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Prevalence and Causes of Burnout among Physicians in Arar City, KSA

Anfal Marzouq Alanazi[1], Khulud Awad Altarfawi[1], Rawan Deham Aledeilah[1], Anwar Matar Alsulobi[1], Hisham Nasef Mohammed Meshref[2]

[1]Family Medicine, Saudi Board Family Medicine, [2] Family Medicine, Badanha Primary health care center, Arar, Saudi Arabia

Corresponding author: Anfal Marzouq Alanazi,Email: Toop-1991@hotmail.com,Mobile: 9660533034571

ABSTRACT

Background: Since burnout is a common condition, and its prevalence is expected to increase with time, lack of knowledge about such problem could impede early diagnosis and may lead to delays in seeking appropriate care. **Objective:** to estimate the prevalence and factors associated with burnout among physicians in Saudi Arabia. **Methodology:** A cross-sectional study was conducted during the period from 1 June to 30 November 2021 on a sample of physicians in health care centers in Arar city. All data were collected, tabulated, and statistically analyzed using SPSS 23.0 for windows.

Results: Of all 303 participants, 51.5% were males and 48.5% were females. 33.7% of study sample aged between 20-30 years old. Most (91.7%) of them were working 6-10 hours per day. Only 1% of participants were working 3 days a week, 5.6% 4 days a week and 64.4% 5 days a week. Only 8.9% of our study participants felt emotionally exhausted because of work every day, 17.2% several times a week and 14.9% once a week. As for burnout, 9.2%, 11.9%, 11.6%, 13.9%, 14.5%, 21.1%, and 17.8% felt burned out every day, several times a week, once a week, several times a month, at least once a month, at least few times a year, and never respectively. 23.4% planned to quit their current job. **Conclusion**: Physicians in Saudi Arabia suffer from burnout and emotional exhaustion within reported ranges in previous literature. Actions must be taken to avoid exhaustion, stress, and emphasize pliability.

Keywords: Arar City, Burnout, Physicians, Prevalence, Saudi Arabia.

INTRODUCTION

Burnout is defined as a response to the chronic stressors that are prevalent in the workplace. It is characterized by feelings of emotional exhaustion and cynicism that leads to inefficacy and lack of accomplishment [1]. Healthcare workers, particularly physicians, are exposed to high levels of physical and psychological distress at their work. Many researches showed that physicians and other health care professionals experience high rates of burnout, their roles leaving them exhausted, overworked, or detached, which is the causes and signs of burnout syndrome [2].

Maslach *et al.*, reported that, burnout has three interrelated dimensions: emotional exhaustion, depersonalization, and low personal accomplishment. Emotional exhaustion usually results from prolonged exposure to stress, and it manifests through the loss of enthusiasm for work, feeling not helpful, trapped, and defeated [3]. Many causes make physicians risky for burnout. Their job demands like workload, bad working conditions, lack of management support, limited vacation, and public system related frustration caused burnout symptoms among physicians [4]. Also, physicians are exposed to emotional and social demands at work, while interacting with patients, which is overloading them and resultantly they develop symptoms of chronic stress and burnout [4].

Moreover, burnout syndrome may increase the risk of medical errors and decrease job satisfaction, which incites early retirement or detachment from the job [5].

It was indicated a high prevalence of burnout among practicing physicians and have shown one-third of US physicians have experienced burnout at certain points throughout their careers [4].

In a study conducted in Al Ahsa, Saudi Arabia, it was found a substantial level of burnout amongst doctor of medicine occupying the primary health care centers. The proportion of contributors who counted high score in emotional exhaustion was 47.3%, near 50% scored high depersonalization, besides 59.7% had diminished personal accomplishment. Approximately 25% scored high burnout in all three dimensions; high emotional exhaustion, high depersonalization and low personal accomplishment [6].

Another study was designed to investigate the frequency of job satisfaction, burnout and ethics among physicians across specialties with varied levels of experience and seniority, in hospitals in Makkah, Saudi Arabia. A high level of burnout was found among physicians (51%) and the level of burnout was significantly higher among physicians willing to change their specialty compared to those willing to repeat it (50% vs. 24%, p-value 0.02) [7].

