Stress and Burnout Among Nursing Staff Working In Forensic Services

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ORIGINAL STUDY

Stress and Burnout Among Nursing Staff Working in Forensic Services

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Abstract

Background: The nurse is the individual responsible for nursing care at the several phases of the patient's presence. Due to the physically demanding nature of nurses' work, nurses experience high levels of work-related stress and burnout, insufficient job satisfaction, and poor general health.

Study aims: This study aims to assess the stress level and burnout of nursing staff working in forensic medicine and better understand the nature of the relationship between work-related stress and nurses' burnout.

Methodology: This study was used to answer four questionnaires from 90 male and female nurses and staff from Al Sadder Hospital in Najaf. The data was collected in 2023, and a study instrument was prepared and approved by the researcher for the direct interview to achieve the goals of the research study that contains socio-demographic data.

Results: The result for together dimensions was higher for nurses without children. In other words, having no children, being a man, and never being married or divorced all appear to be connected with higher burnout rates in professional nurses. Moreover, various moderator variables might emphasize the relationships that have been examined. The study revealed there was a substantial correlation between burnout and marital status, with greater values in burnout among those who were married. Burnout and emotional exhaustion were found to be significantly correlated with the level of education.

Conclusion: This study shows that moderate stress levels related to work and high burnout in nursing staff who are working in forensic medicine. So, it would be required to take into account some unique scenarios. More educated guys with knowledge in their field and nurses with professional experience were present.

Keywords: Stress, Burnout, Forensic services, Nursing staff, Work-related stress

Forensic nurses betrothed in medico-legal death examinations skill trauma-induced reactions in responding to, exploring, and recording sudden, surprising death. The trauma of these repeated experiences often results in reduced performance, poor occupation satisfaction, and prolonged stress [10] (see Figs. 1 and 2)

"Forensic medicine" reflects a significant basis of frustrations for workers. Because "forensic medicine" is related to law, it is not as complicated as traditional medicine and the treatment of patients. This category of work is associated with different types of violence, generating a sad and violent working situation, with the assumption that the deaths and damages affected cannot be stopped, and especially more sensitive populations have found that when writing technical records, they try not to become sensitively complicated by the number of victims and their families, but considering that these stories are necessary to consider the case and make the right decision, which is not always possible [14].

"Mood disorders" are public, with depression disorders being the most common. Depression is one of the causes of world incapacity. Approximately (450) million people suffer from some kind of mental or behavioural disorder, and 25% of the population suffer from the disease at some point in
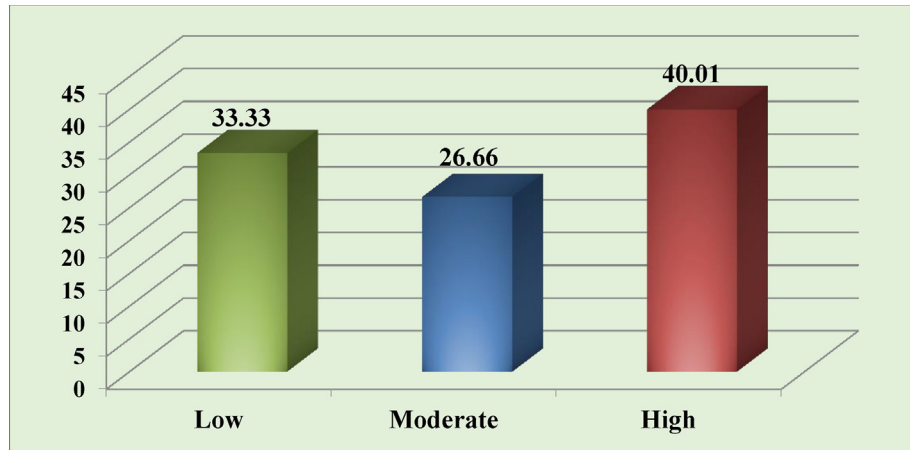
Fig. 1. Distributions of the study subjects by their overall assessment of the burnout staff scale.
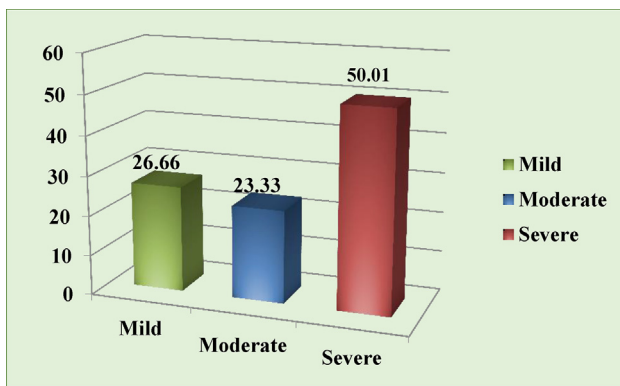

