A Cross-Sectional Study of the Causes, Effects and Management Strategies for Stress and Burnout among Nurses in the Fako Division, Cameroon

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Abstract

Introduction: Stress and burnout are a reality which nurses encounter and try to cope with especially in the Emergency Department (ED) so that they can provide optimal patient care. Nurses who work in ED are front line providers of immediate medical care needed to stabilize patients. With the known critical shortage of health workforce in Cameroon, nurses are overloaded with work and often experience stress and burnout. **Aim:** This study aimed at determining the causes, effects and management strategies of stress and burnout among nurses working in the ED in hospitals in the Fako Division, Cameroon. **Methods:** This study was a descriptive cross-sectional study. The sample consisted of seventy nurses from five different hospitals. A purposive sampling technique was used and data was analyzed using SPSS version 16.0. Data was collected using a structured questionnaire developed from the International Stress Management Scale. **Results:** The highest reported cause of stress in this study was heavy workload (12.88%) and the least was no experience in handling the challenges of the department. The leading reported effect of stress was the development of musculoskeletal disorders such

as joint and back pain (16.48%) and the least effect was contemplating quitting the profession (5.99%). The major management strategy used was humour (8.27%), while the least was crying out stress to feel relieved (2.18%). **Conclusion:** The major cause of stress and burnout among nurses in our study setting was heavy workload, which mostly results in joint and back pain. Moreover, humour was the prime management strategy for stress and burnout among nurses in the emergency department in the study setting. Thus more nurses should be employed and the working conditions of nurses improved to reduce the workload in the study hospitals.

Keywords

Stress, Burnout, Nurses, Causes, Effect and Management, Cameroon

1. Introduction

Nursing is inevitably a demanding and stressful job [1]. The healthcare sector is known to be a stressful industry with manpower shortage and high demands. Compared to other healthcare professionals, nurses are the first line of contact, the most engaged with patients and are always exposed to the emotional strains of catering for the sick and dying, with most of them tirelessly working in Emergency Departments (EDs) [2]. When such stressors are left unchecked and unmanaged, it might lead to stress and burnout [2].

Stress in nursing is a mental and physical response and adaptation by the nurse to the real or perceived changes and challenges faced in their job. A stressor is any real or perceived physical, social or psychological event or stimulus that causes our body to react or respond [3]. There exist a relationship between stress and burnout and proven by the fact that prolonged stress leads to burnout [4]. That is, if the stress continues to operate on a full scale for an extended period, there is an increased risk for burnout. Burnout in nursing, on the other hand, is a condition where nurses experience chronic fatigue, exhaustion, and frequent headaches on account of work stress, affecting professional performance. Nurse burnout has three basic features which are; emotional exhaustion, depersonalization and poor personal achievement [5]. This showcases the fact that nurses are leaving the profession due to occupational stress and inability to provide nurse-assessed good quality care [6].

Globally, nurses comprise the group that experiences the maximum stress and burnout among healthcare professionals. In Africa, the situation is a more serious concern due to shortages of healthcare professionals [1]. Likewise, Cameroon described as one of the 57 countries with "critical shortages" of healthcare workers [7] has an estimated health workforce density of 1.3:1000; which is under the WHO recommended of 2.5:1000 [8]. The country has an estimated physician to population density of 1:12,500 [9] and 1:26,726 in some regions [8]. There is a similar situation with the nursing work-force especially in the emer-

gency department with a nurse to population density of 0.67 per 1000 [8]. With such critical shortage of nurses, there is a high expectation and workload for the available few. Thus, nurses are at risk of having stress and automatically burnout syndrome in Cameroon. This study thus sought to determine the causes, effects and management strategies of stress and burnout among nurses working in the Emergency Department in some hospitals in the Fako Division so as to attract policy makers and hospital administrators' concern and assistance.

2. Materials and Methods

2.1. Study Design

This study was a descriptive cross-sectional design carried out from December 2016 to June 2017.

