



ASSESSMENT OF BURNOUT AMONG NURSES WORKING IN SELECTED CRITICAL CARE UNITS IN TERTIARY HOSPITALS IN ONDO STATE, NIGERIA

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ABSTRACT: *Burnout is the outcome of work-related disorder that is due to accumulated stress and work overload. This study aimed at assessing burnout experienced among nurses working in selected critical care units in tertiary hospitals in the Ondo State of Nigeria. A descriptive cross-sectional design was utilized with 115 respondents chosen purposely from the tertiary hospitals in Ondo State, Nigeria. An adapted standardized instrument on Maslach Burnout Inventory Human Service Survey (MBI-HSS) was used to collect data. Findings revealed that 22.6% of the respondents experienced a high level of emotional exhaustion while 47.8% of the respondents experienced moderate emotional exhaustion in the domain of burnout. There was no statistically significant difference between burnout experienced by nurses and their years in practice. In conclusion, emotional exhaustion is being experienced among nurses in the course of their practice. Therefore, proactive measures that can cater for the psychological wellbeing of the nurses are recommended.*

KEYWORDS: Burnout, Critical Care Units, Depersonalization, Emotional Exhaustion, Personal Accomplishment.

INTRODUCTION

Burnout is a crucial syndrome and problem in any technologically advanced service-oriented society especially for workers in healthcare settings. The high prevalence of burnout among health caregivers was a major cause of concern as this inevitably affects the performance of the quality, and safety of the healthcare system. Davis (2017) noted that in order to meet the developing human service needs of patients who are living longer with endless sicknesses and complex infection forms, nurses should be expertly responsible for extending their clinical range of abilities and reliably actualizing highest quality practice to direct nursing actions. Okwaraji and Agunwa (2014) stressed that nurses' responsibility in health care services cannot be overemphasized as their services are required at all dimensions of human activities necessitating a great deal of devotion, time and vitality.

According to the Global Health Observatory (2017) report, Nurses and Midwives represent about half of the health care populace (out of the 43.5 million health care workforce globally, 20.7 million are nurses and midwives). Nevertheless, half of the World Health Organization (WHO) Member States is reported to have under 3 nursing and midwifery staff per 1000



populace as about 25% is also reported to have under 1 for every 1000 (World Health Organization, 2019). This time, speculation and commitment to obligation is probably going to prompt burnout and psychological distress among the nurses. This is in line with a report in 2014, where Ribeiro, Filho, Valenti, Ferreira, Carlos, et al. established that burnout syndrome was found in workers from various occupations, the dominant being the care workers, especially the healthcare ones.

When Burnout Syndrome (BOS) occurs across the labour force, it has been more commonly found among nurses because of the psychologically demanding nature of their work, especially in units where frequent contacts with tension, rigid policies, multi-faceted and unfamiliar patients' need occur (Ahanchian, Meshkinyazd & Soudmand, 2015).

Burnout is a condition that involves an overwhelming depletion of enthusiasm, an individual's narrowed feelings towards achievement and withdrawal from work, normally occurring as an outcome of delayed and work-related anxiety (Madsen, Lange, Borritz & Rugulis, 2015). It has been globally described as a disease of the 21st century which was redefined by the World Health Organisation (2019) as a syndrome of chronic workplace stress that has not been successfully managed which includes feelings of energy depletion or exhaustion, resulting in increased mental distance from one's job and reduced professional efficacy.

According to a WHO report on the share of people experiencing burnout by country, in the United Kingdom 57% of people experienced burnout, in United State 50% people experienced burnout, Spain 37% of people experienced burnout, Germany 30% of people experienced burnout, France 30% share of people experienced burnout, Nigerian 23.6%, South African 31%, Ghana 20% and Ethiopia 27.5% (Kojik, 2019; Coker, 2010; Liebenberg, 2018; Opoku, 2014; Largo, 2018).

According to Maslach and Jackson (2019), Maslach Burnout Inventory-Human Services Survey (MBI-HSS) was meant for professionals in human services. The three scales of burnout include;

emotional exhaustion which measures the feelings of being psychologically overstretched and shattered over one's job; depersonalization shows an unsympathetic and unfriendly response toward the receiver of one's care service, treatment, or education and low personal accomplishment depicts the feelings of reduction in the level of proficiency and thriving success in one's duty.

