Burnout and Depression among staff nurses at El-Azazy psychiatric Hospital

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Abstract

Background: Psychiatric nurses are considered the main working group of hospitals, they are susceptible to have burnout and other psychological problems as depression as a result of heavy workload, long shift hours and the nature of the psychiatric working environment. **Aim** of the study was to assess burnout and depression among staff nurses. **Subjects and Methods: Design**: A descriptive correlational design was carried out. **Setting:** The study was conducted at El-Azazy Hospital for mental health in Abo Hammad city. **Sample** A convenient sample of 100 nurses. **Tools for data Collection:** Three tools were used to collect the data: I) a structured interview questionnaire, II) Maslach's Burnout Inventory, Human Services Survey (MBI-HSS) and III) Beck Depression Inventory (B D I). **Result**: The current study revealed that 93% were females, 57% had less than 10 years of experience, While 95% worked night shifts. Regarding burnout domains the highest level was to personal achievement 75.0% followed by emotional exhaustion 59.0%, and 23.0% of participants had depersonalization, while 19.0% of them had high level of total burnout. As well as, 66.0% had depressive symptoms, only 18.0% had sever level of depression. Whereas 48.0% of participants had mild level of depression. **Conclusion:** Less than one-quarter of nurses had high level of total burnout. Meanwhile, the majority of them had depressive symptoms ranging from mild to severe. There was a statistically significant positive correlation between depression and burnout. Furthermore, depersonalization burnout domain, problems with supervisors and peers were an independent positive predictors of depressive symptoms. **Recommendations:** Regularly assessment for factors which increase levels of burnout among psychiatric nurses, Implementing interventions to deal effectively with burnout.

Key words: Burnout, Depression, Psychiatric nurses

Introduction

Nursing is a stressful and challenging profession for several reasons. Permanent confrontation with patients, having responsibility for human health, performing clinical procedures, exposure to dying patients, dealing with emergency and unpredictable situations, exposure to too much noise at workplace and shifts turnover are among stress factors affecting the nursing profession [1]

Psychiatric nurses carry out multiple tasks, with different degrees of requirements and responsibilities, these professionals can be exposed to psychosocial risks. In psychiatric hospital units, the environment and the type of demand can expose the nurses to risks, which result in negative consequences for the worker's health and the quality of care provided to patients [2].

Burnout described as the end result of stress in the professional life and combines emotional exhaustion, depersonalization, and low personal accomplishment. This problem is common in health care workers in every specialty and may affect not only personal satisfaction, but also the quality of care delivered to patients [3].Burnout affects job performance. Because burnout is characterized by feelings of emotional depletion, distancing from patients, and feelings of ineffectiveness at work, it is

quite plausible that burnout reduces the likelihood of engaged and proficient care[4].

Depression is a mood disorder. It may be described as feelings of sadness, loss, or anger that interfere with a person's everyday activities. People experience depression in different ways. It may interfere with your daily work, resulting in lost time and lower productivity. It can also influence relationships and some chronic health conditions [5].Depression affects employee performance as well as organizational productivity. Depression is linked to increases in work absenteeism, short-term disability, and decreased productivity and presentism. Depressed employees may have impaired judgment, and lapses of judgment in the workplace may produce serious occupational injuries. Depression is estimated to cause 200 million lost workdays each year [6].

Today, depression is one of the major medical and social issues, which ruined labor, economic and social empowerment of the individual. Workplace stress, depression and anxiety cause lack of confidence and frequent absenteeism. As confirmed by researchers, nurses are among occupational groups who are exposed to stress and mental health problems and these psychological symptoms are among the common complaints [7]. The burned out individual "looks acts and seems depressed". Burnout involves not only the "presence of negative emotions" but also the "absence of positive ones" connecting burnout with dysphoria and anhedonia, the core symptoms of depression [8].

There is disagreement among researchers who study burnout as to whether there is an overlap between burnout and depression. People who suffer from burnout look and act as if they were depressed. Indeed, we cannot overlook the fact that some of the burnout symptoms appear to resemble the ones of depression; as it is characterized by anhedonia, i.e., the loss of interest or pleasure, depressed mood, fatigue or loss of energy, impaired concentration, and feelings of worthlessness, decreased or increased appetite, sleep problems (hypersomnia or insomnia) and suicidal ideation [9].

