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BURNOUT AND ASSOCIATED FACTORS AMONG NURSES AT AL-AHRAR ZAGAZIG TEACHING HOSPITAL



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ABSTRACT:

Background: Burnout is characterized by three dimensions: feelings of energy depletion or exhaustion; increased mental distance from one's job, or feelings of negativism or cynicism related to one's job; and reduced professional efficacy". **The Aim** of this study was assess burnout and associated factors among nurses at Al-Ahrar Zagazige Teaching Hospital. **Subjects and Method:** Cross-sectional design was used in this study. **Setting:** The study was conducted at Al-Ahrar Zagzag Teaching Hospital. **Subjects:** A convenient sample of 120 nurses working in the previous mentioned setting. **Tools:** data were collected using tow tools, **Tool (I):** Socio-demographic data and work related factors. **Tool (II):** Maslach Burnout questionnaire. **Results:** the result of study indicated that Majority of studied nurses were working 36 hours/ week and staff nurses. More than three fifths of nurses were married, female, working at intensive care units and emergency department. Majority of studied nurses had low scores of depersonalization, personal accomplishment, Emotional exhaustion and total burnout. **Conclusion:** Majority of studied nurses had low level of depersonalization, personal accomplishment, Emotional exhaustion, and total level of burnout. No statistical significant relationship between burn out score and demographic and work related factors of studied nurses. **Recommendations:** Periodical assessment of nurses' burnout should be done regularly for early detection and develop training programs to improve their coping abilities and decrease burnout.

Key words: Burnout, Associated Factors, Nurses.

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Introduction

One of the professions with a very high risk of burnout is nursing. Burnout affects nurses' attitudes and behaviours towards patients, and they are less focused at work, which threatens patient safety⁽¹⁾.

Burnout has a variety of detrimental effects on nurses' personal lives as well as the quality of patient care that is provided. These effects can result in family problems because of behavioural changes. Therefore, there is a pressing need to act to reduce burnout, enhance the mental health of nurses, and raise the standard of hospital services⁽²⁾.

Burnout is a state of depersonalization, poor self-esteem, and emotional tiredness that can affect persons who work with others in any capacity. Loss of emotional energy and resources, lack of excitement, irritation, tension, and fatigue are all characteristics of the emotional exhaustion component. The interpersonal connections that result in a bad interaction are represented by the depersonalization component, and feelings of poor personal accomplishment are synonymous with feelings of incompetence⁽³⁾.

Burnout complications include Physical symptoms, sleep issues, depression, social dysfunction, resignation, frequent absenteeism, decreased energy and work efficiency, decreased job satisfaction, and a decline in the standard of patient care and services. A significant risk factor for leaving a job is thought to be burnout. Some studies proposed that there is a positive correlation between burnout and moral distress⁽⁴⁾.

Due to the emotional nature of their work and the prevalence of stress, rigid policies, inappropriate work assignments, poor training, inadequate pay, employee conflict, and complex or unidentified patient needs in hospitals, burnout syndrome has been more frequently seen in nurses than in other workers. Because of the nature of their work, nurses are frequently put in circumstances they are ill-equipped to handle owing to a lack of

training, skills, resources, or information, which causes a great deal of internalized suffering⁽⁵⁾.

Low patient satisfaction, poorer service quality, a higher risk of complications, a longer hospital stay, and high hospitalization-related expenditures are the key patient-related effects. Greater likelihood of medication errors, high prevalence of physical and psychological issues (such as headache, hypertension, depression, anxiety, exhaustion, and sleeplessness), and greater risk for behavioral disorders (such as smoking) are only a few of the consequences that relate to nurses. Burnout at work can also lead to absences from the workplace and low job satisfaction, which lowers the quality of living at work. Job burnout has a negative impact on healthcare organizations, including poor organizational culture, increased staff turnover, increased staff dissonance, decreased productivity, effectiveness, and care quality, which ultimately results in a decline in the organizations' customer base⁽⁶⁾.

Significance of the study:

Burnout is a workplace risk that has been thoroughly studied, documented, and cited as a significant health problem. It has attracted great attention during the last few years. It is the last stage of the chronic occupational exhaustion process⁽⁷⁾.

