ORIGINAL RESEARCH

Stress and coping strategies among nurse managers

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ABSTRACT

Background: The role of Nurse Managers (NMs) is dynamic, multifaceted and complex thus, exposing NMs to high levels of work-related stress which seriously impact general wellbeing, and organizational outcomes.

Methods: A quantitative cross-sectional approach was employed to examine the phenomenon of stress among NMs in 38 selected hospitals. Census approach was used to collect data from 267 NMs. Descriptive and inferential statistics were performed to describe the sample and established the predictors of stress.

Results: The main causes of stress among NMs are a shortage of staff (94.4%), poor working conditions (91.8%), inadequate management support (89.9%) and heavy workload (89.15%). NMs experienced all the types of stress (psychological, emotional and physical). The major stress coping mechanisms are time management (91.8%), effective communication (91%) and delegation of duties (89.5%) while excessive eating (18.4%) is the least strategy used. Sociodemographic characteristics together explained 6.4% of stress among NMs [$R^2 = .064$, $F(6,241) = 2.676$, $p = .016$].

Conclusions: Senior managers of hospitals should create a favourable working environment for nurses and the appointment of NMs should be based on experience and competence. *Implication for Nursing Practice:* Stress among healthcare managers especially, NMs is very common. This current study has extensively proven that stress among NMs affects their general health as well as patient safety and quality of care. Training on stress management should be organized regularly for hospital staff particularly, NMs to enable them to cope better with stress.

Key Words: Stress, Nurse managers, Coping strategies, Unit, Ghana

1. INTRODUCTION

Stress remains a major organizational challenge confronting many healthcare professionals due to its adverse effects on staff performance, job satisfaction, and patients' outcomes. Stress has become an endemic problem in healthcare contributing to health-related challenges which decrease efficiency and productivity. Nurse Managers (NMs) just like other healthcare professionals are vulnerable to work-related stress.[1, 2] The current work environment of nurses is confronted with increasing healthcare complexities such as heavy workloads, inadequate staffing levels, scarce resources and expanding roles of NMs which significantly promote work-related stress. Thus, NMs normally experience high levels of stress, due to the complex and multi-faceted roles and responsibilities.[3]

As important stakeholders in the healthcare systems, NMs play a critical role in ensuring a healthy working environment where nurses can deliver safe and quality patient care while achieving an organizational vision and goals.[4] The NMs' role is, therefore, stress-filled based on the physical labor, human suffering, long working hours, staffing, and interpersonal relationships that are central to the work nurses do.[5] Downey, Parslow and Smart,[6] thus, acknowledged

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that key causes of stress among NMs are poor relationships among colleagues, lack of financial incentives from hospital authorities, poor working environment and conflicting roles in the ward. Hence, several hospitals are struggling to retain NMs due to the shortage of nursing workforce which consistently poses a serious threat to the sustainability of quality nursing care.[7] The situation is further worsened as many NMs are either leaving or entertaining the intention to leave their present job due to stress. For instance, in the US, a study involving 291 NMs in acute care hospitals, realized that 62% of the NMs were planning to quit their current job within the next 2 to 5 years citing stress as the main reason.[8]

Available empirical data suggest that one out of every six NMs experience stress emanating from workplace stressors such as heavy workload, conflicting roles, organizational constraints and poor leadership.[2, 9, 10] Constant exposure and inability to manage stress is linked with job dissatisfaction, fatigue, intention to leave, emotional tiredness, and poor psychological health.[11] Stress does not only affect the physical health of NMs but also their decision-making ability which compromises the welfare of patients, staff and the organization.[12] Several authors have also linked work-related stress to increased occurrence of medical errors, poor quality care and decrease productivity.[13, 14]

In Ghana, a study done in three hospitals at a peri-urban district acknowledged that the major causes of stress among NMs are lack of break period during shifts, staff shortage, inadequate support from management, poor working conditions, inadequate resources to work with, and lack of incentives for overtime.[15] Godwin et al.[16] also contended that stress in NMs leads to anger, frustration, anxiety, powerlessness or helplessness and feelings of inadequacy. Similarly, Starc[17] suggests that stress among NMs affects their health, errors in patient care, increase turnover intentions and absenteeism. In the US, work-related stress among NMs have doubled since the mid-1980s and about one-third of all Americans consider job-related issues as the major cause of stress.[16] This is corroborated by a global poll where about 82% of participants reported pressure from work as the cause of stress.[16] It is, therefore, urgent to research into stress and significantly address the challenges posed by work-related stressors.

