

OCCUPATIONAL BURNOUT AMONG NURSES WORKING IN MATERNAL AND CHILD HEALTH CENTERS IN EL BEHEIRA GOVERNORATE

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Abstract: Nurses who are working in maternal and child health care setting suffer from excessive load that makes them more liable for occupational burnout because their work involves many preventive and curative health services that are provided to both women and under-five children. *The study aimed to:* assess the level of occupational burnout among nurses working in Maternal and Child Health centers (MCH) in El Beheira Governorate. *Design:* a descriptive study was utilized to meet the aim of this study. *Setting:* The study was conducted in 9 MCH centers within 5 directorates out of 16 directorates present in El Beheira Governorate including Damanhour, Kafer El dawar, Abo Elmatamer, Etay Elbarod and Shobarqet directorates. These directorates have the greatest number of nurses within MCH centers. *Subjects:* composed of 300 nursing staff who are working at previously mentioned setting. *Tools:* two tools were used for data collection; Nurses' characteristics self-administrated sheet and The Maslach Burnout Inventory (MBI). *Results:* around two third of the studied nurses had high level of emotional exhaustion, and the majority of them had high level of high depersonalization and personal accomplishment. Moreover, there was a statistically significant negative correlation between emotional exhaustion and personal accomplishment domain and positive correlation between emotional exhaustion and depersonalization. On the other hand, there was no statistically significant correlation between personal accomplishment and depersonalization. *Conclusion:* based on the results of the present study it can be concluded that, although the current study subjects had high level of emotional exhaustion and depersonalization, they still had high level of personal accomplishment. Moreover, emotional exhaustion was negatively correlated with personal accomplishment and positively correlated with depersonalization. On the other hand, there was no statistically significant correlation between personal accomplishment and depersonalization.

Recommendation: frequent workshops about effective coping strategies to be used during time of stress need to be implemented for nurses to protect against occurrence of burnout.

Keywords: nursing staff, occupational burnout, maternal and child health center.

1. INTRODUCTION

In recent years, the impact of occupational burnout (OB) has drawn great attention of researchers and professionals, and it has been widely studied across various disciplines including psychology, business, education, and medical professions. ⁽¹⁻³⁾

(Nahrgang et al., 2011& Vaamonde et al., 2018& Konstantinou et al., 2018)

The Oxford English Dictionary defines burnout “as a physical or mental breakdown caused by overwork or stress. ⁽⁴⁾ **(Zeng et al.,2020)**

It is described as a phenomenon that is of interest for both individuals and organizations and characterized by decreasing energy, power and resources in the presence of excessive demands. ⁽⁵⁾ **(Khodadadizadeh et al., 2012)**

American psychologist Christina Maslach described burnout in terms of emotional exhaustion (EE), depersonalization (DP), and personal accomplishment (PA) ⁽⁶⁾. **(Maslach et al., 1997)** Emotional exhaustion resulting in a progressive loss of energy; depersonalization appears in the form of negative attitudes towards patients and coworkers and feelings of low personal accomplishment or loss of confidence ⁽⁷⁾. **(Maslach, et al., 1981)**. Empirically, occupational burnout is characterized by depleted personal and/or social resources ⁽⁸⁾ and has significant implications on the individual, healthcare organizations, and the patient population ⁽⁸⁾. **(Maslach et al.,2001)**

The individual’s implication of burnout is the unfavorable quality of life, including multiple physical health problems such as (weakness and insomnia, cardiovascular disorders, musculoskeletal disorders, and impairment of the immunological system). Increase mental health problems as (poor self-concept, anxiety, depression, nervousness, substance abuse, or even suicide). Behavioral problems as (aggressiveness, irritability, and isolation), and attitude problems like (hostility, indifference, and cynicism). ^(9, 10-13). **Cañadas et al., 2015& Aghilinejad et al., 2014& Jansson et al., 2010 & Mohren et al., 2003& Kaunomäki et al.,2017)**. Additionally, burnout is a concept related to negative perception of the work environment, often linked with decisions to leave the nursing workforce ⁽¹⁴⁾. **(Borritz, et al., 2006)**. The second implication of occupational burnout is the negative impact on the organizations. It has been found that burnout may lead to reduced nurses work appointment, increase absenteeism, lower levels of job satisfaction, inefficiency in innovative capabilities and loss of productivity. ⁽¹⁵⁾

El-Hadidi et al.,2017)

This in turn place a considerable burden on organizational functioning. ⁽¹⁶⁻¹⁸⁾ **(Nahrgang et al.,2011& Green, et al.,2014& Green et al.,2013)** The third and last consequence is the effect of burnout on the patients’ care, which means that burnout can lead to poor quality of nursing services, increase probability of nursing errors, longer recovery times, lower patient satisfaction and diminishing patient safety. ⁽¹⁹⁻²³⁾

(West et al.,2006& Wallace et al.,2009& West et al., 2009& Shanafelt et al., 2010& Teng et al., 2010). Therefore, knowing organizational and individual predictors of burnout allow interventions to be designed that will not only impact on burnout but also attrition from the profession. Conclusively, burnout is clearly identified as a problem in the area of human services that need to be addressed and studied. Most researchers and practitioners believe that job satisfaction can be optimized, and burnout minimized to enhance the quality of services to the client. ⁽²⁴⁻²⁶⁾

(Lövgren et al.,2002& Kalliath et al., 2002& Aiken et al., 2002)

Hence, nurses with occupational burnout needs to perform a job analysis, actively manage their time, learn how to cope with stress and eliminate the causes of burnout. ⁽²⁷⁻³⁰⁾

(Happell et al., 2003& Pines et al., 1978& Freudenbrger et al., 1989& Edwards et al 2003)

Besides, healthcare professionals, who experience stress or have symptoms of burnout have a possibility to help themselves by using psychological methods and coping techniques, such as meditation, relaxation, and art therapy. ⁽³¹⁾**(Koval, 2016)**

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So that the present study is intended to shed the light on this problem investigating its causes and possible solutions to improve nurses' mental health and the quality of the services as well as alleviate negative effects of burnout on nurses who are working in maternal and child health care.

