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Research Article

Clinical Dynamics of Stress and Burnout among Midwives in Calabar, South-Southern Nigeria

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ABSTRACT

Maternal mortality remains remarkably high in low and middle-income countries, accounting for 94% of maternal death with Midwives serving as the main providers of skilled care to curb the menace. Little attention is paid to their experiences of stress and burnout in Calabar Cross River State, Nigeria. The study utilized a descriptive Cross-Sectional design and total population sampling technique to recruit 255 midwives from two selected hospitals. A validated Expanded Nursing Stress Scale (ENSS) with a reliability coefficient of 0.7 was used for data collection. Data was analyzed using SPSS 21.0 software and chi-square used for inferential statistics. The total mean stress scores for all sub-scale was generally high ranging from 7.76 in 3 items related to inadequate preparation sub-scale to 9 items related to workload with a mean of 27.68 (SD: 7.29; Min: 9.0; Max 70.0). The high total means indicate frequently and extremely stressful level of stress. Moreover, the majority 208(81.6%) participants experienced stress in midwifery related services. 63 (25.0%) experienced burnouts. No significant relationship ($P = <0.05$) existed between year of working experience and experience of stress among midwives. Recognizing and managing stress is imperative in the health care system as midwives in Nigeria are tasked with the responsibility of reducing maternal morbidity and mortality. Solutions to these challenges include increasing the numbers of midwives and improving clinical environment of midwives to improve quality of care and aid the attainment of sustainable development goals three and four in Nigeria.

Keywords: *Clinical dynamics, Stress and Burnout, Midwives, Nigeria*

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INTRODUCTION

The need for skilled birth attendants at every birth has been identified as the panacea for a reduction in maternal mortality. Although significant progress has been made in reducing maternal mortality in developed countries, in the low and middle-income countries, it remained remarkably high, which accounts for 94% of maternal death (United Nations, 2020). This high mortality indirectly focuses global attention on skilled workers and much more on nurse-midwives who with professional expertise and improved quality of care can avert maternal and newborn mortality in all health care settings (WHO, 2022). But while striving to achieve a reduction in mortality by utilizing midwives as the key frontline workers, little attention is paid to the stress and burnout experienced by them.

Geraghty *et al.* (2019) revealed that midwives in a clinical environment experienced stress and burnout which affect their health physically and psychologically as well as impair their practices. Job-related stress occurs among all workers but more among health workers who associate with people in their most vulnerable state in their work environment (ILO, 2016;

Pisljar *et al.*, 2011; Gebeyehu and Zeleke, 2019). Pregnancy invokes a certain degree of risk, for which midwives by virtue of knowledge and experience have the capability of averting. However, it is pertinent to note that while midwives developed an empathic and sensitive relationship with their clients, the negative impact such as stress encountered should never be overlooked especially in low and middle-income countries with inappropriate midwives' patient ratios. This is contrary to the standard of midwifery practice by American College Nurse-Midwives (2011) who affirmed the need for midwifery practice to thrive in an environment that is safe such as the family, community or health care systems. Stress, however, is said to be subjective as well as multi-factorial (McVicar, 2003), and according to Lazarus and Folkman (1984), it exemplifies an individual appraisal of environmental stimulus as taxing or exceeding their resources as well as endangering their well-being. Similarly, Rohleder, (1993) defined stress as the psychological and physiological reaction that ensues when an individual perceived an imbalance between their abilities and the demand placed on them. Still, Omdahl and O'Donnell (1999) added that stress ensues when demands placed on

individuals exceed their behavioural, cognitive, and physiological adaptive mechanisms.

Women remain the central foci of midwifery practice and this exposes them to stress, given the sensitive and empathic relationship midwives develop with women in their care. It could be suggested that contextual and environmental factors enhance the perception of stress as well as the number and extent of stressors (Geraghty *et al.*, 2019). Additionally, Wright *et al.* (2018) asserted that midwives experienced high levels of stress that emanates from the interplay between clinical environmental, internal pressures and workplace demands. Consequences of stress include physical impairment (musculoskeletal and cardio-vascular diseases), mental and behavioural disorders which manifest as burnout, exhaustion, depression and anxiety (ILO, 2016).

