EFFECT OF NURSE BURNOUT ON THE QUALITY OF PATIENT CARE

OPE-BABADELE, O. O.; OGUNTOLA, F. Y.; AKINDUTIRE, P. O.; OGUNLAMI, R. T. & ADEDARA F. A.

ABSTRACT

Occupational burnout is a significant and growing issue, particularly among health professionals like nurses, with serious implications for physical, psychological, and social well-being, as well as workplace performance. This study investigated the effect of nurse burnout on the quality of patient care at Babcock University Teaching Hospital. A cross-sectional descriptive design was used, involving 160 nurses selected through multistage sampling. Data were collected using a self-structured questionnaire and the Maslach Burnout Inventory–Human Services Survey for Medical Personnel (MBI-HSS MP) and analyzed using descriptive and inferential statistics. The majority of respondents were aged 20–30 years (68.8%), female (81.3%), Christian (69%), Yoruba (31.3%), and married (50%). Most held a BNSc degree (43.8%), were nursing officers (62.4%), had 1–5 years of service (37.5%), and 1–3 children (43.8%). Findings of this study indicated that the prevalence of occupational burnout among nurses is moderate (53%) and the types of occupational burnout among nurses are emotional exhaustion (54.2%) and depersonalization (55%). This study observed that the perceived effects of occupational burnout include Reduced care quality to the patient (56.3%), Low patient satisfaction (56.3%), Increase medication errors (50.1%), Reduce quality of work life (59.4%), Absence from work and low job satisfaction (56.3%), Physical Health Issues (50%), Mental Health problems (68.8%), Insomia (81.3%), Anti social behaviour (50.1%), Feelings of isolation (56.3%) and Use of alcohol or other substance (68.8%). The study concludes that burnout significantly compromises patient care and calls for urgent interventions such as improving working conditions, empowering nurses, and reducing turnover to enhance both staff well-being and patient outcomes.

Keywords: Effect; Nurse Burnout; Quality Patient Care

INTRODUCTION

Occupational burnout, an emerging challenge in healthcare system, is very common among healthcare professionals including nurses, manifesting in various ways and impacting on their physical, psychological, and social well-being. While chronic exhaustion in the work environment is one of the leading factors for burnout syndrome, the resultant effects can diminish the quality of patient care, increase work absenteeism, lower morale, and ultimately result in increased intention to leave the profession (Ahmed et al., 2021). Nurses, along with other healthcare professionals, are not immune to these effects. These effects have significant consequences on the workplace (work absenteeism, a rise in staff turnover, a worsening of the work environment, strained relationships among workers) and patients (reduced patient satisfaction, decreased quality of care) which may in turn have a consequent detriment to all users of healthcare services (Membrive-Jiménez et al., 2020; Whittaker et al., 2018).

Owuor et al., (2020) in their meta-analytic study on prevalence of occupational burnout among nurses, recorded a high level of burnout characterized by workplace bullying (50.6%), and lack of social support (54.2%). Furthermore, the burnout was reported to be high in terms of emotional exhaustion (66%) and depersonalization (60%).

In the researcher's study setting, burnout was found to be predominant among the nurses evident by a lag in the delivery of nursing care to patients. Hence, it is imperative to assess the effects of occupational burnout among nurses on the quality of patients' care in Babcock University Teaching Hospital.

METHODOLOGY

Study Design and Study Period: This study adopted a cross sectional descriptive research design and was conducted from September to November, 2023.

Study Area: This study was conducted at Babcock University Teaching Hospital, Ogun state, Nigeria.

Target Population: Registered nurses of all gender, age group and experience. Total population is 240.

Inclusion Criteria: Registered nurses of all gender, age group and experience currently employed at Babcock University Teaching Hospital.

Exclusion Criteria: Intern nurses; Nurses who were absent at the time of data collection.

Sampling Size Determination: The sample size was calculated using Taro Yamane's formula for sample size was used to determine 160 participants from an estimated total population of 240 nurses working at different units in Babcock University Teaching Hospital.

Sampling Technique: A multistage sampling technique was used to select 160 participants from an estimated total population.

Stage 1: Proportionate sampling technique was used to calculate the number of respondents to be selected from each unit of the health facility.

Stage 2: Nurses were selected using random sampling technique; this was used to select individual nurses from each unit.

Instrument: The data collection tool utilized in this study includes a self-designed, pretested questionnaire, and a Maslach Burnout Inventory adapted from existing literature. The 38 items questionnaire contained close ended questions.