In attempting to overcome the negative consequences of this syndrome, nurses may neglect their personal and occupational obligations, and giving rise to negative attitudes towards their work. ^[32] (**Fontán et al., 2010**)

Significance of study:

Burnout is clearly identified as a problem in the area of human services that need to be addressed. Nevertheless, most researchers and practitioners believe that job satisfaction can be optimized and burnout minimized to enhance the quality of services to the client. In addition, occupational burnout has a dire and negative consequences on nurses as chronic stress as well include job dissatisfaction, poorer quality of care, professional mistakes and absenteeism ⁽³³⁻³⁵⁾. (**Lovegren et al., 2002 & Kalliath, et al., 2002 & Aiken, 2002**)

Burnout has been associated with high employment turnover, excessive absenteeism, negative job attitudes, low morale and deterioration in idealism towards helping others. Therefore, maternal and child health nurses need to perform a job analysis, actively manage their time, learn how to cope with stress, and eliminate the causes of burnout ⁽³⁶⁻³⁹⁾ (**Happell et al., 2003 & Pines et al., 1978 & Freudenbrger et al., 1974, Edwards & Burnard , 2003**)

Aims of the study:

This study aimed to:

Assess the level of occupational burnout among nurses working in Maternal and Child Health centers in El Beheira Governorate.

I. Technical Design:

The technical design for this study was included research design, setting of the study, subject, and tools of data collection.

Research Design

A Descriptive cross-sectional study design was utilized to achieve the aim of the present study.

Setting:

The current study was conducted in 9 MCH centers within 5 directorates out of 16 directorates present in EL-Beheira Governorate; Namely **Damanhour** directorates which consist of (3 MCH) centers namely Shobra, Abu abdalla, and Dar Elhellal MCH centers; **Kafr-Eldawar** directorates that consist of (3MCH) centers included first, second and third MCH centers. **Abo Elmatamer** directorates which consisted of (1MCH) center; **Etay Elbarood** directorate that consist of (1MCH) center and lastly **Shobrakh** directorate that consist of (1MCH) center. The type of services that are provided in these directorates include the following: follow-up session for children and pregnant women, family planning services, a dental care, an outpatient clinic, an emergency unit, a laboratory services and lastly vaccination for children and pregnant women.

The researcher decided to choose these directorates specifically because they are located in urban areas and serving large numbers of frequent visitors, in addition to the availability of greatest number of nurses and nursing supervisors within these directorates.

Subject:

Nurses were working in Maternal and Child Health centers in previously mentioned settings in EL Beheira Governorate.

Inclusion criteria

- Full time working nurses.
- Had at least 2 years' experience.

Sample size:

It was calculated based on the result of a previous study that was conducted by Abdo et al (2015) who reported that (25%) of physician and nursing staff had high level of burnout, using margin of error 5% and alpha error of 0.05. So, the minimum required sample size was (267) nurses which increased to be 300 nurses.

Sampling technique:

- A total sample size of 300 nurses who are fulfilling the inclusion criteria were selected using equal proportion allocation of 20% from each directorate.
- A convenient sample of 60 nurses was selected by equal allocation technique from previously selected 5 directorates.

Tools:

The data of the present study was collected by using two tools:

Tool I: Nurses’ characteristics self –administrated sheet:

This was developed by the researcher to collect the necessary data from nurses. It included the following parts:

Part I: Personal, socio demographic and work environment characteristics such as: age, sex, level of education, marital status, years of experience, residence, family size, crowding index, income and qualifications. Present of nursery in workplaces, number of shifts per month, work overload, physical environment or climate, organizational structure, relationship with nurses, relationship with colleagues, transportation and previous exposure to work related violence and its type.

Part II: Nurses’ physical health status such as: health history, present health problems, physical activity and exercise, sleeping pattern, follow-up, stress management and recreational activity.

Tool II: The Maslach Burnout Inventory (MBI).

The tool was developed by Masoodi, et al., (2009). It is a self-reported instrument used to measure the frequency of the three aspects of burnout syndrome namely: emotional exhaustion, depersonalization, and personal accomplishment. It contained 22 items grouped into three subscales namely, emotional exhaustion (9 items) which allows subjects to describe feelings of being emotionally overextended and fatigued; depersonalization (5 items) which measures the extent of unfeeling and impersonal attitudes toward clients, and personal accomplishment (8 items) which describe feelings of competence and successful achievement in relation to working with clients. The responses were rated on 6-point likert-type scale ranging from never = 0 to every day= 6. The total score of burnout scale is 132. Burnout conceptualized as a continuous variable, ranging from low, average, to high probability of experiencing feeling of each element of burnout.

Classification of scores on subscales of the Maslach Burnout Inventory (MBI)

	Level of burnout		
	Low	Average	High
Emotional exhaustion score.	<16	17-26	>27
Depersonalization score.	<6	7-12	>13
Reduced professional Accomplishment score.	>39	38-32	<31

II. Operational design:

The operational design for this study included three stages, namely a preparatory phase, a pilot study, and field work.

Preparatory phase: This phase started from November 2019 to January 2020. It includes the following:

- ❖ Reviewing the national and international related literature using journals, periodicals, textbooks, internet and theoretical knowledge of the various aspects concerning the topic of the study for developing and modifying tool I and translating tool II into Arabic language.

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❖ **Tools validity:** Face and content validity of the study tools were validated by jury consisted of five experts from community health nursing and psychiatric nursing department (Appendix I). This was done to ascertain the appropriateness of the tools for measuring what they are supposed to measure. Minor modifications were done based on jury opinions.

❖ **Pilot study:**

A pilot study was carried out to ensure the clarity, applicability and relevancy of the study tools. As well as estimating the time needed for filling the tools. It was carried out on 30 nurses, who represented 10% from the study subjects and they were excluded from the actual study subjects. Based on the results of the pilot study, minor modifications were done in tool one such as add places for dental clinic in work environment and the fourth part of tool one health and physical status was added due to family problems and lack of time for leisure.

Reliability of tools:

Cronbach's Alpha reliability test was used to determine the reliability level of tool II (The Maslach Burnout Inventory (MBI)) and its result identified that the tool is reliable 74.6%.