Many NMs suffer both physical and emotional effects of stress. Physical ailments (heart attack, high blood pressure, peptic ulcer disease, asthma) and emotional/psychological ailments (insomnia and depression) have all been linked with stress.[15, 18] Similarly, Lim, Chow Yeow, and Poon[19] established a positive association between work-related stress and heart diseases. Furthermore, Starc[17] in a descriptive study, found that stressors such as; psychological or physical violence at the workplace, relationship with colleagues, and difficult nurse-patient issues stimulate stress in female NMs more than male NMs.

Effectively managing stress among NMs is geared towards decreasing and controlling the impact of stressful events in one's social, physical and emotional functions as well as the person's ability to meet work engagement[1, 20] thus, enhancing coping strategies at work. According to Downey, Parslow, and Smart,[6] NMs manage stressful situations through engaging in beneficial task, realistic workload and explicit job expectations. Rothmann, Jorgensen, and Hill[21] identified active (positive) and avoidant (negative) coping strategies used in dealing with stressful events and stress. According to Ofei et al. (2018), the major stress coping strategies adopted by NMs are accepting the things that can't be changed, expressing your feelings instead of bottling them up, time management, delegation of duties and relaxation. Excessive eating, smoking, and drug and/or alcohol abuse are some negative stress coping strategies adopted by NMs.[15, 21–23]

Ofei et al.[15] acknowledged that age plays a critical role in stress among NMs especially when the workload is heavy, conditions are poor on the ward and lack of incentives for overtime. Participants in the study were quite young and found it very stressful to deal with the challenges that confront the role of NM. Age also had a strong negative correlation with blood pressure. The study concluded that advancement in age and proficiency plays a key role in the management of the ward. Again, family issues predispose NMs to stress. Designation of the NMs had a strong positive correlation with blood pressure (BP) which is quite normal, as advancement in career comes with age which naturally predisposes one to increase BP. Furthermore, there is a strong positive correlation between age and frustration, thus increase in age brings about increasing frustrations among nurse managers.[15]

Stress is a normal phenomenon in everyday life and may be very difficult to eliminate it, however, some organizational and individual strategies can be employed to reduce its incidence among NMs. Earlier work looked at stress among NMs in three peri-urban hospitals, this study, therefore, extends the study further to explore stress among NMs in Ghana by finding answers to the causes, types, coping strategies and predictors of stress.

2. METHODS

A quantitative descriptive method using a cross-sectional design was used to explore stress among NMs in 38 selected hospitals in Ghana. The 38 hospitals comprise of 33 district

hospitals, two teaching hospitals, and three regional hospitals. The hospitals were chosen to represent the three levels of healthcare delivery in Ghana namely, the primary (district hospitals), secondary (regional hospitals) and tertiary (teaching hospitals) levels. Participants were selected from all the units of the hospitals. The study population was all NMs in the selected hospitals. Inclusion criteria were nurses recognized as NMs by the hospital, NMs who have worked for at least one year as a manager and accepted to participate in the study. A total of 267 NMs out of the 302 NMs participated in the study representing 88.4% and the census approach was used in administering the questionnaires.

A self-constructed questionnaire comprising of both opened and closed-ended questions was designed by the authors based on the study objectives after extensive literature review. The questionnaire was grouped into four sections; section A has 12-item on socio-demographic characteristics, section B has 20-item on the causes of stress, section C has 18-item on the types of stress and section D has 19-item on the coping strategies of stress. All the items were measured on a 2-point Likert scale (1 = Yes, 2 = No).