In a study conducted by Keyrel (2017) among 257 registered nurses in the United States hospitals, it was reported that 98% of nurses said that their work is mentally and physically challenging, 85% of the study group said their jobs make them fatigued generally, 63% of the nurses observed that their work has led to nurse burnout, 44% disclosed being bothered that their fatigue will cause their patient care to suffer while 41% of the surveyed group have considered changing hospitals in the past year as a result of burnout. In another study conducted by Nantsupawat, Nantsupawat, Kunaviktikul, Turale and Poghosyan (2015) in Thailand community hospitals on nurses' burnout with patient outcomes reported that the relationship between all three burnout indicators, including emotional exhaustion, was recorded with patients' outcomes, depersonalization, and immediate fulfillment. An analysis of 25 research studies in 2016 showed that intensive care nurses experienced burnout more than those in other hospital units in Taiwan (Chuang, Tseng, Lin & Chen, 2016). Many studies have addressed



that burnout affects employee's physical and psychological health, hospital well-being, and indirectly patients' results if the practitioners are nurses (Huan-Fang Lee et al., 2017).

Statement of the Problem

The demanding nature of nurses' jobs necessitated stress as a result of an increase in workload and the resultant effect of burnout such as involvement in errors or exposure to adverse events (Patient Safety Network, 2019). In a study carried out by Dyrbye (2017), it was reported that burnout among physicians and nurses working in critical units resulted in emotional exhaustion and depression which lead to poor quality of patients' care and deteriorated interpersonal teamwork. According to Decapua (2016), it was found that health care providers experiencing professional burnout are less productive, take more sick-leave, retire sooner and also reported both low job satisfaction and low organizational commitment.

Also, it was established that nurses working in high-risk units are more "vulnerable to burnout because of patients' intense needs" and "uncertain outcomes" as those who work in particularly high-stress environments such as emergency departments and intensive care units are particularly susceptible (Paton, 2019). As a matter of factly according to Keyrel (2017), the highly charged context of nurses' work, particularly the impact of witnessing ongoing suffering and death are attributes of burnout. This means that efforts are needed to address this growing problem.

Even though burnout is a global phenomenon, the magnitude of the syndrome is more pronounced in developing countries like Nigeria. While many studies have focused on burnout in medical wards, among psychiatric nurses and oncology nurses (Kitze & Rodrigues, 2008; Lasebikan & Oyetunde, 2012; Ayandiran, Akinyoola, Ajao & Chibe, 2018), there is a dearth of literature targeting burnout among nurses working in critical care units of tertiary hospitals within the Nigeria context. Therefore, the researcher focused on the assessment of burnout among nurses working in selected critical care units of the tertiary hospitals in Ondo State, Nigeria.

Research Questions

The following are the research questions developed to guide the study

1. What is the level of emotional exhaustion among nurses working in selected critical care units in tertiary hospitals, Ondo state?
2. What is the level of depersonalization among nurses working in selected critical units in tertiary hospitals, Ondo state?
3. What is the level of personal accomplishment among nurses working in selected critical care units in tertiary hospitals, Ondo state?

Research hypothesis

The research hypothesis raised is stated thus:

There is no significant difference between burnout experienced by nurses and their years of practice in selected critical care units.



LITERATURE/THEORETICAL UNDERPINNING

Overview of burnout

Burnout is a condition that involves an intense diminution of emotions that usually narrow individual attainment, making him pull out from work, normally occurring as a result of deferred and work-related apprehension (Madsen, Lange, Borritz & Rugulies, 2015). According to WHO (2019), burnout is distinguished to be added to the eleventh revision of the International Classification of Diseases (ICD-11) as an occupational phenomenon and not classified as a medical condition and not to be described as experiences from other areas of life with the possibility of it being proclaimed a proper disease in the future (Kojik, 2019).

Burnout according to ICD-11 is a syndrome conceptualized as resulting from chronic office stress that has not been effectively managed and characterized by three dimensions: 1) sensing strength depletion or tiredness; 2) overwhelming feelings of emotional detachment from one's job or feelings of pessimism or skepticism connected to one's work, and 3) abridged professional competency. Nurses' perceptions of adverse patient outcomes indicated a high level of burnout among nurses which led to a decrease in the quality of care, patient falls, medication errors, and infections (Nantsupawat, Nantsupawat, Kunaviktikul, Turale and Poghosyan, 2015). Similarly, Chang, Wang and Cho (2014) added that Taiwanese nurses that experienced an increased level of burnout had declined quality of patient care and fewer caring behaviors as compared with nurses with a low level of burnout.