Field work

❖ Data collection took about three months from the beginning of March 2020 to the end of May 2020 after securing necessary permissions.

❖ The researcher met nurses and explained the aim and the nature of the study and the methods of filling the questionnaires. This was done individually or through group meeting of staff nursing during the morning shifts after taking the permission from the head nurse of each MCH center according to the load of work in each setting.

❖ The researcher distributed the data collection tools and give necessary instructions about how to fill them.

❖ The data were collected three day per week from 10.30 am to 1.30 pm.

❖ The time required to fill the questionnaire ranging from 10 to 15 minutes.

❖ The average number of nurses filling the questionnaire ranging from 4 to 10 nursing staff per day.

III. Administrative design:

Official permission was obtained from the Dean of Faculty of Nursing Damanhour University. It was directed to the directorate of Ministry of Health and Population in El -Beheira Governorate to obtain the approval to carry out the study at selected MCH centers. Then sent to the previously mentioned directorates. The researcher met the manager director of each directorate to determine the suitable time to collect necessary data needed and ensure that the work not affected.

Ethical consideration

• The study was conducted with careful attention to ethical standards of research and the rights of the participants. So, an approval for conducting the study was obtained from the Ethical Committee of the Faculty of Nursing, Damanhour University.

Informed consent:

The participants rights were protected by ensuring voluntary participation so the informed consent was obtained after explaining purpose, nature, time of conducting the study, potential benefits of the study, how data will be collected, expected outcomes and the respondents rights to refuse participation in the study.

Anonymity and confidentiality

• The respondents assured that the data was treated as strictly confidential; furthermore, the respondents' anonymity was maintained through using a code number instead of names.

IV. Statistical analysis

The collected data were revised, coded, tabulated and using statistical Package for Social Sciences (SPSS version 23). Descriptive statistics were applied in the form of means, and standard deviation for quantitative variables and frequency and percentages for qualitative variables. Qualitative categorical variables were compared using Cronbach's Alpha test. Pearson correlation coefficient was calculated between variables. Statistical significance was considered at p-value $P < 0.05$ and considered highly statistical significance at p-value $P < 0.001$.

2. RESULTS

Part I: Health profile of the studied subjects:

Table (1): Distribution of the studied nurses according to their socio-demographic characteristics

Socio demographic characteristics	Total	
	No. (300)	%
Age (Years)		
>20	1	.3
20 >30	97	32.3
30 >40	135	45.0
40 >50	47	15.7
50 – 60	20	6.7
Mean±SD	33.3±8.9 Year	
Level of education		
Diploma	162	54.0
Technical institute	45	15.0
BSc	83	27.7
Post-graduate	10	3.3
Marital status		
Single	1	.33
Married	271	90.33
Divorced	10	3.33
Widow	18	6.0
No. of family members		
1-3	22	7.3
4-5	203	67.7
6-7	75	25.0
Presence of children		
Yes	292	97.3
No	8	2.7
No of children	n. 292	
1-2 child	50	17.1
3-4 child	234	80.2
5 and more child	8	2.7
Mean±SD of children	3.07±.8	
Mean±SD of children less than 10 years	2.03±1.0	
Mean±SD of children over than 10 years	2.50±.88	
Place of residence		
Rural	113	37.7
Urban	187	62.3
Income		
Not enough	166	55.3
Enough	108	36.0
More than enough	26	8.7

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Table (2): Distribution of the studied nurses according to their working experiences

Working experiences	Total	
	No. (300)	%
Years of experience		
>10 years	3	1.0
10>20 years	97	32.3
≤ 20 years	200	66.7
Working assignment		
Pregnant women follow-up	103	34.3
Administrative activities	79	26.3
Children follow-up	74	24.7
Vaccination	64	21.3
Family planning	55	18.3
Dental clinic	32	10.7
Others	33	11.0
Total assigned activities		
One assignment	191	63.7
Two assignments	86	28.7
Three assignments and more	23	7.7
No. of working hours per week		
36 hours	300	100
No. of morning shifts per month		
8	12	4.0
16	35	11.7
20	157	52.3
24	96	32.0
No. of evening shifts per month		
0	96	32.0
4	157	52.3
8	35	11.7
16	12	4.0

Multiple response

Table (3): Distribution of the studied nurses according to their physiological status

Physiological status	Total	
	No. (300)	%
Health problems		
Yes	58	19.3
No	242	80.7
Practicing Exercises		
Yes	46	15.3
No	254	84.7
Reasons for not practicing exercises#	n. (254)	
Health problems	19	7.5
Time	212	83.5
No place for exercise	35	13.8
It is not important	117	46.1
Sleeping problems	n. (300)	
Yes	31	10.3
No	269	89.7

Multiple response

Table (4): Distribution of the studied nurses according to their psychological status

Psychological status	Total	
	No. (300)	%
Psychological stress		
Yes	218	72.7
No	82	27.3
Emotional blunting		
Yes	3	1.0
No	297	99.0
Less productivity		
Yes	3	1.0
No	297	99.0
Anxiety and stress		
Yes	239	79.7
No	61	20.3
Absenteeism		
Yes	185	61.7
No	115	38.3
No. of absenteeism days per month	n.(185)	
One	86	46.5
Two	29	15.7
3 days and more	70	37.8
Working achievements	n.(300)	
Weak	3	1.0
Medium	241	80.3
High	56	18.7
Relations with peers		
Good	300	100.0

Table (5): Distribution of the studied nurses according to their types of work-related stress

Types of work-related stress#	Total	
	No. (300)	%
Working under stress	253	84.3
Shortage of staff	209	69.7
Lack of income	180	60.0
Transportation problems	113	37.7
Verbal violence	98	32.7
Lack of justice	35	11.7
Family problems	24	8.0
Lack of chance to marriage	5	1.7
Lack of collaboration	4	1.3
Ability to control stress and workload		
Yes	267	89.0
No	33	11.0
Measures to control working stress	n. (267)	
Talking with peers	214	80.1
Day off	67	25.1
Change work	27	10.1
Practicing exercises	18	6.7

Entertainment activities	n. (300)	
Yes	8	2.7
No	292	97.3
Desire for carrier shift		
Yes	24	8.0
No	276	92.0

Multiple response

Part II: Distribution of nurses according to the Maslach Burnout Inventory-Human services.

