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Professional Exhaustion Prevalence and Associated Factors in Doctors and Nurses in Cluster One of Riyadh

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Abstract

Background: Health is the most important factor in the life of an individual. healthcare providers usually encounter several factors that are threatening their professionalism and life. Therefore, this factor not only affects their professionalism and exhaustion from their professional experiences but also introduced the phenomenon of burnout, extremism, and lack the skilled professionalism.
Aim: The aim of the present study was to the professional exhaustion prevalence and associated factors among doctors and nurses working in cluster one of Riyadh kingdom of Saudi Arabia.
Method: studies utilize the quantitative cross-sectional Research Design through the questionnaire-based survey methodology upon the 400-sample size from the doctors and nurses working in cluster one of Riyadh Saudi Arabia.
Results: the greater value of Burnout and Depersonalization was observed with a 95% of confidence interval and a 5% chance of error. this indicates personal achievement among the doctors and nurses reduces to the lower level. results also indicated that age and year of experience have a greater impact on professional exhaustion among healthcare practitioners.
Conclusion: Healthcare practitioners usually get exhausted because of the factors that are related to Burnout and depersonalization. this affects the personal strength of self-containment, confidence, and self-esteem. moreover, it also adds to the personal achievement in their Healthcare dilemma and practices.
Keywords: Professional, exhaustion, prevalence, exhaustion factors, associated factors, doctors, nurses, Cluster One, Riyadh, KSA.

Introduction

The different changes in worker/employee relations are demanding a great capacity for adaptation from workers' conditioning stress, which is one of the biggest labor problems (Durand et al., 2019). In the context of Saudi Arabia, the situation is very much alarming, as 38% of healthcare workers would suffer from stress, being the second ailment most reported by healthcare workers (Moukarzel et al., 2019), linked to half of the working days lost as

absenteeism and conditioning deterioration of mental and physical health, in addition to the decrease in the quality and productivity of individual and organizational performance. (Alqahtani et al., 2021; Abdelhafiz et al., 2020)

Professional exhaustion (PA) or burnout syndrome or 'burned out by work' was initially described by Herbert Freudenberg and is considered a secondary emotional response to prolonged occupational stress (Abbas et al., 2019). Christina Maslach used the term burnout to initially refer to professional identity and inappropriate work behavior, to later define it as a syndrome characterized by emotional exhaustion (Messias et al., 2019), depersonalization and low personal fulfillment among individuals who collaborate with people (Maslach et al., 1997; Aragão et al., 2021). Other authors conceptualize it as a progressive loss of idealism, energy, and the desire to achieve goals (Alqahtani et al., 2021; Torre et al., 2019) or as a state of mental, emotional, and physical exhaustion, caused by chronic stress resulting from excessive involvement with people for long periods of time (Rotstein et al., 2019), being a poor response to work stress that implies alterations, problems, and psychophysiological dysfunctions (Alanazi et al., 2021; Roslan et al., 2021; Alharbi et al., 2022; Shahbal et al., 2022; Noshili et al., 2022; Oraibi et al., 2022)

Based on the definition of Maslach and Jackson, empirically supported by the Maslach Burnout Inventory questionnaire, it has been defined as a syndrome with three symptoms (Giménez Lozano et al., 2021):

a. Emotional exhaustion (EE): the sensation of not being able to give more of oneself at an affective level, creating a situation of depletion of energy or emotional resources due to daily and continuous contact with people in trouble (Saravanabavan et al., 2019).

b. Depersonalization (DP): development of negative attitudes and feelings, such as cynicism, towards the people to whom the service is provided, who are seen with indifference and in a dehumanized way (Shah et al., 2021).

c. Low or lack of professional achievement (PA): tendency to evaluate oneself negatively, especially the ability to do the job and deal with people (Kesarwani et al., 2020).