According to Quick and Henderson (2016), determinants of stress include role conflict, career-specific task demands, workplace design elements or ergonomics, and interpersonal factors such as bullying, social dynamics and managerial issues, poor pay, lack of professional status, unsafe working conditions and abuse (Brodie, 2013). Ruotsalainen, Verbeek, Marine and Serra (2015) assert that occupational stress originates from internal pressure, environmental and workload factors. Similarly, Agaba (2014) identified heavy workloads, poor living and working conditions, delayed salaries and shortage of staff as challenges which compound stress perception in developing countries. The United Nations (2020) report affirms the shortage of healthcare human resources in low and middle-income countries with the inappropriate number of midwives to patients as a major challenge. They further asserted that in over 55% of countries, there are less than 40 nursing and midwifery personnel serving per 10,000 people. Nigeria ranks 6th among the 49 countries identified with insufficient medical doctors, nurses, and midwives (Adebayo *et al.*, 2016; WHO, 2010). An insufficient number of health workers will invariably increase the workload on the available personnel which can be perceived as stress depending on the individual appraisal of the situation.

Evidence abounds that strengthening midwifery practices reduces maternal mortality (WHO, 2022). However, efforts should be directed towards reducing stressors in a clinical environment to enhance provision of evidence-based care which is socio-culturally sensitive, human-rights based and linked to women and newborns (WHO, 2022). Cosgrave (2018) asserted that heavy workloads with a shortage of staff harms health workers and stress increases in line with duration and workload. It is evident that with increased stress secondary to challenging work situations, a potential health hazard may ensue leading to stress-related disease, particularly occupational stress often referred to as burnout syndrome. WHO (2019) affirmed that burnout emanate from chronic workplace stress not effectively managed and it is categorised into three dimensions which manifest as exhaustion or energy depletion, reduce mental alertness or feelings of negativism and reduced professional efficiency. Some studies revealed a triangulated deleterious effect of stress on midwives which involved personal well-being, occupational/professional lives, and well-being of the patient in their care (Beck *et al.*, 2015; Mollart *et al.*, 2013; Sheen *et al.*, 2015; Wright *et al.*, 2018). Personal affectations include

musculoskeletal, mental and cardiovascular affectations (ILO, 2016). Similarly, Mental Health Organisation (2021) acknowledged effects such as anxiety, difficulty in concentration, lack of attention, aggressiveness, irritability, frustration, fatigue, depression, burnout, and lack of job satisfaction among midwives. Professional affectations include medication errors, absenteeism, injury claims litigations, and reduced productivity amongst others (Faremi *et al.*, 2019; Hunter *et al.*, 2019; Hanson *et al.*, 2017). While patient affectation includes prolong hospitalization and an increase in preventable death, stress also produces a negative impact on the quality of care as documented in a study of 644 midwives in the United States (Wright *et al.*, 2018).

It is pertinent to note that stress has some unique benefits such as modifying the human physiological system by necessitating adaptation. The ability to positively adapt can enhance mastery or attainment of higher goals, therefore it is how stress is handled that makes the difference (Janet, 1995; Lazarus, 1999; Selye, 1976).

Nigeria is presently regarded as the most populous country in Africa and has urgent need for high-quality health workers to meet the health challenges of its 216.2 million people. The country has 20 nurses, midwives, and doctors for every 10,000 people, which is less than World Health Organization (2010) recommended standard and yet is determined to ensure that pregnant women are attended to by skilled midwives. This informed the need to consider the well-being of midwives and to assess the level of stress; environmental dynamics and burnout among midwives in Calabar, Cross River State, Nigeria who are expected to avert over 80% of maternal mortality, stillbirths, and neonatal deaths.

MATERIALS AND METHODS

Study Design: The study utilized a quantitative research approach with a descriptive Cross-Sectional design to identify determinants of Stress and Burnout among Midwives in Nigeria. Professional routines have saddled the bedside nurses, particularly the midwives, with the responsibility of reducing the high maternal mortality ratio of 1200/100,000 (Arisukwu, Akinfenwa & Igbolekwu, 2021).