Table (6): Distribution of the studied nurses according to the Maslach Burnout Inventory – Human Services Survey for Medical Personnel (MBI-HSS) Emotional Exhaustion Domain, Depersonalization Domain and Personal Accomplishment Domain

Emotional Exhaustion (EE)	Total	
	No. (300)	%
Low (0-18)	19	6
Moderate (19-26)	80	27
High (27 and more)	201	67
Mean ± SD (Maximum allowed score is 54 point)	29.9±7.6	
Personal Accomplishment (PA)	Total	
	No. (300)	%
Low (40 or more)	29	9.7
Moderate (34-39)	3	1.0
High (0-33)	268	89.3
Mean ± SD (Maximum allowed score is 48 point)	7.4±14.0	
Depersonalization (DP)	Total	
	No. (300)	%
Low (0-5)	29	9.7
Moderate (6-9)	10	3.3
High (10 or more)	261	87.0
Mean ± SD (Maximum allowed score is 30 point)	15.2±5.7	

Table 7: Association between physiological and psychological status of the studied nurses and their emotional exhaustion domain.

Variables	Emotional Exhaustion								FET (P value)
	Low		Moderate		High		Total		
	No.	%	No.	%	No.	%	No.	%	
Physiological status									
Health problems									
Yes	8	13.8%	12	20.7%	38	65.5%	58	100.0%	7.304 (0.026)*
No	11	4.5%	68	28.1%	163	67.4%	242	100.0%	
Exercises									
Yes	5	10.9%	5	10.9%	36	78.3%	46	100.0%	7.878 (0.019)*
No	14	5.5%	75	29.5%	165	65.0%	254	100.0%	
Sleeping problems									
Yes	8	25.8%	2	6.5%	21	67.7%	31	100.0%	26.001 (<0.001)*
No	11	4.1%	78	29.0%	180	66.9%	269	100.0%	
Psychological status									
Psychological stress									

Yes	11	5.0%	42	19.3%	165	75.7%	218	100.0%	27.453
No	8	9.8%	38	46.3%	36	43.9%	82	100.0%	(<0.001)*
Emotional blunting									
Yes	1	33.3%	0	0.0%	2	66.7%	3	100.0%	4.296
No	18	6.1%	80	26.9%	199	67.0%	297	100.0%	(.117)
Less productivity									
Yes	1	33.3%	0	0.0%	2	66.7%	3	100.0%	4.296
No	18	6.1%	80	26.9%	199	67.0%	297	100.0%	(.117)
Anxiety and stress									
Yes	8	3.3%	68	28.5%	163	68.2%	239	100.0%	18.206
No	11	18.0%	12	19.7%	38	62.3%	61	100.0%	(<0.001)*
Absenteeism									
Yes	7	3.8%	49	26.5%	129	69.7%	185	100.0%	5.496
No	12	10.4%	31	27.0%	72	62.6%	115	100.0%	(0.064)
No. of absenteeism days per month									
One	1	1.2%	18	20.9%	67	77.9%	86	100.0%	24.514
Two	0	0.0%	11	37.9%	18	62.1%	29	100.0%	(<0.001)*
3 days and more	6	8.6	20	28.6	44	62.9	70	100.0%	
Working achievements									
Weak	1	33.3%	0	0.0%	2	66.7%	3	100.0%	4.854
Medium	14	5.8%	67	27.8%	160	66.4%	241	100.0%	(.303)
High	4	7.1%	13	23.2%	39	69.6%	56	100.0%	

FET: Fisher Exact Test

P: P value of FET

*Significant at p value ≤0.05

Table 8: Association between physiological and psychological status of the studied nurses and their personal accomplishment domain.

Variables	Personal Accomplishment								FET (P value)
	Low		Moderate		High		Total		
	No.	%	No.	%	No.	%	No.	%	
Physiological status									
Health problems									
Yes	1	1.7%	1	1.7%	56	96.6%	58	100.0%	5.489
No	28	11.6%	2	0.8%	212	87.6%	242	100.0%	(.064)
Exercises									
Yes	26	56.5%	0	0.0%	20	43.5%	46	100.0%	136.722
No	3	1.2%	3	1.2%	248	97.6%	254	100.0%	(<0.001)*
Sleeping problems									
Yes	0	0.0%	2	6.5%	29	93.5%	31	100.0%	13.686
No	29	10.8%	1	0.4%	239	88.8%	269	100.0%	(0.001)*
Psychological status									
Psychological stress									
Yes	29	13.3%	2	0.9%	187	85.8%	218	100.0%	12.090
No	0	0.0%	1	1.2%	81	98.8%	82	100.0%	(0.002)*
Emotional blunting									
Yes	0	0.0%	0	0.0%	3	100.0%	3	100.0%	.362
No	29	9.8%	3	1.0%	265	89.2%	297	100.0%	(.835)
Less productivity									
Yes	0	0.0%	0	0.0%	3	100.0%	3	100.0%	.362
No	29	9.8%	3	1.0%	265	89.2%	297	100.0%	(.835)
Anxiety and stress									
Yes	29	12.1%	3	1.3%	207	86.6%	239	100.0%	9.143
No	0	0.0%	0	0.0%	61	100.0%	61	100.0%	(0.010)*

Absenteeism									
Yes	19	10.3%	2	1.1%	164	88.6%	185	100.0%	.239 (.887)
No	10	8.7%	1	0.9%	104	90.4%	115	100.0%	
No. of absenteeism days per month									
One	0	0.0%	0	0.0%	86	100.0%	86	100.0%	38.918 (<0.001)*
Two	0	0.0%	0	0.0%	29	100.0%	29	100.0%	
3 days and more	19	27.1%	2	2.9%	49	70.0%	70	100.0%	
Working achievements									
Weak	0	0.0%	1	33.3%	2	66.7%	3	100.0%	40.386 (<0.001)*
Medium	29	12.0%	1	0.4%	211	87.6%	241	100.0%	
High	0	0.0%	1	1.8%	55	98.2%	56	100.0%	

FET: Fisher Exact Test

P: P value of FET

*Significant at p value ≤ 0.05

Table 9: Association between physiological and psychological status of the studied nurses and their depersonalization domain.