Burnout is a chronic reaction to constant emotional and behavioral stressors at work. Dimensions of emotional exhaustion resulting from lack of energy and a feeling that one's emotional resources are used up, depersonalization, also known as cynicism or the development of negative and uncaring attitudes towards others and personal accomplishment, also known as personal efficacy or self-confidence and satisfaction in one's achievements (Kara, 2019).

The Maslach Theory of Burnout

Maslach's initial research did not involve the formation of an already existing theory and focus on burnout. Primary interest had been to study 'emotions' which then later led to interest in occupational burnout. The early studies and research on burnout focused more on "care-giving" jobs where the individual providing care and the individual receiving care had a relationship. Later research has broadened to include other occupations aside from human service (Maslach, 1993).

According to Maslach, burnout is as a result of a mismatch between the person doing the job and the job demands. For burnout not to occur, the person doing the job and the job demands have to match or be in 'sync'. According to this theory, burnout consists of three dimensions which are emotional exhaustion, cynicism or depersonalization and inefficacy (Maslach, et al., 2001).

Emotional exhaustion: this is the most visible and easily noticeable among the three dimensions. Most people experiencing burnout easily pinpoint exhaustion, characterized by emotional-stress related symptoms such as moodiness, frustration, agitation which may later cause the inability to cope with the emotional and physical aspects of the job. Emotional incompetence negatively influences physical competence. This causes individuals to act in a

manner that is not in line with their work and sufferers are unable to cope with the demands of the job.

Depersonalization: this makes people create some sort of distance and detachment from the job which is coupled with negative feelings. This often occurs when the individual is unable to deal with the demands of the job leading to disengaging from the work. Cynicism and depersonalization are mostly influenced by emotional exhaustion. Job dissatisfaction may occur in this dimension. People may also be viewed as objects other than human beings.

Personal accomplishment: This dimension is more considered as complex than emotional exhaustion and cynicism. An overall sense of incompetence and unworthiness is experienced at this stage after self-evaluation from the job performance. Personal accomplishments decline as a result of this.

This theory also indicates that burnout has negative consequences such as job performance, turnover, and negative impact on colleagues which may result in conflict. Poor job performance may be seen as a result of continued work despite experiencing burnout (Maslach, et al., 2001). The three dimensions of burnout are shown in figure 1.

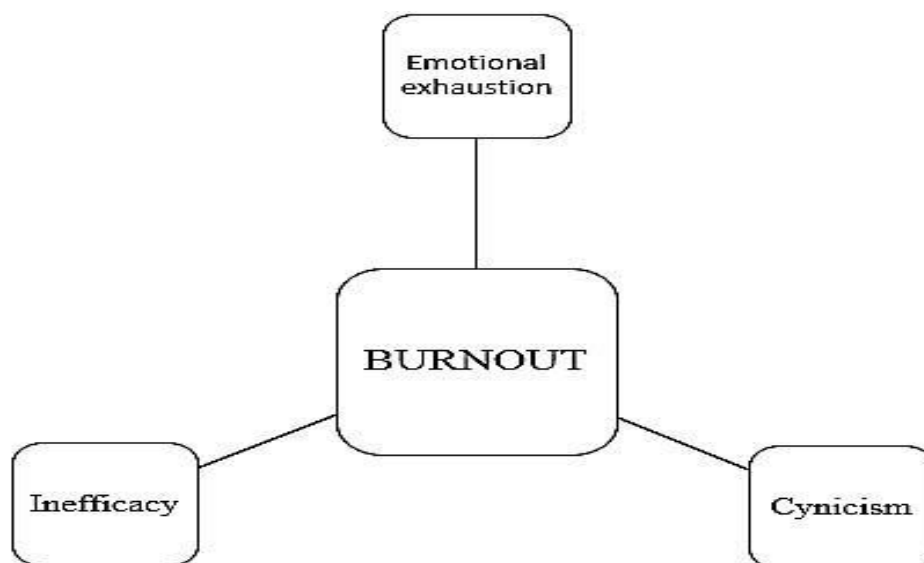


Figure 1: Showing the three dimensions of burnout: Emotional exhaustion, inefficacy, and cynicism

