

Original Article

Stress and Coping Strategies among Nurse Managers at Three District Hospitals in the Eastern Region of Ghana

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Abstract

Nurses have been found to experience high levels of stress which contributes to health challenges and decreases their efficiency. Nurse managers may experience higher levels of stress due to their complex and multi-faceted roles and responsibilities. A quantitative descriptive cross-sectional approach was used to identify how nurse managers experience stress and strategies used to reduce stress. Three hospitals were randomly selected, and 45 nurse managers were also selected using disproportionate stratified sampling technique. Simple random sampling was employed to select 15 nurse managers from each hospital. Structured questionnaire was used for data collection, and the data was analyzed using both inferential and descriptive statistics to describe the sample and determine factors that influence stress. The study revealed that common causes of stress among nurse managers are lack of break period during shifts (95.6%), staff shortage (97.8%), inadequate support from management (93.3%), poor working conditions (91.1%) and inadequate resources (91.1%). The major predictor of stress among nurse managers is the type of unit ($F = 9.546, p < .05, R^2 = .205$). Headache (78.3%), backache (73.9%) and fatigue (82.6%) are the major physical stress experienced by nurse managers. Frustration (84.8%) is the major emotional stress experienced by nurse managers and the major type of psychological stress experienced by nurse managers is lack of concentration (67.4%). The major coping strategies of stress among nurse managers are expression of feelings instead of bottling them up (91.1%), accepting the things one cannot change (88.9%) and time management (86.7%) whereas eating excessively is the least mechanism (8.9%) used to cope with stress. It is recommended that nurse managers should mature in age, practice, knowledge and experience to cope better with the challenges that confront their position. Nurse managers should also take intermittent breaks during shifts, and hospitals.

Keywords:

Ghana; Infertility; Psychological threats; Social threats; Women

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Introduction

Stress is a typical phenomenon of everyday life especially, for professionals who make decisions about life and death such as nurses (Hardwick, 2010). Stress ensues when an individual's capabilities, needs and resources are misaligned to the necessities of the job, and healthcare professionals experience high levels of work related stress especially, nurses (Gandi, Wai, & Karick, 2011) which may compromise their health thus, decrease effectiveness, and efficiency. This may have significant implications, as nurses constitute the largest professional group in any health care system with critical responsibilities as frontline service providers.

Johansson, Sandahl and Hasson (2013) acknowledged that nurse managers usually experience high levels of stress due to their multi-faceted roles and responsibilities. For instance, nurse managers are required to deal with daily issues of patient complaints, nurse shortages, doctor-led hospital systems, tough schedules (Anthony, Standing, & Glick, 2005) and attaining financial targets. All these challenges are within the context of a dynamic system, where there are increased demands for efficiency and stringent requirements for quality healthcare as well as patient safety (Johansson *et al.*, 2013).

Although, nurses in management positions have more control than their subordinates, Nakamura *et al.* (2011) asserted that it is this very control which increases stress vulnerability among nurse managers. This is due to the fact that nurse managers are responsible for identifying and managing stress among subordinates (Wright, 2014), offer 24-hour service for the operational, fiscal and performance accountability (Warshawsy & Havens, 2014), and they have to deal with abridged staff job satisfaction (Munyewende, Rispel, & Levin, 2014), increased rates of absenteeism and long term sick leave of staff (Sandmark & Renstig, 2010). Consequently, the mirage of responsibilities that nurse managers encounter thrusts them to the phenomena of stress.

Warshawsy and Havens (2014) recognized the nurse manager's role to be stressful due to the physical labour, long working hours, staffing, and interpersonal relationships that are central to nurses' work. A study in Australia among nurse managers revealed

that 45% of participants cited poor relationship among colleagues as the most cause of work related stress among nurses, 50% cited lack of financial incentives from hospital authorities and only 5% cited work load, poor working environment and conflicting roles in the ward (Dawson, Stasa, Roche, Homer, & Duffield, 2014). Thus, major causes of stress among nurse managers are mainly financial and human relation related.

Stress may cause nurse managers to display negative behaviours towards their subordinates, thus, affecting the overall experience of nurses, other paramedical staff and the patient. This may lead to high turnover rates among both nurse managers and their subordinates (Mokoka, 2010) thereby, exacerbating the challenge of nurse shortages. Nakamura *et al.* (2011) also stated that, the health of managers has a significant impact on the health of their subordinates, as an embittered person will usually create a hostile workplace environment, thus influencing the emotional state of staff which can culminate in client and staff dissatisfaction.

Friedman (2013) acknowledged that, stress can be classified into physical, emotional and psychological stress. Physical stress can progress to distress, which is a negative stress reaction. Physical manifestations include headaches, stomach upsets, elevated blood pressure, chest pains and trouble sleeping. Emotional stress can affect all aspects of one's life and includes feeling overwhelmed, difficulty in relaxing, low self-esteem, loneliness, worthlessness, becoming easily agitated, frustrated, moody and avoiding others. Psychological stress ensues when stressful situations affect an individual's behavior and thinking abilities, leading to forgetfulness, lack of concentration, memory loss and withdrawal (Hargrove & Ahmed, 2014).