Permission to collect data from the selected hospitals was sought by an introductory letter from the University of Ghana School of Nursing and Midwifery which explained the research purpose and ethical clearance from the Noguchi Memorial Institute for Medical Research-IRB (096/17-18). Participants were approached individually with a vivid explanation of the purpose, confidentiality, and right of withdrawal from the study. Written consent was obtained from each participant. Privacy and confidentiality were established through facilitated negotiation and renegotiation to protect and respect the participants' rights and identity. To ensure anonymity, no names or identifying information of the respondents were collected and eight weeks (February to March 2019) was used to collect data. Data collection was supervised to ensure accuracy, completeness, consistency, and correctness of responses to questions. Data were analyzed using descriptive statistics (frequencies and percentages) and inferential statistics (multiple linear regression and Pearson's correlations). Validity and reliability were ensured through the construction of instruments appropriate to the study objectives to elicit relevant information from participants and after extensive literature review. The instrument has been used to study three peri-urban hospitals[15] but was more enhanced with current knowledge of stress. Cronbach's alpha wasn't used to determine the reliability of the tool because the questionnaire was made up of single-item scales. Therefore, to ensure the reliability of the instrument, the questionnaire was pre-tested in a district hospital with 30 NMs.

3. RESULTS

Table 1 presents the demographic characteristics of the participants. Most (54%) of the participants are between the ages of 30 to 40 years. The mean age is 35.6 years (SD = 8.88) with a modal age of 30 years. The majority (44.2%) of the participants work in regional hospitals. Again, most (70%) of the participants are married. Almost all (81.6%) the participants are Christians and only 1.1% are traditionalists. The majority (32.2%) of the participants are Senior Staff Nurses (SSN) whereas, only 4.9% are Deputy Directors of Nursing Service (DDNS). Additionally, the majority (67%) of the participants are females and most (61.8%) of the participants are diploma trained nurses.

3.1 Causes of stress among nurse managers

Table 2 presents the causes of stress among NMs. Staff shortage (94.4%), poor working conditions (91.8%), inadequate resources to work with (90.3%), inadequate support from management (89.9%) and heavy workload (89.1%), lack of break period during shift (85%) and lack of incentives for overtime (84.3%) are the principal causes of stress among NMs.

Table 3 (see the Appendix) presents multiple linear regression analysis to establish the association between socio-demographic characteristics and causes of stress among NMs. Though Model 1 is not significant [$F_{(8, 267)}$ = 1.940, p = .05, R^2 = .063] when individual variables are evaluated for their contribution to the model, only gender (B = -.204, p = .002) is statistically significant. Thus, gender predicted stress when there is a lack of break period during shifts. In Model 2, NM's socio-demographic characteristics together explained 6.4% of the variance of stress among NMs [$F_{(8, 267)}$ = 2.002, p < .05, R^2 = .064]. Further assessment of individual variables indicates that religious affiliation (B = -.156, .017) and gender (B = -.153, .022) are statistically significant predictors. Again, religious affiliation and gender predicted stress when there are inadequate resources to work with.

3.2 Relationship between Participants' characteristics and causes of stress

Model 3, though not significant, individual evaluation of the variables shows that gender (B = -.156, p = .021) is statistically significant. Gender, thus, predicts stress when there are family issues. Model 4 is also not significant however, further evaluation of individual variables indicates that the unit is statistically significant (B = .149, p = .024). This shows that the unit becomes the source of stress when there is a heavy workload. Model 5 is not statistically significant, further assessment of the variables shows that gender (B = -.151, p = .028) is statistically significant. Model 6 is also

not significant but further analysis shows that marital status (B = .149, p = .039) and gender (B = -.149, p = .026) are statistically significant.