The high-stress and high-responsibility nature of health professions commonly leads to mismanaged mental health which not only directly affects patient outcomes but may also affect the personal health and quality of life of nurses [10].

Significance of the study

Psychiatric nurses are considered the main working group of hospitals, they are responsible for preserving and promoting the quality of care for patients against predetermined standards and they are the milestone of any health care system. The nursing shortage is the main problem facing all hospitals, whether private or governmental, so the nurses are susceptible to have burnout and other psychological problems as depression as a result of heavy workload, long shift hours and the nature of the psychiatric working environment. Therefore, this study will be conducted to determine level of burnout and depression among staff nurses working in El - Azazy psychiatric hospital that help to produce scheme to deal with workplace related stress and decrease depression among psychiatric nurses

Aim of the Study

The aim of the study was to: Assess the burnout and depression among staff nurses working in El - Azazy psychiatric hospital.

Research questions:

- What is the level of burnout among staff nurses?

- What is the level of depression among staff nurses?
- Is there a relation between burnout and depression among staff nurses?

Subjects and methods:

Research design:
A descriptive correlational design was used to conduct this study.

Study setting:
The study was conducted at El-Azazy Hospital for mental health in Abo Hammad city, in Sharkia Governorate, Eygpt.

Study subjects:
The study subjects consisted of A convenient sample of 100 nurses working in El-Azazy Hospital.

Tools of data collection:
Three tools were used to collect the study data;

Tool I: A structured interview questionnaire: This section developed by the researcher and composed of two parts.

Part 1: Demographic data sheet and job characteristics: It was used to asses a sociodemographic characteristics of psychiatric nurses as gender , age , marital status number of children, educational degree, years of experience, income satisfaction, the type of shifts and number of shifts per month.

Part 2: Nurses'opinion about work place problems: It included questions about work place problems as small number of nurses per shift , low salary , risk of infection and injury , problems with supervisors , difficult transportation and overtime which lead to problems with family.

Tool II: Maslach's Burnout Inventory, Human Services Survey (MBI-HSS):
It was developed by Maslach et al [11] to measure the levels of burnout among nurses, it Consists of 22 items grouped under three domains as follows: The emotional exhaustion subscale (nine items), the depersonalization subscale (five items), and the personal accomplishment subscale (eight items).The items are graded on a seven-level rating scale ranging from 0 (never) to 6 (daily)

Scoring system: Items had a 7-point Likert scale response: "Every day ،Few times a week, Once a week, Few times a month, One a month or less, Few times a week, Never". The scoring was reversed for negative statements. For each area and for the total scale, the scores of the items were summed-up and the total divided by the number of the items, giving a mean score for the area. These scores were converted into percentage scores. The nurse burnout was considered "high" if the percentage score was 60% or more and low if less than 60%.

Tool III: Beck Depression Inventory (B D I)
It was developed by Beck et al [12] to measure characteristics, attitudes and symptoms of depression among nurses. It consists of 21 items. Each item is rated on a 4 point scale ranging from 0 to 3.Add up the score for each of the 21 questions by counting the number to the right of each question marked. The highest possible total for the whole test would be 63. This would mean circled number three on all 21 questions since the lowest possible score for each question is 0, the lowest possible score for the test would be 0. This would mean circles zero on each question.
The level of depression was categorized as follows:

Three levels:
    0-7 = None
    8-25 = Mild/Moderate
    26-63 = Severe
Two levels (dichotomous):
    0-7 = No depression
    8-63 = Depression

Content validity and reliability:

The validity of the tools was done by group of panel who were three experts from nursing and educational staff who reviewed the tools and ascertained clarity, relevance, comprehensiveness, and understandability. The reliability is proved by the Cronbach's alpha as Shown in the following table;

Scales	N of Items	Cronbach's Alpha
Burnout:		
Emotional exhaustion	9	**0.82**
Depersonalization	5	**0.82**
Personal achievement	8	**0.84**
Depression	**21**	**0.89**

Pilot study

A pilot study was conducted on 10 nurses in El-Azazy psychiatric hospital, constituting about 10% of total study sample. It was carried out to assess content validity of the used tool, ascertain the clarity, applicability, feasibility, practicability of the tools, and estimated time needed to fill out the tools. Data obtained from the pilot were analyzed and no modification was done. The time needed to fill out the tools was about 25-30 minutes. The pilot sample was not included in the main study.