Furthermore, stress can adversely affect one's physical (Owolabi, Owolabi, Oluron, & Olofin, 2012), emotional, mental and social wellbeing. Physically, Lim, Chow and Poon (2013) found a correlation between stress and several diseases due to reduced immune system, which predispose affected individuals to diseases such as cardiovascular and hypertension or ultimately death. Stress can also facilitate depression (Nakamura *et al.*, 2011), exhaustion and burnout

(Klopper, 2012), and patient care can be severely compromised due to abridged compassion and care (Wright, 2014) ensuing from stress.

Coping with stressful events is challenging, highly dynamic and is directed toward moderating the effect of events in an individual's physical, social and emotional functioning (Chang & Chan, 2015; Miyata, Arai & Suga, 2015) as well as the individual's ability to work engagement. Murphy (1995) declared that the serenity prayer from the philosopher Reinhold Niebuhr; "Grant me the courage to change the things I can change, the serenity to accept those that I cannot change and the wisdom to know the difference" has been the inspiration for many nurse managers to successfully manage their lives by consciously stimulating their perceptions to change their emotions about situations. Nurse managers also manage stress by engaging in realistic workloads, expressive and useful tasks, tolerable levels of control, and explicit job expectations (Downey, Parlson, & Smart, 2011).

Rothmann, Jorgensen and Hill (2011) have identified positive (active) and negative (avoidant) coping strategies used in dealing with stress and stressful situations. Positive coping strategies used particularly by nurse managers include time management, relaxation techniques, exercise, good eating habits, skills development and support. On the contrary, negative coping strategies are associated with addictive behaviours such as smoking (Pagon, Spector, Cooper & Lobnika, 2011), excessive eating (Onasoga, Ogbemor & Ojo, 2013), taking drugs and alcohol abuse (Rothmann *et al.*, 2011).

Generally, gender has been recognized to play a role in the management of stress. Female nurse managers tend to use more social emotional strategies to cope with stress, whereas male nurse managers are more likely to use behavioural/mental or drug/alcohol disengagement. Male nurse managers tend to cope by way of problem focused strategies while female nurse managers are characteristically affective in their management of stress (Wong, Laschinger, & Cummings, 2010).

Again, a descriptive explorative study conducted in Nepal among nurse managers suggests that socialization of female nurse managers predisposes them

to ineffective coping; getting sick as a way of coping with stress more often than male nurse managers (Hutchinson & Hurley, 2013).

Although, it may not be possible to eliminate stress, certain individual and organizational strategies can be used to reduce stress (World Health Organization, 2007). The purpose of this study therefore, is to identify and describe the experiences of nurses in management positions with regards to stress and stressful situations.

Design and Methods

A descriptive cross-sectional design was employed to study the phenomenon of stress among nurse managers in three selected hospitals (two public and one private facilities) in the East Akim Municipality in the Eastern Region of Ghana. The settings were chosen because the towns are periurban, far away from the regional capital with inadequate infrastructure for certain social amenities such as quality schools. Again, the choice of these hospitals was influenced by the fact that the hospitals render primary health care services, staff refuse posting to these areas and the areas are prone to road traffic accidents. By using Yamane's (1967) formula, with a margin of error of 5%, confidence interval of 95% and a population of 52 nurse managers from the three hospitals, the sample size calculation was 46. This is based on the proposition from Bartlett, Higgins, and Kotrlík (2001) that "if the population is within the region of 52, a sample of 45 is ideal." 45 respondents were selected from the three hospitals using disproportionate stratified sampling technique. That is regardless of the number of nurse managers in each hospital, 15 were selected from each hospital to participate in the study. Simple random sampling was employed to select participants from each hospital. A structured questionnaire with both closed and open-ended questions was used to collect the data.

Ethical clearance was obtained from the Noguchi Memorial Institute for Medical Research IRB (096/17-18). An introductory letter from the School of Nursing and Midwifery, University of Ghana which described the purpose of the study, the research team and confidentiality of data as well as samples of the questionnaire was sent to the general administration of each hospital. This was forwarded to the Research Devel-

opment Unit (RDU) of the hospitals, then a permission letter for data collection was sent to heads of the units for approval. Participants were selected based on their designation as a nurse manager of a unit in the hospitals. Participants were given a detailed description of the study and the fact that the study was purely for academic purposes. No reward was offered for participation and no one declined. A written consent was sought from each participant. Validity of the study was ensured by the construction of a standardized questionnaire relevant to the objectives of the study and formulation of questions that required appropriate response from respondents. The ques-

tionnaire was piloted at the University of Ghana hospital using 10 nurse managers. Reliability was ensured by validation of the questionnaire by colleagues who have worked many years as nurse managers on the ward and an expert in nursing management. Internal consistency of the questionnaire was tested using Cronbach alpha for each section; causes of stress (.78), types of stress (.89), and coping (.86). All questionnaires were examined for completeness and coded before data input. Analysis was done using both descriptive (frequencies, percentages) and inferential statistics (Pearson correlation, linear regression) to describe the sample.