Reliability: A pilot test was carried out in Olabisi Onabanjo University Teaching Hospital, Sagamu. Test retest was used on the instrument and the reliability score is 0.8.

Data Collection Procedure: The data was collected with the help of two research assistants.

Data Processing and Analysis: Data analysis involved Microsoft Excel for analysis and Statistical Package for Social Science (SPSS) version 27 for data compilation. Descriptive statistics was employed in the analysis process.

Data Quality Assurance: The questionnaire's validity was examined by the research supervisor for accuracy and corrections were made based on discussions held together with the researcher. The instrument was constructed with the use of literature review as guide and each section of the instrument was matched with the pre-determined objectives.

Ethic's Approval and Consent to Participate

The Babcock University Health Research and Ethical Committee (BUHREC) approved this study. A formal introduction was done as a written opening statement at the beginning of the questionnaire and also verbally at the point of administration of the questionnaire. The importance of the study was explained verbally to the participants and written informed consent was obtained before the commencement of the study. Participants' identity was protected through data anonymization. All personal identifiers were removed from the dataset to ensure confidentiality. Ethical standard principles were adhered in order to ensure confidentiality and anonymity.

FUNDING

This research project did not receive any grant from any funding agency in the public, commercial or not-for-profit sectors.

RESULTS

Respondent's Socio-Demographic Data

The distribution of respondents according to their socio-demographic characteristics is represented below. Majority of the respondents fell within the age bracket of 20 and 30 years (68.8%), having a mean age of 30 years and majority (81.3%) being female. Further findings revealed that majority of the respondents of the respondents practice Christianity (69%), are of the Yoruba ethnic group (31.3%) and are married (50%). Also, majority of the respondents have BNSc certificate (43.8%), are nursing officers (62.4%), have spent between 1-5 years in service (37.5%) and have between 1-3 children (43.8%).

Table 1: Socio-Demographic Characteristics of Respondents

Demographic Information	Variables	Frequency(N=160)	Percentage (%)
Age (Average Age =30±10.01)	20-30	110	68.8
	31-40	30	18.7
	Above 40	20	12.5
Sex	Male	30	18.8
	Female	130	81.3
Religion	Christian	110	68.8
	Muslim	25	15.6
	Traditional	5	3.13
	Others	20	12.5
Ethnicity	Yoruba	50	31.3
	Igbo	40	25.0
	Hausa	20	12.5
	Others	50	31.3
Marital Status	Single	50	31.3
	Married	80	50.0
	Divorced	10	6.3
	Separated	10	6.3
	Widow	10	6.3
Nursing Qualification	RN/RM	60	37.5
	BNSc	70	43.8
	MSc Nursing	20	12.5
	PhD in Nursing	10	6.3
Nursing Cadre	Nursing Officer	100	62.4%
	Senior Nursing Officer	40	25.0
	Chief Nursing Officer	10	6.3
	ADNS	10	6.3
Nursing Years of Experience	1-5 years	60	37.5
	6-10 years	40	25
	11-15 years	30	18.8
	Above 15 years	30	18.8
Number of Parity	1-3	70	43.8
	4-6	50	31.8
	6 and above	40	25.0

Source: Field Survey (2023)

Occupational Burnout among Nurses

Occupational burnout among respondents was assessed under three variables as represented in the table below. The variables are emotional exhaustion, depersonalization and personal accomplishment.

On emotional exhaustion, the table revealed that 25% of respondents felt emotionally drained from work while 31.3% agreed, 12.5% are neutral, 18.5% disagreed and 12.5% strongly disagreed. About 12.5% felt used up at the end of the workday. While 25% agreed, 18.8% are neutral, 18.8% disagreed and 25% strongly

disagreed. Twenty five percent of respondents felt fatigued on waking up in the morning, to which 31.3% agreed, 12.5% are neutral, 18.8% disagreed and 12.5% strongly disagreed. Approximately 31% of respondents felt like they are at the end of the rope while 18.1% agreed, 6.3% are neutral, 18.8% disagreed and 25% strongly disagreed. Thirty one percent of respondents said that they feel burned out from work while 18.7%, agreed, 12.5% are neutral, 18.7% disagreed and 18.7% strongly disagreed. 6.3% of respondents said that they feel frustrated with their job while 12.5%, agreed, 31.3% are neutral, 31.3% disagreed and 18.8% strongly disagreed. 25% of respondents said that they feel they are working too hard on the job while 25%, agreed, 31.3% are neutral, 18.8% disagreed and 18.8% strongly disagreed. 31.3% of respondents said that working with other workers puts too much stress them while 18.8%, agreed, 6.3% are neutral, 18.8% disagreed and 12.5% strongly disagreed. 25% of respondents said that working with other workers puts too much stress on them while 31.3%, agreed, 12.5% are neutral, 18.8% disagreed and 12.5% strongly disagreed. Findings revealed that there is emotional exhaustion among respondents (63.2%)

