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PERCEIVED WORK-RELATED STRESS AND COPING STRATEGIES AMONG CLINICAL NURSES IN UNIVERSITY OF OSUN STATE TEACHING HOSPITAL

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ABSTRACT: *Aim: To examine primary stressors, coping strategies, and techniques used by nurses working in the Uniosun Teaching Hospital in Osogbo, Osun State. Methods: Cross-sectional survey. Place and Duration of Study: The University of Osun Teaching Hospital, Osogbo, South-western, Nigeria between November 2022 and January 2023. Methodology: A self-structured questionnaire with contents derived from the Nursing Stress Scale (NSS) was used as the instrument. One hundred and eighty-seven (187) (21 males, 166 females; age ranged 18-60 years) qualified registered nurses were included in this study. Results: Majority of the respondents were 21-30 years old (44.9%), while more than a quarter (26.7%) had worked between 21 and 30 years. Workload was the main cause of stress among the overwhelming majority of respondents, with a response rate of 72.2% and a mean score of 17.35 while 88.8% reported relaxation as their coping mechanism. There was a significant difference between cause of stress and frequency of P = 0.000* while we found no significant difference between the causes of stress and the coping strategies adopted with P = 0.587. Conclusion: The study concludes that nurses' workload due to inadequate staffing is the primary cause of stress, and it recommends recruiting more nurses into the clinical field to help reduce this burden.*

KEYWORDS: Perceived work-related stress, coping strategies, nurses, teaching hospitals.

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INTRODUCTION

Stress could be defined simply as the rate of wear and tear on the body systems caused by life [1]. Work-related stress has become a major concern among nurses over the years, as nurses experience a high level of work-related stress when work demands exceed their ability to cope [2]. Stress at work is a big problem in the nursing profession, which is a demanding and often stressful occupation, and nurses' health could be affected by stress dangerous consequences [3]. Meanwhile, coping strategies are key elements of nurses' stress reactions, and coping strategy as a stabilizing factor may be as important as the stressful event itself. Stress is also any discomfort perceived by the individual that is stimulated by activities perceived as too intense and frequent, which exceed a person's coping capabilities and resources to manage [4].

Nurses face various sources of work-related stress: noise, conflicts, workload, task conflicts, death, lack of resources/support, patient aggressiveness/violence, and patient care [5]. Nurses work long hours in hospitals, resulting in job physical fatigue [6]. These long hours have been linked to burnout resulting in negative patient and organizational outcomes [7]. Effective management of stress will go a long way in the elimination of a reasonable number of problems experienced in the nursing profession, including behavioral issues like absenteeism, health problems like hypertension, immunological disorders, cardiovascular diseases, musculoskeletal problems (e.g., back pain), burnout, and psychological problems like depression [3]. A significant factor contributing to more stress in nursing is the shortage of nurses in hospitals, which is highly pronounced in the nursing profession, exposing nurses to higher levels of stress [8] due to the recent exodus of nurses from Nigeria. Therefore, the aim of this study was to identify the causes of stress, assess the frequency of job stress and determine the stress coping mechanism among nurses in the University of Osun Teaching Hospital.

MATERIALS AND METHOD

This study employed a cross-sectional survey. Participants for this study were qualified registered nurses employed at the Osun University Teaching Hospital, Osogbo, Nigeria. The sample size was obtained using Taro Yamane's formula [9]; proportionate sampling of the sample size was carried out for proper representation of the nurses based on their wards and units. Convenience sampling was used to select the sample of three hundred and twenty (320) nurses by using respondents present on duty. A self-structured questionnaire with contents derived from the Nursing Stress Scale (NSS) [10] was used for data collection. The questionnaire was in two parts: The first part was made up of 9 items which entailed the socio-demographic information of respondents. The second part was made up of 25 items which were subdivided into 5 parts comprising possible causes of stress among nurses: workload, death or dying patient, uncertainty concerning treatment, conflict with physician, and conflict with other nurses. Each item was scored according to how stressful they were: 1 - not stressful at all, 2 - slightly stressful, 3 - moderately stressful, 4 - very stressful, 5 - extremely stressful. The third part was made up of 5 items indicating how frequently stressful each possible cause of stress indicated in part two was, in which each item was scored according to the level of frequency: 1 - not frequent, 2 - less frequency, 3 - very frequent. The fourth part was made up of 12 items indicating possible stress coping strategies that nurses adopted and each item was either marked yes or no. The questionnaire was distributed by hand and retrieved via the same means.