Table 1: Socio-Demographic Characteristics of Nurse Managers

Variables	Hospital						
	Hosp. A	Hosp. B	Hosp. C	Total			
Age groups							
< 31 years	3 (27.3%)	5 (45.5%)	3 (27.3%)	11 (24.4%)			
31- 40 years	8 (33.3%)	7 (29.2%)	9 (37.5%)	24 (53.3%)			
41 – 50 years	3 (75.0%)	0 (0%)	1 (25.0%)	4 (8.9%)			
51 – 60 years	1 (20.0%)	2 (40.0%)	2 (40.0%)	5 (11.1%)			
> 61 years	0 (0.0%)	1 (100.0%)	0 (0.0%)	1 (2.2%)			
Marital Status							
Single	2 (20.0%)	4 (40.0%)	4 (40.0%)	10 (22.2%)			
Married	12 (36.4%)	10 (30.3%)	11 (33.3%)	33 (73.3%)			
Separation	0 (0.0%)	1 (100.0%)	0 (0.0%)	1 (2.2%)			
Widow	1 (100.0%)	0 (0.0%)	0 (0.0%)	1 (2.2%)			
Religious Affiliation							
Christian	15 (34.1%)	14 (31.8%)	15 (34.1%)	44 (97.8%)			
Traditional	0 (0.0%)	1 (100.0%)	0 (0.0%)	1 (2.2%)			
Designation							
DDNS	1 (25.0%)	2 (50.0%)	1 (25.0%)	5 (8.9%)			
PNO	1 (50.0%)	1 (50.0%)	0 (0.0%)	2 (4.4%)			
SNO	3 (42.9%)	3 (42.9%)	1 (14.3%)	7 (15.6%)			
NO	4 (33.3%)	2 (16.7%)	6 (50.0%)	12 (26.7%)			
SSN	6 (30.0%)	7 (35.0%)	7 (35.0%)	20 (44.4%)			
Gender							
Male	4 (26.7%)	5 (33.3%)	3 (20.0%)	12 (26.7%)			
Female	11 (33.3%)	10 (30.3%)	12 (36.4%)	33 (73.3%)			
Total	15 (33.3%)	15 (33.3%)	15 (33.3%)	45 (100.0%)			
Belief system		1.701	2	.850	3.806	.032	.175
Unfriendly relationships among team members		1.613	2	.806	3.710	.034	.171

Source: Field data 2017

In Table 1, frequencies and percentages were used to describe the demographic characteristics of participants. Majority (53.3%) of the participants are between the ages of 31-40 years, the average age is 36.8 years and the oldest nurse manager is 74 years who happens to be the nurse manager of the private hospital (Deputy Director of Nursing Service). Most of the participants are females (73.3%) and 68.8% of them are married while 97.8% are Christians. Majority (44.4%) of the nurse managers are Senior Staff

Nurses (SSN). The designation of nurse manager according to the job description of the Ghana Health Service (GHS, 2006) is for either Principal Nursing Officers (PNOs) or Senior Nursing Officers (SNOs), however, majority of the participants are SSNs because the research setting is peri-urban, and staff generally refuse postings to such areas.

Consequently, though the SSNs are not nurse managers, they function as such.

Table 2: Causes of Stress among Nurse Managers

CAUSES OF STRESS	N	RESPONSES			
		YES	NO		
1. Working with incompetent staff.	44	29 (64.4%)	15 (33.3%)		
2. Lack of break period during shifts.	45	43 (95.6%)	2 (4.4%)		
3. Long working hours	45	37 (82.2%)	8 (17.8%)		
4. Family issues	45	28 (62.2%)	17 (37.8%)		
5. Heavy workload	45	40 (88.9%)	5 (11.1%)		
6. Belief system	44	23 (51.1%)	21 (46.7%)		
7. Poor communication system	45	35 (77.8%)	10 (22.2%)		
8. Poor organization climate – hostile environment	45	29 (64.4%)	16 (35.6%)		
9. Inadequate support from management	45	42 (93.3%)	3 (6.7%)		
10. Poor working conditions	45	41 (91.1%)	4 (8.9%)		
11. Inadequate resources to work with	45	41 (91.1%)	4 (8.9%)		
12. Poor culture within the organization	45	28 (62.2%)	17 (37.8%)		
13. Lack of incentives for overtime	45	40 (88.9%)	5 (11.1%)		
14. Inadequate delegation of responsibilities	44	31 (68.9%)	13 (28.9%)		
15. Unfriendly relationships among team members	45	27 (60.0%)	18 (40.0%)		
16. Death and dying	42	19 (42.2%)	23 (51.1%)		
17. Staff shortage	45	44 (97.8%)	1 (2.2%)		
18. Conflicts with physicians	45	29 (64.4%)	16 (35.6%)		
Belief system	1.701	2	.850	3.806	.032
Unfriendly relationships among team members	1.613	2	.806	3.710	.034

Source: Field data 2017

In Table 2, frequencies and percentages were used to describe the causes of stress among nurse managers. Staff shortage (97.8%), lack of break period during shifts (95.6%), inadequate support from management (93.3%), poor working conditions (91.1%) inadequate resources (91.1%), heavy workloads

(88.9%) and lack of incentives for overtime (88.9%) are the major causes of stress among nurse managers. Hypothesis was tested to find out predictors of stress among nurse managers. H0 = there is no relationship between socio-demographic characteristics of nurse managers and causes of stress.