Study Setting: The study setting is Cross River State, one of six States in the South-South geopolitical zones of the Federal Republic of Nigeria. Two hospitals, the University of Calabar Teaching hospital (UCTH) and General hospital, Calabar were selected for the study. UCTH is a federal tertiary institution located in the Calabar metropolis in the Southern Senatorial District of Cross River State. The hospital was established in 1979 with a capacity of 610-bed complements and 113 cots. It serves as a referral Centre for both secondary and primary health care facilities in the state. The facility serves as a training center for medical, nursing, medical laboratory science, radiography, and other health-related students in a clinical setting. It also offers healthcare services and research for advanced scientific knowledge. The facility has the highest (580) number of nurses/midwives and records more delivery in the state. General Hospital, Calabar is a secondary health care facility established by the Cross River

State Government. The hospital has a bed space of one hundred, forty-six doctors and one hundred and sixty nurses-midwives. The hospital provides services such as maternity, emergency, obstetrics, gynaecology, surgical and diagnostic among others. It also serves as a referral Centre for primary services. Among secondary health care facilities in the state, this facility has the highest number of nurses/midwives and recorded deliveries than others in the state. The maternal mortality ratio in Cross River State is 1200/100,000, higher than the national figure of 1100/100,000. Alade, (2021) reports on 66% and 37% reduction in hospital-based maternal and neonatal mortality rates respectively. These two health facilities are the most dependable with the highest number of qualified nurses/midwives in the state, which inform their choices for the research.

Methods: The study utilized a total population sampling technique to recruit 269 midwives who met the inclusion criteria of working in the two selected hospitals in Cross River State. The researchers visited the study areas and administered questionnaires to eligible midwives after informed consent was obtained. Inclusion criteria were: Practicing Midwives in the clinical area for at least two years and willingness to participate in the study. This was to ensure the involvement of experienced midwives who have been exposed to a wide range of professional and clinical issues. A total of 269 midwives met the inclusion criteria, however only 255 completely filled their questionnaires. Two (2) midwives refused to participate in the study, while 12 did not complete their questionnaires. Ethical approval was obtained from the University of Calabar Teaching Hospital Ethical Committee and informed consent from study participants after the description of the purpose and aim of the study.

The instrument for data collection: The Expanded Nursing Stress Scale (ENSS) by French, Lenton, Walters and Eyles (1995) is a self-reporting questionnaire that is widely used to assess work-related stress among nurses. It measures sources and frequency of stress perceived by nurses through 57 items subdivided into nine sub-scales namely: death and dying, conflict with physicians, inadequate preparation, problems with peers, problems with supervisors, workload, uncertainty concerning treatment, patients and their families, and discrimination. These sub-scales utilized a five-point Likert scale to measure stress associated with role conflict, ambiguity, and workload, the three core areas of stress among clinical nurses (Healy and McKay, 1999). The higher the score the higher the level of stress experienced by the midwives. ENSS also provides a valid measure when samples are obtained from nurses in different hospital units. The scale has a high construct validity and reliability coefficient of 0.7. The utilization of ENSS by Healy and McKay (1999) in Australia revealed a reliability coefficient of 0.89 for the entire scale and a sub-scale coefficient ranging from 0.64 to 0.77. ENSS is therefore chosen for this study to explore the factors that contribute to perceived stress and burnout among midwives.

Data Analysis: Data were coded and analyzed using SPSS 21.0 software to generate frequency and percentages of the values, while chi-square was used for inferential statistics.

Items in the instrument were grouped into nine sub-group in line with the author’s suggestions as indicated above (under instruments for data collection). To obtain a total stress score, scores from all 57 items were added together. Appropriate items for specific subscales were added together to obtain a level of stress in each subgroup. In all the sub-groups, scores observed as “not applicable” were scored 0. The higher the score from each sub-group, the higher the level of stress experienced.