Fig. 2. Distributions of the study subjects by their overall assessment of the work-related stress scale.

their lives. In this situation, psycho-social interventions are necessary to meet the psychological stresses of employees [25]. Allowing for the pain, sadness, and loss that morgue employees are showing, the presence of psychological care is essential to decrease this state of mind [12].

"Stress" refers to an outside force that an individual may be exposed to, which in turn outcomes in tensions or strains concerning stress experienced within the workplace; stress is chiefly regarded as a bad event or condition that an individual is exposed to and outcomes in adverse effect "cognitive appraisal theory of Coping and Stress" high-lighted that cognitive assessments of event instigated coping reactions as challenging, damaging and aggressive [6]. The study suggests that the actual physical violence or perceived threat of physical violence, as well as the difficult social interaction that often occurs in safe hospitals, can affect the experiences of "forensic health care professionals"

in dealing with stress models, can be directly practical for FHCP competences [19].

Employment stress refers to workers' reaction or development after exposure to work-related demands and expectations that exceed their capacity and treatment device [5]. Job stress involves the interaction between people and working environments [27]. Community stress factors include long working hours, workload, job anxiety, conflict with colleagues, exposure to high emotional and/or emotional incidents, discrimination, and bullying at work. Although some stress related to work is public, some people are at risk of developing stress in the workplace when they are exposed to certain stressors or during periods of stress [21].

The training in the workplace has three possible reactions that often lead to negative behaviour coping [17]. It is expected that nearly 25 percent of controlling personnel are alcohol intake or show symptoms of alcohol dependency as a consequence of "job stress", with these estimates being possibly lower than the actual ratio related to imprecise self-reporting (Dempsey & Frost, 2010). When confronted with conflicting sitting, employees may progress with psychological disorders activated by the workplace. Job-related stress, specifically, may be directly caused by routine work actions and influence efficiency, job agreement, and triggering indications of behavioural disorder [14].

Although forensic investigators may not be exposed to the strength of police officers' exposure, they are still vulnerable to the harmful health consequences of committed officers [23]. These include hypervigilance, PTSD, increased risk of suicide, and poor work agreements [16]. Nursing is one of the occupations and is especially vital in the therapeutic

and psychological "health care delivery". Nurses are complicated in the various parts of hospital management as clinical staff, and the nature of their work makes them highly susceptible to burnout syndrome (Khamisa, Peltzer, & Oldenburg, 2013). "Forensic science" is not alone in this, with an estimated (20%) of critical management and first responder personnel developing, or are at great risk of, job-related stress. This covers professions such as policing, crime scene examiners, critical care and coronial staff, forensic medical practitioners, correctional officers, military forensic and mortuary technicians, and medical staff [18].

Forensic employees identify their imminent death when faced with the depths of people's lives. Consequently, psychological pressures on these employees should be considered in the context of "emotional and psychological" involvement in their daily work. Ethical dilemmas related to personal behaviour lead to conflicts between values and beliefs, which differ depending on family structure, religious beliefs, and death acceptance [24]. In this context, suffering is the source of stress at work and psychological disorders, which lead to unemployment, burnout, and psychiatric disorders [8]. The present study aims to assess the stress level and burnout of nursing staff who are working in forensic medicine and to find out the relationship between stress and burnout of staff and their demographic features.

1. Materials and methods

Design of the Study: A descriptive cross-sectional study design was used to accomplish the stated goals during the period from 2nd9/2023 to 9th3/2023.