Adapted from the Annual Review of Psychology, 2001

Theoretical Framework

Individual Job Characteristics

Organizational Outcome

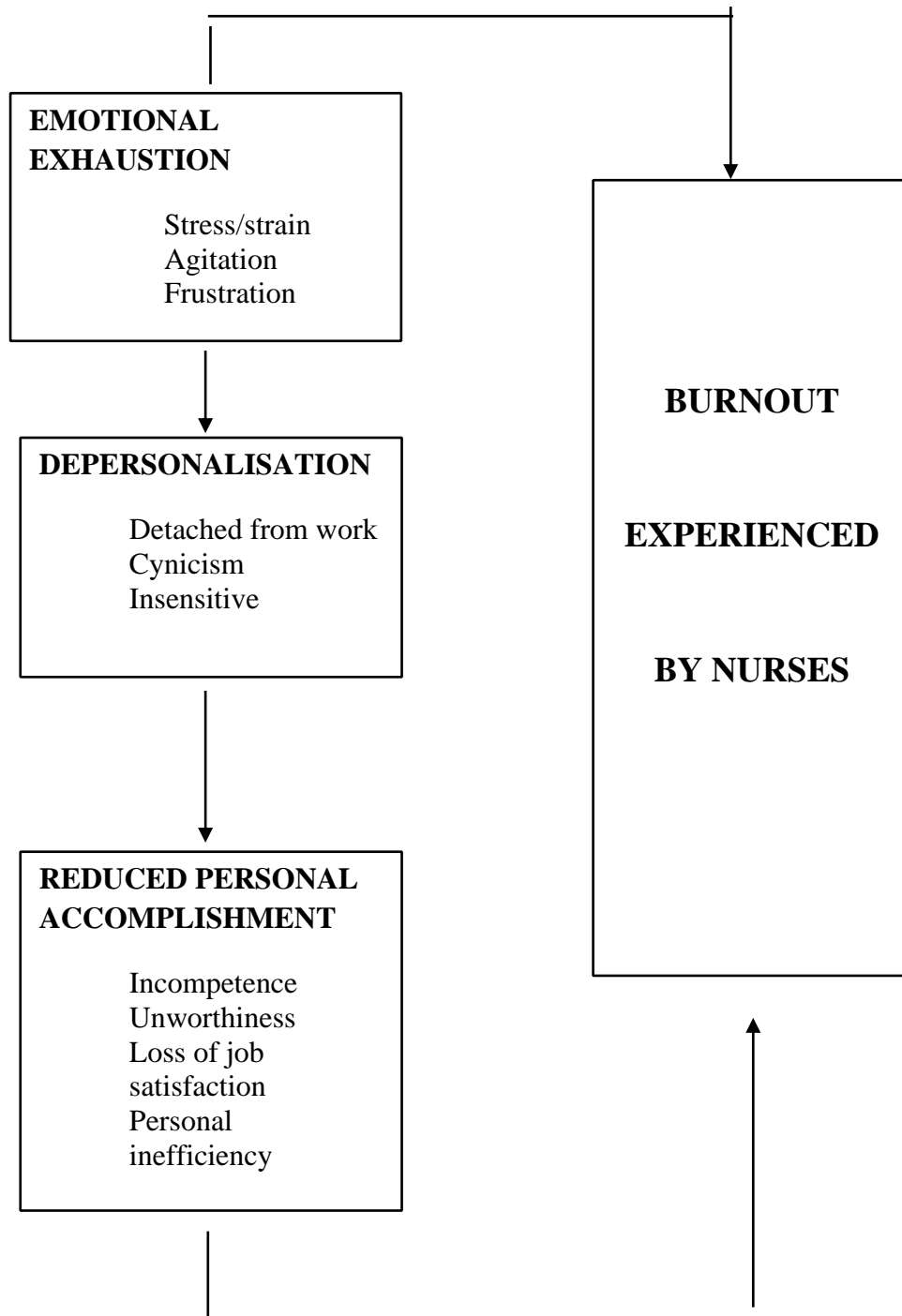


Figure 2: Conceptualized Maslach Burnout Theory

Adapted from Maslach Burnout Theory



Application of Maslach Burnout Theory to the Study

Burnout comprises of three components and this is expected to manifest in the following three domains:

Emotional exhaustion: the nurse becomes emotionally drained, sensing fatigue or strain in the course of carrying out one's duty.

Depersonalization: the nurse becomes insensitive or hardened towards the feelings of their clients.

Personal accomplishment: there is a reduction in the level of achieving the goal of nursing and a sense of defeat is felt.