RESULTS

Demographic profile: As shown in Table 1, a total of 255 participants were recruited for the study, 69(27.1%) were in age range of 25 -34years, 66 (25.9%) were between 35-44years, the majority 90(35.3%) were between 45-54years while 30 (11.8%) were 55 years and above. The majority 159(62.4%) midwives were from Cross River State, 54(21.2%) were from Akwa Ibom State while 42(16.5%) were from other states in Nigeria.

Table 1:
Socio-demographic characteristics of participants

Characteristics	Response option	Frequency	percentage
Age	25 -34	69	27.1
	35 -44	66	25.9
	45-54	90	35.3
	55 years and above	30	11.8
	Total	255	100.0
Tribe	Cross River State	159	62.4
	Akwa Ibom State	54	21.2
	Others	42	16.5
	Total	255	100.0
Marital Status	Married	164	64.3
	Single	76	29.7
	Divorced	3	1.2
	Separated	6	2.4
	Widowed	6	2.4
Years of working experience	2 - 10 years	46	18.0
	11 – 19yrs	79	31.0
	20 – 28yrs	63	24.7
	29 years and above	67	26.3
	Total	255	100.0
Religion	Christian	215	84.3
	Muslims	40	15.7
	Total	255	100.0
Highest educational status	RNRM	109	42.7
	BNSC	126	49.4
	MSc	15	5.9
	PhD	5	2.0
	Total	255	100.0
Place of work	Teaching Hospital	152	59.6
	General Hospital	103	40.4
	Total	255	100.0

Table 2:
Clinical Environment Factors of stress among midwives in Calabar, Nigeria

S/N	Variables	Never stressful (a)	Occasionally stressful (b)	Frequently stressful (c)	Extremely stressful (d)	Does not apply (e)	Grand Total
1.	Death and Dying	20 (7.8)	57 (22.4)	45 (17.6)	120 (47.1)	13 (5.1)	255
2.	Conflict with physicians	36 (14.1)	80 (31.4)	49 (19.2)	56 (22.0)	34 (13.3)	255
3.	Inadequate preparation	55 (21.6)	84 (32.9)	52 (20.4)	39 (15.3)	25 (9.8)	255
4.	Problems with peers	11 (4.3)	42 (16.5)	98 (38.4)	97 (38.0)	7 (2.8)	255
5.	Problems with supervisors	35 (13.7)	102 (40.0)	46 (18.0)	41 (16.1)	31 (12.2)	255
6.	Workload	4(1.6)	12(4.7)	85 (33.3)	151 (59.2)	3(1.2)	255
7.	Uncertainty concerning treatment	28 (11.0)	92 (36.1)	62 (24.3)	60 (23.5)	13 (5.1)	255
8.	Patients and their families	38 (14.9)	76 (29.8)	73 (28.6)	53 (20.8)	15 (5.9)	255
9.	Discrimination	32 (12.5)	81 (31.8)	78 (30.6)	39 (15.3)	25 (9.8)	255
Column Total		259	626	588	656	151	2295
Total stress Scores for Participants		29	70	65	73	18	255

Concerning marital status, the majority 164(64.3%) were married, 76(29.8%) were single, 3(1.2%) were divorced, 6(2.4%) were separated, while 6(2.4%) were widowed. In assessing data related to working experience 46(18.0%) had been working between 2 - 10 years, 79(31.0%) participants worked between 11 – 19years, 63(24.7%) had served for 20 – 28years, while 67(26.3%) participants had 29 years and above working experience. The majority 215(84.3%) were Christians, while 40(15.7%) were Muslims. The majority 126(49.4%) of participants had BSc, 109 (42.7%) had RNRM, 15(5.9%) were MSc while 5(2.0%) were PhD holders. 152 (59.6%) were staff of the University of Calabar Teaching Hospital, a tertiary institution while 103 (40.4%) worked at the General Hospital, Calabar a secondary health care facility.