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RESULTS

Table 1 shows the socio-demographic distribution of the participants. The age of the respondents ranged from 18 to 60 years, of which 44.9% of the respondents fall within 21-30 years. 88.8% were females while 11% were males. An overwhelming proportion (82.9%) were permanent staff and 26.7% had working experience between 21-30 years.

Table 1: Socio-demographic characteristics of respondents (n=187)

Variables	Characteristics	Frequency (n=187)	Percentage (%)
Sex	Male Female	21 166	11.2 88.8
Age (in years)	18-20 21-30 31-40 41-50 51-60 Range 18-60	5 84 49 38 11	2.7 44.9 26.2 20.3 5.9
Marital status	Single Married	75 112	40.1 59.9
Qualification	Diploma Degree Msc Phd	42 132 9 4	22.5 70.6 4.8 2.1
Nature of job	Temporary Permanent	32 155	17.1 82.9
Years of experience	0-10 11-20 21-30 31-40 41-50	40 33 50 42 22	21.4 17.6 26.7 22.5 11.8
Cadre	Nursing officer II Nursing officer I Senior nursing officer Principal nursing officer Assistant chief nursing officer Chief nursing officer Assistant director of nursing service Deputy director of nursing service	36 19 37 33 29 18 9 6	19.3 10.2 19.8 17.6 15.5 9.6 4.8 3.2
Ward/area of specialty	Medical Surgical Pediatric Clinic Intensive care unit	21 22 13 27 10	11.2 11.8 7.0 14.4 5.3

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	Others	94	50.3

Table 2: Work related causes of stress among nurses in Uniosun Teaching Hospital

NF - Not frequent, LF - Less frequent, VF - Very frequent

Variables (n=187)	**NS F(%)**	**SS F(%)**	**MS F(%)**	**VS F(%)**	**ES F(%)**	**Mean (standard deviation)**
Not enough staff to cover the load on the ward/unit	2 (1.1)	30 (16.0)	36 (19.3)	59 (31.6)	65 (34.8)	3.78 (1.009)
Not enough time to complete all nursing task	6 (3.2)	37 (19.8)	47 (25.1)	53 (28.3)	44 (23.5)	3.49 (1.147)
Too many non-nursing tasks required	16 (8.6)	41 (21.9)	49 (26.2)	46 (24.6)	35 (18.7)	3.23 (1.229)
Making certain decisions concerning a patient when physician is unavailable	18 (9.6)	45 (24.1)	51 (27.3)	38 (20.3)	35 (18.7)	3.14 (1.251)
Lack of equipment for nursing care	8 (4.3)	34 (18.2)	27 (14.4)	53 (28.3)	60 (32. 1)	3.71 (1.237)

STRESS FROM DYING OR DEAD PATIENTS

Variables (n=187)	**NS F (%)**	**SS F (%)**	**MS F (%)**	**VS F (%)**	**ES F (%)**	**Mean (standard deviation)**
The death of a patient of whom you develop a close relationship with	16 (8.6)	40 (21.4)	45 (24.1)	57 (30.5)	29 (15.5)	3.23 (1.19)
Physician not present when a patient dies	29 (15.5)	28 (15.0)	43 (23.0)	63 (33.7)	23 (12.3)	3.14 (1.27)
Listening or talking to a patient about his/her approaching death	29 (15.5)	27 (14.4)	35 (18.7)	63 (33.7)	33 (17.6)	3.24 (1.33)
The death of a patient	30 (16.0)	29 (15.5)	43 (23.0)	46 (24.6)	39 (20.9)	3.19 (1.36)
Feeling inadequately prepared to meet the emotional needs of the relatives of a dying patient	17 (9.1)	33 (17.6)	46 (24.6)	57 (30.5)	34 (18.2)	3.31 (1.22)

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STRESS FROM UNCERTAINTY CONCERNING TREATMENT

Variables (n=187)	NS F(%)	SS F(%)	MS F(%)	VS F(%)	ES F(%)	Mean (standard deviation)
Feeling helpless in case of patients who fail to improve	5 (2.7)	38 (20.3)	57 (30.5)	59 (31.6)	28 (15.0)	3.36 (1.05)
Uncertainty regarding functioning and operation of specialized equipment	11 (5.9)	34 (18.2)	65 (34.8)	54 (28.9)	23 (12.3)	3.24 (1.07)
Fear of making mistakes in the treatment of a patient	23 (12.3)	47 (25.1)	56 (29.9)	43 (23.0)	18 (9.6)	2.93 (1.16)
Not knowing details about a patient condition and its treatment	17 (16.0)	42 (22.5)	56 (29.9)	43 (23.0)	29 (15.5)	3.13 (1.19)
Watching a patient suffer	9 (4.8)	34 (18.2)	49 (26.2)	58 (31.0)	37 (19.8)	3.43 (1.14)