Model 7 though not significant, individual assessment of the variable indicates that type of facility (B = .143, p = .037) is statistically significant. Therefore, when there is poor communication, the type of facility predicts stress. Model 8 is not significant however, gender (B = -.193, p = .004) is statistically significant. Again, gender predicts stress when

there is a lack of incentives for overtime. Model 9 is also not significant; individual evaluation of the variables indicates that gender (B = -.168, p = .015) is statistically significant. In model 10, the NMs' socio-demographic characteristics (age, marital status, religious affiliation, rank, gender, and unit) together explain 6.4% of the variance in stress among NMs (R^2 = .064, F(6,241) = 2.676, p = .016). When the variables are further evaluated for their contribution to the model, only marital status (B = .206, p = .002) and religious affiliation (B = .158, p = .026) are statistically significant predictors.

Table 1. Demographic characteristics of participants

Variables		Frequency	Percentage
Age Group Mean = 35.63, SD = 8.88 Modal = 30	Below 30 years	63	23.6
	30-40 years	146	54.7
	41-50 years	28	10.5
	51-60 years	28	10.5
	Above 60 years	1	0.4
	Missing values	1	0.4
	Total	267	100
Type of Hospital	Teaching Hospital	51	19.1
	Regional Hospital	118	44.2
	District Hospital	98	36.7
	Total	267	100
Marital Status	Single	69	25.8
	Married	187	70
	Separation/Divorce	4	1.5
	Widow	2	0.7
	Missing values	5	1.9
	Total	267	100
Religious affiliation	Christianity	218	81.6
	Islam	41	15.4
	Traditional	3	1.1
	Missing values	5	1.9
	Total	267	100
Rank	DDNS	13	4.9
	PNO	33	12.4
	SNO	57	21.3
	NO	76	28.5
	SSN	86	32.2
	Missing values	2	0.7
	Total	267	100
Gender	Male	84	31.5
	Female	179	67
	Missing values	4	1.5
	Total	267	100

Field data 2019

3.3 Types of stress among nurse managers

Table 4 established that major physical stress experienced by NMs are fatigue (92.5%), headache (88.4%), and back-ache (84.3%). The main emotional stress NMs go through

are frustration (88%) and anger (78.3%) whereas, the key psychological stress NMs experience is lack of concentration (77.5%) and forgetfulness (71.5%).

Table 2. Causes of stress among nurse managers

Causes of stress	RESPONSE		
	N	YES	NO
Working with incompetent staff	267	184 (68.9%)	83 (31.1%)
Lack of break period during shift	267	227 (85%)	40 (15%)
Long working hours	267	213 (79.8%)	54 (20.2%)
Family issues	267	176 (65.9%)	91 (34.1%)
Heavy workload	267	238 (89.1%)	29 (10.9%)
Belief system	267	107 (40.15)	160 (59.9%)
Poor communication system	267	219 (82%)	48 (18%)
Poor organizational climate	267	191 (71.5%)	76 (28.5%)
Inadequate support from management	267	240 (89.9%)	27 (10.1%)
Poor working conditions	267	245 (91.8%)	22 (8.2%)
Inadequate resources to work with	267	241 (90.3%)	26 (9.7%)
Poor culture within the organization	267	169 (63.3%)	98 (36.7%)
Lack of incentives for overtime	267	225 (84.3%)	42 (15.7%)
Inadequate delegation of responsibilities	267	201 (75.3%)	66 (24.7%)
Unfriendly relationships with team members	267	170 (63.7%)	97 (36.3%)
Death and dying	267	143 (53.6%)	124 (46.4%)
Staff shortage	267	252 (94.4%)	15 (5.6%)
Conflicts with physicians	267	162 (60.7%)	105 (39.3%)
Lack of opportunity for Growth	267	195 (73%)	72 (27%)
Low Salary	267	202 (75.7%)	65 (24.3%)