Clinical determinants of Stress among Midwives: Data analyses of the sub-groups revealed the extent of stress experienced among midwives (Table 2). In reference to sub-group death and dying, it was obvious that all the study participants accentuate stress experienced, although at varying grades. Data submersion under death and dying revealed, 20(7.8%) as never experienced stress with regards to this sub-group, 57(22.4%) experienced stress occasionally, 45(17.6%) experienced stress frequently, the majority 120(47.1%) affirmed extreme stress regarding this sub-group, while 13(5.1%) retorted it was not applicable. For Conflict with physicians’ sub-scales, 36(14.1%), the majority 80(31.4%) asserted that it was occasionally stressful, 49(19.2%) responded it was frequently stressful, 56 (22.0%) alleged that it was extremely stressful, while 34(13.3%) replied it was not applicable. Regarding inadequate preparation, 55(21.6%) alleged that it was never stressful, the majority 84(32.9%) acknowledged that inadequate preparation was occasionally stressful, 52(20.4%) agreed it was frequently stressful, 39(15.3%) admitted it was extremely stressful while 25(9.8%) concurred it was not applicable.

11(4.3%) asserted that problems with peers were never stressful, 42(16.5%) reacted it was occasionally stressful, the majority 98(38.4%) affirmed that problems with peers were frequently stressful, 97(38.0%) alleged problems with peers was extremely stressful, while 7(2.8%) refuted it was not applicable to them.

With regards to problems with supervisors, 35(13.7%) acknowledged it was never stressful, the majority 102(40.0%) agreed it was occasionally stressful, 46(18.0%) responded it was frequently stressful, 41(16.1%) retorted it was extremely stressful, while 31(12.2%) disproved it was not. Concerning the midwives’ workload, only 4(1.6%) agreed it was never stressful, 12(4.7%) noted it was occasionally stressful, 85(33.3%) accepted it was frequently stressful while the majority 151(59.2%) acknowledged the workload was extremely stressful and 3(1.2%) asserted that the workload was not applicable to them. With regards to uncertainty concerning treatment, 28(11.0%) noted uncertainty concerning treatment was never stressful, 92(36.1%) acknowledged it was occasionally stressful, 62 (24.3%) replied it was frequently stressful, 60 (24.3%) concurred it was extremely stressful while 13(5.1%) said it was not applicable. For the patients and their families sub-scale, 38(14.9%) participants never encountered any stress in this sub-scale, 76(29.8%) responded it was occasionally stressful, 73(28.6%) noted it was frequently stressful, 53(20.8%) agreed it was extremely stressful while 15(5.9%) disagreed it was not stressful.

About the discrimination sub-scale, 32 (12.5%) noted it was not stressful, the majority 81(31.8%) said it was occasionally stressful, 78(30.6%) agreed it was frequently stressful, 39(15.3%) accepted it was extremely stressful while 25(9.8%) pointed out that issues with discrimination werenot applicable to them

The total mean stress scores for all sub-scale were generally high ranging from 7.76 in 3 items inadequate preparation sub-scale to 9 items workload with a mean of 27.68 (SD: 7.29; Min: 9.0; Max 70.0). Other sub-scales with high level of stress were: Uncertainty concerning treatment (mean: 27.24; SD: 5.55, Min 9.0 and Max.38.0); Death and Dying (Mean 22.3; SD 23; Min.7.0; Max.31.0). Problems with patients and their families (Mean 24.59; SD 5.22; Min 8.0, Max 36.0). Problems with peers (Mean 21.24; SD 5.08; Min. 7.0 Max. 35.0). The high total means indicate frequently and extremely stressful levels of stress. (Table 3).

Out of the 255 study participants, the majority 208(81.6%) experienced stress in midwifery-related services, while 47(18.4%) participants did not (Fig. 1).