Variables	Depersonalization								FET (P value)
	Low		Moderate		High		Total		
	No.	%	No.	%	No.	%	No.	%	
Physiological status									
Health problems									
Yes	22	37.9%	3	5.2%	33	56.9%	58	100.0%	67.639 (<0.001)*
No	7	2.9%	7	2.9%	228	94.2%	242	100.0%	
Exercises									
Yes	9	19.6%	0	0.0%	37	80.4%	46	100.0%	7.587 (0.023)*
No	20	7.9%	10	3.9%	224	88.2%	254	100.0%	
Sleeping problems									
Yes	14	45.2%	8	25.8%	9	29.0%	31	100.0%	110.793 (<0.001)*
No	15	5.6%	2	0.7%	252	93.7%	269	100.0%	
Psychological status									
Psychological stress									
Yes	21	9.6%	7	3.2%	190	87.2%	218	100.0%	.039 (.981)
No	8	9.8%	3	3.7%	71	86.6%	82	100.0%	
Emotional blunting									
Yes	3	100.0%	0	0.0%	0	0.0%	3	100.0%	28.318 (<0.001)*
No	26	8.8%	10	3.4%	261	87.9%	297	100.0%	
Less productivity									
Yes	1	33.3%	0	0.0%	2	66.7%	3	100.0%	2.001 (.368)
No	28	9.4%	10	3.4%	259	87.2%	297	100.0%	
Anxiety and stress									
Yes	10	4.2%	4	1.7%	225	94.1%	239	100.0%	53.155 (<0.001)*
No	19	31.1%	6	9.8%	36	59.0%	61	100.0%	
Absenteeism									
Yes	10	5.4%	6	3.2%	169	91.4%	185	100.0%	10.128 (0.006)*
No	19	16.5%	4	3.5%	92	80.0%	115	100.0%	
No. of absenteeism days per month									
One	4	4.7%	0	0.0%	82	95.3%	86	100.0%	7.166 (.127)
Two	1	3.4%	1	3.4%	27	93.1%	29	100.0%	
3 days and more	5	7.1%	5	7.1%	60	85.7%	70	100.0%	
Working achievements									
Weak	1	33.3%	0	0.0%	2	66.7%	3	100.0%	23.074 (<0.001)*
Medium	17	7.1%	4	1.7%	220	91.3%	241	100.0%	
High	11	19.6%	6	10.7%	39	69.6%	56	100.0%	

FET: Fisher Exact Test P: P value of FET

*Significant at p value ≤ 0.05

Table 10: Correlation between burnout domains.

Burnout domains	EE		PA		DP	
	R	P	R	P	R	P
Emotional Exhaustion (EE)			-.166**	.004	.257**	.000
Personal Accomplishment (PA)	-.166**	.004			-.109	.060
Depersonalization (DP)	.257**	.000	-.109	.060		

R: Pearson correlation coefficient

P: P value of Pearson correlation coefficient

** : Correlation is significant at the 0.01 level

Table (1): shows the distribution of the studied nurses according to their socio-demographic characteristics. It was found that, nearly one half of nurses (45.0%) were 40 years old and around < 30 aged from one-third of them (32.3%) were in the age 20-< 30 years, while only 3% were in the age group less than 20 with a mean, age of 33.3±8.9 years. Concerning level of education, more than one half of the studied subjects (54%) had diploma degree of nursing education whereas, around one quarter of them (27.7%) had bachelor’s degree. Compared to only (15.0 % & 3.3%) who had technical institute and post-graduate university education respectively.

Regarding marital status, the majority of nurses were married and having children ranging from three to four children (90.33% & 97.3 %, 80.2% respectively) and around two thirds of studied subjects (67.7%) had four to five family members.

Pertaining to nurse’s residence, less than two third (62.3 %) of them were living in urban areas, while the rest of them (37.3 %) were living in rural. In relation to the monthly income sufficiency, more than one half of nurses (55.3%) hadn’t enough income to meet the demands of their lives, and the minority of them (8.7%) had more than enough income.

Table (2): presents the distribution of the studied nurses according to their working experiences. Regarding years of experience, two third (66.7%) of them had 20 years’ experience and more, while (32.3%) had experience ranged from 10 to less than 20 years.

Concerning working assignment, around one third (34.3%) of nurses were working in follow up for pregnant women and those who are working in administrative activities and children follow-up had nearly the same percent (26.3% & 24.7% respectively). The rest of the studied subjects were working in vaccination, family planning and dental clinic (21.3%, 18.3% &10.7% respectively) and only 11.0% had other activities.

Regarding to the total assigned activities, the table illustrates that the nurses differ in their number of assignment, as nearly to two thirds of them (63.7%) mentioned that they had one assignment compared to 28.7% who had two assignments and Only 7.7% revealed that they had three assignments from total assigned activities.

In relation to their number of working hours per week as well as morning and evening shift per month. It was found that the total subjects (100%) were taking 36 hours per week.

About number of morning and evening shift per month, equal percentage of more than one half of studied nurses (53.3%) were taken morning and evening shift per month while the rest of them were regarded between morning and evening shift to complete their shifts per month (32.0%,11.7%&4.0%)respectively.

Table (3): shows the distribution of the studied nurses according to their physiological status. It was observed that, more than three quarters of the studied nurses (80.7%) hadn’t any health problems. Compared to only (19.3%) who were suffering from health problems. As for practicing exercise, nearly an equal percent claimed that they are not practicing exercise because of there is no time for it (84.7% and 83.5 % respectively). Whereas, 46.1% of nurses stated that it is not important to practicing exercises.

Lastly, as regards to sleeping problem, the majority of the studied nurses (89.7%) hadn't sleeping problems while the rest of them (10.3%) had sleeping problems.

Table (4): displays the distribution of the studied nurses according to their psychological status. It was found that, more than two third of the studied nurses (72.7%) reported that they had psychological stress, compared to only 27.3% who

hadn't psychological stress. At the same line, 79.7% of the nurses reported that they had anxiety and stress. On the other hand, almost all studied nurses (99%) reported that they hadn't emotional blunting nor less productivity.