Field data 2019

Table 4. Types of stress among nurse managers

Types of stress		RESPONSE		
		N	Yes	No
Physical stress	Headache	267	**236 (88.4%)**	31 (11.6%)
	Weight loss/weight gain	267	180 (67.4%)	87 (32.6%)
	Anxiety	267	185 (69.3%)	82 (30.7%)
	Insomnia	267	189 (70.8%)	78 (29.2%)
	Fatigue	267	**247 (92.5%)**	20 (7.5%)
	Increase blood pressure	267	169 (63.3%)	98 (36.7%)
	Backache	267	**225 (84.3%)**	42 (15.7%)
	Diabetes	267	78 (29.2%)	189 (70.8%)
	Others	267	195 (73%)	72 (27%)
Emotional stress	Anger	267	**209 (78.3%)**	58 (21.7%)
	Over reaction	267	192 (71.9%)	75 (28.1%)
	Frustration	267	**235 (88%)**	32 (12%)
	Other	267	198 (74.2%)	69 (25.8%)
Psychological stress	Forgetfulness	267	**191 (71.5%)**	76 (28.5%)
	Lack of concentration	267	**207 (77.5%)**	60 (22.5)
	Withdrawal	267	126 (47.2%)	141 (52.8%)
	Memory loss	267	119 (44.6%)	148 (55.4%)
	Other	267	187 (70%)	80 (30%)

Source: field data

3.4 Relationship between types of stress and socio-demographic characteristics

Table 5 examined the relationship between types of stress and socio-demographic characteristics of participants. Under the physical stress, religious affiliation positively correlated with anxiety (r = .145, *p* = .018), as designation correlated positively with increased blood pressure (r = .239, *p* ≤ .001). Again, there is a negative but significant relationship between age and increased blood pressure (r = -.183, *p* = .003). Age also correlated negatively with diabetes (r = -.140, *p* =

.022). Similarly, under the emotional stress category, the unit showed a significant and positive association with anger (r = .125, *p* = .045) as religious affiliation correlated positively with overreaction (r = .138, *p* = .025). Finally, in the psychological stress domain, religious affiliation shows a weak but significant positive correlation with forgetfulness (r = .145, *p* = .018) whereas, there is a negative but significant association between unit and forgetfulness (r = -.137, *p* = .028).

Table 5. Relationship between types of stress and socio-demographic characteristics

Type of stress			Age	Marital Status	Gender	Unit	Religion affiliation	Rank
Physical	Headache	r	0.095	0.052	-0.103	-0.053	0.047	-0.061
		Sig.	0.122	0.403	0.095	0.397	0.448	0.325
	Weight loss/weight gain	r	0.037	0.036	-0.114	-0.034	0.094	0.011
		Sig.	0.543	0.56	0.064	0.582	0.129	0.854
	Anxiety	r	-0.013	0.03	-0.06	0.024	0.145*	0.036
		Sig.	0.835	0.624	0.334	0.707	0.018	0.557
	Insomnia	r	0.019	0.082	0.061	-0.055	-0.061	0.064
		Sig.	0.756	0.187	0.324	0.376	0.329	0.300
	Fatigue	r	-0.013	0.104	-0.024	0.009	0.092	0.009
		Sig.	0.834	0.093	0.702	0.89	0.135	0.885
	Increase blood pressure	r	-.183**	0.009	-0.044	-0.081	0.085	.239**
		Sig.	0.003	0.883	0.482	0.197	0.173	0.001
	Backache	r	-0.021	-0.005	-0.022	0.029	0.037	0.044
		Sig.	0.736	0.941	0.726	0.64	0.551	0.475
	Diabetes	r	-.140*	0.005	-0.017	0.085	0.074	0.093
		Sig.	0.022	0.935	0.787	0.174	0.232	0.13
Emotional	Anger	r	0.069	0.078	0.005	.125*	.174**	-0.091
		Sig.	0.26	0.207	0.942	0.045	0.005	0.142
	Over reaction	r	0.077	0.008	0.008	-0.043	.138	0.002
		Sig.	0.208	0.901	0.896	0.49	0.055	0.98
	Frustration	r	0.001	-0.059	0.088	-0.032	0.064	0.059
		Sig.	0.981	0.343	0.154	0.607	0.303	0.343
Psychological	Forgetfulness	r	.145*	0.062	0.089	-.137*	0.052	0.046
		Sig.	0.018	0.321	0.149	0.028	0.401	0.455
	Lack of concentration	r	0.007	0.035	0.044	-0.058	0.049	0.053
		Sig.	0.911	0.568	0.476	0.358	0.427	0.389
	Withdrawal	r	0.062	0.078	-0.007	0.062	0.116	-0.076
		Sig.	0.316	0.21	0.904	0.321	0.061	0.219
	Memory loss	r	-0.037	0.037	0.01	0.000	0.002	0.038
		Sig.	0.547	0.546	0.873	0.998	0.972	0.541