This syndrome is complex, continuous, and heterogeneous, which appears when the previously motivated person no longer supports and rejects work (Dinibutun et al., 2020). It manifests gradually from the initial emotional exhaustion that appears from having failed to manage stress, causing the job to lose its appeal, and feelings of tedium and boredom appear together with low professional achievement, therefore that the term full syndrome is used when all three symptoms are present. It affects the individual (emotional problems). (AL-KUBAISI et al., 2022; Chemali et al., 2019), anxiety, feelings of helplessness, irritability, aggressive behavior, cardiovascular disorders, immunological and sexual problems, among others) and the workplace (quality of care, absenteeism, and job abandonment, as well as interpersonal conflicts) (Gualano et al., 2021, Amin et al., 2022; Amin et al., 2022; Noshili et al., 2022; Batool et al., 2022; Al-Kubaisi & Shahbal, 2022)

It also causes family and social problems due to the attitudes and behaviors developed that can continue to affect private life with cynical and contemptuous attitudes, confrontations, and others, for which it is considered one of the most important psychosocial occupational injuries today (Rotstein et al., 2019; Elhadi et al., 2020).

Its presence in demanding activities and psychological stress means that it occurs more frequently in professions with greater and continuous contact with people who require care, especially if there is a relationship of help or service, such as healthcare personnel,

teachers, and social workers (Noshili et al., 2022; Jalili et al., 2021).

Aims and Objective of the Study

The objective of this study is to determine the prevalence and associated factors of Professional exhaustion in doctors and nurses in cluster one of the Riyadh Region.

Methodology

Research Design

A quantitative nature-based cross-sectional research design was used.

Sampling and Targeted Population

A purposive non-probability sampling technique was used. Data was collected from healthcare professionals including doctors, nurses, nurse teachers, and other supporting staff professionals who are working within health institutions, and public hospitals under cluster one of Riyadh Region. The sample size was determined under the assumption of maximum variability (p=0.5), 95% reliability, 10% error, and 10% non-response rate, excluding other supporting staff members in healthcare units.

Targeted Data and Data Collection

The sample size was 400 through calculation from the G-force sample calculation method**.** Data was collected from a sample of 350 healthcare professionals including doctors, nurses, nurse teachers, and other supporting staff professionals who are working within this health institution, and public hospitals of Riyadh Region. Considering all the rituals and rules of ethical consideration. The process of data collection was started by getting permission and later print form document was handed to the participant including the informed consent. Informed consent contains all the relevant information that is important for the participant to know. That includes the confidentiality of the participant information, unbiased responses, volunteer participation in the research, and the right to withdraw from the research at any moment. Letters on a questionnaire were handed to the participant to respond regarding the phenomena of interest

Data collection was conducted through a personalized survey prepared by the author that included sociodemographic and employment variables and the self-application of the Maslach Burnout Inventory (MBI) in the English language, ensuring anonymity and confidentiality. The MBI is a 22-item self-administered questionnaire that assesses the professional's feelings and attitudes in their work and towards patients, having been validated in people. This scale evaluates the three dimensions of the syndrome (EE, DP, and lack of PR); with responses on a Likert scale from 0 (never) to 6 (every day).

The score for each dimension of the MBI is the sum of all the points in the corresponding elements. The scores by dimension are categorized into three levels (high, medium, and low) and the cut-off points to define high levels, considering as professionals with a PC profile those who had a high score in the EE and DP dimensions and a low PR score.

The descriptive analysis considered measures of central tendency (continuous variables) and percentages (categorical variables). To assess association, the chi2, Fisher, Anova, and Kruskal-Wallis tests were used. A multivariate model was generated, entering the variables that in the univariate analysis had a significance of less than 0.3 and that were consigned in more than 80% of the cases studied, using binary logistic regression (Forward Stepwise methods), excluding them from the model or re-categorizing the variables with a correlation coefficient greater than 0.6 or a VIF > 0.2 (38). $P \leq 0.05$ was considered significant. The analysis was performed with SPSS (Version 28.0).

Ethical Consideration

Before the conduction of the study, IRB will be obtained from Health Directorate or concerning the authority of the Riyadh Region.

RESULTS

Table 1 450 healthcare professionals were assessed, excluding 50 who answered partially or refused to complete the questionnaire. A final sample of 250 doctors and 150 nurses was obtained, where 53.6% were women. The average age was 43 (SD=0.27) years, the average time of years working in the health sector was 10.53 (DE=0.251), and 9.7 (DE=0.234) years working in the establishment where they were surveyed.