Study Setting: Al Sadar hospital in the Najaf city.

The Study Instrument: The researcher used the Stress and Burnout Levels of the nursing staff, and the last study instrument consisted of two parts:

1.1. Part 1: Population data:

A general data sheet contains [10] items, which include age, sex, marital status, housing, levels of education, job title, working condition, number of years of service as a nurse, and how many years you have worked in this hospital.

1.2. Part 2: Stress and burnout level of the staff:

The second part of the questionnaire comprises [3] domains, including the burnout nursing scale domain, comprising [15] items. The work-related stress scale domain is comprised of (34) items.

1.3. The Sampling of the Study

The sample selected was 90 persons from different staff, using a non-probability sampling technique (accidental).

1.4. Statistical analysis:

The following statistics analysis methods are used to analyze the study's data under the Statistical Package for the Social Sciences (SPSS) ver investigation. [20], and Microsoft Excel (2016)

The chi-square test ($\chi 2$) is used to find out the relationship between the burnout, stress, and performance levels of the nurses and their population data.

1.5. Inferential data analysis:

This method accepts or rejects the statistical hypothesis, including the Chi-square test ($\chi 2$) for the cause's correlation of the association tables.

1.6. Descriptive data analysis:

A- (Frequency (f), Percentage (%)).
B- (Bar Charts and Histogram).
C- Summary Statistics (Mean, Mean of scores).
D- Standard Deviation (SD).
E- The determined grades of the stress and burnout levels of the nurses are divided into three:

1.6.1. Burnout nursing scale:

- Low (1−2).
- Moderate (2.01−3.01).
- High (3.02−4.02).

1.6.2. Work-related stress scale:

- Mild (1−2.33).
- Moderate (2.34−3.67).
- Severe (3.68−5).

2. Study result

This section presents the outcomes of the study as follows:

Table (1) provided seems to contain demographic data about a group of individuals, likely hospital staff or healthcare workers. It's divided into different categories and provides frequencies and percentages within each category.

Table 1. Nurses demographic characteristics of the study.

Demographic Data	Classes	Frequency	Percent
Age	19−31 years	62	68.9
	32−44 years	18	20.0
	45−57 years	10	11.1
	Total	90	100.0
	Mean ± SD 30.11 ± 9.61		
Sex	Male	57	63.3
	Female	33	36.7
	Total	90	100.0
Marital Status	Single	45	50.0
	Married	44	48.9
	Widowed	1	1.1
	Total	90	100.0
Housing	Urban	81	90.0
	Countryside	9	10.0
	Total	90	100.0
Level of education	Diploma or lower	52	57.8
	Baccalaureate	32	35.6
	Higher certificate	6	6.7
	Total	90	100.0
Your job title	commissioned policeman	3	3.3
	Criminal cop	1	1.1
	medical assistant	2	2.2
	Senior Head Nurse	2	2.2
	Senior Skilled Head Nurse	4	4.4
	skilled nurse	4	4.4
	Technical midwife	1	1.1
	Technical Nurse	41	45.6
	University nurse	32	35.6
	Total	90	100.0
Working Condition	Morning Time	64	71.1
	Evening Time	26	28.9
	Total	90	100.0
	Total	90	100.0
	Mean ± SD 7.44 ± 8.21		
Number of years of service	1−11 years	71	78.9
	12−22 years	14	15.6
	23−33 years	5	5.6
	Total	90	100.0
	Mean ± SD 7.08 ± 8.09		
How many years have you worked in this hospital?	1−9 years	70	77.8
	10−18 years	11	12.2
	19−27 years	9	10.0
	Total	90	100.0
	Mean ± SD 5.80 ± 6.46		

The surveyed group comprises primarily younger individuals, with (68.9%) falling between 19 and 31 years old, while 20.0% are aged 32 to 44 and 11.1% are 45−57 years old, indicating a relatively youthful composition with an average age of approximately 30.11 years. Male representation stands higher at 63.3% compared to female representation at 36.7%. Half of the individuals are single (50.0%), and an almost equal proportion is married (48.9%). Most respondents reside in urban areas (90.0%), hold varied educational backgrounds primarily with diplomas or lower qualifications (57.8%), and serve in diverse roles within the healthcare sector, predominantly as Technical Nurses (45.6%) and University Nurses (35.6%). The majority work during morning hours (71.1%), have served between 1 and 11 years in their positions (78.9%) with an average tenure of 7.08 years, and work experience in the hospital averaging 5.80 years with a standard deviation of 6.46 years, showcasing a range of experience levels within the surveyed healthcare workforce.