In relation to absenteeism, nearly two thirds of the nurses (61.7%) had absenteeism, and the minority of them (38.3%) hadn't absenteeism. While less than one half (46.5%) of the nurses had only one day absenteeism per month, 37.8 % had three days of absenteeism and more per month.

Speaking about working achievement, the table describes that more than three-quarters (80.3%) of the nurses reported that they had medium degree of working achievements, whereas, only 18.7% had high degree of working achievements. Lastly, all nurses (100.0%) reported that they had good relations with peers.

Table (5): shows the distribution of studied nurses according to their types of work-related stress. It was noted that, the majority of the studied nurse (84.3%) reported that they worked under stress. The first cause of stress as mentioned by 69.7% of nurses was related to shortage of staff followed by lack of income 60.0%. While, 37.7%, 32.7% & 11.7% of nurses claimed that the stress at work was due to transportation problems, verbal violence and lack of justice respectively. On the other hand, minimum percent of nurses stated that the stress at the work was related to family problems, lack of chance to marriage and lack of collaboration between staff members (8.0%, 1.7%, and 1.3% respectively).

As regards to nurses' ability to control stress and workload, the vast majority of the studied nurses (89.0%) stated that they can control their stress, while only 11.0% of them were not able to control stress and workload. As for measures used by nurses to control work related stress, it was found that 80.1% talking with their peers, followed by 25.1% reported that they take day off. While, the rest of them changed their work and practiced exercises (10.1% & 6.7% respectively).

Concerning to entertainment activities, almost all studied nurses (97.3%) hadn't any entertainment activities compared to only 2.7% who had. Finally, regarding to the desire for carrier shift, 92.0% of the studied nurses hadn't the desire for carrier shift, while the rest of them (8.0%) had this desire.

Table (6): illustrated the distribution of the studied nurses according to The Maslach Burnout Inventory – Human Services Survey for Medical Personnel (MBI-HSS) Emotional Exhaustion Domain, depersonalization Domain and Personal Accomplishment Domain. It was observed that around two third of the studied nurses (67.0%) had high level of emotional exhaustion, while slightly more than one quarter (26.7%) had moderate level of emotional exhaustion and only 6.3% had low level of emotional exhaustion. Moreover, it was observed that (87.0%) of the studied nurses had high level of depersonalization, whereas(9.7%) had low level and(3.3%) had moderate level of depersonalization. Finally, from this table (6), it was noted that the majority of the studied nurses (89.3%) had high level of personal accomplishment, while minimum percentage (9.7% & 1.0%) only had low and moderate level of personal accomplishment respectively.

Table (7): presents the association between physiological and psychological status of the studied nurses and their emotional exhaustion domain. It was found that all physiological and psychological variables have statistical significant relationship with emotional exhaustion except emotional blunting, less productivity, and working achievements.

In more details; firstly, as regard to physiological status and presence of health problem; 67.4% of those who are not suffering from health problem had high level of emotional exhaustion ($P= 0.026^*$) and 78.3% of the studied nurses who are not practicing exercises also had high level of emotional exhaustion ($P = 0.019^*$). Moreover, 67.7% of nurses who had sleeping problems had high level of emotional exhaustion ($P= 0.001^*$)

Secondly, regarding to psychological status; 75.7% & 68,2 % of those who have psychological stress and anxiety had high level of emotional exhaustion respectively. ($P=<0.001^*$).

Lastly, concerning to number of absenteeism days per month; 77.9% of the studied nurses who had only one day of absenteeism per month had high level of emotional exhaustion ($P=<0.001^*$).

Table (8): displays the association between physiological and psychological status of the studied nurses and their personal accomplishment domain. It was found that; exercises, sleeping problems, psychological stress, anxiety & stress, number of absenteeism days per month and working achievements were the most physiological and psychological variables that had statistical significant positive relationship with personal accomplishment domain. Otherwise, no statistical significant relationships were detected between personal accomplishment and health problems, emotional

blunting and less productivity. In more details; 97.6% of those who are not practicing exercises had high level of personal accomplishment ($P = <0.001^*$) also 93.5% of nurses who had sleeping problems had high level of personal accomplishment ($P= 0.001^*$).

Table (9): displays the association between physiological and psychological status of the studied nurses and their depersonalization domain. It was observed that almost all physiological and psychological variables had statistical significant positive relationship with depersonalization domain except psychological stress, less productivity and number of day's absenteeism per month. In more details; 94.2% of those who are not suffering from health problems had high level of depersonalization ($P = <0.001^*$) and 88.2% from the studied nurses who are not practicing exercises also had high level of depersonalization ($P = 0.023^*$). As for sleeping problems; 93.7% of nurses who are not complaining from sleeping problems had high level of depersonalization ($P= < 0.001^*$).

As regard psychological status; 87.9% of nurses who are not suffering from emotional blunting had high level of depersonalization ($P = < 0.001^*$) and 94.1% of nurses who had anxiety and stress had high level of depersonalization ($P = < 0.001^*$).

Lastly concerning to absenteeism and working achievements; 91.4% of those who had absenteeism had high level of depersonalization ($P=0.006^*$). Also, 91.3% of nurses who had medium level of working achievements had high level of depersonalization ($P = <0.001^*$).

Table (10): reveals the correlation between burnout domains. It appears from this table that, there was a statistical significant negative correlation between emotional exhaustion and personal accomplishment domain where ($r= -.166^{**}$, $P = .004$) and positive correlation between emotional exhaustion and depersonalization ($r= .257^{**}$, $P = .000$). On the other hand, there was no statistically significant correlation between personal accomplishment and depersonalization ($r=-.109$, $P = .060$).