Table # 1: Demographical Information of the study participants. (N=400)

Variable	Categories	f	%
Gender			
	Female	214	53.6
	Male	186	46.4
Age			
	21 – 25	71	17.7
	26 – 30	85	21.3
	31 – 35	91	22.8
	36 + 40	87	21.7
	40 +	66	16,5
Educational Level			
	Diploma	102	25.4
	Bachelors	95	23.7
	Master	110	27,5
	PhD	93	23.4
Professionals			
	Doctors	250	62.5
	Nurses	150	37.5
Year of Experience			
	Less than 10 years	134	33.5
	10 to 20 years	171	42.7
	More than 20 years	95	23.8

Note: f =frequency, % = personage

An average score of 13 was found in EE, 39 in PA, and 4 in DP. As recommended by Maslach, in the sense that the populations are sociocultural different and therefore it is appropriate to calculate the cut-off points for the populations, we found that, compared to the values obtained by Maslach and Jackson (1996), for our sample, the 75th percentile had lower scores in the dimensions of EE and DP table 2 indicates.

Table # 2 dimensions of EE and DP

Variable		Range	Score	Interpretation
EE	75th Percentile	17 – less	13	Low burnout
DP		5 – less	4	Low burnout
PA		33 – less	29	Low burnout

Using the Gil-Monte and Peiro cut-off points in Figure 1, we found a high level of PA risk in the PA dimension in 32.1% of those surveyed, DP in 18.7%, and 10% in EE.

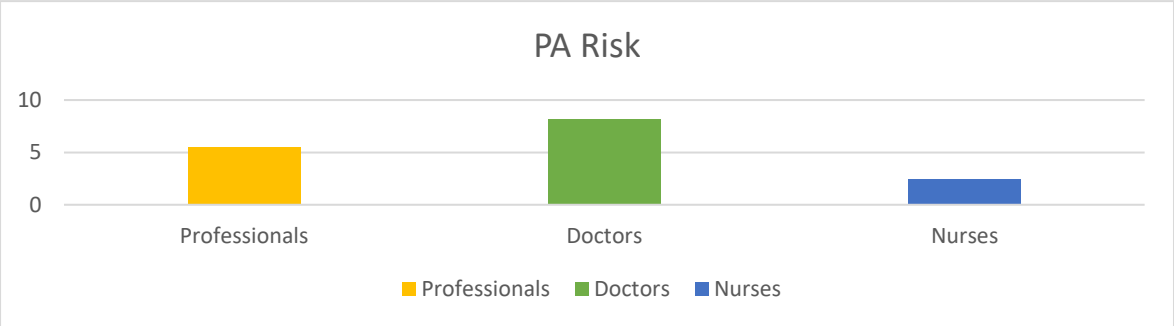

Figure 1 High level of PA Risk

Considering the MBI criteria in Figure 2, we found that only 5.5% of professionals had high-risk levels of PA in the three dimensions. According to professions, the presence of high scores in the three dimensions of the MBI was higher in doctors (8.2%) than in nurses (2.4%)

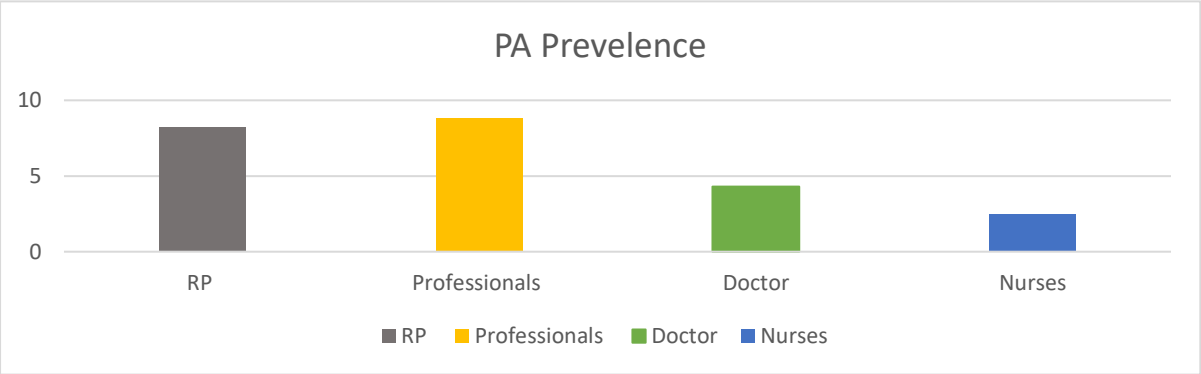

Figure 2 MBI Criteria

As some authors suggest in Figure 3, AP occurs when there is a high level of EE in combination with a high level of PD or a low level of RP (8,23); the prevalence of PA would be 8.8% with a prevalence in physicians of 13% and in nurses of 4%.