Burnout also has a negative effect on nurses since it increases absenteeism, work discontent, and the intention to leave the field while also having an adverse effect on healthcare organizations. Last but not least, burnout affects patients' safety. It is associated with lower quality of care, increased frequency of neglectful behaviors toward patients and increased frequency of adverse patient events, such as medication errors⁽⁸⁾.

Aim of the study:

The current study aimed to assess burnout and associated factors among nurses at Al-Ahrar Zagazig Teaching Hospital

Subjects and methods:

Research Questions:

- 1-What are the levels of burnout dimensions among nurses?
- 2- How to investigate socio-demographic and work related factors among nurses?
- 3- Is there relationship between burn-out and socio-demographic and work related factors among nurses?

Research design:

A cross-sectional design was utilized in this study

Study setting:

The study was conducted in the Intensive care units (ICU) & Emergency departments at Al Ahrar Zagzag Teaching Hospital. The hospital divided by five floors; reception and emergency departments are found in the first floor. Post open heart surgery I.C.U, is found in second floor. Endoscopy department I.C.U, C.C.U, I.C.U, and E.R I.C.U. is found in third floor. N.I.C.U, & Pediatric I.C.U., found in fourth floor. And Intermediate I.C.U. is found in fifth floor.

Study subjects

A purposive sample of 120 staff nurses from the above-mentioned setting who fulfilled the following criteria: who were providing direct patient care in Intensive care units (ICU) & Emergency departments during the time of data collection and having at least one year of experience, all educational level, both sexes, and agree to participate in the study.

Sample size calculation:

The association between burn out score with work place bullying behavior score among nurses was 0.36⁽⁹⁾ with power of test 98%, and confidence level 95% ,and four subjects added to be round number ,the sample size calculated to be 120 nurses⁽¹⁰⁾.

Tools of data collection:

Two tools were used to collect necessary data. It includes **Tool (I):** Socio-demographic data and work related factors: It was developed by the researcher and includes information about age, sex, level of education, Marital status, hospital department, years of experience, Position, and Working hours.

Tool (2): Maslach Burnout questionnaire⁽¹¹⁾: It consists of 22 items which were divided into three subscales. These subscales are emotional exhaustion (9 items), depersonalization (5 items) and personal accomplishment (8 items). A seven-point Likert scale ranging from (0) means never to (6) means almost every day. High scores of emotional exhaustion and depersonalization subscales correspond with a low score on the personal accomplishment subscale indicate a high level of burnout. Moderate scores of the three subscales reveal a moderate level of burnout. Low scores on the emotional exhaustion and depersonalization subscales accompanied by high score on the personal accomplishment subscale indicate a low level of burnout.

Scoring system

The total score were calculated by summing scores of all categories where.

- 1- High level of staff nurses' experience burnout >75%.
- 2- Moderate level of staff nurses' experience burnout 50- 75%.
- 3- Low level of staff nurses' experience burnout <50%.

Content validity & Reliability:

The tools were tested for content validity by Jury of four experts, from the Faculty of Nursing (psychiatric and Mental Health, and nursing administration departments). These experts assessed the tool for clarity, relevance, comprehensiveness and understandability.

The reliability of tools was tested by measuring their internal consistency. It demonstrated a good level of reliability with Cronbach's Alpha

as follow: Burnout was 0.890 which indicate an accepted reliability of the tool.

Fieldwork

Once the permission was granted to proceed with the study, the researcher started to prepare a schedule for collecting the data. Each nurse was interviewed individually by the researcher who introduced herself and explained the aim of the study briefly and reassured them that information obtained is strictly confidential and would not be used for any purposes other than research. After that, the verbal agreement was obtained to collect the necessary data.

The researcher used to go to Intensive care units (ICU) & Emergency departments at Al- Ahrar Zagzag Teaching Hospital for interviewing the participants who fulfills the criteria. The study tools were answered by each participant during the interview, and the time needed ranged from 15 to 20 minutes, according to the participant's response to the questions. The fieldwork was executed over three months from the beginning of October to the end of December 2022; at different times, the morning, afternoon and night shifts, and tried to collect data from different work circumstances.