2.2. Study Area and Setting

This study was carried out in selected hospitals in the Fako Division. These hospitals are the major hospitals in Fako and they have emergency departments. The Fako Division is located in South West Region with headquarters in Limbe. It occupies an area of 2093 km^2 and inhabits a total population of 534,854 people. It is divided administratively into 7 councils which are; Buea, Limbe I, Limbe II, Limbe III, Muyuka, Tiko and West Coast. The selected hospitals are located in the following towns; Buea, Tiko, Mutengene, Limbe.

2.3. Study Population and Sampling

The study population comprised all nurses who work in Emergency Departments in five (5) hospitals in the Fako Division. This study made use of a purposive sampling technique. This is a non-probability sampling method which is selected based on the characteristics of a population and the objectives of the study, where sampling for proportionality is not the main concern [10]. Also, the purposive sampling method used is total population purposive sampling which examines the entire population which has one or more shared characteristics common to a particular group or groups within larger populations [10].

This study, therefore sampled hospitals based on a common characteristic of having an emergency department and all nurses who work in the ED. Nurses who worked full-time in the ED and nurses who had worked in the ED for at least six months were included in the study.

2.4. Instrumentation and Study Procedure

A well-structured questionnaire was used as the main tool for data collection. The questionnaire was structured to first collect demographic information about the participants. The later part of the questionnaire was divided into three parts with each part containing at least twelve questions based on the three specific objectives of the study (Causes, Effects, and Management strategies). Closed-ended questions were used as well as one open-ended question at the end of each

objective to assess the factors not listed in the questionnaire. Each of the questions on the three parts of the questionnaire had 4 responses graded from 1 to 4 (1 = very low, 2 = low, 3 = high, 4 = very high). To assess the level of stress, a stress scale guided by the International Stress Management Scale [11] was used. This scale assessed the objectives as follows.

For causes of stress, after adding up the responses for each cause, everyone who scored a total of ≤7 had the least causes of stress and as such had a lower risk of developing stress-related illness 8 - 23 was more likely to experience stress-related illness >24 was most prone to experiencing stress showing a greater number of characteristics and suffered from stress-related illnesses.

For the effects of stress, after adding up the responses for each effect, everyone who scored a total of ≤6 felt the least effects of stress. 7 - 19 were more likely to experience the effects of stress. >20 were most prone to experiencing the effects of stress.

For management:

≤11 least management strategies used.

12 - 34 make more use of management strategies.

>35 make the most use of management strategies.

A total number of 73 questionnaires were administered with a 95.89% response rate. In the end, 3 questionnaires were rejected due to incomplete responses giving a non-response rate of (4.29%). The nature of the distribution of the questionnaires was based on the number of ED nurses in each hospital.

2.5. Data Analysis and Management

Data was analyzed using SPSS version 16.0. Demographic data (gender, age, marital status, educational qualification number of working hours per week, years of experience, number of night shifts, post of responsibility and shifts with more work) was arranged in a tabular form for all the hospitals and represented in pie and bar charts. For each objective, the number of responses was put in tabular form under the headings very low, low, high and very high, as well as their respective percentages were also represented in a tabular form. The mean, mode and median for each objective were represented. At the end, a table showing the causes, effects and management strategies of stressed and burnout was presented. The values of each measure presented used the Stress Management Scale as a reference or gold standard.

3. Results

3.1. Demographic Characteristics

Table 1 is summary of the demographic data.

3.2. Causes of Stress in the Emergency Department

Table 2 shows perceived causes of stress according to the International Stress Management Scale.

Table 1. Summary of demographic data.

Gender		Age Group				Marital Status				Level of Education				
MALE	FEMALE	20 - 30	31 - 40	41 - 50	51 - 60	Single	Married	Widow	Divorced	N-A	SRN	HND	BSc	Masters
13	57	34	23	13	0	34	35	1	0	19	18	17	12	4

Table 2. Causes of stress.