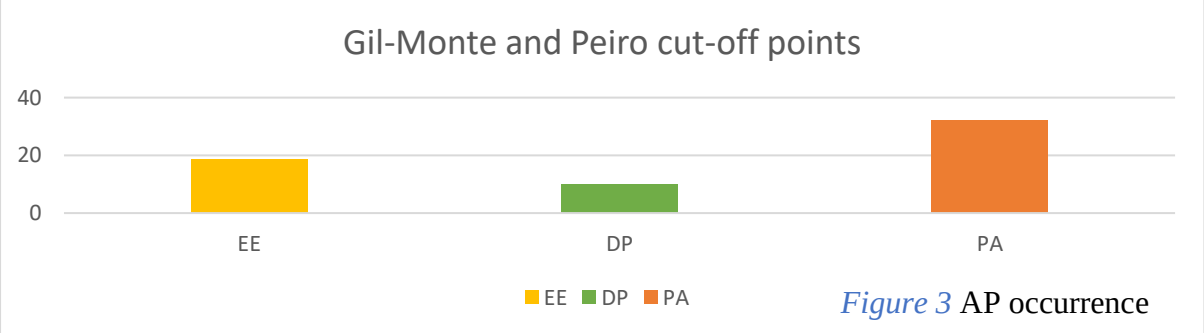

Figure 3 AP occurrence

The prevalence of PA varied by region in Figure 4, with the highest prevalence in those with the greatest poverty, affecting 10% of doctors and nurses in King Salman Hospital

15.3% of doctors and 4.3% of nurses; in King Saud Medical City it was 15.3 as general prevalence, 4.4 for doctors and 2% was for nurses. Meanwhile, in the Prince Sultan Military Medical City (PSMMC) 6.34% and PHC first cluster s5.01%, nurses did not present PA, while in Primary healthcare centers and General Mohail Hospital prevalence of PA was around 2% in nursing professionals. It was different in doctors, with a prevalence greater than 8% in all regions, apart from several past researcher evidence, where it reached only 1.2%.

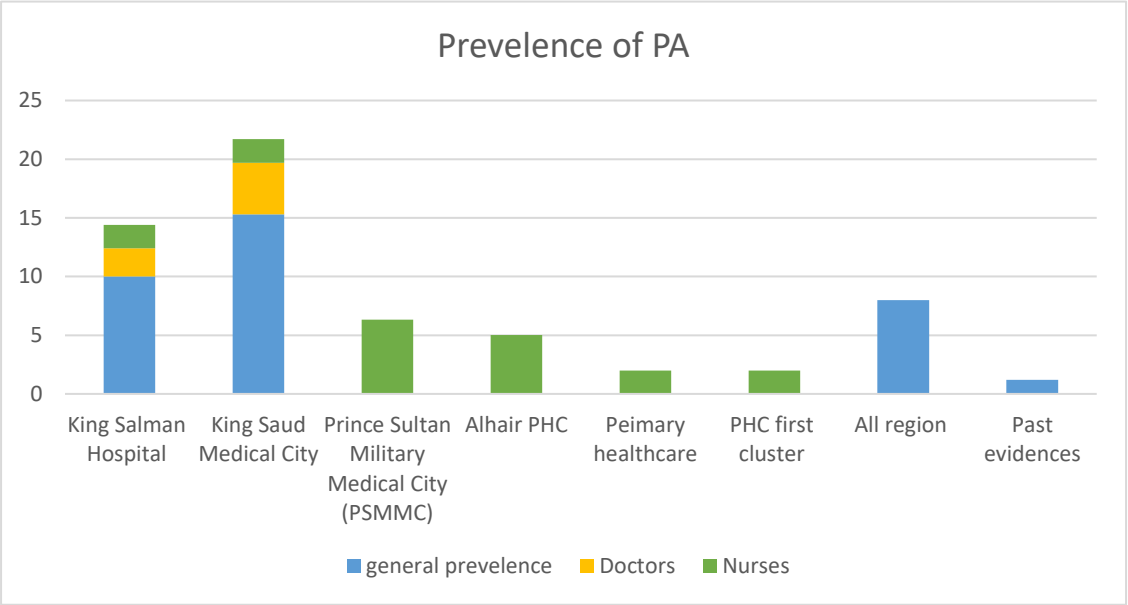

Figure 4 Prevalence of PA

Table 3 Group comparison on Transformational leadership and Innovative behavior (N = 400).