Elbarazi *et al.* (2017) conducted a systematic review to guess the occurrence of burnout in Arab medical professionals. Then looked at the individual and occupational influences accompanying this burnout. This review showed moderate-to-high estimates of self-reported burnout among health care professionals in Arab countries. This was similar to the prevalence in the developed western countries that do not speak Arabic [8].

Cape Town survey done by **Rossouw *et al.***, found that 76% of physicians experienced symptoms of chronic stress and burnout [9]. Another research, published in JAMA Surgery, reported nearly 7,000

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general surgery residents in the U.S. experienced symptoms of burnout. When the researchers parsed the definition of burnout differently, they found significant differences in how prevalent burnout was among participants [10].

Study rationale

Since burnout is a common condition, and its prevalence is expected to increase with time, lack of knowledge about such a problem could impede early diagnosis and may lead to delays in seeking appropriate care.

Objectives:

1. To estimate the prevalence and factors associated with burnout.
2. To determine risk factors of burnout among physicians of Ministry of Health (MOH) care institutes (including dentists) in Arar, Northern Saudi Arabia

SUBJECTS AND METHODS

A cross-sectional study was conducted during the period from 1 June to 30 November 2021 on all male and female physicians in health care centers in Arar city, who were invited to participate and fill the questionnaire of the study.

Sample size:

Sample size was calculated from a total population of 1400 physicians and dentists in health care centers in Arar city.

The calculation methodology of sample size for population survey was used "Raosoft, sample size calculator [11]. According to these methods a minimum of 302 participants was needed; given that the margin of error alpha (α) =0.05, the confidence level = 95%, and the response of distribution = 50%.

It was increased to 332 to compensate for non-responses and incomplete forms.

Data collection tool:

A self-administered online disseminated questionnaire was used for data collection. It was composed of two main sections.

Section 1 included sociodemographic characteristics of the participants, e.g. age, sex, marital status, nationality and occupational characteristics, degree, years of experiences, work hours per day, and choosing day off. The second section asked about causes of burnout; e.g. feel emotionally exhausted, feel worn out at the end of a working day, can easily understand the actions of my colleagues/supervisors, sleep deprivation, sleeping hours, satisfaction with your job, and feeling appreciated.

Data collection technique:

The researchers distributed the questionnaire online as the questionnaire was distributed on social media sites (WhatsApp, Twitter) to be, filled out personally. The questionnaire had a brief introduction explaining the nature of the research and confidentiality of the information that given to participants.

Ethical considerations:

The participants were assured that the confidentiality of their data would be maintained during the study. Research clearance and approval was obtained from the Ethical Research Committee of the General Directorate of Health Affairs, Al-Qassem region with ethical approval number (1443-626214). This work has been carried out in accordance with The Code of Ethics of the World Medical Association (Declaration of Helsinki) for studies involving humans.

Data management and analysis:

All data were collected, tabulated, and statistically analyzed using SPSS 23.0 for windows. Quantitative data were stated as mean ± standard deviation, and qualitative data were stated as absolute frequency and relative frequency (percentage). Proportions of categorical variables were compared using either the chi-square test or Fisher's exact test. P Value < 0.05 was considered statistically significant.

RESULTS

The sociodemographic data are shown in table 1.

Table (1): Sociodemographic characteristics of participants (n=303)

Parameter		No.	%
Gender	**Male**	156	51.5
	Female	147	48.5
Age	**20 - 30 years old**	102	33.7
	31 - 40 years old	114	37.6
	41 – 50 years old	49	16.2
	51 - 60 years old	30	9.9
	More than 60	8	2.6
Nationality	**Saudi**	147	48.5
	Non-Saudi	156	51.5
Marital status:	**Married**	242	79.9
	single	58	19.1
	Divorced	3	1.0
Number of children	***0 (no children)***	80	26.4
	1-2	125	41.3
	3-4	77	25.4
	5 or more	21	6.9
Chronic health condition	**Bronchial Asthma**	9	3.0
	Allergic rhinitis	1	0.4
	Cancer	1	0.4
	Celiac disease	1	0.4
	Diabetes Mellitus	18	7.1
	Hypertension	24	9.5
	Ischemic Heart Disease	5	2.0
	Hypothyroidism	6	2.4
	No	235	77.6
smoking status	**Current**	32	10.6
	ex-smoker	20	6.6
	non-smoker	251	82.8
Education level	**Bachelor**	2	.7
	BDS	2	.7
	Board	9	3.1
	Diploma	14	4.6
	Fellowship	41	13.5
	Master	52	17.2
	MBBS	169	55.8
	MD	8	2.6
	PhD	6	2.0
Job title:	**Consultant**	37	12.2
	GP	76	25.1
	Resident	84	27.7
	Specialist	106	35.0

Participant’s characteristics and work details are shown in table 2.