On depersonalization, the study observed that 31.3% of respondents said that they treat patients as impersonal "objects". While 18.8% agreed, 6.3% are neutral, 18.8% disagreed and 25% strongly disagreed. No (0%) respondent strongly agreed that they became more callous toward patients but 18.8% agreed, 31.3% are neutral, 31, 3.8% disagreed and 18.8% strongly disagreed. 25% of respondents said that they worry that the job is hardening them emotionally while 25% agreed, 31.3% are neutral, 18.8% disagreed and 18.8% strongly disagreed. 12.5% of respondents said that they do not really care what happens to patients while 18.8% agreed, 31.3% are neutral, 18.8% disagreed and 18.8% strongly disagreed. 31.3% of respondents said that they feel patients and co-workers blame them for their problems while 18.8% agreed, 6.3% are neutral, 18.8% disagree and 25% strongly disagreed. Findings therefore showed a high level of depersonalization among respondents (61.9%).

On personal accomplishment, the study found that 25.0% of respondents cannot easily understand the feelings of their patients while 31.3% agreed, 12.5% are neutral, 18.8% disagreed and 25% strongly disagreed. 12.5% of respondents said that they deal effectively with the problems of their patients, while 25% agreed, 18.8% are neutral, 18.8% disagreed and 25% strongly disagreed. 31.3% of respondents felt they positively influenced their patients' lives, while 18.8% agreed, 12.5% are neutral, 12.5% disagreed and 25% strongly disagreed. 25% of respondents said that they do not feel very energetic while 25% agreed, 31.3% are neutral, 18.8% disagree and 0% strongly disagreed. While 25% of respondents opined that they easily create a relaxed atmosphere, 31.3% agreed, 18.8% are neutral, 18.8% disagreed and 12.5% strongly disagreed. 12.5% of respondents strongly agreed that they feel exhilarated after working with people while 25% agreed, 18.8% are neutral, 25% disagreed and 18.8% strongly disagreed. 25% of respondents said that they accomplished many worthwhile things in the job while 25% agreed, 31.3% are neutral, 18.8% disagreed and 0% strongly disagreed. 31.3% of respondents said that they deal with emotional problems calmly while 18.8% agreed, 6.3% are neutral, 18.8% disagreed and 25% strongly disagreed. Findings revealed that there is personal accomplishment among respondents (67.3%). On the overall, this study shows that there is occupational burnout among nurses (64.1%)

Findings of this study revealed that the prevalence of occupational burnout among nurses is moderate (53%) and the types of occupational burnout among nurses are emotional exhaustion (54.2%) and depersonalization (55%).