*correlation significant at the .05 level; **correlation significant at the .01 level

3.5 Coping with stress among nurse managers

Table 6 examines the strategies NMs use in coping with stress. The results show that major strategies used by NMs in coping with stress are: manage your time better (91.8%),

effective communication (91%), delegation of duties (89.5%) and expressing feelings instead of bottling them up (88.8%) while the least used strategy is excessive eating (18.4%).

Table 6. Coping with stress among Nurse Managers

| | N | RESPONSE | |
		Frequency	Percent
Break time	267	208 (77.9%)	59 (22.1%)
Relaxation	267	220 (82.4%)	47 (17.6%)
Meditation	267	158 (59.2)	109 (40.8)
Delegation of duties	267	**239 (89.5%)**	28 (10.5%)
Exercise	267	187 (70%)	80 (30%)
Taking of drugs	267	88 (33%)	179 (67%)
Manage your time better	267	**245 (91.8%)**	22 (8.2%)
Express your feelings instead of bottling up	267	**237 (88.8%)**	30 (11.2%)
Accept the things you can't change	267	208 (77.9%)	59 (22.1%)
Eating excessively	267	**49 (18.4%)**	218 (81.6%)
Acknowledging your sphere of influence	267	198 (74.2%	69 (25.8%)
Giving up/slow down	267	105 (39.3%)	162 (60.7%)
Effective communication	267	**243 (91%)**	24 (9%)
Meaningful interpersonal relationship	267	233 (87.3%)	34 (12.7%)
Take time off	267	218 (81.6%)	49 (18.4%)
Clear job expectation	267	202 (75.7%)	65 (24.3%)
Reasonable workloads	267	221 (82.8%)	46 (17.2%)
Challenging tasks	267	208 (77.9%)	59 (22.1)
Adequate levels of control	267	216 (80.9%)	51 (19.1%)

Source: field data

4. DISCUSSION

The NM role is pivotal in the provision of efficient quality health service which enables accountability, effectiveness, and satisfaction among patients and staff. Essentially, the role guides the unit towards goal accomplishment by interpreting the mission and goals into reality. The role of the NM for the past decades has expanded to become more implicit, increasingly challenging and complex in healthcare delivery[24] thus, making it stressful. The paradox of the NM role precipitated this study as work-related stress has direct financial implications for the patient and organizational outcomes in terms of turnover, absenteeism and quality care.[25]

The main causes of stress according to the study is primarily organizational factors. Prominent among the causes is staff shortage which puts a lot of stress on the lean staff particularly, the NM who ensures positive patient and staff outcomes. Other significant causes of stress identified by the NMs are poor working conditions, inadequate resources to work with, heavy workload, lack of break period during shift and inadequate incentives for overtime. The finding conforms with a study by Liu, Zhu, Wu, and Mao[26] where about 30% of public sector nursing workforce expressed intention to leave due to a high-level of work-related stress owing to heavy workload, inadequate staffing levels, poor working condi-

tions, and inadequate incentives. These findings are also consistent with several empirical studies.[15, 16, 27, 28] Iyi[29] acknowledged that the immediate physical environment of the ward typically affects the NM and largely determines the efficiency, effectiveness and the predisposition to stress. Thus, with the challenges of all these organizational factors, the NM will have to work extremely hard to realize organizational goals that precipitate the incidence of stress. Therefore, NMs should be given adequate resources and support to enable effective nursing administration whilst eschewing stress.