Table (2) presents an assessment of burnout levels among a group of staff members, presumably in a healthcare or nursing setting. The data is categorized into three levels: low, moderate, and high burnout. The distribution shows that among the surveyed staff, 33.33% experience low burnout, 26.66% exhibit moderate burnout, and the largest

Table 2. Overall assessment of the burnout scale.

Groups	Rating	Freq.	Perc. %	M.S	Overall Assessment
Burnout staff	**Low**	**30**	**33.33**	**2.06**	**High (Burnout Nursing)**
	Moderate	**24**	**26.66**		
	High	**36**	**40.01**		
	Total	**90**	**100.0**		
Low = 1 - 1.66	*Moderate = 1.67 - 2.33*			*High = 2.34 − 3*	

proportion, 40.01%, fall into the high burnout category.

The mean scores (M.S) within these categories indicate that the low burnout level ranges from 1 to 1.66, moderate burnout from 1.67 to 2.33, and high burnout from 2.34 to 3. Notably, the overall assessment suggests that those falling within the high burnout range (2.34−3) are labeled as experiencing "High (Burnout Nursing)," indicating a significant portion of the surveyed staff is under high burnout conditions. This breakdown provides insights into the prevalence of different burnout levels among the staff, emphasizing the substantial presence of high burnout cases within this group, particularly in nursing.

Table (3) displays an evaluation of work-related stress levels among a group of individuals, likely within a professional setting. The data is categorized into three levels: mild, moderate, and severe stress. The distribution indicates that among the surveyed individuals, 26.66% experience mild work-related stress, 23.33% report moderate stress, and the largest portion, 50.01%, are categorized under severe work-related stress. The mean scores (M.S) within these categories specify that mild stress falls within the range of 1−1.66, moderate stress from 1.67 to 2.33, and severe stress from 2.34 to 3. The overall assessment suggests that those falling within the severe stress range (2.34−3) are labeled as experiencing "Moderate Stress," indicating a significant presence of severe stress among the surveyed individuals. This breakdown provides insights into the distribution of stress levels within this group, highlighting a substantial portion experiencing high levels of work-related stress, categorized as severe in this context.

Table (4) provides a detailed breakdown of demographic variables and their associations with the overall assessment Burnout staff Scale, indicating statistically significant relationships in certain categories like age, marital status, level of education, job title, working conditions, number of years of service as a nurse, and years worked in the hospital. These findings shed light on potential factors contributing to different overall assessment levels within this surveyed group.

Table (5) presents a comprehensive analysis of various demographic factors and their associations with the overall assessment of the Work-related Stress Scale. It identifies significant relationships in age groups, marital status, working conditions, number of years of service as a nurse, and years worked in the hospital. These findings provide insights into potential influencing factors related to different overall assessment levels within this surveyed group.

3. Discussion

The study aimed to examine the connection between nurse age and burnout. In this study, we discovered various factors that might mitigate this relationship and a positive link between burnout and age, while the other study conducted bu [4] which shows no correlation between age. The review's findings found a link between nurses who experience excessive burnout and adverse outcomes [7]. They discovered a link between various circadian rhythm patterns and the potential for burnout depending on stress responses and adaptability to each worker's unique shifts, depending on the setting and period of work; this result agrees with [1].

The present study found relationships between burnout and a nurse's marital status; this agrees with the study conducted by [28], which examined the relationships between burnout and a nurse's marital status. This study shows a significant influence on marital status, particularly in the instance of married people in comparison to single and widowed persons, in order as there is no significant

Table 3. Overall assessment of the work-related stress scale.