Field work

Once permission was granted to proceed with the study, the researcher met with nursing staff of El- Azazy psychiatric hospital. The purposes and benefits of the study were explained to participants. They were ensured of confidentiality, participation was completely voluntary. The researcher started the interview with nurses individually using the data collection tools. The questionnaire was read and explained. Instructions were given to nurses to fill questionnaire. The researcher clarified any questions to nurses if needed. The filled forms were revised to check completeness to avoid any missed data. From the pilot study results, it was found that the average time to fill in all tools was from 25-30 minutes. Data was collected two times per week during Monday and Thursday. Data collection period continued in about 6 months from the mid of October till the mid of April, 2019.

Administrative and Ethical considerations

An official permission was obtained from the director of El-Azazy hospital for mental illness after explaining the nature and the aim of the study to get the permission of data collection and facilitate the researcher role.

The ethical issues were taken into consideration. The study was approved by the pertinent authority of research ethics committee of faculty of nursing at Zagazig University with code (M.DZU. NUR/195/15/11/ 2022). The agreement for participation of the informants was taken after fully explained of the aim of the study. Participants were afforded the chance to decline the participation, and they were advised that they could back out at any stage of the data collection interviews; as well they were reassured that the data would be confidential and utilized for the research purpose only.

Statistical design:

Data entry and statistical analysis were done using SPSS 20.0 statistical software package. Data were presented using descriptive statistics in the form of frequencies and percentages for qualitative variables, and means and standard deviations and medians for quantitative variables. Cronbach alpha coefficient was calculated to assess the reliability of the developed tools through their internal consistency. Qualitative categorical variables were compared using chi-square test. Whenever the expected values in one or more of the cells in a 2x2 tables was less than 5, Fisher exact test was used instead. In larger than 2x2

cross-tables, no test could be applied whenever the expected value in 10% or more of the cells was less than 5. McNemar chi-square test was used for the comparison of dependent samples. Spearman rank correlation was used for assessment of the inter-relationships among quantitative variables and ranked ones. In order to identify the independent predictors of burnout and depression, multiple linear regression analysis was used and analysis of variance for the full regression models was done. Statistical significance was considered at p-value <0.05.

Results

Table (1) represents Demographic characteristics of nurses in the study sample. It was clarified that more than half of the studied nurses (55%) their age less than thirty with mean age 29.0±5.1 , the majority of them were female (93%) and married (84%) number of their children ranged from 0-5 children and more than half of nurses had technical institute diploma (56%) .

Table (2) demonstrates that more than half of the sample 57%had less than 10 years of experience with median 8 years. Approximetly two third of participants had insufficient income 63% , as regard , number of shifts more than half of studied nurses (56.0 %)had less than 15 shifts per month. While 95% had work night shifts.

Table (3) shows that the great majority of them selected the risk for infection and injuries 93.0%, followed by problems with their families due to over time78.0% and low salary 75.0% . On the other hand the least selected problems with supervisors 30.0%.

Table (4) shows that the highest level regarding burnout domains was to personal achievement 75.0% followed by emotional exhaustion 59.0%. On the other

hand, 23.0% of participants had high depersonalization, while 19.0% of them had high level of total burnout.

Table (5) illustrates that 34% of the studied nurses had no depressive symptoms, while 66.0% had depressive symptoms. Only 18.0% had severe level of depression. Whereas 48.0% of participants had mild level of depression.

Table (6) demostrates a statistically significant weak positive correlation between nurses depression scores and their emotional exhaustion (r=0.272), depersonalization (r = 0.420) and total burnout (r= 0.425). While a weak negative correlation with personal achievement (r= 0.210). As regards for burnout domains, there was a statistically significant positive correlation between depersonalization and emotional exhaustion (r= 0.379). Conversely, negative correlation with personal achievement (r= 0.270).