Table 2: The Prevalence and Types of Occupational Burnout among Nurses

S/N	Items	SA	A	N	D	SD
	Emotional exhaustion					
1	I feel emotionally drained from work	40 (25%)	50 (31.3%)	20 (12.5%)	30 (18.8%)	20 (12.5%)
2	I feel used up at the end of the workday	40 (25%)	40 (25%)	30 (18.8%)	30 (18.8%)	20 (12.5%)
3	I feel fatigued whe n I get up in the morning	40 (25%)	50 (31.3%)	20 (12.5%)	30 (18.8%)	20 (12.5%)
4	I feel like I am at the end of the rope	50 (31.3%)	40 (25%)	10 (6.3%)	30 (18.8%)	30 (18.8%)
5	I f eel burned out from work	50(31.3%)	30(18.7%)	20(12.5%)	30(18.7%)	30(18.7%)
6	I feel frustrated with my job	50(31.3%)	50(31.3%)	10(6.3%)	20(12.5%)	30(18.8%)
7	I feel I am working too hard on the job	40 (25%)	40 (25%)	50 (31.3%)	30 (18.8%)	30 (18.8%)
8	Working with other workers puts too much stress on me	50 (31.3%)	30 (18.8%)	10 (6.3%)	30 (18.8%)	40 (25%)
9	Working with other workers is a strain to me	40 (25%)	50 (31.3%)	20 (12.5%)	30 (18.8%)	20 (12.5%)
		27.8%	26.4% 54.2%	13.2%	18.1% 47.9%	16.6%
	Depersonalization					
10	I treat patients as impersonal "objects"	50 (31.3%)	40 (25%)	30 (18.8%)	10 (6.3%)	30 (18.8%)
11	I become more callous toward patients	50 (31.3%)	50 (31.3%)	30 (18.8%)	0 (0%)	30 (18.8%)
12	I worry that the job is hardening me emotionally	40 (25%)	40 (25%)	20 (31.3%)	30 (18.8%)	30 (18.8%)
13	I don't rea lly care what happens to patients	30 (18.8%)	50 (31.3%)	30 (18.8%)	20 (12.5%)	30 (18.8%)
14	I feel patients and co - workers blame me for their problems	50 (31.3%)	40 (25%)	10 (6.3%)	30 (18.8%)	30 (18.8%)
		27.5%	27.5% 55%	18%	10% 45%	18%
	Personal Accomplishment					
15	I cannot easily understand the feelings of my patients	40 (25%)	30 (31.3%)	20 (12.5%)	30 (18.8%)	40 (25%)
16	I deal effectively with the problems of my patients	20 (12.5%)	40 (25%)	30 (18.8%)	30 (18.8%)	40 (25%)
17	I feel I am positively influencing my patients' lives	50 (31.3%)	30 (18.8%)	20 (12.5%)	20 (12.5%)	40 (25%)
18	I do not feel very energetic	40 (25%)	40 (25%)	50(31.3%)	30(18.8%)	0 (0.0%)
19	I easily create a relaxed atmosphere	40 (25%)	50 (31.3%)	30 (18.8%)	30 (18.8%)	20 (12.5%)
20	I feel exhilarated after working with people	20 (12.5%)	40 (25%)	30 (18.8%)	40 (25%)	30 (18.8%)
21	I accomplished many worthwhile things in the job	40 (25%)	40 (25%)	50 (31.3%)	30 (18.8%)	0 (0.0%)
22	I deal with emotional problems calmly	50 (31.3%)	30 (18.8%)	10 (6.3%)	30 (18.8%)	40 (25%)
		23.5%	25% 48.5%	18.8%	18.8% 54%	16.4%
	Prevalence rate		53%		49%	

Source: Field Survey 2023

Effects of Occupational Burnout among Nurses

Occupational burnout in this study is perceived to have effects on the nurse, patients and the healthcare system at large, as represented in the table below. The study found that occupational burnout would lead to reduced quality of care, where 43.8% strongly agreed, 25% agreed, 12.5% neutral, 18.8% disagreed and 25% strongly disagreed. Twenty five percent of the respondents strongly opined that occupational burnout results in low patient satisfaction. While 12.5% agreed, 18.8% were neutral, 18.8% disagreed and 25% strongly disagreed. Approximately 19% strongly agreed that occupational burnout will lead to increased medication errors, 18.8% agreed, 12.5% neutral, 25% disagreed and 25% strongly disagreed. Reduction in quality of work life was strongly agreed to as a perceived effect of occupational burnout (15.6%). While 25% agreed to this perception, 18.8% were neutral, 18.8% disagreed and 21.9% strongly disagreed. Also, 15.6% strongly felt that occupational burnout results in poor functioning within the family, 18.8% agreed, 25% neutral, 18.8% disagreed and 21.9% strongly disagreed. Additionally, occupational burnout results in the nurse's neglect of day to day activities. This was strongly agreed to by approximately 19% respondents, 25% agreed, 12.5% stayed neutral, 18.8% disagreed and 25% strongly disagreed. Twenty five percent respondents strongly agreed that absence from work and low job satisfaction is an effect from occupational burnout. 12.5% agreed, 18.8% were neutral, 18.8% disagreed and 25% strongly disagreed. This study observed that reduced care quality to the patient (53.3%), low patient satisfaction (56.3%), increased medication errors (50.1%), reduced quality of work life (59.4%), absence from work and low job satisfaction (56.3%), physical health issues (50%), mental health problems (68.8%), insomnia (81.3%), anti-social behaviour (50.1%), feelings of isolation (53.6%) and use of alcohol or other substance (68.8%) are effects of occupational burnout among nurses while poor functioning within the family (34.4%), neglect of important day-to-day activities (43.8%), depression (37.6%) and high blood pressure, heart diseases or diabetes(31.3%) are not the effects of occupational burnout among nurses. This study observed that the perceived effects of occupational burnout include Reduced care quality to the patient (56.3%), Low patient satisfaction (56.3%), Increase medication errors (50.1%), Reduce quality of work life (59.4%), Absence from work and low job satisfaction (56.3%), Physical Health Issues (50%), Mental Health problems (68.8%), Insomia (81.3%), Anti social behaviour (50.1%), Feelings of isolation (56.3%) and Use of alcohol or other substance (68.8%), while Poor functioning within the family (34.4%), Neglect of important day-to-day activities (43.8%), Reduced work performance (37.5%), Depression (37.6%) and High blood pressure, heart diseases or diabetes (31.3%) are not with perceived effects of occupational burnout among nurses.