The study realized that most of the participants are Senior Staff Nurses instead of Principal or Senior Nursing Officers as has been outlined by the job description of the Ghana Health Service.[30] Principal and Senior nursing officers are senior managers of nursing who have worked for at least three to thirteen years depending on your level (diploma or degree certificate) of entry. Thus, these cadres of nurses are poised with both technical and managerial expertise. Senior staff nurses have only worked for three years and have a diploma certificate. This implies that there will be higher levels of stress among the NMs due to limited knowledge, experience, and proficiency.

The participants' mean age is 35.63 years which symbolizes a critical period in one's life especially, women who con-

stituted the majority of the participants. During this period, women are expected to be married, raising children and managing family responsibilities both immediate and extended especially, in Africa. Hence, the challenges of both the formal and informal life of the NMs predispose them to stress. This agrees with the work of Ofei et al.[15] who suggested that stress and how to cope cannot be separated from age and aging. Aging essentially comes with experience, proficiency, and exposure, but it also comes with wearing out which is a principal cause of stress.[31] NMs therefore, cope better with maturity and experience.

Again, the commonest predictor of stress among NMs is gender, with most of the participants being females. Thus, considering the modal age of participants, most of the NMs are struggling with marital and family issues coupled with organizational challenges which increases the incidence of stress. Generally, socio-demographic characteristics of NMs predicted stress when there are inadequate resources to work within the ward especially, religious affiliation and gender. Additionally, depending on the type of facility, family issues will predispose NMs to develop stress thus, making stress among NMs is a common phenomenon. Heavy workload in the unit also promotes stress among NMs which is quite a common knowledge in the health system.

The study also recognized that when there is inadequate support from management, marital status predicts stress among NMs. A significant percentage (25.8%) of the participants are single which conforms with Ofei et al.[15] who reported similar findings in a study among NMs in the Eastern region of Ghana. Marital status has a significant impact on the stress level reported among NMs. Single NMs are prone to higher levels of work-related stress. This stems from the socio-cultural values of Ghanaians which frowns on late marriage particularly, females. It has been argued that once a person reaches the period of independence and economic viability, society expects such an individual to get married.[32] Married workers get emotional and psychological support from their spouses which help reduce the level of work-related stress. African societies generally, respect women who are economically viable and married; they are considered responsible and exemplary members of society. One interesting finding of this study is the belief system of participants being a stressor. This finding reaffirms all the above assertions about socio-cultural values of the context of the study; that the African is significantly traditional and spiritual and would try to always explain issues from the perspective of their belief system.

Furthermore, other key stressors identified include inadequate managerial support, poor communication system, long

working hours, low salary, inadequate delegation of roles, poor organizational climate, and unfriendly relationships with team members. This may stem from institutional neglect, ineptitude, unfriendly policies, or the combination of all. This finding reinforces the above as important sources of work-related stressors among NMs and is consistent with the work of Warshawsky and Havens (2014). According to the study findings, nurses need adequate preparation before they are appointed into administrative positions. Proper delegation, effective staffing, and scheduling are required to reduce the long working hours which enhance efficiency in managerial roles.

The socio-demographic characteristics of the NMs (age, marital status, religious affiliation, designation, gender, and unit) together explained 6.4% of the stress among NMs but only marital status and religious affiliation were statistically significant predictors in the regression model. This is inconsistent with a study by Godwin et al.[16] who found no significant relationship between socio-demographic characteristics and level of stress among NMs. The difference in findings between this current study and that of Godwin et al.[16] may be due to the sample size and setting. Godwin et al.[16] used 73 nurses from one hospital while this study used 267 NMs from 38 hospitals across Ghana. However, the finding that marital status and religious affiliation significantly predict stress is consistent with an Iranian study by Tahereh, Mohammad-Kazem, and Zahra[33] whose study established that marital status and religion significantly decrease stress among NMs. It has been established that married workers draw psychological and emotional support from their spouses which aid reduce work-related stress. Again, people with religious affiliation get advice and motivational encouragement from peers and religious leaders which help reduce stress.[32, 34]