STRESS FROM CONFLICT WITH PHYSICIAN

Variables (n=187)	NS F(%)	SS F(%)	MS F(%)	VS F(%)	ES F(%)	Mean (standard deviation)
Disagreement concerning treatment of patient	5 (2.7)	29 (15.5)	68 (36.4)	61 (32.6)	24 (12.8)	3.37 (0.09)
Inadequate information from physician regarding medical condition of a patient	4 (2.1)	37 (19.8)	64 (34.2)	65 (34.8)	17 (9.1)	3.29 (0.95)
Criticism by a physician	4 (2.1)	30 (16.0)	52 (27.8)	73 (39.0)	28 (15.0)	3.49 (1.00)
A physician not been present in a medical emergency	7 (3.7)	25 (13.4)	57 (30.5)	60 (35.3)	32 (17.1)	3.49 (1.00)
A physician ordering what appears to be inappropriate treatment for a patient	9 (4.8)	12 (6.4)	52 (27.8)	77 (41.2)	37 (19.8)	3.65 (1.02)

STRESS FROM CONFLICT WITH OTHER NURSES

Variables (n=187)	NS F(%)	SS F(%)	MS F(%)	VS F(%)	ES F(%)	Mean (standard deviation)
Difficulty in working with a particular nurse (nurses) on the ward/unit	20 (10.7)	28 (15.0)	57 (30.5)	53 (28.3)	29 (15.5)	3.23 (1.19)
Disagreement/argument about a patient's treatment	9 (4.8)	36 (19.3)	59 (31.6)	56 (29.9)	27 (14.4)	3.30 (1.08)

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Criticism from supervisor/senior colleague	11 (5.9)	21 (11.2)	71 (38.0)	55 (29.4)	29 (15.5)	3.37 (1.66)
Conflict with supervisor/senior colleague	9 (4.8)	19 (10.2)	68 (36.4)	63 (33.7)	28 (15.0)	3.44 (1.02)
Running shift for nurses that are absent from duty	12 (6.4)	12 (6.4)	43 (23.0)	59 (31.6)	61 (32.6)	3.78 (1.16)

Objective Two: Assess the frequency of work-related stress among nurses in Uniosun Teaching Hospital.

Frequency of work-related stress among nurses in Uniosun Teaching Hospital.

NF - Not frequent, LF - Less frequent, VF - Very frequent

Variables (n=187)	**NF F(%)**	**LF F(%)**	**VF F(%)**	**Mean(standard deviation)**
1. Workload	5 (2.7)	47 (25.1)	135 (72.2)	2.70(0.51)
2. Death and dying patients	55 (29.4)	94 (50.3)	38 (20.3)	1.91(0.70)
3. Uncertainty concerning patient treatment	67 (35.8)	75 (40.1)	45 (24.1)	1.88(0.76)
4. Conflict with physician	77 (41.2)	72 (38.5)	37 (19.3)	1.79(0.75)
5. Conflict with other nurse (nurses)	92 (49.2)	56 (29.9)	39 (20.9)	1.72(0.79)

The table above shows that of all the perceived work-related causes of job stress among nurses, workload was the most frequent, with a rating of 135 (72.2) while 5 (2.7) claimed that it was not frequent. Next to workload was stress from uncertainty concerning patient treatment of 45 (24.1), followed by conflict with other nurses 39 (20.9%), and then death and dying patients of 38 (20.3) in the teaching hospital. The least frequent cause of stress was from conflict with a physician as only 37 (19.3%) claimed to be very frequent, while 77 (41.2%) admitted that it was not frequent.