Variable	PA (153)		Without PA (167)		t (3.92)	p	Cohan's d
	M	SD	M	SD			
Age	22.9	1.29	18.5	2.01	.78	.89	3.35
AWH	27.8	1.15	22.9	1.45	.95	.77	2.98
YE	19.4	1.15	22.9	1.45	.56	.87	2.01

p = significant

** = highly significant at .01

* = Significant at .05

The professionals affected by the PA were significantly older, with average working hours, and years of work in the health sector or in their health facility, compared to professionals without PA indicated in table 3.

Table 4 Mean Differences among Profession

Variables	Doctor		Nurse				95%CI		Cohen' s d
	M	SD	M	SD	t (298)	p	LL	UL	
Constant	95.2	18.0	98.8	17.2	-1.32	.188	-6.7	1.32	-1.5
PA	36.1	4.9	31.9	6.21	6.31	.000	2.81	5.3	0.73

The diagnosis of PA was more frequent in 8.2% of doctors compared to 2% of nurses, and in men with 8.3% compared to 3% in women. Likewise, single, widowed, or without family professionals had a higher prevalence of PA, as did those separated from the family (OR= 2.6) for work reasons. The professionals who worked in more complex establishments (II and III levels) or in public establishments of PHC had a higher prevalence of PA Table 4.

Table 5 Pearson Correlation Among Study Variables (N=400)

Variables	1	2	3
perception of working	-	.72**	.83**
job satisfaction		-	.84**
Mental Wellbeing			-

***p<.001. **p<.01

The perception of working conditions and job satisfaction was assessed with 11 components, finding a significant association with 9, with a greater association with dissatisfaction with the work schedule and the position or participation of the professional in decision-making or job management. their service or service area table 5.

Table 6 Multivariate analysis (N=400)

	Model B	Outcome: Happiness 95%CI	
Predictors		LL	UL
(constant)	.01	40.02	49.26
PA	-5.18**	-0.37	.043
R^2	22	-.47	.22
F	11.5**		

*p<.05. **p<.001.

In the multivariate analysis, a highly significant model (p<0.01) was defined, which allowed the correct classification of 94.8% of cases with high specificity (99.8%) and low sensitivity (7%). The global fit and goodness of fit of the model were acceptable, the variance explained using R^2 reached 22%, and 10.2%. The model includes as the variables of significant association with the presence of PC the medical profession, age, male sex, family separation, having a second specialty, dissatisfaction with work hours, a history of having a disease caused by or aggravated by their work, as well as working in an in table 6.

Discussion

Result-based discussion on the present literature and statistical analyses provide in-depth information about the prevalence and the exhaustive factors in the kingdom of Saudi Arabia regarding the cluster of one versus and doctors. Professional exhaustion is one of the most important factors that are related to the understanding of various other factors and the determinants that demonstrated the reason. The most important tractor related to professional exhaustion includes burnout, depersonalization, and professional achievement.

Durand et al. (2019), stated that burnout is one of the most important parameters that result in the prevalence of professional exhaustion among doctors and nurses. Moukarzel et al. (2019), demonstrated that burnout is linked to the justification of fatigue, chronic health issues, physical problems, trouble sleeping, etc. The most important parameter is related to

exhaustion which is the key component of the syndrome responsible for depression, anxiety, and an excessive amount of workload. Hu et al. (2021), studied complementary research that demonstrated that professional exhaustion is linked to burnout which is like the present study material.

Burnout is linked to different other variables and the prevalent factor is linked to the associated issues it cost to the person's life (Abdelhafiz et al., 2020). Moreover, it is studied that professional exhaustion is also linked to depersonalization. Naldi et al. (2021), stated that depersonalization is linked to a lower level of empathy, increase dehumanization, ideologies of emotional exhaustion is greater and extensive, negative attitude regarding patient care concerns and colleagues, feeling of guilt, withdrawal, and social avoidance. Abbas et al. (2019), stated that depersonalization is another fragment that is linked to the understanding of the prevalence of professional exhaustion (Messias et al., 2019). It should be noted that the excessive prevalence of depersonalization stated an excessive amount of professional exhaustion (Aragão et al., 2021). That is like the present literature evidence.