METHODOLOGY

Research design

A descriptive cross-sectional design was used to assess the level of burnout experienced by the nurses working in selected critical care units in Tertiary Hospitals in Ondo State, Nigeria.

Population

The population of the study included all cadres of nurses working within the Accident and Emergency departments, Intensive Care Units (adults and neonates), and Theatre of the University Medical Science Teaching Hospitals in Ondo Town and Federal Medical Centre in Owo Town, Ondo State, Nigeria. Nurses in the critical care units of University Medical Science Teaching Hospitals in Ondo were 74 nurses while the nurses in Federal Medical Centre in Owo were 54 nurses with the total number of 128 nurses.

Sample and Sampling Technique

A purposive sampling technique was used to select all nurses working in the critical care units based on the total enumeration method used to select 128 nurses from the tertiary hospitals because of the relatively small size of the population. The study sample size distribution is shown in Table 1.

Table 1: Study Sample Size Distribution

Critical Care Units		Ondo	Owo
Accident & Emergency		32	12
Intensive care unit(Adult)		9	8
Neonatal intensive care unit	Inborn	9	15
	Out born	9	
Theatre		15	19
Total		74	54
Total population		128	



Instrumentation

The questionnaire is titled Assessment of burnout among nurses working in selected critical care units in Tertiary Hospitals in Ondo State, Nigeria. An adapted standardized instrument on the Maslach Burnout Inventory Human Service Survey (MBI-HSS) and self-structured respondents' demographic instruments were used for data collection. A frequency on a 5-point scale ranging from "Never = 1, Rarely = 2, Sometimes = 3, Often = 4, Always = 5" was used to assess the scores on burnout experienced by the respondents. The items were written in statement forms showing the respondents' personal feelings or attitudes and the responses are to be ticked. The scores for each subscale were summed up and considered separately and not combined into a single total score; thus, three scores were computed for each respondent.

For both emotional exhaustion and depersonalization subscales, higher scores correspond to higher degree of burnout experienced. In contrast to this, lower scores on personal accomplishment subscale correspond to a higher degree of burnout experienced. The scoring and interpretation key adapted for this study is illustrated in Table 2.

Table 2: Scoring and interpretation key

Categorization	Emotional exhaustion Summation	Depersonalization summation	Personal accomplishment summation
Low	1 – 18	1 -10	1 – 16
Moderate	19 – 27	11 -15	17 – 24
High	28 and above	16 and above	25 and above

Validity and reliability of the instrument

The Maslach Burnout Inventory Human Service Survey (MBI-HSS) is a validated standardized instrument. However, content and face validity of the instruments were ensured by the Researcher's Supervisor and other experts: a statistician and methodologist from which adequate suggestions were effected. Unclear and ambiguous items were reframed before the final administration of the instrument to the respondents.

The reliability of the instrument was pretested with 13 respondents, being 10% of the sample size (128) from Obafemi Awolowo University Teaching Hospital, Ile-Ife (OAUTHC), Osun State. Data collected were coded and analysed with the Split-half method, being a single-shot approach as respondents (Nurses) in the study run shift duty with no possibility of collecting second phase data from the same respondents. The Spearman-Brown coefficient is used to estimate the reliability of each section of the instrument and these are recorded as follows: Emotional Exhaustion is 0.89, Depersonalization is 0.80 and Personal Accomplishment is 0.67 while the overall coefficient of all the instruments is 0.77. The instrument to be used for data collection was considered reliable.

Method of data analysis

Data were collected, coded, screened for missing values and analyzed using Statistical Package for Social Sciences (SPSS) version 25. The three research questions were answered using descriptive statistics in the form of frequency and percentage. Inferential statistics of Kruskal-Wallis test was used to test the hypothesis of the study at 0.05 level of significance.



FINDINGS

The study had a response rate of response rate of 89.8% (N=115) representing a high degree of participation.

Table 3: Levels of Emotional exhaustion of respondents

Variable	Frequency	Percentage
High	26	22.6
Moderate	55	47.8
Low	34	29.6
Total	115	100

Table 3 shows the levels of emotional exhaustion domain of burnout of respondents, the findings reveal that 26 (22.6%) experienced a high level of emotional exhaustion while nearly half of the respondents 55 (47.8%) had experienced a moderate level of emotional exhaustion.