Perceived Causes	Very low	Low	High	Very high
Heavy Workload	2	5	31	32
Verbal and Physical Assault	12	19	19	20
Limited Time of Nursing Intervention	16	20	16	18
Confronted with Broad Range of Health Conditions	14	10	16	30
Frustration from Patients and Relatives	6	18	17	29
No Breaks during Shift	21	5	9	35
Complex Medical Conditions (which are emotionally demanding)	13	11	23	23
No Experience in Handling Critically Ill Patients	27	20	8	15
Low Salaries Compared to Workload	16	5	30	19
Exposure to Health Hazards	10	8	12	40
Lack of Equipment	11	12	18	29

3.3. Effects of Stress in the Emergency Department

Table 3 shows perceived effects of stress according to the International Stress Management Scale.

Table 3. Effects of stress.

Perceived Effects	Very Low	Low	High	Very High
Contemplate quitting job	35	15	10	10
Memory loss and poor decision making	16	20	20	14
Headaches and extreme fatigue	6	14	17	33
High blood pressure	16	30	9	15
Development of gastritis	18	15	14	23
General disappointment with life	21	28	11	10
Altered character (anger and hostility)	23	21	13	13
No balance between work and personal life	16	17	10	27
Musculoskeletal disorders	7	8	20	35
Disturbed emotional and psychological state	11	29	14	16

3.4. Management of Stress in the Emergency Department

Table 4 shows management of stress according to the International Stress Management Scale.

Table 4. Management of stress.

Management	Very Low	Low	High	Very High
Identifying area of stress	9	9	20	32
Do more research	13	15	24	18
Social support from friends and family	5	21	15	29
Physical exercise	13	12	15	30
Using humor	10	7	27	26
Reading interesting novels	28	24	7	11
Listening to music	4	21	17	28
Regular meditation and thinking	20	14	20	16
Frequent massage	25	16	22	7
Watching Television	15	15	21	19
Spending time on hobby	10	15	25	20
Adequate rest	11	10	9	40
Drink much or binge feeding	26	20	12	12
Avoiding panic	10	14	16	30
Psychosocial counseling	16	28	13	13
Ignore stress	19	18	18	15
Cry out stress	6	50	3	11

4. Discussion

The results from the study of causes of stress and burnout among nurses in the ED in some hospitals in the Fako division revealed that 12.88% of the nurses cited heavy workload as the leading cause of stress. This finding is similar to the results of a study carried out in Ghana, which listed heavy workload as the leading cause of stress [12]. Furthermore, another study noted that poor working conditions and heavy workload were the leading causes of stress among nurses [13]. From this study, 9.61% of nurses do experience stress as a result of a lack of equipment. Similar findings were observed among nurses in Turkey where nurses reported that they were stressed due to inadequacy of equipment [14]. In both settings, nurses were forced to improvise methods of care and were exposed to health hazards. Also, our study revealed that 7.98% of nurses were stressed out as a result of verbal and physical assault from patients and their relatives. This finding is similar to that of another study which showed that nurses in the emergency department and the intensive care unit faced more stressed than nurses from other departments owing to verbal and physical assault from patients and

their relatives [15]. Moreover, 9.41% of nurses were stressed due to handling complex medical conditions which were emotionally demanding. This finding is analogous to that of a study, which observed that ED nurses were stressed due to dealing with major incidents, death and resuscitation of patients [16]. Furthermore, conditions of patients are constantly changing and the work in the ED is very unpredictable. For this reason, nurses get confronted with a broad range of conditions and problems which need mix skills. It is, therefore, important for hospitals to recruit unlicensed less specialized staff to undertake tasks that do not necessarily need a registered nurse to perform. This leads to increased productivity, greater work satisfaction and cost effectiveness by decreasing work pressures and allowing nurses to focus on maximizing nursing care [17].