Objective Three: Determine the coping strategies adopted by nurses

Coping Strategies

Variables (n=187)	**YES F(%)**	**NO F(%)**	**Mean**
Physical activities, e.g., taking a walk	158 (84.5)	29 (15.5)	1.16
Listening to music (self-distraction)	139 (74.3)	48 (25.7)	1.26
Engage in conversation with friends, relatives	148 (79.1)	39 (20.9)	1.21

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Venting of emotions on others	62 (33.2)	125 (66.8)	1.67
Seeking emotional supports from families/friends	133 (71.1)	54 (28.9)	1.29
Relaxation technique, e.g., sleep or rest	166 (88.8)	21 (11.2)	1.11
Taking a break off duty	145 (77.5)	42 (22.5)	1.22
Increase faith in religion	132 (70.6)	55 (29.4)	1.29
Acceptance of the stressful condition	135 (72.2)	52 (27.8)	1.28
Self-medication	98 (52.4)	89 (47.6)	1.48
Eating	106 (56.7)	81 (43.3)	1.43
Avoiding interaction with physician and other nurses	85 (45.5)	102 (54.5)	1.55

The table above shows that a large number of 166 (88.8%) adopted stress coping technique among the nurses, which was relaxation technique, and the next was physical activities, e.g., taking a walk 158 (84.5%), 148 (79.1%) engaged in conversation with friends and relatives, 145 (77.5%) took break off duty, 139 (74.3%) listening to music (self-distraction). Some nurses with 135 (72.2%) accepted the stressful condition, 133 (71.1%) seeking emotional supports from families/friends, 132 (70.6%) increased faith in religion, 106 (56.7%) eating, 98 (52.4%) self medication, and 85 (45.5%) avoiding interaction with physician and other nurses. The least adopted stress coping technique by the nurse was venting of emotions on others as only 62 (33.2%) used it, whereas 125(66.8%) did not use it.

DISCUSSION

Causes of Stress

The participants in this study ranked ‘workload’ and lack of staffing as the most frequent cause of stress; this is supported by findings of [11, 12, 13] who also reported workload as the main cause for stress among nurses. These findings explain the importance of nurses in the healthcare system as they are required to care for patients until recovery. A study by [14] reported a contrary view to our study, with staff shortage as the major cause of job stress. This might be as a result of the fact that the study was conducted among nursing managers whose jobs involve administration duties, than patient management in comparison to this study whose participants were in the stages of their career.

Coping Strategies

This study reported participants’ relaxation as a strategy to ease and also cope with stress encountered at work. This is in agreement with [14] who also reported that the participants in his study adopted relaxation as a strategic means of coping with work stress. This might be because relaxation has proven to reduce stress, thereby promoting improving heart, breathing

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rates, lower fatigue, reduced anger and frustration [15], which is usually experienced with a high level of stress. This study also reported that is the participants engaged in physical activities, e.g., taking a walk and taking a break off duty to relieve their stress; this is in agreement with [14] who reported the majority 208 (77.9%) and 218 (81.6%) engaged in physical activity and took some time off duty, respectively. This finding collaborates the benefits of engaging in physical activity as empirical studies have documented its effects on reducing workplace stress and improving psychological function, thereby resulting in work-related outcomes [16, 17]. There was a significant difference between cause of stress and frequency while we found no significant difference between the causes of stress and the coping strategies adopted.

CONCLUSION

The findings of this study reported an increase in workload and reduced staffing which results in work-related stress. There is a need to improve the working environment by ensuring more nurses are employed, increase their wages and ensure that they get adequate time off work. This will help to abate the high level of stress beyond the level at which they can effectively cope. Also, the administrative arms of the hospitals should ensure that the number of nurses on shift should be enough to handle the workload. Furthermore, the participants in this study reported relaxation as a means to cope with their stress. It is imperative that the administrative arm of the hospital creates policies to ensure nurses take leave, advises against multiple shifts and ensures lunch/break times are adhered to.

Competing Interest

Authors have declared that there is no competing interest.

Authors' Contribution

'Author A' designed the study, performed the statistical analysis, wrote the protocol, and wrote the first draft of the manuscript. 'Author B' and 'Author C' managed the analyses of the study. 'Author C' managed the literature searches. All authors read and approved the final manuscript."

Consent

Informed consent was sought and obtained from each participant before the commencement of the study. Participation was entirely voluntary and participants were informed that they were free to decline to participate at any time without suffering any negative consequences. Participants were given adequate information about the study and no part of the research process was expected to pose a source of physical or emotional harm to the participant.

Ethical Consideration

Ethical approval was sought and obtained from the Redeemer's University Ethics Committee and the University of Osun Teaching Hospital Ethics Committee.

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