Table 3:
The mean and standard deviation stress scores of 9 ENSS sub-scales

S/N	Score	No. of Items	Mean X	Standard Deviation	MIN	MAX
1.	Death and Dying	7	22.3	4.23	7.0	31.0
2.	Conflict with Physicians	4	13.99	3.29	5.0	21.0
3.	Inadequate Preparation	3	7.76	2.27	3.0	14.0
4.	Problems with Peers	6	21.24	5.08	7.0	35.0
5.	Problems with Supervisors	5	16.74	5.20	6.0	30.0
6.	Workload	9	27.68	7.29	9.0	70.0
7.	Uncertainty concerning treatment	8	27.24	5.55	9.0	38.0
8.	Problems with Patients and their families	8	24.59	5.22	8.0	36.0
9.	Discrimination	3	10.51	3.24	3.0	15.0
Total		53	172.05	41.37	57.0	290.0

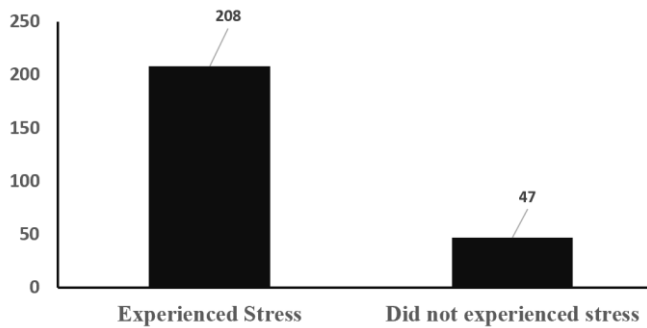


Figure 1:
Bar chart showing proportion that experienced stress

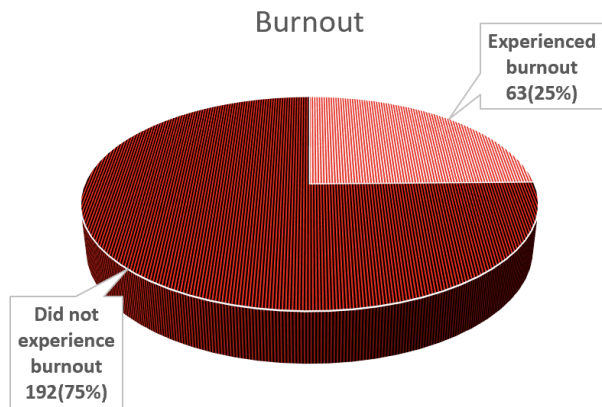
with 152 midwives, 18(7.1%) acclaimed midwifery services were never stressful, 41(16.1%) perceived it was occasionally stressful, 39(15.3%) alleged it was frequently stressful, the majority 43(16.9%) agreed it was extremely stressful while 11(4.3%) asserted it did not apply to them (Table 4). Secondly, from General Hospital perspective, 11(4.3%) midwives declared it was never stressful, 29(11.4%) refuted it was occasionally stressful, 26(10.2%) agreed, that it was frequently stressful, and the majority 30(11.8%) perceived it as being extremely stressful, while 7 (2.4%) alleged that it was not applicable to them. The inferential statistics revealed no significant relationship between stress perception in the two hospitals selected for the study with a χ^2 value of 0.1402; df 0.4 and $P > 0.05$ indicating no significant relationship between stress perception in the two health facilities. Other parameters measured are reflected in Table 4.

Considering the stress scores from the two selected hospitals:
Firstly, the University of Calabar Teaching Hospital (UCTH)

Table 4:
Profile of stress scores of participants from UCTH and General Hospital (N=255, UCTH (n) = 152, General Hospital (n) = 103)