Personal achievement is usually dropped down to the lowest value regarding the situation parameters, emotional exhaustion, motivational factors of default, repetitive failure depression effects (Torre et al., 2019). Grow et al. (2019), stated that personal achievement in a negative sense put a negative impression of self-doubt and a sense of failure. Roslan et al. (2021), also stated that personal achievement really enhances the positive sense of personality and hence is the work in entanglement, motivation, and environmental concerns. This is given to the results of the present study that specify that personal achievement has a higher impact on decreasing professional exhaustion among nurses and doctors (Giménez Lozano et al., 2020).

All these values are approximate to the objectivity of the present study. Therefore, it should be noted that the prevailing factors of emotional exhaustion include burnout, depersonalization, and personal achievements (Saravanabavan et al., 2019). The prevalence and association of these factors usually increase with the increase in workload, job dissatisfaction, and other parameters (Alqahtani et al., 2019). Therefore, it should be noted that the most effective and appropriate parameter for reducing professional exhaustion among nurses and doctors use depends upon their well-being, satisfaction, and environmental consequences (Shah et al., 2021).

It is most often observed that the professional difference between doctors and nurses usually gives an ample amount of information about their professional exhaustion (Kesarwani et al., 2021). It is most observed that nurses face a greater amount of professional exhaustion as compared to doctors (Dinibutun, 2020). Usually, it is associated with prevalent factors and effective consequences. The most prevalent factors in the health care center area, for this reason, are based upon the identification of standardized and effective duty casual (Kok et al., 2021).

All this evidence is providing in-depth information about the preventing and effecting factors related to professional exhaustion among nurses and doctors (Alrawashdeh et al., 2021). Results from the literature and statistical analysis indicated a greater amount of burnout and depersonalization reduces professional achievement among them.

PA as a response to chronic work stress is linked to a multiplicity of factors, some of a work nature, which are due to changes experienced in work organizations and interpersonal relationships within them, but others express a broader dimension because they are of a more general nature. socio-cultural (Al Ali et al., 2022; Chemali et al., 2019), which

determines that the results in a social context are not like those of other realities.

Compared with other studies, present cut-off points would be lower, which, as previously described by other authors, is possible due to the different cultural connotations, as well as the type of people who make up the universe to which the instrument is applied (Xu et al., 2020). The present work was conducted in specific geographic and social contexts in a specific region of Riyadh in cluster one, which in turn would explain the different prevalence patterns found with higher prevalence in relatively low-income areas.

We found a lower prevalence of PC in relation to other previous studies in our country (34,41), a situation that would be related to the scope of the study and the different levels of complexity that were considered, including the first level (establishments 1-4). There are studies in Peru with a high prevalence of specialist medical professionals (psychiatrists, anesthesiologists) (Gualano et al., 2021), which is consistent with our findings, where having a specialty was a factor associated with PC, possibly in relation to the complexity of cases to be dealt with. When comparing with other research, it is important to consider how to use the scores on the dimensions that the MBI assesses, given that in some studies a high score in only one of the dimensions is valued as AP or also clinically considered as AP when there is a high EE score in combination with a high DP score or a low PA score, which increases the sensitivity of the diagnosis but limits the specificity of the instrument and, therefore, overestimates the prevalence have considered all three dimensions.

Unlike other studies, we found that age is not necessarily a predisposing factor for PA (Elhadi et al., 2020) and on the contrary seems to have a protective effect, also reported in other studies (Zarei et al., 2019). In this regard, it has been postulated that age can play a moderating role, so that the older the age, the less PA is present, possibly related to the experience that the professional gains in the performance of their tasks and greater security that makes them less vulnerable. (Keubo et al., 2021). On the other hand, it has been mentioned that workers who suffer from PA and do not overcome this stage have a high risk of leaving work; Therefore, the workers who continue to work and have greater seniority would have already managed to overcome the problem. (Al-Kubaisi & Shahbal, 2021; Al-Kubaisi, Shahbal & Khan, 2022).