Pilot study:

A pilot study was carried on 5 nurses representing about 10% of the study subjects. The purposes of the pilot study were to test applicability, feasibility, practicability of the tools. It also, helped to estimate the time needed to complete the questionnaire sheet. According to the results of pilot study no modification made to the tools and those who shared in the pilot study were involved in the studied sample.

Administrative and ethical considerations:

Official permission for data collection was obtained by submission of official letters issued from the Dean of the Faculty of Nursing at Zagazig University to the director of Al Ahrar Zagzag Teaching Hospital. Moreover, the researcher visited

the study setting, met with the director of Al Ahrar Zagzag Teaching Hospital, explained to him the aim and importance of the study and asked for his cooperation.

Firstly, the study proposal was approved by the Research Ethics Committee (REC) and Postgraduate Committee of the Faculty of Nursing at Zagazig University). Then, verbal agreement for participation was obtained from each subject after full explanation of the aim of the study. Participants were given the opportunity to refuse participation, and they were notified that they could withdraw at any stage of filling the questionnaire. No names were included in the questionnaire sheet and anonymity of each participant was protected by the allocation of code number for each participant. They were assured that the information would be confidential and used for research purpose only.

Statistical analysis:

Data entry and statistical analysis were done using SPSS 22.0 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. Quantitative data were expressed as the mean \pm SD, median (range) and qualitative data were expressed as absolute frequencies (number) & relative frequencies (percentage). The chi-square test was used to find the significant association between the demographic and work related factors, and burnout. Cronbach alpha coefficient was calculated to assess the reliability of the awareness scale through its internal consistency. P-value $<$ 0.05 was considered statistically significant, p-value $<$ 0.01 was considered highly statistically significant, and p-value \geq 0.05 was considered statistically non-significant (NS).

Results:

Table (1), represents frequency distribution of socio-demographic characteristics of the studied nurses the study sample consisted of 120 nurses whose age ranged between 24 and 49 years old. It was revealed that (57.5%) of studied nurses were from 20 to 30 years old, work as staff nurse (89.2%), married (68.3%), working at Intensive Care Units & Emergency Department (ICU /ER) (66.7%), females (63.3%), had 1 to 5 years of experience (38.3%), had technical institute of nursing (45.8%), working for 36 hours/week (94.2%).

Table and figure (2) reveal that (90%) of studied nurses had low scores of depersonalization, (80%) of them had low scores of personal accomplishment. The same table also reveals that (84.2%) of them had low level of burnout.

Table (3) shows that no statistical significant relationship between burn out score and demographic and work related factors of studied nurses.

Discussion:

Burnout among nurses leads to nurses experiencing tiredness, chronic fatigue, anger, exhaustion, irritability, frequent headaches, gastrointestinal disorders, abnormal weight loss or gain, insomnia, depression, and breathing difficulties. It is associated with increased rate of job withdrawal, absenteeism, and turnover⁽¹²⁾.

Concerning the answer of research questions regarding to the levels of burnout and investigate socio demographic and work related factors among nurses the present study showed that studied nurses were consisted of 120 nurses. Their age ranged from 24-49 years old. The years of experience was ranged from 1 to less than 5 years among more than one third of nurses were female. A female gender was higher than male this may be long history of the feminine nature of the nursing profession; this may be explained by the larger number of female nursing schools than male nursing schools in Egypt. Also the common concept of our Egyptian

community that the nursing profession is considered the profession of women leading to an increasing number of females admitted to the nursing profession than males.

Furthermore, more than two third of them were married and slightly less than majority of them were staff nurse. This may be because technical nurses start their working life early because of shorter educational time compared with baccalaureate nurses and subsequently start their social life early

This result was in agreed with a study of **Ibrahim et al**⁽¹³⁾ who reported that the majority of nurses were female, married and their age range between 24-49 years old, and partially similarly to the study of **Mahmoud, et al**⁽¹⁴⁾ who reported that the majority of nurses were female, married and their age ranged between 24-49 years old. On the contrary they found that, more than half of staff nurses had less than 5 years of experience and nearly half of them had Technical Nursing Institute. Also, the current study results disagreed with study by **Homayuni et al**⁽¹⁵⁾ in south of Iran, who showed that, the majority of nurses had Bachelor's degree as their highest qualifications. About half of them were between the ages of 30 and 39 years. The majority of participants had more than 10 years' experience.