Variable	Sub-score n (%)					χ^2 df (4)	P-value
	Total stress Scores for Participants						
		Never stressful	Occasionally stressful	Frequently stressful	Extremely stressful	Does not apply	
Location of work	UCTH	18(17.3)	41 (41.7)	39(38.8)	43(43.5)	11 (10.7)	0.1402
	GHC	11(11.71)	29 (28.27)	26(26.3)	30(29.5)	7 (7.3)	
Death and Dying	UCTH	12(11.9)	37 (34.0)	28(26.8)	67(71.5)	8 (7.8)	1.5253.
	GHC	8(8.08)	20(23.0)	17(18.2)	53(48.5)	5(5.3)	
Conflict with physicians	UCTH	15(21.5)	56(47.7)	29 (29.2)	33 (33.4)	19(20.3)	8.6117
	GHC	21(14.5)	24(32.3)	20 (19.8)	23(22.6)	15 (13.7)	
Inadequate preparation	UCTH	31(32.8)	59(50.1)	25 (31.0)	21 (23.3)	16(14.9)	7.7926
	GHC	24(22.2)	25(34.0)	27(21.0)	18(15.8)	9(10.1)	
Problems with peers	UCTH	7(6.6)	29 (25.0)	53(58.4)	60 (57.8)	3(4.2)	3.8909
	GHC	4(4.4)	13(17.0)	45(39.6)	37(39.2)	4(2.8)	
Problems with supervisors	UCTH	20(20.9)	62(60.8)	23(27.4)	27(24.4)	20 (18.5)	2.8851
	GHC	15(14.1)	40(41.2)	23(18.6)	14(16.6)	11(12.5)	
Workload	UCTH	3(2.4)	8(7.2)	49(50.7)	91(90.0)	1(1.8)	1.6649.
	GHC	1(1.6)	4 (4.9)	36(34.3)	60(61.0)	2(1.2)	
Uncertainty concerning treatment	UCTH	18 (16.7)	55(54.8)	33(37.0)	38(35.8)	8 (7.8)	1.6705
	GHC	10(11.3)	37(37.2)	29(25.0)	22(24.2)	5(5.3)	
Problems with Patients and their families	UCTH	21(22.7)	43(45.3)	44(43.5)	33 (31.6)	11 (8.9)	1.93
	GHC	17 (15.4)	33(30.7)	29 (29.5)	20(21.4)	4(6.1)	
Discrimination	UCTH	18 (19.1)	46(48.3)	50(46.5)	22(23.3)	16 (14.9)	1.4374
	GHC	14 (12.9)	35(32.7)	28(31.5)	17(15.8)	9(10.1)	

Proportion of participants that experienced burnout: Among the 255 study participants 63 (25.0%) affirmed perception of burnout, while the majority 192(75.0%) did not (Fig.2).



Forty-six participants had working experience between 2 - 10 years, 39 midwives experienced stress while 7 did not experience stress associated with midwifery services rendered (Table 5). 79 participants had 11 – 19 years of working experience, 70 midwives experienced stress while 9 did not experience any stress associated with midwifery. 63 participants had 20 – 28years of working experience, 50 midwives experienced stress while 13 did not experience stress. 67 participants had 29 years and above of working experience, 49 midwives experienced stress while 18 did not experience stress associated with midwifery. A chi-square statistic of 6.2933 at $p < 0.05$ was obtained. Since the tabulated value of 7.841 is more than the calculated value of 6.2933, we reject the null hypothesis. This shows that there is no significant relationship between years of working experience and the experience of stress among midwives.

Table 5: Relationship between years of working experience and the experience of stress among midwives

Years of working experience	Status of Stress		Total
	Experience Stress	Did not experience Stress	
2 - 10 years	39(37.5)	7(8.5)	46
11 – 19yrs	70 (64.4)	9 (14.6)	79
20 – 28yrs	50 (51.4)	13(11.6)	63
29 years and above	49 (54.7)	18 (12.35)	67
Total	208	47	255

The figure in brackets are the expected frequencies.
 Degree of freedom = 3, $P = <0.05$,
 Chi-square Calculated = 6.2933, Chi-square Tabulated = 7.841

DISCUSSION

Stress is imperative in life, and a certain amount of stress is beneficial to enhance mastery or attainment of higher goals. However, excessive stress may be detrimental to individual health and those within her care such as those in midwifery practice. This study has revealed the major determinants of