3. DISCUSSION

Occupational burnout is considered an epidemic of modern society and the issue of occupational stress and occupational burnout receive increasing attention worldwide. The first main finding of the current study revealed that nearly one half of nurses were aged from $30 \leq 40$ years old, with a mean age of 33.3 ± 8.9 years. In relation to nurse's level of education, the present study illustrated that more than one half of the studied subjects had diploma level of education. This may be due to that most of nurses who are currently working in Maternal, and Child Health (MCH) Centers had diploma level of education and their numbers is greater than numbers of nurses with bachelor's degree of education three times. Therefore, they are in the middle age group. Regarding marital status, the majority of nurses were married and more than one half of them not have enough income to meet the demands of their lives (Table I). From the researcher point of view, it may be due to the presence of multiple economic challenges, added to the direct family workload for the study participant as the most of them were married and having children. A similar finding showed by **Shahin et al., (2020)**⁽⁴⁰⁾ who revealed that, most participants were females' nurses, more than one half of them aged ≤ 35 years, large percentage were married, three quarters of them had diploma and more than one half of participant had insufficiently monthly income. Moreover, this finding was in line with the study done in Egypt by **Ibrahim (2017)**⁽⁴¹⁾ who found that two thirds of the studied sample had not enough income. The current study finding also matched with study by **Gharib (2014)**⁽⁴²⁾ performed on female nurses demonstrated that, nearly two-thirds of nurses were aged ≥ 30 years old, and more than two-thirds of the studied subjects had diploma (nursing school). Otherwise, the current study is contradicted with other studies performed in Egypt⁽⁴³⁻⁴⁸⁾ and found that more than half of the studied subjects had enough income. Regarding physiological status of the studied nurses (**Table 3**). It was observed that, more than three quarters of the studied nurses hadn't had any health problems. Compared to nearly twentieth who was suffering from health problems. From the investigator point of view, it may be due to nurses have good knowledge about how to maintain good health and take vaccination according to schedule such as influenza vaccine, Hepatitis B vaccine and Covid 19 vaccination. Nurses have great experience about new programs of early management and prevention of diseases and know when to take medical advice. This comes in line with the results of the study conducted by **Sayed et al., (2019)**⁽⁴⁹⁾ who reported that no medication use is found among most of the study participants. Objectively, physical exercises have significant effect on psychological status of the person by elevating hormones inside the brain as endorphin which lead to feeling of happiness and wellbeing. In contrast, absence of performing regular exercise (as the case in our study in which majority of studied subjects not practicing

physical exercise).(Table 5), lead to worsening psychological status and increasing feeling of emotional exhaustion. A study done by **Amin et al., (2020)**⁽⁵⁰⁾ was consistent with this result which demonstrated that less than two thirds of the study group didn't practice any type of exercise compared to more than three quarters of the control group. Consistent with the study done by **Wilkerson et al., (2019)**⁽⁵¹⁾ more than two third of the study subject reported not performing any strength exercises. As regard distribution of the studied nurses according to the Maslach Burnout Inventory – Human Services Survey for Medical Personnel (MBI-HSS) Emotional Exhaustion Domain, Depersonalization Domain and Personal Accomplishment Domain **table (6)**, The findings of the current study are in harmony with the results of **El Dalatony et al., (2018)**⁽⁵²⁾, who told that nurses are experienced high stress and burnout scores. **Gosseries et al., (2012)**⁽⁵³⁾, reported that around one third of the studied subjects showed moderate to severe emotional exhaustion and depersonalization and a little bit presented low personal accomplishment. Which means that the highly percentage of them had high personal accomplishment. Furthermore, the present study finding is partially goes in the same line with a study conducted by **Alfuqaha and Alsharah (2018)**⁽⁵⁴⁾, who reported moderate to high levels of emotional exhaustion and depersonalization and low levels of personal accomplishment. Similarly, **Abbas et al., (2019)**⁽⁵⁵⁾, reported that nearly half of respondents scored high on emotional exhaustion, whereas more than two third had higher levels of depersonalization and more than one third of them had high levels of reduced personal accomplishment. **Wu et al., (2010)**⁽⁵⁶⁾ in their study reported that greater work experience allows for more accomplishments and greater organizational commitment, which are protective factors against job burnout.

As for the association between physiological and psychological status of the studied nurses and their emotional exhaustion and depersonalization domains (**Tables 7, 8**). It was observed that almost all physiological and psychological variables had statistically significant positive relationship with emotional exhaustion and depersonalization domains. The possible explanation for this may be the fact that nurses are suffering from many sources of stress and a lot of anxiety that outweigh their physical health status, sleep quality and ability to practice exercise. This is indication of poor mental health status and increase days of absence from work with the possibility of occurrence of work errors. Consistent with this explanation, the study done by **Peterson et al.,(2008)**⁽⁵⁷⁾ on health care workers showed that burnout was associated with poorer self-rated health, increased depression, and increased anxiety, sleep disturbances, and impaired memory. On the same line, burnout was defined as a psychological syndrome of physical and emotional exhaustion that can occur through long-term exposure to chronic stressors, particularly job stress and lack of adequate coping mechanisms (**Alfuqaha, & Alsharah, 2018**).⁽⁵⁸⁾

The finding of the current study revealed that the vast majority of the studied nurses had high level of personal accomplishment. This finding may be apparently inconsistent with the pervious findings of the present study. But factually there are many other factors present in the current subjects help them in personal achievement and assist in overcoming all bad situations. Among these factors, is the presence of good relationship with peers (all studied nurses stated that they had good relationship with peers) (Table 4). Which act as a buffer against stress and give great support in stressful situations. Through empathetic relationship with friends, the nurses have an excellent opportunity to express their feelings freely and frankly without any hesitation and have the chance to receive appropriate reply to their situation from the closest friends. Also, effective coping strategies may be learned via this relation. All these affecting nurses' level of personal accomplishment in a positive manner.

In agreement with this explanation, **Shin and Lee (2016)**⁽⁵⁹⁾ reported that nurses with long-term friendships characterized by strong connections experienced lower levels of stress than did those with weak ties to friends. Moreover, the degree of interrelation among friends and the friendship network of high density in the workplace had a positive impact on the level of job stress experienced by nurses. Another key factor is present and may be significant in elevating level of personal accomplishment among nurses which is the nurses' own ability to control stress (most of the studied nurses stated that they can control stress and workload) (Table 5). This is means that they have high level of self-efficacy. Self-efficacy entails the individual beliefs about his capabilities to exercise control over his own situation.