Table (2): Participants characteristics and work details (n= 303)

Parameter		No.	%
Specialty:	**Anesthesia**	5	1.7
	Cardiology	4	1.3
	Dentist	9	3.0
	Emergency	30	9.9
	ENT	6	2.0
	Family medicine	76	25.1
	General dentistry	3	1.0
	General practice	2	.7
	General surgery	14	4.6
	General Practitioner (GP)	16	5.3
	Hematopathology's	2	.7
	Internal medicine	17	5.6
	Medical laboratory	2	.7
	Nephrology	3	1.0
	Obstetrics and Gynecology	14	4.6
	Oncology	2	.7
	Ophthalmology	5	1.7
	Orthopedic	6	2.0
	Pediatric	44	14.5
	Pediatric Emergency	3	1.0
	Prosthodontics	4	1.3
	Psychiatrist	8	2.6
	Public Health	3	1.0
	Radiology	4	1.3
	Urology	21	6.9
Experience (years):	**1- 5**	134	44.2
	6- 10	61	20.1
	11- 15	37	12.2
	16- 20	27	8.9
	21- 25	11	3.6
	26- 30	12	4.0
	More than 30	5	1.7
	No	16	5.3
Salary/month:	**<10,000 SR**	57	18.8
	10,000-19,999 SR	168	55.4
	≥20,000 SR	78	25.7
Living environment:	**Alone**	48	15.8
	with family	255	84.2
Practice any physical activity	**Yes**	169	55.8
	No	134	44.2
Working hours per day:	**1 - 5**	10	3.3
	6 - 10	278	91.7
	11- 15	14	4.6
	16 - 20	1	0.3
Working days per week:	**3**	3	1.0
	4	17	5.6
	5	195	64.4
	6	65	21.5
	7	23	7.6
Wweekends off	**Yes**	226	74.6
	No	77	25.4
Average number of patients per week:	**1 - 20**	33	10.9
	21 -50	73	24.1
	51 - 100	114	37.6
	100 - 200	63	20.8
	More than 201	11	3.6
	I don't no	9	3.0

Table (3) shows that 20.5% of our study participants felt emotionally exhaustion, 20.5% felt at least few times a year and 17.8% never felt burned out.

Table (3): Burnout and emotional exhaustion among study participants (303)

	Every day	Several times a week	Once a week	Several times a month	At least once a month	At least few times a year	Never
Feel emotionally exhausted because of work	27 8.9%	52 17.2%	45 14.9%	47 15.5%	33 10.9%	62 20.5%	37 12.2%
Feel burned out because of work	28 9.2%	36 11.9%	35 11.6%	42 13.9%	44 14.5%	64 21.1%	54 17.8%

Table 4 shows the factors, which are associated with burnout and emotional exhaustion among study participants.

Table (4): Factors associated with burnout and emotional exhaustion among study participants (303)

