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OCCUPATIONAL BURNOUT AMONG DOCTORS WORKING IN MANKWENG AND PIETERSBURG HOSPITALS, LIMPOPO PROVINCE

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Introduction

Burnout can be described as a job-related stress syndrome caused by chronic exposure to work stress[1]. Work environments with excessive work schedules and high demands plus the need to prove one's value, leave employees feeling emotionally drained and cynical about their work, with a low sense of personal accomplishment[1]. Physical depletion, feelings of helplessness, negative self-concept, and negative attitudes towards work, life, and others follow[2].

The concept of burnout includes three major components, namely Emotional Exhaustion (EE), Depersonalization (DP), and reduced Personal Accomplishment (PA)[2]. EE is defined as a state of emotional and sometimes physical depletion. DP refers to negative and cynical attitudes toward one's clients or patients, or towards work in general[3]. Reduced PA, refers to the tendency to doubt the meaning and quality of one's work[4].

Occupational burnout among medical doctors is a major concern globally[1], and there is evidence to suggest that it is an issue locally as well. Amongst rural hospital doctors in the Western Cape, 81% of participants had high EE or DP scores[5]. Similarly, in the Cape Metropole, 76% of public sector doctors experienced burnout[6]. However, the understanding of burnout, especially amongst doctors in the public sector in Limpopo Province, is still limited. Therefore, we investigated the prevalence of burnout and associated factors among full-time doctors at two tertiary hospitals in the Limpopo Province of South Africa.

Methods

A quantitative observational cross-sectional study was conducted from August 2018 to May 2019 among all medical doctors working at Mankweng Hospital (32km to the east of Polokwane, the capital of Limpopo Province) and Pietersburg Hospital (situated in Polokwane). Both hospitals employed 382 doctors of all ranks. No community service doctors were included in the study because there were none working at the tertiary hospitals at that time.

The Maslach Burnout Inventory (MBI) a validated tool was used for data collection.[7] The MBI measures all 3 burnout dimensions (EE, DP, and PA) using 7-point Likert scales indicating the frequency of characteristic symptoms. Final scores are then classified either as low range, moderate or high range (see Table 1)[8]. For the purposes of this research, burnout was regarded as a high-range score in the EE and/or DP dimensions (see Table 1). PA is greatly dependent on resources[8]. Thus, since resources are frequently a problem in the public sector, PA was excluded. To avoid bias, our questionnaire was labelled as a "job satisfaction survey", as suggested by Maslach et al[8].

The prevalence of burnout was correlated with socio-demographic variables. A Chi-square test was used to determine whether a significant relationship exists between burnout and the participants' demographics. Statistical significance was reported on a 95% confidence interval.

Ethical Considerations: Permission was obtained from the Turfloop Research and Ethics Committee: TREC/72/2017: PG. Approval was granted from the Limpopo Provincial Department of Health, and both hospitals: LP2017 09 015). All participants gave written consent.

Table 1: Maslach Burnout Inventory Classification of Burnout[9]

Category of Burnout	Low Range	Moderate Range	High Range
Emotional Exhaustion (EE)	0 – 16	17 – 26	≥ 27
Depersonalisation (DP)	0 – 6	7 – 12	≥13
Personal Accomplishment (PA)*	≥ 39	32 – 38	0 – 31

*The value of PA is inversely related to burnout. Thus, a lack of PA is a part of the burnout syndrome.

Figure 1: Gender of participants

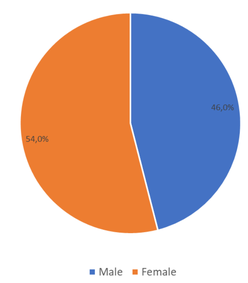
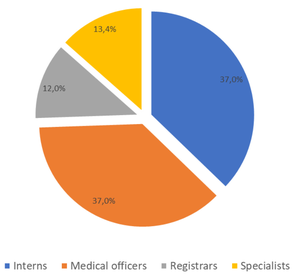


Figure 2: Participants' ranks



Results

Questionnaires were completed by 150 doctors (a response rate of 77.7%). Of these participants, 95 (63.0%) were working at Mankweng Hospital and 55 (37.0%) were working at Pietersburg Hospital.

The overall burnout rate for Mankweng Hospital was 33% and 39% for Pietersburg Hospital. The combined overall burnout rate for both hospitals was 36%.

The mean EE score for all participants was 21 (moderate burnout range), the mean DP score was 6 (low range) and the mean PA score was 36 (moderate range). See Table 1.