The current study results pointed out that majority of studied nurses had low level of depersonalization, personal accomplishment and Emotional exhaustion. This may be because nurses not suffer from many factors such as increased workload; conflicts with supervisors, insufficient rewards, such as low salaries and lack of job promotion, all these factors decreased the risk of burnout among nurses.

The previous finding partially agreed with a study conducted in Egypt by **Metwaly, & Ahmed**⁽¹⁶⁾, which demonstrated that nurses had low burnout in depersonalization level, on the contrary found that the studied nurses experience

high burnout in emotional exhaustion, also partially agreed with study of **Farahbod et al** ⁽¹⁷⁾ in Iran, which found that nurses had low burnout in a reduced sense of personal accomplishment. On the contrary, he found that nurses had a high burnout in emotional exhaustion, moderate burnout in depersonalization.

This partially goes on line with the study of **El-Demerdash et al** ⁽¹⁸⁾ in Egypt, who indicated that nearly all of them experienced a low level of personal accomplishment and more than half of them experience a high level of emotional exhaustion. This study results contrary with the study of **Hamaideh** ⁽¹⁹⁾ in Jordanian Which indicated that nurses experience a high level of emotional exhaustion and moderate levels of depersonalization and personal accomplishment.

Regarding to the relationship between burn-out, and socio-demographic and work related factors, the current study, showed that no statistical significant relationship between burn out score and demographic and work-related factors of studied nurses, this finding was similar to studies conducted in Nigeria, by **Ezenwaji et al** ⁽²⁰⁾, who represented that the socio-demographic factors were not

significantly associated with burnout symptoms among the nurses. Our findings did not support previous studies which indicated that factors such as age, work environment, and work experience significantly correlated with burnout among nursing professionals^(21,22)

Conclusion:

The study result concluded that, Majority of studied nurses had low level of depersonalization, personal accomplishment, Emotional exhaustion, and level of burnout. Also, study indicated that more than half of studied nurses were from 20 to 30 years old and more than one third of them had 1 to 5 years of experience. Furthermore, more than two third of them were married and majority of them were staff nurse, female and working for 36 hours/week ..

Recommendations:

- Periodical assessment of nurses' burnout should be done regularly for early detection.
- develop training programs to improve their coping abilities and decrease burnout.
- Further researches Required to determine nurses' burnout and to investigate their needs for its prevention.

Table (1): Frequency distribution of socio-demographic characteristics and bullying experience of the studied nurses (n=120).

Socio-demographic Characteristics	No.	%
Age (year)		
20- < 30	69	57.5
30- < 40	47	39.2
40 – 50	4	3.3
Mean± SD	30.54 ±4.98	
Range	24-49	
Gender		
Male	44	36.7
Female	76	63.3
department of work		
ICU /ER	80	66.7
Other department	40	33.3
Years of experience		

1 < 5	46	38.3
5 < 10	46	38.3
10 and above	28	23.3
Position		
Staff nurse	107	89.2
head nurse	13	10.8
Marital status		
Married	82	68.3
Un married	38	31.7
Academic qualification		
Nursing diploma	8	6.7
Technical institute of Nursing	55	45.8
Bachelor's degree	50	41.7
Post-graduate studies	7	5.8
Working hours /week		
36 hours	113	94.2
48 hours	7	5.8

Table (2): Total burnout scores and its domains of studied nurses (n=120)

Burnout scores	low		Moderate		High		Mean± SD
	No	%	No	%	No	%	
Emotional exhaustion	77	64.2	23	19.2	20	16.7	24.60±13.93
Depersonalization	108	90.0	8	6.7	4	3.3	5.32±6.23
Personal accomplishment	96	80.0	17	14.2	7	5.8	13.97±12.15
Total	101	84.2	15	12.5	4	3.3	43.90±22.66