Table 3: Tests of Between-Subjects Effects between Causes of Stress and Socio-demographic Characteristics

Dependent variable	Sum of Squares	df	Mean Square	F	Sig.	R ²
Independent Variable – Age Group						
Heavy workload	.975	4	.244	2.809	.038	.219
Poor working conditions	1.011	4	.253	3.840	.010	.277
Inadequate resources to work with	1.011	4	.253	3.840	.010	.277
Lack of incentives for overtime	1.019	4	.255	2.976	.030	.229
Independent variable – Religious Affiliation						
Lack of incentives for overtime	.780	1	.780	8.064	.007	.179
Lack of break period during shift	.924	1	.924	3.510	.000	.487
Independent variable – Designation						
Poor working conditions	.815	4	.204	2.498	.061	.227
Inadequate resources to work with	.815	4	.204	2.498	.061	.227
Staff shortage	.224	4	.056	2.543	.057	.230
Family issues	2.316	4	.579	3.099	.028	.267
Independent Variable – Hospital						
Belief system	1.701	2	.850	3.806	.032	.175
Unfriendly relationships among team members	1.613	2	.806	3.710	.034	.171
Belief system	1.701	2	.850	3.806	.032	.175
Unfriendly relationships among team members	1.613	2	.806	3.710	.034	.171

Source: Field data 2017

In Table 3, linear regression analysis was used to determine the relationship between nurse manager characteristics and causes of stress. The causes of stress under age group are heavy workloads (F = 2.809, p < .05, R2 = .219), inadequate resources to work with (F = 3.840, p < .05, R2 = .277), lack of incentives for overtime (F = 2.976, p < .05, R2 = .229), and poor working conditions (F = 3.840, p < .05, R2 = .277). Causes of stress for religious affiliation are

lack of incentives for overtime (F = 8.064, p < .05, R2 = .179) and lack of break period during shift (F = 3.510, p < .05, R2 = .487). Causes of stress for designation is family issues (F = 3.099, p < .05, R2 = .267). Whereas, for the hospital, the causes of stress are the belief system (F = 3.806, p < .05, R2 = .175), and unfriendly relationships among team members (F = 3.710, p < .05, R2 = .171).

Table 4: Types of Stress among Nurse Managers

TYPES OF STRESS		N	RESPONSES		
			Yes	No	No response
1.PHYSICAL STRESS	Headache	45	36 (78.3%)	8 (17.8%)	1 (2.2%)
	Weight loss/gain	45	31 (67.4%)	11 (23.9%)	3 (6.7%)
	Anxiety	45	29 (63.0%)	14 (30.4%)	2 (4.4%)
	Insomnia	45	23 (50.0%)	20 (43.5%)	2 (4.4%)
	Fatigue	45	38 (82.6%)	4 (8.7%)	3 (6.7%)
	Increase blood pressure	45	24 (52.2%)	18 (39.1%)	5 (11.1%)
	Backache	45	34 (73.9%)	8 (17.4%)	3 (6.7%)
	Diabetes	45	9 (19.6%)	29 (60.0%)	7 (15.5%)
	Others	45	8 (17.4%)	4 (8.7%)	33 (73.3%)
2.EMOTIONAL STRESS	Anger	45	30 (65.2%)	12 (26.1%)	3 (6.7%)
	Over reaction	45	31 (67.4%)	11 (23.9%)	3 (6.7%)
	Frustration	45	39 (84.8%)	4 (8.7%)	2 (4.4%)
	Others	45	7 (15.2%)	5 (10.9%)	33 (73.3%)
	Total				
3.PSYCHOLOGICAL STRESS	Forgetfulness	45	25 (54.3%)	18 (39.1%)	2 (4.4%)
	Lack of concentration	45	31 (67.4%)	13 (28.3%)	1 (2.2%)
	Withdrawal	45	17 (37.0%)	23 (50.0%)	5 (11.1%)
	Memory loss	45	15 (32.6%)	25 (54.3%)	5 (11.1%)
	Others	45	6 (13.0%)	6 (13.0%)	33 (73.3%)

Source: Field data 2017

In Table 4, frequencies and percentages were used to describe types of stress identified among nurse managers. Fatigue (82.6%), headache (78.3%), backache (73.9%) and weight loss/gain (67.4%) are the major physical stress experienced by nurse managers. Frustration (84.8%), over reaction (67.4%)

and anger (65.2) are the key emotional stress experienced by nurse managers.

The main types of psychological stress experienced by nurse managers is lack of concentration (67.4%).

