women’s liabilities in the Sudanese society, hence, pouring to the increased threat of collapse. still, this is a threat that wasn't studied in this exploration.

4. Conclusion:

In conclusion, ER doctors suffered the most from burnout, whereas surgeons suffered the least. Several factors attributing to the burnout symptoms of these doctors have been identified. The first factor being personal accomplishment, which was the most affected factor in general practitioners and the least affected in consultants. Emotional exhaustion was the highest in specialist and the least in house officers. Depersonalization was the highest in consultants and the least in specialists. In terms of the risk factors accrediting to burnout in terms of gender, our results concluded that males got a higher percentage of low personal accomplishment and emotional exhaustion than females. Meanwhile, females scored a higher percentage of depersonalization than males. In regards to the risk factors affecting the different specialties, results have shown that emotional exhaustion was the most affected in ICU doctors and least affected in orthopedic doctors. Low personal accomplishment was the highest in orthopedics and the lowest in OB/GYN. Depersonalization, was the highest in OB/GYN and the lowest in ICU. Finally, the prevalence of symptoms of Burnout Syndrome among doctors employed at Ibrahim Malik Teaching Hospital in October 2020 was found to be very high, constituting a pressing challenge that needs to be met by organizations, individuals and society at large.

Consent

As per international standard or university standard, Participants' written consent has been collected and preserved by the author(s).

Reference

1. Freudenberger HJ. "Staff burnout". *Journal of Social Issues* 30 (1974): 159-165.
2. Maslach C, Jackson SE. The measurement of experienced burnout. *Journal of organizational behavior*. 1981 Apr;2(2):99-113.
3. Maslach C and Leiter MV. "Understanding the burnout experience: Recent research and its implications for psychiatry". *World Psychiatry* 15 (2016): 103-111.
4. World Health Organization. Burn-out an "occupational phenomenon": International Classification of Diseases. Geneva: World Health Organization (2019).
5. Salvagioni DA, Melanda FN, Mesas AE, González AD, Gabani FL, Andrade SM. Physical, psychological and occupational consequences of job burnout: A systematic review of prospective studies. *PloS one*. 2017 Oct 4;12(10):e0185781.

6. Garcia C de L., *et al.* "Influence of Burnout on Patient Safety: Systematic Review and Meta-Analysis". *Medicina* 55.9 (2019): 553.
7. Udemezue O Imo. "Burnout and psychiatric morbidity among doctors in the UK: a systematic literature review of prevalence and associated factors". *BJ Psych Bulletin* 41 (2017): 197-204.
8. Patel RS, Bachu R, Adikey A, Malik M, Shah M. Factors related to physician burnout and its consequences: a review. *Behavioral sciences*. 2018 Oct 25;8(11):98.
9. Shanafelt TD, West CP, Sinsky C, Trockel M, Tutty M, Satele DV, Carlasare LE, Dyrbye LN. Changes in burnout and satisfaction with work-life integration in physicians and the general US working population between 2011 and 2017. In *Mayo Clinic Proceedings* 2019 Sep 1 (Vol. 94, No. 9, pp. 1681-1694).
10. Panagioti M, Geraghty K, Johnson J, Zhou A, Panagopoulou E, Chew-Graham C, Peters D, Hodkinson A, Riley R, Esmail A. Association between physician burnout and patient safety, professionalism, and patient satisfaction: a systematic review and meta-analysis. *JAMA internal medicine*. 2018 ;178(10):1317-31.
11. Tawfik DS, Profit J, Morgenthaler TI, Satele DV, Sinsky CA, Dyrbye LN, Tutty MA, West CP, Shanafelt TD. Physician burnout, well-being, and work unit safety grades in relationship to reported medical errors. In *Mayo Clinic Proceedings* 2018 Nov 1 (Vol. 93, No. 11, pp. 1571-1580).
12. Dewa CS, Loong D, Bonato S, Trojanowski L, Rea M. The relationship between resident burnout and safety-related and acceptability-related quality of healthcare: a systematic literature review. *BMC medical education*. 2017 ;17(1):1-6.
13. Tawfik DS, Scheid A, Profit J, Shanafelt T, Trockel M, Adair KC, Sexton JB, Ioannidis JP. Evidence relating health care provider burnout and quality of care: a systematic review and meta-analysis. *Annals of internal medicine*. 2019 ;171(8):555-67.
14. Han S, Shanafelt TD, Sinsky CA, Awad KM, Dyrbye LN, Fiscus LC, Trockel M, Goh J. Estimating the attributable cost of physician burnout in the United States. *Annals of internal medicine*. 2019 Jun 4;170(11):784-90.
15. Owoc J, Mańczak M, Jabłońska M, Tombarkiewicz M, Olszewski R. Association between physician burnout and self-reported errors: meta-analysis. *Journal of Patient Safety*. 2022 ;18(1): e180-8.