No statistically significant associations were found between burnout and various demographic covariates, including clinical departments. While burnout rates seemed to be higher in general surgery, anesthesia, and internal medicine, none of these differences were statistically significant. Similarly, gender, age, marital status, length of practice, average number of hours worked per week, and participation in overtime did not have a statistically significant effect on burnout.

Figure 3: MBI Burnout scores of doctors at PMHC

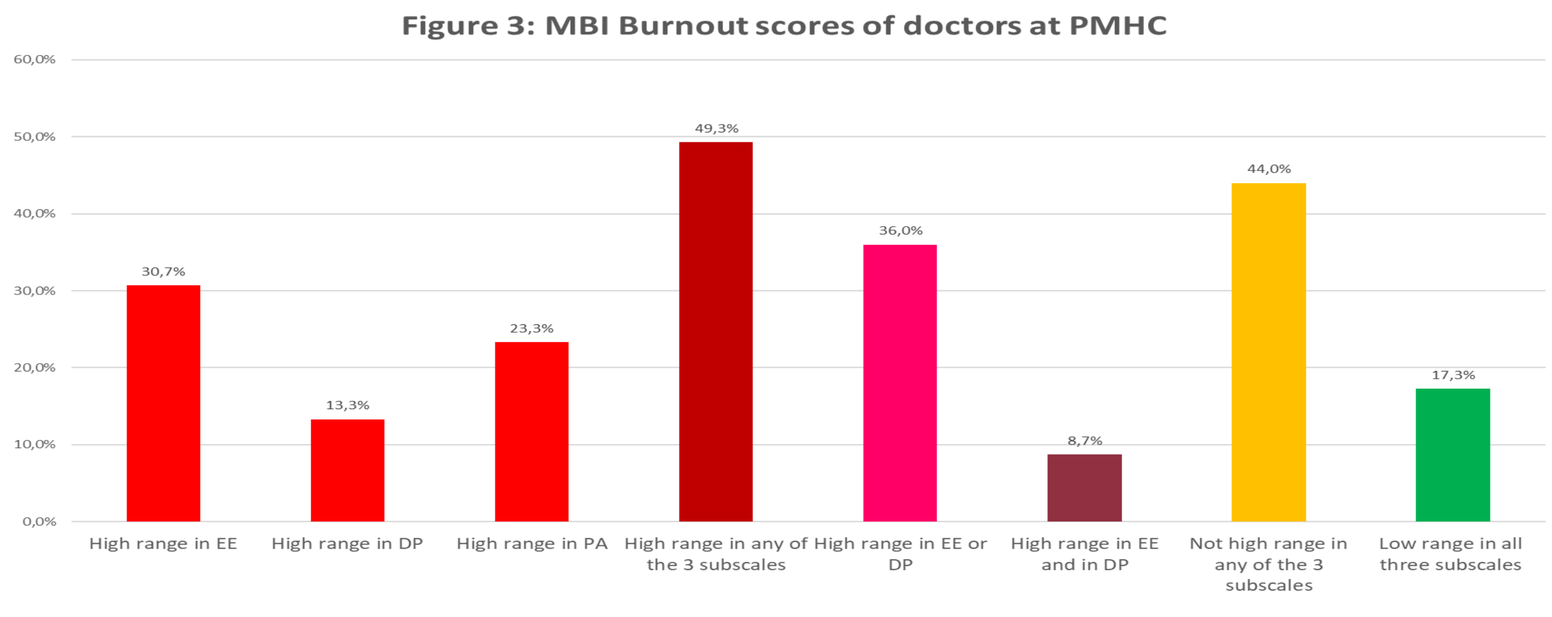
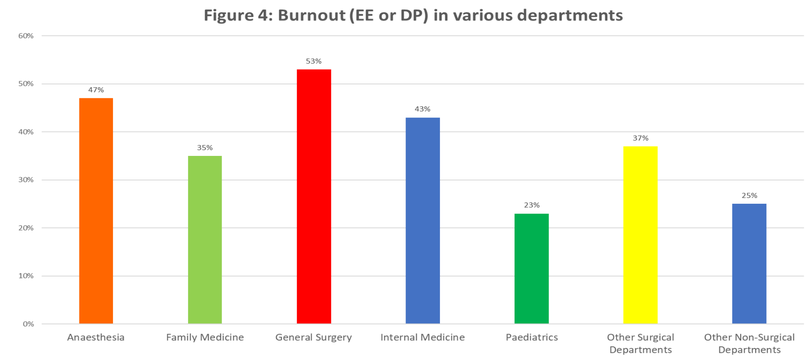


Figure 4: Burnout (EE or DP) in various departments



Discussion

This study found a 36% prevalence of clinically significant burnout among doctors working at Mankweng and Pietersburg hospitals in Limpopo. Furthermore, 74% of doctors at these institutions scored high in at least one category of burnout.