Table 5: Correlation between Types of Stress and Socio-demographic characteristics

Type of Stress	Dependent Variable		Age	Marital status	Rank	Unit	Gen
Physical	Headache	r	.215	-.076	-.294	.190	.041
		Sig.	.161	.623	.053	.217	.790
	Weight loss/weight gain	r	-.215	-.138	.225	-.043	-.237
		Sig.	.139	.382	.151	.788	.130
	Anxiety	r	.252	.199	-.144	-.121	.046
		Sig.	.102	.200	.356	.438	.771
	Insomnia	r	.160	.028	.012	-.045	-.020
		Sig.	.304	.857	.939	.773	.900
	Fatigue	r	.082	.220	-.092	-.144	-.157
		Sig.	.604	.161	.564	.364	.338
Increased blood pressure	r	-.402**	-.076	.345*	-.289	-.114	
	Sig.	.008	.633	.025	.063	.472	
Emotional	Backache	r	.006	.218	.055	.286	.139
		Sig.	.969	.166	.730	.066	.379
	Diabetes	r	-.004	-.129	-.078	-.175	.009
		Sig.	.983	.442	.641	.294	.955
	Anger	r	-.048	.101	.067	.008	.048
		Sig.	.760	.521	.670	.958	.758
	Over reaction	r	.208	-.138	-.104	.125	-.014
		Sig.	.187	.382	.512	.430	.931
	Frustration	r	.398**	.225	-.288	-.186	-.037
		Sig.	.008	.146	.061	.233	.842
Forgetfulness	r	.172	.096	-.071	.004	.097	
	Sig.	.271	.541	.650	.979	.536	
Psychological	Lack of concentration	r	.050	-.021	-.032	-.069	.105
		Sig.	.748	.894	.835	.655	.499
	Withdrawal	r	.124	.028	-.083	.056	.078
Sig.		.447	.863	.609	.733	.633	
Memory loss	r	.111	.012	-.169	-.236	.029	
	Sig.	.497	.943	.296	.142	.859	

*correlation significant at the 0.05 level

**correlation significant at the 0.01 level

In Table 5, Pearson’s correlation was used to measure the strength of linear relationship between type of stress and demographic characteristics of participants. Under physical stress, there is a strong negative correlation between age and increased blood

pressure (-.402) and strong positive correlation between rank and increased blood pressure (.345). Whereas, under emotional stress, there is a strong positive correlation between age and frustration (.398).

Table 6: Coping Strategies of Stress among Nurse Managers

Coping Strategies	N	YES	NO	No Response
Break time	45	31 (68.9%)	14 (31.1%)	0 (0.0%)
Relaxation	45	37 (82.2%)	8 (17.8%)	0 (0.0%)
Meditation	45	29 (64.4%)	14 (31.1%)	2 (4.4%)
Delegation of work/ duties	45	36 (80.0%)	7 (15.6%)	2 (4.4%)
Exercise	45	33 (73.3%)	10 (22.2%)	2 (4.4%)
Taking of drugs	45	15 (33.3%)	26 (57.8%)	4 (8.9%)
Time management	45	39 (86.7%)	4 (8.9%)	2 (4.4%)
Express your feelings instead of bottling them up	45	41 (91.1%)	3 (6.7%)	1 (2.2%)
Accept the things you can't change	45	40 (88.9%)	4 (8.9%)	1 (2.2%)
Eating excessively	45	4 (8.9%)	37 (82.2%)	4 (8.9%)
Acknowledging your sphere of influence	45	33 (73.3%)	9 (20.0%)	3 (6.7%)
Giving up/ slow down	45	21 (46.7%)	22 (48.8%)	2 (4.4%)

Source: Field data 2017

Frequencies and percentages were used to describe strategies used by participants to cope with stress and Table 6 indicates that, the key strategies used in coping with stress are expression of their feelings instead of bottling them up (91.1%), accepting the things that can't be changed (88.9), time management (86.7%), relaxation (82.2%) and delegation of duties (80.0%) whereas, eating excessively is the least mechanism (8.9%) used to cope with stress.

Discussion

The role of the nurse manager is critical in the provision of effective and quality health service in any clinical setting, enabling accountability, patient and staff satisfaction. Essentially, the role is to guide organizations toward goal accomplishment by interpreting the mission and vision into reality. Effectiveness and efficiency are vital to the surviving and thriving of the nurse manager's role, and this requires the nurse manager to possess administrative confidence, appropriate educational preparation, skills to manage the business turbulence in the ward, broad clinical expertise and a thorough understanding of leadership principles (Ansah Ofei, 2015; Beheshtifar & Nazarian, 2013; Davidson, Elliott & Daly, 2006). The role is an enigma; observed to be the hardest and most complex

role in healthcare which often ensue in stress and this underscores the basis for the study.

The study indicated that due to the site of the hospitals, most of the nurse managers are SSNs instead of PNOs or SNOs as found in other units in regional capitals. PNOs and SNOs are responsible for the management of nursing units/department in the hospitals. They are accountable for the planning, organizing, leading, and control of nursing units in the hospitals and are known as the ward managers or nurse managers. This implies that there will be higher levels of stress due to the limited competencies of SSNs in ward management. The average age is 37 years, this age represents critical periods in one's life; marriage and management of family responsibilities especially, children. This conforms to Burns et al. (2002) who argue that age and ageing cannot be separated from stress and how to cope with it, as age comes with exposure and experience on the positive note, as well as wearing out which could be a major source of stress.