	Every day	Several times a week	Once a week	Several times a month	At least once a month	At least few times a year	Never
Feel worn out at the end of a working day:	32 10.6%	59 19.5%	36 11.9%	42 13.9%	42 13.9%	51 16.8%	41 13.5%
Have sleep deprivation in usual routine work:	26 8.6%	39 12.9%	30 9.9%	38 12.5%	41 13.5%	56 18.5%	73 24.1%
Feel tired in the morning and have to face another day on the job:	31 10.2%	37 12.2%	32 10.6%	51 16.8%	28 9.2%	57 18.8%	67 22.1%
Get the feeling that treat some patients /colleagues impersonally, as if they were objects	11 3.6%	28 9.2%	13 4.3%	24 7.9%	28 9.2%	33 10.9%	166 54.8%
Working with people the whole day is stressful	19 6.3%	33 10.9%	24 7.9%	28 9.2%	42 13.9%	56 18.5%	101 33.3%
Deal with other patients' problems successfully	135 44.6%	86 28.4%	21 6.9%	27 8.9%	11 3.6%	17 5.6%	6 2.0%
Feel that influence other people positively through work	98 32.3%	80 26.4%	30 9.9%	38 12.5%	26 8.6%	12 4.0%	19 6.3%
Worry that work makes me emotionally harder:	36 11.9%	35 11.6%	33 10.9%	42 13.9%	31 10.2%	52 17.2%	74 24.4%
Feel full of energy	64 21.1%	92 30.4%	44 14.5%	40 13.2%	28 9.2%	19 6.3%	16 5.3%
Feel frustrated by work	16 5.3%	34 11.2%	33 10.9%	52 17.2%	42 13.9%	53 17.5%	73 24.1%
Feel like working too hard	71 23.4%	56 18.5%	27 8.9%	51 16.8%	20 6.6%	41 13.5%	37 12.2%
Not really interested in what is going on with many of patient	13 4.3%	20 6.6%	14 4.6%	14 4.6%	17 5.6%	37 12.2%	188 62.0%
Being in direct contact with people at work is too stressful	25 8.3%	26 8.6%	22 7.3%	39 12.9%	30 9.9%	65 21.5%	96 31.7%
Feel stimulated when been working closely with my patients	89 29.4%	57 18.8%	43 14.2%	44 14.5%	24 7.9%	23 7.6%	23 7.6%
Have accomplished many worthwhile things in work	66 21.8%	77 25.4%	43 14.2%	48 15.8%	30 9.9%	21 6.9%	18 5.9%
Feeling relaxed when dealing with emotional problems	56 18.5%	66 21.8%	38 12.5%	47 15.5%	34 11.2%	27 8.9%	35 11.6%

Almost half of participants felt need to change job even for once. 23.4% planned to quit their current job. Only 15.8% felt fully appreciated at their job. Only 15.5% were fully satisfied with their job (Table 5).

Table (5): Doctors related characteristics of burnout (n=303)

Parameter		No.	%
Feeling need to change job even for once	**Yes**	136	44.9
	No	167	55.1
Planning to quit current job	**Yes**	71	23.4
	No	232	76.6
Feeling of appreciation at work (1 least, 5 highest)	**1**	17	5.6
	2	32	10.6
	3	131	43.2
	4	75	24.8
	5	48	15.8
Feeling of satisfaction (1 least, 5 highest)	**1**	15	5.0
	2	26	8.6
	3	139	45.9
	4	76	25.1
	5	47	15.5

There was a significant association between burnout and intention to quit job with nationality, smoking status and monthly income or salary (Table 6).

Table (6): Association between sociodemographic characteristics of participants with burnout and intention to quit job due to burnout (303)

		Intention to quit job due to burnout			P value
		Yes (n=71)	No (n=232)	Total (N=303)	
Gender	**Male**	38	118	156	**0.695**
		53.5%	50.9%	51.5%	
	Female	33	114	147	
		46.5%	49.1%	48.5%	
Age	**20 - 30 years old**	18	84	102	**0.446**
		25.4%	36.2%	33.7%	
	31 - 40 years old	31	83	114	
		43.7%	35.8%	37.6%	
	41 – 50 years old	12	37	49	
		16.9%	15.9%	16.2%	
	51 - 60 years old	7	23	30	
		9.9%	9.9%	9.9%	
	More than 60	3	5	8	
		4.2%	2.2%	2.6%	
Nationality	**Saudi**	24	123	147	**0.005**
		33.8%	53.0%	48.5%	
	Non-Saudi	47	109	156	
		66.2%	47.0%	51.5%	
Marital status	**Married**	60	182	242	**0.404**
		84.5%	78.4%	79.9%	
	single	11	47	58	
		15.5%	20.3%	19.1%	
	Divorced	0	3	3	
		0.0%	1.3%	1.0%	
Number of children	**0 (no children)**	16	64	80	**0.260**
		22.5%	27.6%	26.4%	
	1-2	28	97	125	
		39.4%	41.8%	41.3%	
	3-4	22	55	77	
		30.9%	23.7%	25.4%	
	5 or more	5	16	21	
		7.1%	6.9%	6.9%	