Table (7) shows that small number of nurses per shift, problems with supervisors and difficult transportation were independent positive predictors of total burnout score. The model explains 0.27 % of the variation in this score.

Table (8) demonstrates that problems with supervisors, overtime lead to family problems and depersonalization were its statistically significant independent positive predictors. The model explains 0.28% of the variation in the depressive symptoms score.

Discussion

Nurses spend more time with their patients than any other healthcare provider, and patient outcomes are directly affected by the quality of care provided by these professionals. The work conditions of nurses make them highly susceptible to developing psychological conditions such as depression, anxiety, stress, fatigue, and burnout [13].

The present study finding showed that more than half of studied nurses were less than thirty years with median 28 years, the majority of them were females and married. The possible explanation for that, nursing has traditionally been a female-dominated industry, but the percentage of male nurses has increased. These results supported with the study by **Cheng et al** [14] who revealed that most of studied nurses were female and more than half were married. Beside a study conducted by **Huo et al.** [15] where the majority of participants were females. Similarly, **Lungerland et al.** [16] in Sweden who stated that mean age of studied nurses was 39.7 and the most of them were female.

Regarding to Job characteristics of nurses, the current study demonstrated that more than half of participant nurses had less than 10 years of experience. Less than half of them had taken more than 15shifts per month and the great majority working night shifts. These results attributed to the nature of work in most Egyptian hospitals oblige nurses to take night shifts and determine the number of certain shifts. These result agreement with the study conducted by **Sharma et al.** [17] in North India and founded that about two thirds of the studied nurse had up to five years in the profession and majority of them worked night shift. Beside **Putra et al.** [18] who reported that about half of subject had up to five years of experience. But these results dis agreement with the study conducted by Kelly et al [19] reported that mean working hours per week was 34.79±7.2 and more than half worked day shifts.

According to Opinions about workplace problems as reported by nurses, the current study revealed that the majority of the nurses had high risk for infection and injuries, more than three quarters had problems with their families due to over time, while less than one third had problems with supervisors and peers. These results may be due to overload from many factors such as aggressive behavior either verbally or physically from psychiatric patients, difficulties of dealing with patient at risk for suicide, lack of patient recovery and suffered from shortage of nurses related patients ratio. These results consistent with the study by **Molina-Praena et al.** [20] who reported that more than half suffered from high risk of infection.

Concerning psychiatric nurses' total burnout level, In total less than one quarter of nurses had high level of total burnout, this result might be due to the challenge of the tasks that need to be done and available time to perform them subjected workers to extreme tension, aggressive behavior either verbally or physically from psychiatric patients, difficulties of dealing with patient at risk for suicide, lack of patient recovery may be predisposing factors for burnout. This study agree with a study conducted by **Huo et al.** [15] presented that about one quarter of participants suffered from burnout. Beside a study of **Delfrate et al.** [21] in Italy about moral distress and burnout in mental health nurses showed that great majority of studied nurses did not suffer from burnout. And also is agree with study results of **Vidotti et al.** [22] in Brazil which revealed that burnout syndrome was about twenty percent among studied nurses. These result irrelevant with the study performed by **Harizanova et al** [23] titled in burnout among nurses and correctional officers, who presented that about half of studied nurses had high burnout.

Regarding to the first dimension of burnout domains, The current study revealed that more than half of studied nurses had emotional exhaustion These results agree with the study done by **Choi et al.** [24] who stated that half of studied nurses had high emotional exhaustion.

And also relevant with study conducted by **Elsayes et al.** [25] who revealed that more than half of studied sample had high level of emotional exhaustion.

Concerning to the second dimension of burnout ; personal accomplishment, the current study results showed that majority of studied nurses had high level of personal accomplishment this result might be due to, it's true that more years of experience can lead to greater personal achievement as a result of developing deeper understanding of their field, gaining more skills and knowledge. This result relevant with study conducted by **Abedi-Gilavandi et al.** [26] in Tehran titeled in Burnout Among Nursing staff in Ziaeian hospital, who revealed that the majority of studied nurses had high level of personal accomplishment. Beside **Lopez-Lopez et al** [27] in Belgrade founded that about two third of studied participants had high level of personal accomplishment. Similarly, a study conducted by **Berry-Robertson et al.** [28] showed that more than one quarter of studied nurses had low level of accomplishment.