The findings revealed that, the main causes of stress among nurse managers are basically organisational factors. Prominent among these factors are staff shortage, lack of break period during shift, poor working conditions, inadequate resources to work with,

lack of incentives for overtime and heavy workloads. These findings have been reported by several studies (Obiora, 2015; Chan, Tam, Lung, Wong & Chau, 2013; Najimi et al., 2012; Circenis & Millere, 2012; Aiken et al., 2011; Davidson, Elliott & Daly, 2006; Luchinger, Almost, Purdy & Kim, 2004).

Generally, the working environment of nurses reflects its influence on the nurse manager. Obiora (2015) iterated that how the immediate physical environment affects the nurse manager determines largely his/her efficiency, effectiveness and predisposition to stress and this has been acknowledged by many studies. The study has contributed to the levels of stress among nurse managers and the importance of adequate preparation for junior nurses who get appointment to administrative positions due to inadequate numbers of senior nurses.

The study again, revealed that, inadequate support from management, poor organisational culture, inadequate delegation of responsibilities, unfriendly relationships among team members and conflicts with physicians are stressors arising from administrative or leadership lapses. This may result from incompetence, neglect, bad policies or a combination of all. Findings from this study reaffirm the above as causes of stress among nurse managers. This conforms with Warshawsy and Havens' (2014) view on causes of stress among nurse managers. Judging from the outcome of this study, nurse managers need to be adequately prepared for this role; how to delegate effectively without inhibition and how to effectively engage staff to cut down on the long hours of working, as this enables inefficiency in managerial roles.

As most of the participants are SSNs and young, the study revealed that age is a predisposition to stress among nurse managers especially when the workload is heavy (21%). Thus, there is a relationship between socio-demographic characteristics and stress among nurse managers. When the conditions in the ward is also poor, nurse managers are inclined to develop stress (27.7%), the same is for inadequate resources to work with. Additionally, lack of incentives for overtime exposes nurse managers to stress (22.9%). This clearly shows that experience plays a critical role in the predisposition to stress. As nurse managers advance in age and proficiency in the management of the ward, they become familiar with their environment thus, resilient in the management of their environment. This is in line with the findings

of Kath et al. (2012) that severities of occupational stressors are significantly associated with age. Thus, young nurse managers should be empowered and supported with their responsibilities in order to excel especially, with training and adequate resources.

Family issues under designation predispose nurse managers to stress (26.7%) and this again, can be explained by the age group of the participants. Most of the nurse managers are in the child bearing age; getting married and having babies which conflict with work. As explained earlier, all the hospitals are sited in peri-urban homogenous environment where mystic beliefs thrive. Belief systems about the dead, way of life, etc. impose several challenges on the lives of people living in that area. Thus, belief system, according to the study, accounts for stress among nurse managers (17.5%), whereas unfriendly relationships among team members account for 17.1% of stress amongst nurse managers. Anecdotally, as most of the nurse managers are young and inexperienced, they may be having challenges with the management and staff as they try to cope with their responsibilities.

The findings in this study revealed that nurse managers experience the same types of stress in executing their duties. Three main types of stress were identified among the nurse managers: physical, emotional, and psychological stress. The most psychological stress experienced among nurse managers is lack of concentration. This issue is serious and needs to be addressed quickly as it will undoubtedly have effect on the administration of the unit. Emotional stress identified includes anger, frustration and over reaction while physical stress includes headache, weight loss/weight gain, anxiety, insomnia, fatigue, increased blood pressure and backaches. It can be inferred that these types of stress are all interrelated, as the occurrence of one will usually lead to the other thereby causing intense stress. The finding conforms to the works of Hargrove *et al.* (2014) and Friedman (2013) who reported that the types of stress experienced by nurse managers can be classified under three categories which are physical, emotional and psychological stress. Physical, emotional and psychological stress are therefore, common to the work of nurse managers due to the implicit and dynamic nature of the job.

The study further revealed that age has a negative correlation to increased blood pressure; that is, the younger your age, the more your inclination to develop

stress as a nurse manager due to the challenges they encounter as managers and their lack of experience. Designation, on the other hand, had a fairly strong positive correlation with increased blood pressure, signifying that a move upward in rank predisposes nurse managers to stress. Increase in designation comes with aging, active work and experience, these naturally pose a lot of challenges to the person's disposition. There is also a fairly strong positive correlation between age and frustration, thus increase in age brings about increasing frustrations among nurse managers.

In the midst of all the stress encountered by these nurse managers, it was found that while some are usually overwhelmed by the stress, others develop coping strategies to deal with the pressures associated with their work and ensured that they do not breakdown in the course of executing their duties. This confirmed the study by Lazarus (2000) who defined coping as consisting of all the things people do to control, tolerate or reduce the effects of stressors.