Table 4: Levels of Depersonalization among the respondents

Variable	Frequency	Percentage
High	2	1.7
Moderate	21	18.3
Low	92	80
Total	115	100

Table 4 shows the level of depersonalization domain of burnout of respondents, the findings reveal that the majority of the respondents 92 (80%) experienced a low level of depersonalization.

Table 5: Levels of Personal Accomplishment of the respondents

Variable	Frequency	Percentage
High	114	99.1
Moderate	1	0.9
Total	115	100

Table 5 shows the level of personal accomplishment domain of burnout of respondents, the findings reveal that the majority of the respondents 114 (99.1%) experienced a high level of personal accomplishment.



Table 6: Kruskal-Wallis test to show the difference between burnout experienced by nurses and their years in practice

Category	Emotional exhaustion				Depersonalization				Personal accomplishment			
	M	Df	H	P	M	Df	H	P	M	Df	H	P
Years in practice												
1 – 10	21.00				8.00				33.00			
11 – 20	21.00	1	0.35	0.85	7.00	1	0.263	0.61	34.50	1	0.374	0.54
21 – 30	19.00				7.50				32.50			
>30	29.50				7.50				37.00			

M= Mean, H= Kruskal-Wallis values, Df= degree of freedom, P= P value

The Kruskal-Wallis test shows no statistically significant difference between the emotional exhaustion domain of burnout and years in the practice of nurses as $H_{(1)} = 0.35$, $P = 0.85$, the differences in the mean values were not significant. Also, no significant difference was found between depersonalization burnout and years in the practice of nurses, $H_{(1)} = 0.263$, $P = 0.61$. Similarly, no significant difference was recorded between the personal accomplishment of nurses and their years in practice as $H_{(1)} = 0.37$, $P = 0.54$.

DISCUSSION

Emotional Exhaustion

The findings from the study showed that 26 (22.6%) of the nurses experienced emotional exhaustion while nearly half of the nurses 55 (47.8%) experienced a moderate level of emotional exhaustion in the domain of burnout (Table 3). This shows that burnout is already building up in a good number of the respondents as emotional exhaustion is the core element of burnout as established by many studies (Lahana, et al., 2017; Günügen, Üstün & Erdem, 2014) and also that this is also the first dimension of burnout (Fernández-Castro et al., 2017). These findings are in line with the study of Sillero and Zabalegui (2018), carried out in Spain which revealed that close to an average number of nurses experienced moderate emotional exhaustion as the degree of general burnout was moderately seen among the respondents. A similar finding was reported by Galletta, Portoghese, Ciuffi, Sancassiani, D' Aloja and Campagna (2016) that a moderate level of emotional exhaustion was revealed among nurses that participated in the study. Also, Wang, Liu and Wang (2015) in their study findings added that the participants had moderate levels of emotional exhaustion. It is accepted that these units are stressful fields in the hospital and burnout is a common phenomenon in such settings (Dyrbye, 2017; Cishahayo, Nankundwa, Segó & Bhengu (2017).

On the contrary, this finding was not supported by a cross-sectional study carried out by Elshaer, Moustafa, Aiad & Ramadan (2018) that reported a severe level of emotional exhaustion by almost all the respondents. Similarly, a series of studies conducted by Hamdan and Hamra (2017); Ibikunle, Amah and Useh (2016) depicted high prevalence in emotional exhaustion experienced among a larger percentage of the participants.



Depersonalisation

The findings from the study revealed that the majority of the nurses experienced a low level of depersonalization indicating that their connection with people and the environment is relatively intact. This is in line with a study carried out by Socaciu, Ionut, Barsan, Ungur and Rajnoveanu (2020) which revealed a low level of score obtained on the depersonalization subscale among nurses. Also, nurses in Singapore experienced a lower level of depersonalization than nurses in the United Kingdom in the study of Ang, Dhaliwal, Ayre, Uthaman, Fong, Tien & Della (2016). These findings deduced that since the first sign in burnout (emotional exhaustion) experienced by these study respondents is on the moderate side, apparently the domain of depersonalization will be unconsciously manifested.

However, this finding was not supported by the study carried out by Abedi-Gilavandi et al., (2019) which reported severe depersonalization among the staff nurses working in Ziaecian Hospital. Also, findings in the study carried out by Elshaer, Moustafa, Aiad and Ramadan (2018) is also not in agreement with the finding of this study, as more than one-third of the nurses showed an increase in the depersonalization domain of Burnout Syndrome (BOS) at the surgical emergency department and intensive care unit of Critical Care department at the Alexandria University Hospital.