Table 3: Perceived Effects of Occupational Burnout among Nurses

S/N	Items	Strongly Agree	Agree	Disagree	Strongly Disagree	SIG**
1	Reduced care quality to the patient	30(18.8%)	60(37.5%)	30 (18.8%)	40 (25%)	**
2	Low patient satisfaction	40 (25%)	50(31.3%)	30 (18.8%)	40 (25%)	**
3	Increase medication errors	30(18.8%)	30(31.3%)	40(37.5%)	40 (25%)	**
4	Reduce quality of work life	25(15.6%)	70(43.8%)	30(18.8%)	35(21.9%)	**
5	Poor functioning within the family	25(15.6%)	30(18.8%)	70(43.8%)	35(21.9%)	
6	Neglect of important day-to-day activities	30(18.8%)	40 (25%)	50(31.3%)	40 (25%)	
7	Absence from work and low job satisfaction	40 (25%)	50(31.3%)	30(18.8%)	40 (25%)	**
8	Physical Health Issues	40 (25%)	40 (25%)	50(31.3%)	30(18.8%)	**
9	Mental Health problems	40 (25%)	70(43.8%)	30(37.2%)	20(12.5%)	**
10	Reduced work performance	20(12.5%)	40 (25%)	70(43.8%)	30(18.8%)	
11	Insomia	40 (25%)	90(56.3%)	30(18.8%)	0 (0.0%)	**
12	Anti social behaviour	50(31.3%)	30(18.8%)	40 (25%)	40 (25%)	**
13	Feelings of isolation	50(31.3%)	40 (25%)	30(18.8%)	40 (25%)	**
14	Depression	30(18.8%)	30(18.8%)	50(31.3%)	50(31.3%)	
15	Use of alcohol or other substance	40 (25%)	40(43.8%)	20 (31.3%)	30(18.8%)	**
16	High blood pressure, heart diseases or diabetes	20 (12.5%)	30(18.8%)	50(31.3%)	30 (37.6%)	

Source: Field Survey (2023)

DISCUSSION

The aim of this study was to determine the effects of nursing burnout on patient care among nurses in Babcock University Teaching Hospital. This study shows that majority of the respondents fall within the age bracket of 20 and 30 years, are females, practice Christianity and are from Yoruba ethnic group. Further result revealed that majority of the respondents are married, have BNSc certificate, are nursing officers, have spent between 1-5 years in service and have between 1-3 number of children.

Findings revealed that there is prevalence of occupational burnout among nurses. This finding was in tandem with the study of Efa et al., (2024) who found a prevalence of 49.2% and Senthil et al., (2024) who also noted a high prevalence of occupational burnout among the nurses. Also, Woo et al., (2020) found approximately 11% global pooled-prevalence of burnout among nurses.

The common types of occupational burnout among nurses are emotional exhaustion and depersonalization. This study resonates with Abbas et al.'s (2019) who reported widespread of emotional strain experienced by healthcare workers in Egypt particularly those in critical care settings. This finding also corroborates with lfuqaha & Alsharah in (2018) who noted emotional exhaustion, tiredness, excess demand, having to deal with sick people, working too hard and being under pressure on all kinds of nursing tasks as significant effects among nurses in Jordan. Additionally, Marzieh et al., (2022) indicated a high prevalence of burnout symptoms, particularly emotional exhaustion, among hospital nursing professionals. Houmaini & Zeggwagh (2021) also noted a high emotional exhaustion and major depersonalization among nurses' especially surgical nurses.