The study found that, the coping strategies adopted by these nurse managers are relaxation, break time, acknowledging their sphere of influence, expressing their feelings instead of bottling them up, accepting the things they cannot change, meditation, delegating work to other nurses instead of trying to do all the work by themselves, indulging in exercise and being able to manage their time very well. The above findings correspond with the findings of Seyedfatemi, Tafreshi and Hagani (2007) who acknowledged that the coping strategies adopted by nursing students in the face of stress included sharing of problems with family and friends, talking to parents/friends, practicing relaxation activities, positive thinking, praying, meditating and effective time management. Interestingly, most of the SSN cope with stress by acknowledging their sphere of influence and this strategy helps them in avoiding stress. The SSN used this strategy because they acknowledged the fact that, they lack the experience and knowledge to handle the challenges of the unit thus, accepting their limitations helped them cope better with the issues that confront them as managers.

Relevance to clinical practice

Stress is a common phenomenon among nurses especially nurse managers. The study has proven

widely that stress among nurses affects both their health and practice which ultimately affects patients' care. Thus, periodic training session about stress, and its management should be organized for nurses especially, nurse managers for them to effectively manage stress personally and to offer support and counselling services to nurses. This would help avoid the devastating effects of stress on both nurses and clients. Nurse managers should therefore, be encouraged to take intermittent breaks during shifts, and hospitals should ensure proper staffing practices, provide positive working conditions and make adequate resources available for work.

Conclusion

Based on the findings of the study, it can be concluded that, indeed working as a nurse manager in all the three hospitals is associated with stress which, if not carefully attended to, can reduce effectiveness and efficiency of the units. Furthermore, it can be concluded that there is no difference in the types of stress experienced by nurse managers in the various hospitals.

Additionally, based on the statistics about the designations of the nurse managers, most of them being SSN; it can be concluded that their stress was mainly due to their limited knowledge in ward management. In sum, it can be posited that nurse managers should mature in age and practice as well as knowledge and experience to cope better with the challenges that confront the nurse manager position. Hospitals should ensure adequate resources, proper staffing practices, and periodic training to enable the resilience nurse managers need to manage the challenges of the unit.

The study is limited by the fact that causality could not be established, and response bias and social desirable responses might have also occurred.

Conflict of interest

The authors acknowledge that there was no conflict of interest.

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References

- Aiken, L. H., Cimiotti, J. P., Sloane, D. M., Smith, H. L., Flynn, L., & Neff, D. F. (2011). Effects of nurse staffing and nurse education on patient deaths in hospitals with different nurse work environments. *Medical Care*, 49 (12), 1047-1053.
- Anthony, M. K., Standing, T. S., & Glick, J. (2005). Leadership and Nurse Retention: The Pivotal Role of Nurse Managers. *Journal of Nursing Administration*, 35, 146-155
- Ansah Ofei, A. M. (2015). Management practices of nurse managers in the Greater Accra region, Ghana. Thesis. University of Ghana, Legon, Accra.
- Bartlett, J. E., Higgins, C. C., & Kotrlík, J. W. (2001). Organisational research: determining appropriate sample size in survey research. *Information Technology, Learning and Performance Journal*. 19 (1), 43-50.
- Chan, Z. C. Y., Tam, W. S., Lung, M. K. Y., Wong, W. Y., & Chau, C. W. (2013). A systematic literature review of nurse shortage and the intention to leave. *Journal of Nursing Management*, 21(4), 605-613.
- Chang, Y., & Chan, H-J. (2015). Optimism and Proactive Coping in Relation to Burnout among Nurses. *Journal of Nursing Management*, 23(3), 401-408
- Circenis, K., & Millere, I. (2012). Stress Related Work Environment Factors: Nurses Survey Results. *International Journal of Collaborative Research on Internal Medicine & Public Health*. 4(6), 1150-1157.
- Davidson, P. M., & Elliott, D., Daly, J. (2006). Clinical leadership in contemporary clinical practice: implications for nursing in Australia. *Journal of Nursing Management*. 14 (3), 180-187.
- Dawson, A. J., Stasa, H., Roche, M. A., Homer, C. S., & Duffield, C. (2014). Nursing churn and turnover in Australian hospitals: nurses' perceptions and suggestions for supportive strategies. *BMC Nursing*, 13 (1), 1-20.
- Downey, M., Parslow, S., & Smart, M. (2011). The hidden treasure in nursing leadership: informal nurse leaders. *Journal of Nursing Management*. 19 (4), 517-521.
- Friedman, W. J. (2013). Stress Reduction and Management Resources. Adapted from: Trivieri L. The Health Plus Letter, 2(2), www.1healthyworld.com
- Gandi, J. C., Wai, H., & Karick, Z. K. (2011). The Role of Stress and Level of Burnout in Job Performance among Nurses. *Mental Health in Family Medicine*, 8 (3), 181-94
- Hargrove, M. B., & Ahmed, A. (2014). Stress, Health and Wellbeing in Practice: Workplace Leadership and Leveraging Stress for Positive Outcome. In Chen, P. & Cooper, C. L. (Eds.), *Wellbeing in the Workplace: From Stress to Happiness*. Wiley Blackwell: Oxford and New York.
- Hardwick, D. (2010). Burnout: The Effects of Unavoidable Job Stress. Viewed 3 February 2012, From: [Http://www.Mentalgamecoaching.Com/Imgarticles/Stresscontrol/Burnout.html](http://www.Mentalgamecoaching.Com/Imgarticles/Stresscontrol/Burnout.html). California, USA.
- Hutchinson, M., & Hurley, J. (2013). Exploring leadership capability and emotional intelligence as moderators of workplace bullying. *Journal of Nursing Administration*, 33 (1), 39-47.
- Johansson, G., Sandahl, C., & Hasson, D. (2013). Role Stress among First-Line Nurse Managers and Registered Nurses- A Comparative Study. *Journal of Nursing Management*, 21, 449-458
- Klopper, H. C. (2012). Practice Environment, Job Satisfaction and Burnout of Critical Care Nurses in South Africa. *Journal of Nursing Management*, 20, 685-695
- Lazarus, R. S. (2000). Toward Better Research on Stress and Coping. *American Psychologist*, 55, 665-673
- Lim, M. H., Chow, Y. L., & Poon, E. (2013). Evaluation of Meditation Programmes used by Nurses to Reduce Stress: A Literature Review. *Singapore Nursing Journal*, 40 (3), 11-20
- Luchinger, H. K. S., Almost, J., Purdy, N., & Kim, J. (2004). Predictors of Nurse Managers' Health in Canadian Restructured Healthcare Settings. *Nursing Leadership*. 17, 88-105.
- Miyata, A., Arai, H., & Suga, S. (2015). Nurse Managers Stress and Coping. *Open Journal of Nursing*, 5, 957-964. <http://dx.doi.org/10.4236/ojn.2015.511101>
- Mokoka, E. (2010). Retaining Professional Nurses in South Africa: Nurse Managers Perspectives. *Health S.A. Gesundheit*, 15(1), Viewed 7 October 2014, www.Hsag.Co.Za/Index.Php/HSAG/Article/View/484/531
- Munyewende, P. O., Rispel, L. C., & Levin, J. (2014). Positive Practice Environments Influence Job Satisfaction of Primary Health Care Clinic Nursing Managers in Two South African Provinces. *Human Resource for Health*, 12, (27), Viewed 7 October 2014, www.Human-Resources-Health.Com/Content/Pdf/1478-4491-12-27.Pdf
- Murphy, L. R. (1995). Occupational Stress Management: Current Status and Future Direction in Trends in Organizational Behavior. 2, 114