Concerning to the third dimention of burnout depersonalization, the current study reported that less than one quarter of participants had high level of depersonalization .This result was relevant with study conducted by Sharma et al [17] who founded that about one quarter of the studied nurses had high depersonalization., and also agree with study result conducted by **Khalaf and Adam** [29] in Eygpt reported that less than one quarter of studied nurses had high level of depersonalization.

Concerning to the second objective: The current study demonstrated that two third of studied nurses had depressive symptoms , where about one half of the sample had mild and moderate level of depression and only one fifth had severe depression, these results may due to less than two thirds of the studied nurses had emotional exhaustion which result from exposure to aggression from psychiatric patient, and also coflicts with colleages and supervisors which increase work load certainly will increase depressive symptoms. These results consistent with the study conducted by **Huo et al.** [15] who revealed that more than half of participants had depressive symotoms. Beside a study conducted by **Maharaj et al.** [30] who study the Prevalence and risk factors of depression, anxiety, and stress in a cohort of Australian nurses, revealed that less than one third of studied nurses suffered from severe depression. In the same line **Saquib et al.** [31] who reported that less than one fifth of participant in the study suffered from severe depression**.**

The present study showed that there was a statistically significant positive correlation between nurses' depression scores and their emotional exhaustion, depersonalization and total burnout. While a negative correlation with personal achievement. These results supported with the study conducted by **Xu et al.** [32] about Emotional exhaustion and sleep-related worry as serial mediators between sleep disturbance and depressive symptoms in student nurses reported that there was positive correlation between emotional exhausting and depressive symptoms and also supported with the study conducted by **Xie et al.** [33] about prevalence of depressive symptoms among nurses in China, demonstrated that emotional exhausting and burnout had negative correlation with their depression level. But disagreement with the study by **Hu et al.** [34] titled in Frontline nurses' burnout, anxiety, depression, and fear and their associated factors in Wuhan, China, who stated that there was high negative effect of nurses' burnout on nurses' depression level.

According to the best fitting multiple linear regression model for the total burnout score, the current study showed that small number of nurses per shift, Problems with supervisors and peers and difficult transportation were positive predictors on total burnout score. These results cohort with the study performed by **Al- Omari et al.** [35] who revealed that shortage of nurses and work load had high effect on nurses' burnout. In a similar line a study conducted by **Hendy et al.** [36] who showed that shortage of nurses had negative effect on emotional stress among nurses.

Related to the best fitting multiple linear regression model for the depression score, the current study detected that problems with supervisors and peers, overtime lead to family problems and depersonalization score were positive predictors on nurses' depression score. These results consistent with the study by **Saquib at al.** [31] titled in association of cumulative job dissatisfaction with depression, anxiety and stress among expatriate nurses in Saudi Arabia, who showed that overtime and workload had negative effect on their depression level.

Conclusion

The study findings revealed less than one-quarter of nurses had high level of total burnout. Meanwhile, the majority of them had depressive symptoms ranging from mild to severe. There was a statistically significant positive correlation between depression and burnout. Furthermore, depersonalization burnout domain, problems with supervisors and peers were an independent positive predictors of depressive symptoms among psychiatric nurses. Furthermore, small number of nurses, difficult transportation and problems with supervisors were an independent positive predictors of burnout among nurses.

Recommendations

- Regularly, Assess factors which increase levels of burnout and Depressive symptoms among psychiatric nurses.

- Implement an interventions programs to those who having burnout and severe depressive symptoms.

- Improving communicating skills, team working, providing space for relaxation, entertainment, and exercises which help in enhancing mental health and reduction of burnout among psychiatric nurses.