Regarding marital status, the results are varied, with vulnerability predominating in singles or those who do not have a stable partner, a situation that is evidenced in the univariate analysis. However, when adjusting to the regression model, family separation caused by work becomes stronger as a factor associated with PA, possibly related to an unwanted but necessary forced situation (Nishimura et al., 2021). Regarding the relationship of AP with a certain sex, this is still controversial since some authors describe greater wear in males. As in our study, others find it more in women.

The level of resolution of the establishment where the professional works is a variable little studied but that configures a condition of complexity to attend, the complexity and severity of cases tend to be greater with a consequent greater risk of pressure in the care activity and/or work overload by the type of patients, their complications and needs (Liu et al., 2020).

Job dissatisfaction has also been a studied factor that is related to AP. We found an association with the work schedule that is considered by professionals as an element that limits the family relationship due to the number of shifts, and the continuous schedule, among others (Jalili et al., 2021). The physical work environment is also an important associated factor, a situation that is consistent because an association has been found between comfort and emotional exhaustion, with PA being considered in some legislations as a

professional accident (Membrive-Jiménez et al., 2020).

Likewise, a fewer-studied factor indicated negative experiences with work as a disease that worsens or is generated in it, which can predispose to disappointment and even maladjustment of work that could explain the association found in our final model (Lasalvia et al., 2021).

Our study is partially representative, considering only those establishments with hospitalization at the first level of care, so the results for the first level are valid only for this type of health establishment (Messias et al., 2019). On the other hand, for the private sector, only data from establishments linked to EPSs were included, which represents approximately one-third of the private supply; thus, the results are only limited to this group of formal private establishments (Abdelhafiz et al., 2020).

Finally, it shows a strong association between the presence of professional exhaustion syndrome or burnout with the level of complexity of the establishment where they work and the specialization, a situation that shows the greatest risk in hospital environments where people with greater damage and more vulnerable are treated. This risk can be further enhanced when there is an underlying illness and worker dissatisfaction with the work environment or work schedules, labor aspects that can be modified with adequate labor policies.

Limitations

The present study indicated several limitations which are based on research methodology and design. it is the quantitative cross-sectional Research Design that provides information about professional exhaustion among doctors and nurses. whereas qualitative interviews can provide an effective and most appropriate perspective for an in-depth understanding of professional exhaustion. Cluster one sample was considered whereas another cluster can also be subjected to this study to get different results for emotional exhaustion.

A comparative study is also important in the fact that provides the prevailing factors in the kingdom of Saudi Arabia regarding emotional exhaustion as compared to the other countries. all these limitations on the factors affecting professional exhaustion regarding the secondary factors of burnout, turnover, etc.

Implications

The present study will be highly implicated able to the doctor nurses and other medical staff working in cluster 1 in the kingdom of Saudi Arabia. the present study will help to understand the factors affecting professional exhaustion. The study will be highly implicated bill for the understanding and knowledge acquisition among the students and learn to facilitate their professional skills.

Conclusion

The prevalence of professional exhaustion among nurses and doctors is one of the most common factors that is influenced by the communicative and compounding factors affecting factors. Factors that affect burnout, depersonalization, and personal achievement. It should be noted that the doctors and the nurses on burnout and personalization whereas a lower value on personal achievement. Therefore, it is concluded that nurses and doctors usually face different factors that affect their professionalism and hinder their routine work.

Declaration: Authors have no conflict of interest.

Contribution of the Author

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Hussain Salem Alomari	Other, Proofreading
Hayfa Sultan Alsuwaylih	Developing the data collection tool/questionnaire
Jedal Mohammad Aljohani	Developing the data collection tool/questionnaire
Amirah Senaitan Alharbi	Writing the methods section
Manal Mufareh Alburemi	Writing the methods section
Najla Hassan Alshehri	Other, data analysis
Samiyh Moufleh Almutairi	Other, bias checking
Samar Hassan Alshehri	Other, data interpretation
Ameerah Mohammed Aseri	Other, discussion and conclusion
Nada Saeed Almutiri	Other, discussion and conclusion
Fouad Ghazi Alanazi	Other, Data cleaning and Verification
Najla Ayed Alattaf	Other, Plagiarism checker
Hanan Debshi Alanazi	Other, Publishing support

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