- Najimi, A., & Goudarzi, A. M. (2012). Causes of Job Stress in Nurses: A Cross-sectional Study. *Iran Nurs Midwifery Res.*, 17 (14), 301-305
- Nakamura, K., Seto, H., Okino, S., Ono, K., Ogasawara, M., Shibamoto, Y., Agata, T., & Nakayama, K. (2011). Which stress influence returning to work in Japan, inside or outside the workplace. *International Medical Journal*, 18 (2), 89-99.
- Obiora, I. (2015). Stress management and coping strategies among nurses: A literature review. Thesis. Finland, Lovista City.
- Onasoga, O. A., Ogbabor, S. O., & Ojo, A. A. (2013). Occupational Stress Management among Nurses in Selected Hospital in Benin City, Edo State, Nigeria. *European Journal of Experimental Biology*, 3 (1), 473-481
- Owolabi, A. O., Owolabi, M. O., Oluron A. D., & Olofin, A. (2012). Work-Related Stress Perception and Hypertension amongst Health Workers of a Mission Hospital in Oyo State, South-Western Nigeria. *African Journal of Primary Health Care Family Medicine*, 4 (1), 1-7
- Pagon, M., Spector, P. E., Cooper, C. L., & Lobnika, B. (2011). Managers in Suits and Managers in Uniforms: Sources and Outcomes of Occupational Stress. *International Journal of Police Science and Management*, 13 (3), 211-222
- Rothmann, S., Jorgensen, L. I., & Hill, C. (2011). Coping and Work Engagement in Selected South African Organisations. *SA Journal of Industrial Psychology*, 37(1), 962.
- Sandmark, H., & Renstig, M. (2010). Understanding Long Term Sick Leave in Female White Collar Workers with Burnout and Stress-Related Diagnoses: A Qualitative Study. *BMC Public Health*, 10 (210), 1-12
- Seyedfatemi, N., Tafreshi, M., & Hagani, H. (2007). Experienced Stressors and Coping Strategies among Iranian Nursing Students. *BMC Nursing*, 6(11), 1-10
- Warshawsky, N. E., & Havens, D. S. (2014). Nurse Manager Job Satisfaction and Intent to Leave. *Nursing Economics*, 32(1), 32-39
- World Health Organisation. (2007). Raising Awareness of Stress at Work in Developing Countries. Viewed 1 October 2014, http://www.who.int/occupational_health/publications/pwh6/en/
- Wong, C. A. Laschinger, H.K.S., & Cummings, G.G. (2010). Authentic Leadership and Nurses' Voice Behavior and Perceptions of care Quality. *Journal of Nursing Management*, 18, 889-900.
- Wright, K. (2014). Alleviating Stress in the Workplace: Advice for Nurses. *Nursing Standard*, 28(20), 37-42
- Yamane, T. (1967). *Elementary Sampling Theory*. Englewood Cliffs, New Jersey: Prentice Hall, Inc.