The major effect of stress from the result of this study is the development of musculoskeletal disorders such as joint pain and back pain. 16.48% of nurses suffered this condition as result of bending, lifting patients and standing for long hours during their shifts at the hospital. This is consistent with the results gotten from a study in Finland where ED nurses reported musculoskeletal disorders as the main effect of stress and burnout [17]. This is quite different from the results gotten from Clark (2012) whose main effect of stress was feelings of fatigue and liable to making medical errors [18]. Moreover, 14.97% of nurses complained of developing headache frequently as a result of stress. This finding is in agreement with that of a study carried out in Dutch which reported that stress and burnout cause poor health and psychological illnesses (such as headaches), impairment of immunological system, and gastroenteritis [19]. Up to 10.18% of nurses in this study reported loosing concentration as an effect of burnout. This can result in poor decision making and negligence to identify work-related errors. This is in line with the finding that linked increase burnout to increase nosocomial infection in acute care facilities [20]. Some nurses (5.99%) in this study felt frustrated and contemplated quitting their job as a result of stress and burnout. Similar studies reported that nurses faced overwhelming exhaustion, detachment from their jobs, a sense of ineffectiveness and lack of accomplishment as a result of stress [21].

8.27% of nurses used humour to overcome stress; that is, they used humour as a stress management strategy [22]. This finding is quite different from a previous study whose major management strategy was carrying out regular physical activities as a means to restore energy and a sense of wellbeing [23]. The fact that women make up the vast majority of the population of nurses and being generally less physically active than men can partially explain this disparity. They tend to prefer discussions and socializing as a means of relaxation rather than vigorous physical activity [24].

Limitation to the Study

1) The participants were confronted just once; there is a possibility that multiple encounters could have reduced the effect their moods at work could have

had on their responses.

2) A larger sample size could strengthen the implications of our findings.

5. Conclusion

Based on the findings, the leading cause of stress is heavy workload and the least cause of stress comes from having little or no experience in handling the critically ill and facing the challenges of the department. Also, the major effect of stress and burnout is the development of musculoskeletal disorders and the least effect is contemplating quitting the profession. The most used management strategy was humour and the least used was crying out one's stress. Although a small amount of stress is needed to keep these nurses alert, there are levels that should be avoided because it becomes a danger to their health and can compromise the care rendered to patients. Therefore, hospital administrators should urgently address this issue. ED nurses should also learn to manage stress properly.

Availability of Data and Materials

The dataset and materials of the study are available through the author AAT and will be made accessible on request at the following e-mail: anwijunior@gmail.com

Authors' Contributions

ATA participated in conception, literature review, data collection, data management, data analysis and interpretation. ASK participated design, drafting, and correction of the final manuscript. MI participated in the conception, design, data management, data analysis, drafting and revising the manuscript for publication, TPA: participated in drafting, data management and analysis, ANA participated in data collection, data management and interpretation, ATFA participated in conception, literature review and interpretation of results, ME participated in conception, design and review of the academic content, NBE participated in conception, design and reviewed of the academic content. All authors read and approved the final copy.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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Abbreviations

AIS: American Institute of Stress

APA: American Psychological Association

ANS: Autonomic Nervous System

BHM: Baptist Hospital Mutengene

DHL: District Hospital Limbe

DHT: District Hospital Tiko

ED: Emergency Department

EMJ: Emergency Medical Journal

ENA: Emergency Nurses Association

ILO: International Labor Organisation

ISMA: International Stress Management Association

MCN: Michigan Center for Nurses

NHS: National Health Services

PNS: Parasympathetic Nervous System

RCN: Royal College Nurses

RHB: Regional Hospital Buea

RHL: Regional Hospital Limbe

SNS: Sympathetic Nervous System

NA: Nursing Assistant

SRN: State Registered Nurse

HND: Higher National Diploma

BSc: Bachelor of Science

AAT: Acha Anwi Therese

ASK: Ateh Stanislas Ketum

MI: Mohamed Isah

TPA: Thiery Pechap Ayafor

ANA: Agbornkwai Nyenty Agbor

ATFA: Acha Therese Fomundam Anwi

ME: Malika Esembeson

NBE: Nahyeni Bassah Esoh