stress among all sub-scales. However, very high-stress level is recorded among seven sub-scales as listed below namely: Workload, uncertainty concerning treatment, death and dying, problems with patients and their families, problems with peers, problems with patients and their families, and problems with supervisors. This is may be apparent because working in the health care system induces a lot of stress and therefore the mean stress scores are high in all sub-scales. The sub-scales affected revealed, job, patient, family, peers, and supervisors related. This may however be secondary to environmental and personal and inter-personal factors that might be eminent in the clinical setting. This is similar to findings by Ruotsalainen *et al.* (2015) who observed that the health care system induces a lot of occupational stress which emanates from an interplay of internal pressure, workplace demand and environmental factors. The stress experienced is holistic which may affect their job impacting the quality of care and personal relationship with others. The highest source of stress among midwives was workload. This is so obvious in Nigeria, with only 20 nurses, midwives, and doctors for every 10,000 people, far below World Health Organization’s recommended standard (2010). This inappropriate ratio increases workload which in turn exacerbates the stress. It is apparent that the country’s population growth never correlates with the growth of health workers, which escalates the stress experienced by few midwives in practice (WHO, 2014). Similarly, Agaba (2014) identified heavy workloads and shortage of staff as challenges which compound stress perception in developing countries. These findings align with Cosgrave (2018) who observed that heavy workloads coupled with a shortage of staff have a damaging impact on health workers and stress increases in line with duration and workload. The author further reported that stress increased with challenging work situations. Sub-scale of death and dying also attracted a lot of stress from study participants, this is true because midwifery practice attracts the development of an empathic relationship between midwives and women in their care. Therefore, negative outcomes such as the death of the fetus or mother invokes traumatic stress which affects the midwives both physically and psychologically. This corresponds to Banovcinova and Baskova (2014) who observed that death and dying were the most stressful subscales among study participants. Findings also revealed that problems with peers also compounded stress perception among study participants. This is true because of the interdependence of humans for communication, support and motivation and a heavy workload, the inability to share challenges could make an individual perceive their services as stressful. This finding is similar to work by Quick and Henderson (2016) who observed that interpersonal factors such as bullying, social dynamics and managerial issues accrue stress among health care workers. Study findings also revealed that the majority of the participants experienced stress because midwifery services invoke a lot of emotional demand with pregnant women, especially in low resource setting with high health care demand compounded with a limited number of midwives, services rendered become extremely stressful. This is comparable to Peter *et al.* (2020) who asserted that nurses and midwives are more affected with work-related stress than

other health care professionals secondary to emotional demands. Findings from this study also revealed that stress was eminent in all care settings and no relationship existed between study settings and the experience of stress. It is apparent because midwives in the two research settings share similar environmental attributes compounded with inappropriate midwives to patient ratio. Therefore healthcare workers in the two settings appraised their job as tasking above their individual abilities. This agrees with Agaba (2014) who opined that midwives in low-income countries are challenged with personal and work-related issues like heavy workloads, delayed salaries, shortage of staff and poor living and working conditions which compound stress perception. Similarly, Brodie, (2013) affirmed that unsafe working conditions are commonly documented in low and middle-income countries and they contribute to moral distress, which may adversely affect the midwifery practice. Additionally, no significant relationship existed between years of working experience and stress perception. This is true because stress is encountered daily with an increased workload, irrespective of years of work experience, and midwives fail to adapt to stress. This is however contrary to Cosgrave (2018) who asserted that stress increases in line with duration, but further added that heavy workloads with the shortage of staff harms health workers as stress induces negative consequences. Study also revealed participant perception of burnout in midwifery related services. This is true in that with increased workload and stress, burnout is imperative especially when there are no modalities put in place for stress management. This findings is similar to Sheen *et al.*, (2015) who confirm the prevalence of stress among midwives and the adverse consequences on individual and professional wellbeing. Additionally, Doherty and O'Brien, (2022) affirm incidence of burnout experience among midwives and emphasized on creating time for debriefing within work environment as well as preventing staffing shortages.

Implications: Stress is imperative in life, while some unique benefits such as modifying the system by necessitating adaptation are welcomed, measures should be directed toward reducing negative stress impact to prevent burnout and enhance the attainment of sustainable development goal three. This informs the need for policymakers to address midwife-ratio issues in our Nigerian health care settings and reduce job-related stress as well as improve on the sustainable therapeutic work environment.

In conclusion, although stress is imperative in the health care system, the need to eliminate stressors to enhance the quality of care becomes imperative among midwives in Nigeria saddled with the responsibility of reducing maternal morbidity and mortality. Addressing challenges associated with the workload by increasing the numbers of midwives and improving the clinical environment would improve the quality of care and aid the attainment of sustainable development goals numbers three and four in Nigeria.

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