Several South African studies on burnout among medical doctors in the public sector have been conducted with varying results ranging from 26,3% in Bloemfontein and 81% in the Western Cape[5,6,10]. This variation in burnout prevalence is a worldwide phenomenon. A review of 182 burnout studies including 109 628 individuals in 45 countries showed that overall burnout prevalence rates ranged from 0% to 80.5%[11].

Considering the above, the 36% burnout prevalence found at Pietersburg and Mankweng hospitals seems to fall within the lower middle range compared to studies from South Africa and internationally[5,6,10,12]. However, this assumption should be viewed with caution. While it seems like the prevalence of burnout varies a lot from place to place, as the work circumstances may differ greatly, the reasons for this variation might also be due to definitions and criteria as opposed to burnout itself.

In the abovementioned review, while most studies used the MBI as a measuring tool, criteria used to define and measure overall burnout varied, possibly contributing to these wide ranges[11]. Considering there are at least 142 unique definitions for meeting the criteria of overall burnout or burnout within a subscale, this is not surprising[11].

Unfortunately, this lack of consensus among researchers makes study comparisons problematic[11,13].

Our study did not demonstrate any statistically significant associations between burnout and demographic factors, including rank, or work experience. This was likely due to the small sample sizes of some of the sub-groups. Nevertheless, this negative finding has also been echoed by others[11,14].

Conclusion

While a burnout prevalence of 36% at Pietersburg and Mankweng hospitals seem to fall within the lower-middle range of what has been reported in South Africa and elsewhere, this must be viewed with caution[5,6,10,11,12]. Research on burnout amongst medical doctors has shown a large degree of variation, most likely due to extraneous factors.

In keeping with the literature, our study showed no associations between sociodemographic factors and burnout, which either suggests that the cause of burnout should be sought elsewhere, or simply that the phenomenon of burnout is complex and multifactorial in origin. Additionally, there is too much variation in the criteria of burnout amongst different studies, making comparisons difficult. More work is needed to standardize the measurement of burnout.

Limitations

Our final sample size of 150 was less than expected with a response rate of 77,7%. A further limitation was that participants were recruited conveniently, and consequently the results are not generalisable. The small number of doctors in some of the sub-groups limited the reliability of between-group comparisons. Furthermore, the sample comprised doctors who were present at departmental meetings and available to fill out the questionnaires. It is possible that the doctors who happened to be absent from the weekly continuing medical education meetings might have been the ones who were most burned out.

Table 2: Comparison of burnout and demographic covariates.

	Presence of Burnout (From Total of 150)		
Gender	No Burnout	Burnout Present	P-Value
Male	47	22 (31.8%)	0.212
Female	49	32 (39.5%)	
Age Group	No Burnout	Burnout Present	P-Value
20 – 35 years	63	40 (38.8%)	0.656
36 – 45 years	20	10 (33.3%)	
46 – 55 years	7	2 (22.2%)	
> 55 years	6	2 (25%)	
Marital Status	No Burnout	Burnout Present	P-Value
Single	53	35 (39.7%)	0.131
Married	43	17 (28.3%)	
Divorced	0	1	
Separated	0	0	
Widowed	0	1	
Length of Practice	No Burnout	Burnout Present	P-Value
< 5 years	45	31 (40.7%)	0.258
5 – 9.9 years	24	12 (33.3%)	
10 – 15 years	16	7 (30.4%)	
> 15 years	11	4 (26.6%)	
Average Hours Per Week	No Burnout	Burnout Present	P-Value
< 30 hours	1	1 (50%)	0.183
31 – 50 hours	38	14 (26.9%)	
51 – 70 hours	47	30 (38.9%)	
71 – 90 hours	7	8 (53.3%)	
> 90 hours	3	1 (25%)	
Overtime Duties	No Burnout (Out of 96)	Burnout Present (Out of 54)	P-Value
(YES) Does Performs Overtime	94	51 (35.2%)	0.200
(NO) Does Not Performs Overtime	2	3 (60%)	
Ranks	No Burnout	Burnout Present	
Intern doctors	34	22(39%)	
Medical officers	34	22(39%)	
Registrars	14	4(22%)	
Consultants	14	6(30%)	

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