***Original Research Article***

# 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 descriptive cross-sectional hospital-based study was conducted in Ibrahim Malik teaching hospital in Khartoum, Sudan. This research was conducted in Ibrahim Malik Teaching Hospital, located in Khartoum State, 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 outpatients' clinic. 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. As of October 2020, the hospital has around 500 doctors in employment.

**Result:** (72%) of the participant were females and (28 %) were males, age ranged between 2and 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, 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 alow level of (PA). (19 %) of the residents included inthis study had a high level of burnout in all three do- mains 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 (68 %), 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 consultant's .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

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 [1]. Maslach definition "burnout as a psychological syndrome emerging as a prolonged response to chronic interpersonal stressors on the job" [2]. Burnout syndrome is characterized by three dimensions' emotional exhaustion (EE): (energy depletion, emotional and physical fatigue or depletion), depersonalization (DP): (cynicism, loss of empathy, detachment from the job or subject or responsibility), and personal accomplishment (PA): inefficacy, ineffectiveness and sense lack of accomplishment or competence. Maslach Burnout Inventory (MBI), is the most widely used self-reported questionnaire to measure the three dimensions of burnout quantitatively [2,3]. The three dimensions of burnout are emotional exhaustion (EE), depersonalization (DP) (cynicism), and personal accomplishment (PA) (low sense of personal accomplishment). The world health organization (WHO) defined burnout as an occupational syndrome that result from chronic workplace stress that has not been successfully managed. It is characterized by three dimensions: feelings of energy depletion or exhaustion, increased mental distance from one's job, or feelings of negativism or cynicism related to one's job; and reduced professional efficacy. Burnout recognized in the edition of International Classification of Disease (ICD-11- the Official Compendium of Diseases 11th edition), WHO. Burnout was not classified as a medical condition, also recognized workplace burnout as the diagnosable condition (Diagnostic Code

QD85) resulting from chronic workplace stress and encompassing a constellation of exhaustion, cynicism, and reduced efficacy [4]. Burnout appears as global phenomenon affects physician all over the world, burnout affects physician, patient, and health care organization. Burnout affects physical health, mental health, and psychological health and personal life of the physicians, leading to occupational consequences [5-9]. Burnout consequence negatively affect the quality of patient healthcare, patient's safety and satisfaction, including medical errors, malpractice, sub-optimal health care services [10,11]. Burnout consequences overburden the health care organizations with a high economic cost due high rate of physician turnover, early retirement, low productivity, paying compensation of malpractice and medical errors, 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.

This research was conducted in Ibrahim Malik Teaching Hospital, located in Khartoum State, 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. As of October 2020, the hospital has around 500 doctors in employment.

### 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**

| 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 ofself-care or increase engaging in activities to increase mental and personal wellbeing |
| Serious | 50.1%-75% | This physician is likely suffering from a serious degreeof 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 helpfrom a trusted mental health professional |

## 3. Results

The final sample size was (100), Table 2represents the distribution of residents according to demographic and work-related variables. (72%) of the participant were females and (28 %) were males, age ranged between 2and 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%).

**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 |
| | 41–5 | 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 % | 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*

Levels of emotional exhaustion, depersonalization, and personal accomplishment are displayed in Table 3 (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 do- mains of the index, and (93 %) had a high level in at least one of the three.

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

| | EE | | DP | | PA | |
|---|---|---|---|---|---|---|
| | Percent | Frequency | Percent | Frequency | Percent | Frequency |
| Low level | 7% | 7 | 16.% | 16 | 65 % | 65 |
| Moderate | 16% | 16 | 30 % | 30 | 21% | 21 |
| High level | 77% | 77 | 54% | 54 | 14 % | 14 |
| | | | | | Percent | Frequency |
| 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

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 using T-test ($p = 0.004$).

**Table4** Research variables and statistical test

| Research variables | | | Burnout variables | | | Statistical tests | |
|---|---|---|---|---|---|---|---|
| Variable | | Percent | High level of EE | High level of DP | High level of PA | Statistical test | *P* value |
| Gender | Females 44.10% | | 71.6% | 54% | 12.1% | T-test | 0.004 for EE |
| | Males | 55.90 % | 82.8% | 55% | 14.9% | | |
| Age group | 21–25 | 34% | 73.6% | 56.1% | 12.2% | ANOVA | 0.037 for EE |
| | 26–30 | 59.50 % | 79.3% | 53.2% | 13% | | |
| | 31–35 | 6.50% | 86.3% | 59% | 27.2% | | |
| Specialty | General Surgery | 32.6% | 81.4% | 58% | 14.8% | ANOVA | 0.066 no significant relation |
| | 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% | | |



**4. Discussion:**

The findings of this 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 [17]. This supported utmost of the former studies made in Africa [18] [19] [20]. Contradicting the "Burnout in Australasian Youngish Fellows" study [21] 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 [21]. 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 [22]. 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 [22]. 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 [23]. 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 [24] unlike their counterparts which scored much better [24]. 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 [25], 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 Meds cape lifestyle Report (which was grounded on the check of over,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 [26] [27], with all womanish actors likely suffering from collapse in comparison to 98 of manly actors. This could be linked to the hormonal changes 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.

**5. Conclusion:**

In conclusion, our study showed that burn out is highly prevalent among Ibrahim Malik hospital doctors (68 %), 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 consultant's .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 pressingchallenge that needs to be met by organizations, individuals and society at large.

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