Groups	Rating	Freq.	Perc. %	M.S	Overall Assessment
Work-related Stress Scale	Mild	24	26.66	2.23	Moderate of the Stress
	Moderate	21	23.33		
	Severe	45	50.01		
	Total	90	100.0		
Mild = 1 - 1.66	*Moderate = 1.67 - 2.33*			*Severe = 2.34 − 3*	

Table 4. Relationship between the Samples' Demographical Data with their Overall Assessment of the Burnout staff Scale.

Demographic Data	Groups	Overall Assessment			Chi-Square			
		Low	Moderate	High	χ^2	d.f	P-value	Sig.
Age	19–31 years	16	17	29	66.136	4	0.019	H.S
	32–44 years	10	4	4				
	45–57 years	4	3	3				
	Total	30	24	36				
Sex	Male	19	15	23	0.012	2	0.524	N.S
	Female	11	9	13				
	Total	30	24	36				
Marital Status	Single	10	10	25	10.915	4	0.001	H.S
	Married	19	14	11				
	Widowed	1	0	0				
	Total	30	24	36				
Housing	Urban	25	23	33	2.500	2	0.198	N.S
	Countryside	5	1	3				
	Total	30	24	36				
Level of education	Diploma or lower	21	12	19	8.224	4	0.045	S
	Baccalaureate	8	12	12				
	Higher certificate	1	0	5				
	Total	30	24	36				
Your job title	commissioned policeman	2	0	1	30.008	16	0.066	N.S
	Criminal cop	1	0	0				
	medical assistant	0	0	2				
	Senior Head Nurse	0	2	0				
	Senior Skilled Head Nurse	1	3	0				
	skilled nurse	2	1	1				
	Technical midwife	0	1	0				
	Technical Nurse	19	9	13				
	University nurse	5	8	19				
	Total	30	24	36				
Working Condition	Morning Time	17	17	30	5.666	2	0.014	H.S
	Evening Time	13	7	6				
	Total	30	24	36				
	12–22 years	6	5	4				
	23–33 years	2	3	0				
	Total	30	24	36				
Number of years of service as a nurse	1–11 years	22	17	32	47.927	4	0.020	S
	12–22 years	6	4	4				
	23–33 years	2	3	0				
	Total	30	24	36				
How many years have you worked in hospital?	1–9	22	17	31	46.769	4	0.018	H.S
	10–18	5	2	4				
	19–27	3	5	1				
	Total	30	24	36				

*N.S = More than 0.05, S = 0.01 – 0.05 H.S = Less than 0.05.

value between sex and lifestyle, although the years of work it has a significant effect on the nurses; this outcome doesn't really agree with [1], but accepts [22]. This study conducted by [26] found different variables that could influence this correlation, including a positive connection between fatigue and marital status.

Although burnout is a notion that impacts many different occupations, it is claimed that it is more likely to occur in health workers, notably nurses who have children, and the frequency of burnout among nurses in general [15]. Burnout can have a detrimental impact on a nurse's physical and mental well-being, lower the standard of healthcare, make it difficult to do one's job, and lead to leaving the field altogether and it should be remembered that these circumstances may also significantly impact nurses' professionalism, teamwork, and efficiency [20]. On the other hand, this study highlights a significant relationship between education levels and the extent to which nursing staff with higher education can manage challenges in conquering burnout at employment. Additionally, there's a significant relationship between burnout and working conditions, which is dependent on the nurses' experiences during the course of their employment. Thus, there is no correlation between stress and the kind of formal title [1,7].

Table 5. Relationship between the Samples' Demographical Data with their Overall Assessment of the Work-related Stress Scale.