This study observed that the perceived effects of occupational burnout include Reduced care quality to the patient, Low patient satisfaction, Increase medication errors, Reduce quality of work life, Absence from work and low job satisfaction , Physical Health Issues, Mental Health problems, Insomia, Anti social behaviour, Feelings of isolation (56.3%) and Use of alcohol or other substance.

The study does not corroborates Whittaker et al.'s (2018) whose findings shed light on the physical and mental toll of burnout on nurses, including issues such as back pain and psychological distress. lfuqaha & Alsharah in (2018) also noted tiredness, excess demand, having to deal with sick people, working too hard and being under pressure on all kinds of nursing tasks as significant effects.

CONCLUSION

These findings provided insights into the prevalence, types, and effects of occupational burnout among nurses. The prevalence of burnout cannot be overlooked, with depersonalization and emotional exhaustion identified as the most common types of occupational burnout. The effects of burnout were also found to have a significant toll on nurses, patients, and healthcare institutions. It is crucial for healthcare organizations and policymakers to recognize these consequences on both patient care and the well-being of nurses themselves. Strategies to mitigate these effects may include implementing nurse support programs, fostering a more supportive and healthy work environment, improving working conditions, empowering nurses, and improving the quality of patient care.

Limitation to the Study

The study's sample size may be limited due to the specific location and the potential constraints on the number of participants. This might limit the generalizability of the findings to a broader population of nurses in Nigeria or in different healthcare settings.

The data collected in the study are based on self-reported responses from nurses. Self-reported data can be subject to recall bias and social desirability bias, where participants may not accurately recall or truthfully report their experiences and feelings.

Participants may have responded to the survey in a way they think aligns with what is expected of them or what is perceived as the socially desirable response, leading to response bias
.

RECOMMENDATIONS

Based on the findings of the study, the following recommendations are proposed: healthcare organizations should establish support programs for nurses, including stress management, mental health support, and resources for coping with burnout. Also, training and education programs on stress management, self-care, and resilience should be incorporated into nursing curricula and ongoing professional development.

COMPETING INTEREST

The authors declare that they have no competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

REFERENCES

Abayomi, O., Emmanuel, B., Gbolagade, A., Peter, O., & Kofoworola, O. (2018). Burnout Syndrome and Anxiety Disorders among Hospital Nurses in a Tertiary Health Center in Nigeria. *International Neuropsychiatric Disease Journal, 11*(2), 1-11. https://doi:10.9734/indj/2018/39640.

Abbas A., Alic A., Bahgatb S & Shouman W. (2018). Prevalence, associated factors, and consequences of burnout among ICU healthcare workers: an Egyptian experience. *The Egyptian Journal of Chest Diseases and Tuberculosis* 2019, 68:514–525.

Adams, R., Ryan, T., & Wood, E. (2021). Understanding the factors that affect retention within the mental health nursing workforce: A systematic review and thematic synthesis. *International Journal of Mental Health Nursing*, 30(1), 1476–1497. https://doi.org/10.1111/inm.12904

Alfuqaha, O., & Alshra'ah, H. (2018). Burnout among nurses and teachers in Jordan: a comparative study. *Archives of Psychiatry and Psychotherapy, 20*(2), 55-65. doi:10.12740/app/80168.

Ahmed, T., Shah, H., Rasheed, A., & Ali, A. (2020). Burnout among nurses working at Dow and Civil Hospitals in Karachi: A cross-sectional study. *J Pak Med Assoc, 70*(6), 1018-1022. https://doi:10.5455/JPMA.27407.

Bai, J., & Ravindran, V. (2019). Job stress among nurses. *Indian Journal of Continuing Nursing Education, 20*(2). doi:10.4103/ijcn.Ijcn_11_20.

Bazmi E., Alipour A., Yasamy M., Kheradmand A., Salehpour S., Khodakarim K. & Soori H. (2019). Job Burnout and Related Factors among Health Sector Employees. *Iran J Psychiatry 2019; 14: 4: 309-316.*

Belji Kangarlou M, Fatemi F, Paknazar F and Dehdashti A (2022) Occupational Burnout Symptoms and Its Relationship with Workload and Fear of the SARS-CoV-2 Pandemic Among

Hospital Nurses. Front. Public Health 10:852629. doi: 10.3389/fpubh.2022.852629

Cañadas-De la Fuente, G. A., Ortega, E., Ramirez-Baena, L., De la Fuente-Solana, E. I., Vargas, C., & Gómez-Urquiza, J. L. (2018). Gender, Marital Status, and Children as Risk Factors for Burnout in Nurses: A Meta-Analytic Study. *International journal of environmental research and public health*, 15(10), 2102. https://doi.org/10.3390/ijerph15102102.