		Intention to quit job due to burnout			P value
		Yes (n=71)	No (n=232)	Total (N=303)	
Are you known to have any chronic health condition?	**Bronchial Asthma**	2	7	9	**0.148**
		2.8%	3.0%	3.0%	
	Bronchial Asthma, Allergic rhinitis	1	0	1	
		1.4%	0.0%	0.3%	
	Bronchial Asthma, No	2	0	2	
		2.8%	0.0%	0.7%	
	Cancer	1	0	1	
		1.4%	0.0%	0.3%	
	Celiac disease	1	0	1	
		1.4%	0.0%	0.3%	
	Diabetes Mellitus	3	10	13	
		4.2%	4.3%	4.3%	
	Diabetes Mellitus, Bronchial Asthma	0	1	1	
		0.0%	0.4%	0.3%	
	Diabetes Mellitus, Hypertension	2	4	6	
		2.8%	1.7%	2.0%	
	Diabetes Mellitus, Hypertension, Bronchial Asthma	0	1	1	
		0.0%	0.4%	0.3%	
	Diabetes Mellitus, Hypertension, Ischemic Heart Disease	1	1	2	
		1.4%	0.4%	0.7%	
	Diabetes Mellitus, No	0	1	1	
		0.0%	0.4%	0.3%	
	Hypertension	4	13	17	
		5.6%	5.6%	5.6%	
	Hypertension, Ischemic Heart Disease	0	1	1	
		0.0%	0.4%	0.3%	
	Hypertension, Osteoarthritis	0	1	1	
		0.0%	0.4%	0.3%	
	Hypothyroidism	1	5	6	
		1.4%	2.2%	2.0%	
	Ischemic Heart Disease	1	1	2	
		1.4%	0.4%	0.7%	
	No	51	184	235	
		71.8%	79.3%	77.6%	
	Osteoarthritis	0	2	2	
		0.0%	0.9%	0.7%	
	Rheumatic Arthritis	1	0	1	
		1.4%	0.0%	0.3%	
smoking status	**Current**	14	18	32	**0.008**
		19.7%	7.8%	10.6%	
	ex-smoker	2	18	20	
		2.8%	7.8%	6.6%	
	non-smoker	55	196	251	
		77.5%	84.5%	82.8%	
Degree of education	**Bachelor**	1	1	2	**0.489**
		1.4%	0.4%	0.7%	
	BDS	1	1	2	
		1.4%	0.4%	0.7%	
	Board	2	7	9	
		2.8%	3.1%	3.1%	
	Diploma	5	9	14	
		7.0%	3.9%	4.6%	
	Fellowship	9	32	41	
		12.7%	13.8%	13.5%	
	Master	16	36	52	
		22.5%	15.5%	17.2%	
	MBBS	32	137	169	
		45.1%	59.1%	55.8%	
	MD	3	5	8	
		4.2%	2.2%	2.6%	
	PhD	2	4	6	

		Intention to quit job due to burnout			P value
		Yes (n=71)	No (n=232)	Total (N=303)	
		2.8%	1.7%	2.0%	
Job title:	**Consultant**	9	28	37	**0.465**
		12.7%	12.1%	12.2%	
	General Practitioner (GP)	16	60	76	
		22.5%	25.9%	25.1%	
	Resident	16	68	84	
		22.5%	29.3%	27.7%	
	Specialist	30	76	106	
		42.3%	32.8%	35.0%	
Salary/month:	**<10,000 SR**	20	37	57	**0.046**
		28.2%	15.9%	18.8%	
	10,000-19,999 SR	32	136	168	
		45.1%	58.6%	55.4%	
	=>20,000 SR	19	59	78	
		26.8%	25.4%	25.7%	

DISCUSSION

Physician burnout is a major problem in the medical community, its main cause is workload. This is common, but reversible and preventable. Burnout negatively affects the security and comfort of doctors, patient care, and the health care system. Furthermore, it can raise the financial burden of recruiting new staff members when efficient physicians quit their jobs due to inability to handle stress [12].

In our study, 9.2%, 11.9%, 11.6%, 13.9%, 14.5%, 21.1%, and 17.8% feel burned out every day, several times a week, once a week, several times a month, at least once a month, at least few times a year, and never respectively. Using the Maslach Burnout Inventory - Human Services Survey for Medical Personnel (MBI-HSS (MP)), a Saudi study established that 24.3% of contributors recorded high score of BS in its three scopes [7]. In an additional Saudi study steered in Jeddah, the frequency of burnout was 25.2% [13]. In Riyadh, 6.3% of the contributors reported a high score of burnout in all its three scopes [14].