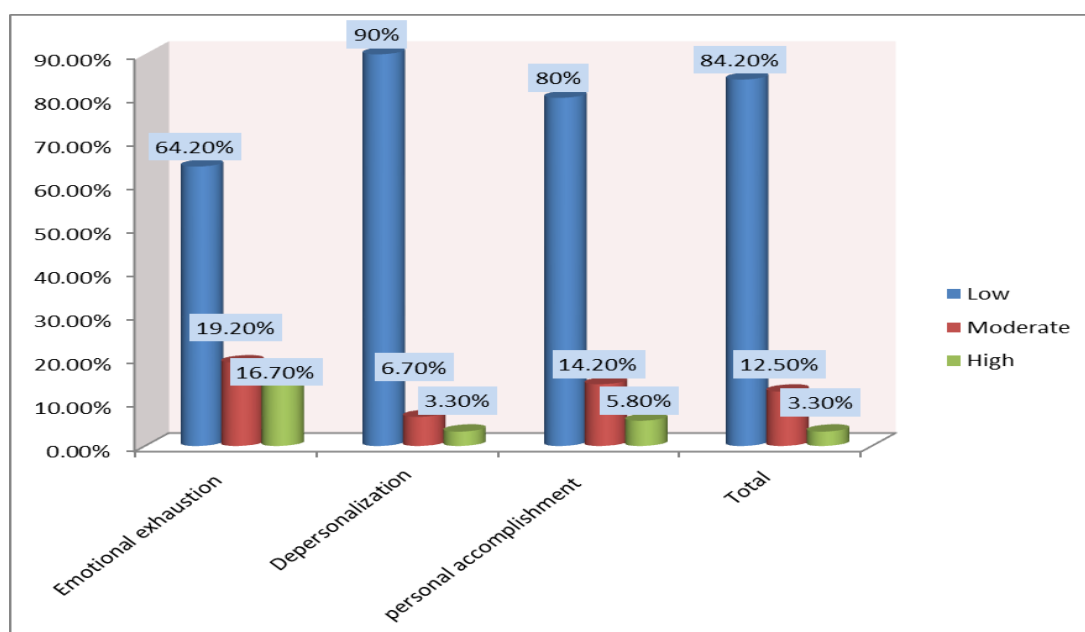


Figure (1): Bar chart presenting total burnout score and its domains among studied nurses.

Table (3): Relation between sociodemographic characteristics of the studied nurses and their burnout score (n=120).

Sociodemographic Characteristics	Low (n=101)		Moderate (n=15)		High (n=4)		χ^2	p-value
	n	%	n	%	n	%		
Age (year)								
20-	57	56.4	10	66.7	2	50.0	1.286	0.864
30-	40	39.6	5	33.3	2	50.0		
40-50	4	4.0	0	0.0	0	0.0		
Gender								
Male	38	37.6	4	26.7	2	50.0	0.992	0.609
Female	63	62.4	11	73.3	2	50.0		
Current department								
ICU /ER	63	62.4	13	86.7	4	100.0	5.537	0.063
Other department	38	37.6	2	13.3	0	0.0		
Years of experience								
1-							4.172	0.383
5-								
10 and above								
Position								
Staff nurse	89	88.1	14	93.3	4	100.0	0.870	0.647
head nurse	12	11.9	1	6.7	0	0.0		
Marital status								
Married	70	69.3	10	66.7	2	50.0	0.685	0.710
Un married	31	30.7	5	33.3	2	50.0		
Academic qualification								
Nursing diploma	6	5.9	1	6.7	1	25.0	6.572	0.362
Technical institute of Nursing	48	47.5	7	46.7	0	0.0		
Bachelor's degree	40	39.6	7	46.7	3	75.0		
Post-graduate	7	6.9	0	0.0	0	0.0		
Working hours								
36 hours	94	93.1	15	100.0	4	100.0	1.398	0.497
48 hours	7	6.9	0	0.0	0	0.0		

χ^2 : Chi square test, non-significant($p>0.05$), **: statistically highly significant ($p<0.001$)

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