Dall'Ora, C., Ball, J., Reinius, M., & Griffiths, P. (2020). Burnout in nursing: a theoretical review. *Hum Resour Health, 18*(1), 41. doi:10.1186/s12960-020-00469-9

Efa, A., Lombebo, A., Nuriye, S. et al. (2024). Prevalence of burnout and associated factors among nurses working in public hospitals, southern Ethiopia: a multi-center embedded mixed study. Sci Rep 14, 31268. https://doi.org/10.1038/s41598-024-82703-1

Foster, K. , Roche, M. , Delgado, C. , Cuzzillo, C. , Giandinoto, J. A. , & Furness, T. (2019). Resilience and mental health nursing: An integrative review of international literature. International Journal of Mental Health Nursing, 28(1), 71–85. 10.1111/inm.12548

Hoseinabadi, S.T., Kakhki, S., Teimori, G., & Nayyeri, S. (2020). Burnout and its influencing factors between frontline nurses and nurses from other wards during the outbreak of Coronavirus Disease - COVID-19- in Iran. *Investigacion y educacion en enfermeria*, *38*(2), e3. https://doi.org/10.17533/udea.iee.v38n2e03

Jaishree S. & Parthiban S. (2018) Burnout Among Nursing Professionals- A Literature Survey. *Volume 5 I Issue 3 I July – Sept 2018.*

Jun, J., Ojemeni, M. M., Kalamani, R., Tong, J., & Crecelius, M. L. (2021). Relationship between nurse burnout, patient and organizational outcomes: Systematic review. *International Journal of Nursing Studies*, *119*, 103933. https://doi.org/10.1016/j.ijnurstu.2021.103933

Kelly, L. A., Gee, P. M., & Butler, R. J. (2021). Impact of nurse burnout on organizational and position turnover. *Nurs Outlook, 69*(1), 96-102. https://doi:10.1016/j.outlook.2020.06.008.

Kim, E.Y., & Chang, S.O. Exploring nurse perceptions and experiences of resilience: a meta-synthesis study. BMC Nurs 21, 26 (2022). https://doi.org/10.1186/s12912-021-00803-z

Kowalczuk, K., Krajewska-Kulak, E., & Sobolewski, M. (2019). Factors Determining Work Arduousness Levels among Nurses: Using the Example of Surgical, Medical Treatment, and Emergency Wards. *Biomed Res Int, 2019*, 6303474. https://doi:10.1155/2019/6303474

Leszczynski, P., Panczyk, M., Podgorski, M., Owczarek, K., Galazkowski, R., Mikos, M.,... Gotlib, J. (2019). Determinants of occupational burnout among employees of the Emergency Medical Services in Poland. *Ann Agric Environ Med, 26*(1), 114-119. https://doi:10.26444/aaem/94294.

Lizhen F. (2020). Prevention of burnout among nurses. *Lab University Of Applied Sciences Ltd Bachelor Of Social And Health Services Degree Programme In Nursing Spring 2020*

Mao, P., Cai, P., Luo, A., Huang, P., & Xie, W. (2018). Factors in Organ Donation Coordinators: A Cross-Sectional Study in China. *Ann Transplant, 23*, 647-653. https://doi:10.12659/AOT.910409.

Pradeepa Senthil, Jenifer, P, Rajaseharan Divya, Gousalya, M, Gowtham, M, Hari, G and Gowtham Ganesh. (2019). Prevalence of occupational burnout among nurses in tertiary care hospital. Natl. J. Physiol. Pharm. Pharmacol. (2025), Vol. 15(1): 102-106. DOI: 10.5455/NJPPP.2025.v15.i1.18

Whittaker, B. A., Gillum, D. R., & Kelly, J. M. (2018). Burnout, Moral Distress, and Job Turnover in Critical Care Nurses. *International Journal of Studies in Nursing, 3*(3). https://doi:10.20849/ijsn.v3i3.516.

Woo, T., Ho, R., Tang, A., & Tam, W. (2020). Global prevalence of burnout symptoms among nurses: A systematic review and meta-analysis. Journal of psychiatric research, 123, 9–20. https://doi.org/10.1016/j.jpsychires.2019.12.015