Internationally, frequency of burnout amongst primary health centre (PMC) medical doctor fluctuates from one nation to alternative; fluctuating from 3.7% to 54.1% [2]. In a previous systematic review, the pooled prevalence of burnout fluctuated from 23% to 27% reliant on the field in which burnout was measured [15]. Supreme scholarships from diverse portions of the world have conveyed a comparable prevalence of burnout [16-19]. **Trufelli *et al.*** [20] showed another systematic review and stated a burnout incidence of 36% in the emotional exhaustion (EE) dominion, 34% in the depersonalization (DP) dominion, and 25% in the low sense of personal accomplishment (PA). **Rodrigues *et al.*** [20] steered a meta-analysis and established the general prevalence of burnout amongst residents from wholly specialisms to be 35%. In a systematic review, by **Rotenstein *et al.*** [21] the evaluation and incidence of burnout displayed considerable disparity between studies, with the prevalence in certain studies was >80%, although in others it was <10%. In additional systematic review amongst 4,108 Arab health care providers, the burnout frequency for the three fields fluctuated from 20 - 81% for EE and 9 to 80% for DP. Correspondingly, the overall prevalence of burnout among Iranian nurses was estimated to be 36% based on 21 studies including 4,180 participants [22]. In yet another meta-analysis, the prevalence of burnout among oncology nurses was found to be 30%, 15%, and 35% in EE, DP, and PA domains, respectively.[23]. This proposes that burnout is a widespread problem across specialisms and dissimilar sets of health care professionals (HCPs), with tiny variance between the industrialized and unindustrialized world.

Regarding emotional exhaustion, 8.9% of our study participants felt emotionally exhaustion because of work every day, 17.2% several times a week, 14.9% once a week, 15.5% several times a month, 10.9% at least once a month, 20.5% at least few times a year, and 12.2% never felt. In a previous study, 47.4% have a great level of EE [7], although it was likewise high in 23.2% to 69.5% in further studies completed in Arab nations. [14,15,25]. In additional Saudi studies, the proportion of medical doctors with high score EE was fluctuating from 29.5% to 69.5%. [25-27]. Two studies were directed in Lebanon conveyed extraordinary prevalence guesses of EE amongst physicians (67.7%) [28]; although alternative study steered in Lebanon described a lesser incidence of extraordinary EE (23.2%) amongst physicians [29]. Correspondingly, 2 studies steered on physicians in Egypt described a great prevalence of extraordinary EE (62.2%, 81.0%, correspondingly), matched to a study on emergency medicinal contributors in Egypt that stated a lesser prevalence of extraordinary scores (20.0% EE) [29-30]. General, studies steered in Bahrain and Jordan described certain of the lowermost prevalence guesses of high EE (24.2%, 32.7%, correspondingly) [31]

As regards to our study results, there was a substantial link between burnout and purpose to quit job with nationality, smoking status and monthly income or salary. Numerous influences were stated in preceding literature such as younger age, female gender, single

status, and problematic working circumstances were establish to be linked with burnout in certain studies. Nevertheless, numerous studies along with ours were unsuccessful to demonstrate a link between burnout and age/gender, signifying that there is indecisive evidence to reflect them as risk issues for burnout. The inconsistency in the outcomes of the studies might be correlated to unadjusted confounding factors. Although younger HCPs can be expected to have increased workloads, low remuneration, and less respect, the incidence of burnout might also be affected by the specialty and the hospital. The higher rate of burnout found in females highlights the need for gender equality and family-friendly work environments. [32]

The financial, individual, and paintings-related rudiments may be accountable for the burnout of the operational staff, resulting in the precocious leaving from their occupations. This touches the extreme revenue of dues for managing in altering educated health workers, inappropriate quality, less efficiency, and decreased morale [33]

CONCLUSION

Physicians in Saudi Arabia suffer from burnout and emotional exhaustion within reported ranges in previous literature. Awareness among doctors can improve the capability to identify their susceptibility to burnout, and instant actions must be taken to overwhelmed and accomplish fatigue, stress, and emphasize resiliency. This could be addressed using the methodical request of evidence-based interferences, comprising the group interferences, and training, confidence training, assisted conversation groups, in addition to endorsing a healthy work atmosphere.

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