Actually, feeling of self-efficacy led to increase power and energy in the person and push him to make all efforts to achieve his goals with self-confidence and optimism. This is in turn lead to increase level of personal accomplishment. Previous research conducted by **Herbert (2011)**⁽⁶⁰⁾ has shown that people with high level of self-efficacy able to manage and cope more effectively with any stress they may face than people with a low level of self-efficacy. In agreement with this finding, **Rehman et al., (2017)**⁽⁶¹⁾ indicated that having high level of self-efficacy results in nurses' greater interest in difficult tasks and motivate them to exert effort to get mastery on it.

In addition to the previous explanations, a new factor was reported and may be considered, which is the effect of good health on person's ability to perform his work (most of the studied nurses claimed that they do not have any sleeping problems nor any health problems) (Table 3). Which means that their physical health status is very well, and sleep quality is high. Truthfully, these two factors are very essential to the person to live successfully and maintain his quality of life. As well-known also, the presence of chronic illness may inhibit the person's ability to perform the assigned tasks and let him to feel inadequate. This is later affecting his level of personal accomplishment. The study carried out by **De Martino et al., (2013)**⁽⁶²⁾ informed that nurses who did not obtained sufficient sleep will putting their patients' health and their own health at risk which reflected negatively on clients and public health.

The findings of the current study are in harmony with the results of **El Dalatony et al., (2018)**⁽⁶³⁾, who told that nurses are experienced high stress and burnout scores. **Gosseries et al., (2012)**⁽⁶⁴⁾, reported that around one third of the studied subjects showed moderate to severe emotional exhaustion and depersonalization and a little bit presented low personal accomplishment. Which means that the highly percentage of them had high personal accomplishment. Furthermore, the present study finding is partially goes in the same line with a study conducted by **Alfuqaha and Alsharah (2018)**⁽⁶⁵⁾, who reported moderate to high levels of emotional exhaustion and depersonalization and low levels of personal accomplishment. In addition, the study conducted by **Shahin et al., (2020)**⁽⁶⁶⁾ in Saudi Arabia, demonstrated that more than one third of them had high emotional exhaustion, high depersonalization and the majority had low personal accomplishment. Similarly, **Abbas et al., (2019)**⁽⁶⁷⁾, reported that nearly half of respondents scored high on emotional exhaustion, whereas more than two third had higher levels of depersonalization and more than one third of them had high levels of reduced personal accomplishment. Regarding the relationship between socio-demographic characteristic and second dimension of burnout which is the personal accomplishment. The current finding revealed that, the studied nurses who had family members ranged from one to three had high level of personal accomplishment. Truthfully, the small family is few in number and its demands. Therefore, it does not cause a lot of marital or psychological burden, and their members are satisfied physically and psychologically. Subsequently, their level of achievement is high, and the quality of their work is superior. **Thorsen et al., (2011)**⁽⁶⁸⁾, are consistent with this view. They reported that the number of children was the only significant predictor for personal accomplishment. It can be inferred that home duties, such as child rearing and being accountable to one's spouse, may introduce additional and sometimes intensive responsibilities. On the other hand, this was contradicted with the study conducted by **El Lassy and Tawfik (2012)**⁽⁶⁹⁾ who illustrated that more than half of the studied sample lives in a bedroom composed of three or more members. This variance could be explained by the diversity of culture between cities regarding the number of children in the family where some people prefer large family size, while others favor small family size. Prominently, the current study finding proved that there was a statistically significant negative correlation between emotional exhaustion and personal accomplishment domain (Table 10). This is means that when the degree of emotional exhaustion increase, the level of personal accomplishment decreases and vice versa..

This is logical and meaningful result and reflects the reality of the effect of higher amount of stressors on the person's achievement. When the nurses exposed to several sources of psychological stressors, they become unable to do their expected job and fail to overcome this negative state which will lead to poor work achievement. On the same line, there is a positive correlation between emotional exhaustion and depersonalization (Table 10). This is also reasonable finding. In fact, higher level of emotional exhaustion led the nurse to feel detached and have little concern for human aspect of client care which makes them to act the nursing task only without any focus on client's feeling. This is consequently affecting their quality of work and relationship with others. This finding is consistent with the study done by **Omar et al., (2021)**⁽⁷⁰⁾ they showed that there is significant strong positive correlation between total burnout scale in relation to emotional exhaustion and depersonalization scales. Moreover, significant moderate positive correlation between total burnout scale in relation with psychosomatic score and personal accomplishment score.

4. CONCLUSION

Based on the results of the present study it can be concluded that, although the current study subjects had high level of emotional exhaustion and depersonalization, they still had high level of personal accomplishment. Moreover, emotional exhaustion was negatively correlated with personal accomplishment and positively correlated with depersonalization. On the other hand, there was no statistically significant correlation between personal accomplishment and depersonalization.

5. RECOMMENDATION

Based on the results of the present study, the following recommendations are suggested:

A. Recommendation guard for the occurrence of burnout in nursing staff:

1. Educational programs need to be implemented for nurses to increase their awareness about the phenomena of burnout, contributing factors, differences between stress and burnout and how to avoid this severe state.
2. Applying frequent workshops for nurses about effective coping strategies to be used during time of stress.
3. Early discovery of burnout symptoms through recurrent assessment of burnout level among nurses to identify the current problems and produce the fast and suitable solutions.
4. Psychological counselling centers ought to be established to make appropriate referral of all nurses needing help and producing suitable intervention.
5. The nursing authority have to focus on strength points and positive qualities in all nurses to boost their feeling of self-efficacy which have a major effect on increasing their resilience to stressors.
6. A comprehensive individual and organizational interventional approach need to prepare for to minimize the risk of burnout among nurses through increasing recreational activities, paying more attention to basic physiological needs and encourage social behaviors that build trust relationship among whole staff.
7. Enhance job satisfaction and nurses' productivity through regular encouragement, appreciating good performance, positive reinforcement and stimulating challengeable activities to keep the nurses active all the time and encouraging teamwork spirit among them.
8. work and decrease workload by proper planning of duty schedule and follow job description.

For further research

Another area of research that could also be extensively investigated is the following:

1. Studying the relationship between burnout syndrome and self-efficacy in nurses.
2. The role of burnout in the occurrence of depression, and anxiety among nurses.
3. Examining the link between burnout and nurses' medication errors.

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