Table 1: Demographic characteristics of nurses in the study sample (n=100)

	Frequency	Percent
Age:		
<30	55	55.0
30+	45	45.0
Range	21.0-42.0	
Mean±SD	29.0 ±5.1	
Median	28.0	
Gender:		
Male	7	7.0
Female	93	93.0
Marital status:		
Married	79	79.0
Single	16	16.0
Divorced	5	5.0
Marital status:		
Never married	16	16.0
Married	84	84.0
No. of children:		
Range	0-5	
Mean±SD	2.3±1.1	
Median	2.0	
Nursing qualification:		
Nursing school diploma	31	31.0
Technical institute diploma	56	56.0
Bachelor	9	9.0
Master	4	4.0
Nursing qualification:		
Nursing school diploma	31	31.0
Technical institute diploma	56	56.0
Bachelor/master	13	13.0

Table 2: Job characteristics of nurses in the study sample (n=100)

	Frequency	Percent
Experience years:		
<10	57	57.0
10+	43	43.0
Range	1.0-24.0	
Mean±SD	9.0±5.7	
Median	8.00	
Income:		
Insufficient	63	63.0
Sufficient	37	37.0
No. of shifts/month		
<15	56	56.0
15+	44	44.0
Range	5.0-20.0	
Mean±SD	13.7±2.8	
Median	14.00	
Work night shifts:		
No	5	5.0
Yes	95	95.0

Table 3: Opinions about workplace problems as reported by nurses in the study sample (n=100)

Opinions:	Frequency	Percent
Small number of nurses per shift	54	54.0
Low salary	75	75.0
Problems with supervisors/peers	30	30.0
Risk of infections and injuries	93	93.0
Difficult transportation	43	43.0
Overtime lead to family problems	78	78.0

Table 4: Burnout among nurses in the study sample (n=100)

	Frequency	Percent
Emotional exhaustion domain:		
High	59	59.0
Low	41	41.0
Personal achievement domain:		
High	75	75.0
Low	25	25.0
Depersonalization domain:		
High	23	23.0
Low	77	77.0
Total burnout:		
High	19	19.0
Low	81	81.0

Table 5: Levels of depressive symptoms among nurses in the study sample (n=100)

	Frequency	Percent
Depression:		
None	34	34.0
Mild/ Moderate	48	48.0
Severe	18	18.0
Depression:		
Absent	34	34.0
Present	66	66.0

Table 6: Correlation matrix of depression and burnout scale domains scores

Scores	Spearman's rank correlation coefficient			
	Depression	Emotional Exhaustion	Personal Achievement	Depersona-Lization
Depression				
Emotional exhaustion	.272**			
Personal achievement	-.210*	.039		
Depersonalization	.420**	.379**	-.270**	
Total burnout	.445**			

(*) Statistically significant at p<0.05   (**) Statistically significant at p<0.01

Table 7: Best fitting multiple linear regression model for the total burnout score

	Unstandardized Coefficients		Standardized Coefficients	t-test	p-value	95% Confidence Interval for B	
	B	Std. Error				Lower	Upper
Constant	2.11	0.13		16.676	<0.001	1.86	2.36
Small number of nurses per shift	0.41	0.16	0.24	2.640	0.010	0.10	0.72
Problems with supervisors/peers	0.71	0.17	0.37	4.228	<0.001	0.38	1.05
Difficult transportation	0.34	0.15	0.19	2.225	0.028	0.04	0.64

r-square=0.27
Model ANOVA: F=13.37, p<0.001
Variables entered and excluded: age, gender, qualification, experience, marital status, income, shift work, low salary, risk of infections, overtime and family problems

Table 8: Best fitting multiple linear regression model for the depression score

	Unstandardized Coefficients		Standardized Coefficients	t-test	p-value	95% Confidence Interval for B	
	B	Std. Error				Lower	Upper
Constant	5.57	2.30		2.424	0.017	1.01	10.13
Problems with supervisors/peers	4.81	2.13	0.21	2.258	0.026	0.58	9.04
Overtime lead to family problems	7.49	2.17	0.30	3.454	0.001	3.19	11.80
Depersonalization score	1.97	0.58	0.31	3.386	0.001	0.81	3.12

r-square=0.28
Model ANOVA: F=13.72, p<0.001
Variables entered and excluded: age, gender, qualification, experience, marital status, income, shift work, small number of nurses per shift, low salary, risk of infections, difficult transportation

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