Demographic Data	Groups	Overall Assessment			Chi-Square			
		Low	Moderate	High	χ^2	d.f	P-value	Sig.
Age	19–31 years	11	14	37	65.094	4	0.005	H.S
	32–44 years	10	4	4				
	45–57 years	3	3	4				
	Total	24	21	45				
Sex	Male	18	11	28	2.515	2	0.238	N.S
	Female	6	10	17				
	Total	24	21	45				
Marital Status	Single	6	7	32	18.331	4	0.000	H.S
	Married	17	14	13				
	Widowed	1	0	0				
	Total	24	21	45				
Housing	Urban	19	20	42	4.325	2	0.069	N.S
	Countryside	5	1	3				
	Total	24	21	45				
Level of education	Diploma or lower	16	12	24	4.032	4	0.109	N.S
	Baccalaureate	7	9	16				
	Higher certificate	1	0	5				
	Total	24	21	45				
Your job title	commissioned policeman	1	1	1	39.347	16	0.149	N.S
	Criminal cop	0	1	0				
	medical assistant	0	0	2				
	Senior Head Nurse	0	2	0				
	Senior Skilled Head Nurse	1	3	0				
	skilled nurse	0	3	1				
	Technical midwife	0	1	0				
	Technical Nurse	17	6	18				
	University nurse	5	4	23				
	Total	24	21	45				
Working Condition	Morning Time	11	17	36	10.186	2	0.005	H.S
	Evening Time	13	4	9				
	Total	24	21	45				
	12–22 years	5	6	4				
	23–33 years	2	2	1				
	Total	24	21	45				
Number of years of service as a nurse	1–11 years	16	15	40	66.339	4	0.004	H.S
	12–22 years	6	4	4				
	23–33 years	2	2	1				
	Total	24	21	45				
How many years have you worked in this hospital?	1–9 years	17	13	40	57.848		0.003	H.S
	10–18 years	4	3	4				
	19–27 years	3	5	1				
	Total	24	21	45				

*N.S = More than 0.05, S = 0.01 – 0.05 H.S = Less than 0.05.

Our research supported the idea that personality characteristics affect how burnout is felt. Burnout and age were found to be strongly correlated. In line with other research, we also discovered that high openness to experience [11], openness, and agreeableness scores had a preventive role on burnout, whereas high neuroticism scores had an adverse effect [13]. The likelihood that a nurse may experience burnout rises with the number of adverse personality characteristics an individual possesses [2]. Age-dependently, people with high neuroticism tend to overestimate the magnitude and frequency of their issues; instead, there is no discernible connection between stress and educational levels [26].

This research found an essential correlation between age and the effectiveness of nurses in healthcare facilities even though they gain experience during the time they work and also because they were able to solve different problems in comparison to another nurse's new job in one place, nursing efficiency is a vital component of this evaluation, which examines the operations of nursing even during a daily routine in hospitals, this agrees with [13,20]. On the other hand, In comparison to other studied trials, such as the educational

background, gender, and or work condition, no correlation existed because workers were either encountered by the moment of understanding the essential work or by the time the social status as well as the duration of the job in nursing as well the time of employment give a strong relationship when assessing by the achievement of nursing work [9]. This is because the working individual has much more knowledge and will be more innovative. It agrees with [3] but disagrees with [15]; it shows the significant relation between the work conditions.

4. Conclusion

This study shows that moderate stress levels related to work and high burnout of nursing staff who are working in forensic medicine. Burnout and emotional exhaustion were found to be significantly correlated with the level of education. The findings for both dimensions were higher for nurses without children. In other words, having no family, being a man, and never being married or divorced all appear to be connected with higher burnout rates in professional nurses.

4.1. Study limitations

The chosen participants may not have been an adequate sample size to be generalized to the larger population. Also, it was possible that some of the participants did not have the necessary experience. Further studies should be pursued with a larger population sampling and possibly more detailed questions to assess the stress level and burnout of nursing staff who are working in forensic medicine. Further research should be conducted to obtain a broader spectrum of the nursing population to determine if these problems were unique to the hospital or if they were generalized problems across the nursing spectrum. Future studies may need to be conducted through hospitals and possibly through surveys in these areas.

4.2. Ethical considerations

Permission was granted from Al-Najaf Health Direction and the district hospitals' research committees to conduct the study. Participation was voluntary, and informed consent was obtained from each participant. All participants were assigned a code number, and the same numbers were maintained during the assessment. Data were kept in a safe place, and only the researcher had access to the data. Furthermore, only the questionnaire number and the anonymous codes were captured and separated from the main data during the analysis.

Funding

Acknowledgment

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