16. Panagioti M, Geraghty K, Johnson J, Zhou A, Panagopoulou E, Chew-Graham C, Peters D, Hodkinson A, Riley R, Esmail A. Association between physician burnout and patient safety, professionalism, and patient satisfaction: a systematic review and meta-analysis. *JAMA internal medicine*. 2018 ;178(10):1317-31.
17. Kemper KJ, Wilson PM, Schwartz A, Mahan JD, Batra M, Staples BB, McClafferty H, Schubert CJ, Serwint JR. Burnout in pediatric residents: comparing brief screening questions to the Maslach Burnout Inventory. *Academic pediatrics*. 2019 Apr 1;19(3):251-5.
18. MAM I & Mahgoub M A. Physician Burnout Syndrome. *Sudan journal of medical science, JMS* Vol. 4, No. 4, Dec 2009: 327-331
19. Abdo SA, El-Sallamy RM, El-Sherbiny AA, Kabbash IA. Burnout among physicians and nursing staff working in the emergency hospital of Tanta University, Egypt. *East Mediterr Health J*. 2016 Mar 15;21(12):906-15.
20. Liebenberg A, Coetzee J, Conradie H, Coetzee J. Burnout among rural hospital doctors in the Western cape: comparison with previous south African studies. *Afr J Prim Health Care Fa Med*. 2018;10(1): e1–e7.
21. Ogundipe OA, Olagunju AT, Lasebikan VO, Coker AO. Burnout among doctors in residency training in a tertiary hospital. *Asian J Psychiatr*. 2014; 10:27–32.
22. Aldrees TM, Aleissa S, Zamakhshary M, Badri M, Sadat-Ali M. Physician well-being: prevalence of burnout and associated risk factors in a tertiary hospital, Riyadh, Saudi Arabia. *Annual Saudi Medicine*. 2013 ;33(5):451-6.
23. Opoku ST, Apenteng BA. Career satisfaction and burnout among Ghanaian physicians. *Int Health*. 2014;6(1):54–61.
24. Rajan S, Engelbrecht A. A cross-sectional survey of burnout amongst doctors in a cohort of public sector emergency centres in Gauteng, South Africa. *Afr J Emerg Med*. 2018;8(3):95– 99.
25. van der Walt N, Scribante J, Perrie H. Burnout among anaesthetists in South Africa. *S Afr J Anaesth Analg*. 2015;21(6):169–172.
26. van der Walt N, Scribante J, Perrie H. Burnout among anaesthetists in South Africa. *S Afr J Anaesth Analg*. 2015;21(6):169–172.
27. Stodel JM, Stewart-Smith A. The influence of burnout on skills retention of junior

doctors at Red Cross War Memorial Children's Hospital: a case study. *S Afr Med J*. 2011 Feb;101(2):115-8

28. Kim MH, Mazenga AC, Simon K, Yu X, Ahmed S, Nyasulu P, Kazembe PN, Ngoma S, Abrams EJ. Burnout and self-reported suboptimal patient care amongst health care workers providing HIV care in Malawi. *PLoS One*. 2018 Feb 21;13(2): e0192983.