NMs, according to the study, experience three main types of stress; psychological, emotional, and psychological stress. The most psychological stress experienced by NMs is a lack of concentration and forgetfulness. The same was observed by Ofei et al.[15] This is a serious issue that requires prompt attention as it will certainly have grave consequences on the management of the unit. Forgetfulness is the second most significant psychological stress among NMs which also confirms the work of Godwin et al.[16] who found that forgetfulness and lack of concentration as the most important psychological stress among nurses at Saint Dominic Hospital in Akwatia, Ghana. Lack of concentration and forgetfulness in the administration of the unit by NMs are serious challenges that must be avoided due to its consequences on quality of care. Senior managers in healthcare should, therefore, effectively manage the issue of stress.

The study also found frustration as the key emotional stress among NMs, whereas, overreaction and anger were equally, significant. Fatigue, headache, backache, weight loss/gain, insomnia, and anxiety were identified as the physical stress among NMs. Emotional and physical stress are mutually related as the manifestation of one lead to the other thereby, triggering extreme stress. This finding corroborates the work of Godwin et al.[16] and Ofei et al.[15] who categorized stress among NMs as physical, psychological and emotional. Psychological, physical and emotional stress have been commonly identified with the role of NMs due to the dynamic and implicit nature of the responsibilities.

Additionally, the study established a negative but significant correlation between age and increased blood pressure. This means that the younger the age of the NM, the tendency of him developing stress because of limited experience and the challenges imposed by the role. On the other hand, designation, and increase blood pressure positively correlated. This positive association implies that as the NM advance in the designation, the chances of developing increased blood pressure is high. Ofei et al.[15] and Godwin et al.[16] reported similar findings. Promotion to higher grades comes with aging, experience and active work-life which increases the person's disposition to stress. Again, age and forgetfulness were also positively correlated. Thus, an increase in age leads to an increase in frustration among NMs resulting in stress.

The study found that NMs adopted various stress coping strategies which are: time management, delegation of duties, expressing feeling instead of bottling them up, meaningful interpersonal relationships, reasonable workload, and relaxation. These findings have been confirmed in other Ghanaian studies.[15, 16, 35] Olayinka, Osamudiamen, and Ojo[22] also reported similar findings in Nigeria. It is worth noting that most of the NMs cope with stress by managing their time well and effective communication. The majority of the NMs were senior staff nurses and because they lack the requisite knowledge and experience to handle the challenges of the unit, proper time management, and effective communications aided them to better cope with stress and its related issues that confront them as unit-level managers.

5. CONCLUSION

The role of NMs in healthcare delivery is associated with work-related stress which if not properly addressed can reduce the quality and effectiveness of nursing units. Sociodemographic characteristics of the NM particularly gender, age, and marital status are significant to the incidence of stress. NMs experience psychological, emotional and physical stress that can compromise their roles. NMs should be appointed based on maturity, experience and knowledge as the alternative predisposes them to stress. In situations where senior staff nurses are appointed to the position, they should be adequately groomed by experiential training programs before taking up the position. Hospitals and policymakers must ensure effective staffing levels, adequate logistics, and regular structured management and leadership training for all nurses to enable them to build their competencies before they assume the NM. Besides, periodic training on stress and stress management should be ensured at all hospitals.

5.1 The implication for health policy and nursing practice

Stress among healthcare managers especially, NMs is very common. This current study has extensively proven that stress among NMs affects their general health as well as patient safety and quality of care. Training on stress management should be organized regularly for hospital staff particularly, NMs to enable them to cope better with stress. This would also aid NMs to avoid the overwhelming impact of stress on patients and staff. Senior managers of hospitals should ensure adequate staffing levels and schedules, favourable working conditions, and adequate logistics at the unit level for nurses to work with.

5.2 Limitation

The study adopted a self-reporting approach which has the tendency for response bias. No causality was established.

CONFLICTS OF INTEREST DISCLOSURE

No competing interest.

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