Personal Accomplishment

The finding from the study indicated that almost all the nurses experienced a high level of personal accomplishment. This shows that virtually the reduction in the personal accomplishment attribute of burnout is virtually not seen among respondents. This observation from the level of personal accomplishment in this study was a sequel to the points raised in the previous findings that revealed that the burnout category of emotional exhaustion is emanating on a moderate form among the respondents which will make other domains of burnout (reduced personal accomplishment) to be minimally experienced. This is in agreement with findings from the study of Rushton, Batcheller, Schroeder and Donohue (2015) that depicted that nurses in high-stress areas scored high on measures of burnout but still felt personal accomplishment related to their work. This was not dissimilar to a study conducted in Greece according to Lahana et al., (2017) where female nurses had a higher personal accomplishment score, than men. Also, in a study carried out by Ang, Dhaliwal, Ayre, Uthaman, Fong, Tien and Della (2016) which indicated that the nurses in Singapore experienced comparable levels of emotional exhaustion and higher levels of depersonalization but higher levels of personal accomplishment.

On the contrary, several studies have established high level of reduced personal accomplishment among nurses, doctors and other health workers (Elshaer, Moustafa, Aiad, & Ramadan, 2018; Abedi-Gilavandi et al., 2019; Günösen, Üstün & Erdem et al., 2014; Fernández-Castro et al., 2017; Singh et al., 2017). Similarly, findings from the study of Elshaer, Moustafa, Aiad & Ramadan (2018) revealed reduced levels of personal accomplishment in the domain of Burnout Syndrome (BOS) by nurses at the surgical emergency department and intensive care unit of the Critical Care department at the Alexandria University Hospital.

Relationship between burnout experienced by nurses and their years in practice

The findings from this study revealed that there was no statistically significant difference between the emotional exhaustion, depersonalization, and personal accomplishment domains



of burnout experienced by nurses and their years in practice as the differences in their mean values was not significant. Therefore, burnout experienced by nurses does not depend on the number of years they have spent in practice. These findings suggest that nurses experienced the same degree of burnout irrespective of their years in practice which may be a result of being exposed to a similar workload.

These findings were in line with the study of Ahmed, Shah, Rasheed and Ali (2020) which showed that there was no significant association between burnout and years in the practice of nurses. Congruent to this, in another study conducted by Alfuqaha and Alsharah (2018) which showed that there was no significant association between burnout in nurses based on their work experience.

However, in variance with the above findings, the report of the study of Kalateh, Hemmati, Rahnavard, Bagheri, and Heydari (2016) showed a significant relationship between both emotional exhaustion and reduced personal accomplishment with the nurses' amount of work experience as the middle-aged group that had 6 - 15 working years demonstrated significantly higher levels of emotional exhaustion.

Implication to Research and Practice

The outcome of this study revealed that nurses in the critical care units are already experiencing emotional exhaustion which should serve as a red flag to the profession. Nursing leaders should put necessary measures in place to motivate workers as these would have a positive psychological impact that can enhance the quality of care given to patients, improve quality of work-life and higher levels of job satisfaction.

A longitudinal study that can broaden the research scope and extend the analysis of the personality variables should be carried out. Further research should focus on a qualitative method of approach where nurses' work behaviour and actual practice can be explored.

CONCLUSION

Emotional exhaustion is invariably a consequence of stress and increased workload and this is pivotal to the other two dimensions of burnout i.e. depersonalization and reduced personal accomplishment. Burnout is a high risk for all organizations especially the health field in terms of staff wellbeing and productivity, if promptly managed it can lead to improved quality of patient care, improved quality of work-life, and higher levels of job satisfaction, commitment and nurses' turnover

RECOMMENDATIONS

The following recommendations were made based on the findings from this study:

1. Nurse leaders should organize programs to enable nursing professionals to be aware of the physical, mental and emotional effort required by their profession



2. There is a need for nursing stakeholders to organize workshops for the individual worker and organizational interventions to further increase resilience and other coping strategies that can reduce the experience of burnout
3. There is a need for nursing elders to inculcate training on improvement of communication skills among nurses for them to know how to make a request, if need be, for support among their colleagues and other professionals
4. There is a need for the enactment of policy in the hospital that can provide prompt and adequate interventions for burnout prevention and treatment

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