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Factors Associated with Psychiatric Morbidity in Female Medical Doctors in Kwara State, North- Central, Nigeria

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Authors' contributions

This work was carried out in collaboration among all three authors. Authors OINB and AJO designed the study, managed the literature search and review, data entry and first manuscript draft. Author JAO managed the analyses and literature search. All authors read and approved the final manuscript.

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ABSTRACT

Introduction: The female doctor apart from being affected by the same variables that impose stress on the general population is also prone to stress because of the peculiarities of medical practice and the socio-cultural demands on them by virtue of their gender.
Objectives: This study was aimed at assessing the personal, work-stress as well as family related factors in female doctors associated with psychiatric morbidity in female doctors in Kwara state.
Methods: This was a cross-sectional study involving female medical doctors in Ilorin, Kwara State, North-Central, Nigeria. Questionnaires were administered to the Members of the state Chapter of the Medical Women's Association of Nigeria (MWAN) who were present at the general and scientific meeting of the association held in Kwara state in June 2018. A self-administered semi-structured questionnaire designed to assess biodata, personal history, work related stress, family

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related history and self-care history of the participants as well as the 12 item general health questionnaire (GHQ-12) was distributed to 80 participants that consented.
Results: The prevalence of 23.8% psychiatric morbidity found. Age, relationship with co-workers, feelings of frustration and anger at work, reconsidering a change in work environment, views of negative effect of stress on work as well as access to a maternity leave were found to be associated with psychiatric mobility.
Conclusions: These findings underline the need to pay attention to the welfare of female doctors and a need for routine evaluation, early identification and prompt intervention as well as support.

Keywords: Factors; psychiatric morbidity; female doctor.

1. INTRODUCTION

A doctor is a professional who practices medicine which is concerned with promoting, maintaining, or restoring health through the study of, diagnosis, and treatment of diseases, injuries, and other physical and mental impairment. The term *woman* is usually reserved for an adult female. In the past, the practice of medicine was reserved mostly for men, however in more modern times; more and more females are studying and indeed practicing medicine in different parts of the world.

Stress in medical practice has always been a source of concern. The World Health Organization defines work related stress as the response people may have when presented with work demands and pressures that are not matched to their knowledge and abilities and which challenge their ability to cope [1]. Some studies have reiterated that high burnout in physicians was due to long working hours and several other factors, like mental depression, the evaluation assessment system, hospital culture, patient-physician relationships, and the environment [2]. It is expected that the medical doctor himself must be in a perfect state of mind devoid of morbid worries and anxieties in order to render quality care to the patient. This is however not usually the case, because the doctor apart from being affected by the same variables that impose stress on the general population, is also prone to stress because of the peculiarities of his work situation, the expectation of the society at large, thus largely ignoring their own health [3].

It is not an exaggeration that the woman forms an important aspect of the society; this is because her well- being is linked to that of her children, her spouse and other members of the society. Although most researches in women in the past focused on maternal and child health, recently, the search light has shifted focus to mental health issues in women as well as the care of mental disorders in them and women in a dynamic profession such as medicine are not left out.

Female doctors do not only fulfill professional roles but they may also have to fulfill other domestic roles too; as home managers, wives and mothers, in addition to the enormous stress attached to the practice of medicine as a profession. Earlier researchers on this subject also noted that female doctors deliver more empathetic care, and this may be a reflection of our social expectations of gender roles rather than something in but usually at a great cost to their mental health [4]. Women, irrespective of their profession have also been consistently found to have higher rates of minor psychiatric morbidity than men, both in community studies as well as in studies of general practice attendees [5]. Additionally, it has been reported that it is more acceptable socially for men to show aggression openly while women are taught to control aggressive feelings and internalize them; this may then predispose females, irrespective of their occupations or vocations, more than males to depressive reactions [6].

In a similar vein, it has also been suggested that the traditional modes of upbringing of each sex tend to discourage independence, self-sufficiency and assertiveness for girls as unfeminine, making the task of coping with stress more difficult for women than for men [7]. Additionally, female physicians have been shown to face condescension and discrimination from their female counterparts just as often as their male counterparts. This is often seen (but not exclusive to) when female physicians become mothers [8]. It is said that other women may become passive aggressive out of inappropriate jealous, resentment, or even their own grief of a loss [8]. It is not also uncommon for women nurses or administrative staff to also treat women physicians with less respect than their female counterparts as well [8]. All these contribute to

the stress female doctors experience and this may in turn be associated with psychiatric morbidity in female doctors.

This study was therefore aimed at assessing the personal, work-stress as well as family related factors in female doctors working within Kwara state that are associated with psychiatric morbidity with a view of recommending global and gender- sensitive interventions to reduce this morbidity.

2. AIMS AND OBJECTIVES

This study is aimed at assessing the personal, work-stress as well as family related factors in female doctors associated with psychiatric morbidity in female doctors in Kwara state.

Table 1. Socio-demographic variables of respondents

Age group	**Frequency**
20-30	31 (38.7)
31-40	36 (45.0)
41-50	13 (16.3)
Marriage	
Single	22 (27.5)
Married	52(72.5)
Type of Marriage	
Monogamous	52 (100.0)
Ethnicity	
Yoruba	73 (91.2)
Hausa	4 (5.0)
Igbo	3 (3.8)
Religion	
Christianity	43 (53.8)
Islam	37 (46.2)
Level Professionally	
Junior Resident	4 (5.0)
Senior Resident	17 (21.3)
Consultant	15 (18.8)
Medical officer	23 (28.8)
House officers	21 (26.3)

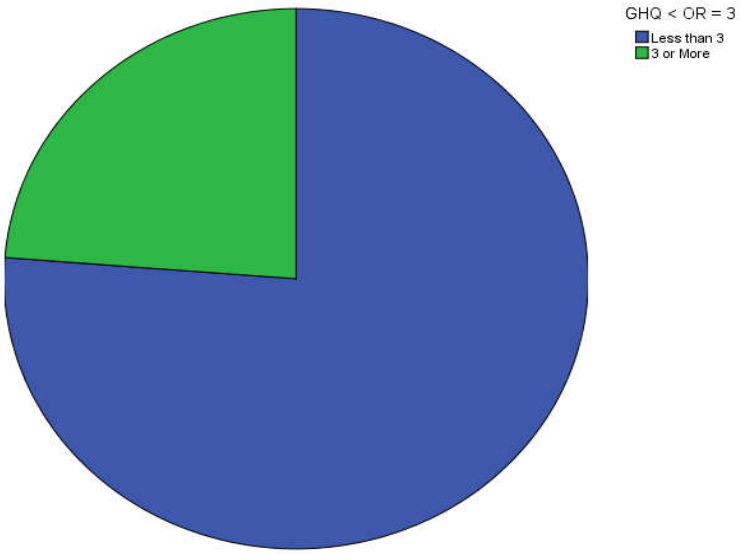

Fig. 1. A pie chart showing the distribution of GHQ scores of respondents

Table 2. Work stress and work related factors of respondents

Work ownership	**Frequencies**
Government Owned	75 (93.8)
Privately owned	5 (6.2%)
Hours of work	
≤5	3 (3.8)
6-10	64 (80.0)
11-15	10 (12.5)
16-20	3 (3.8)
Job supervision	
Yes	64 (80.0)
No	16 (20.0)
Relationship with co-workers	
Excellent	9 (11.3)
Very good	58 (72.5)
Good	11 (13.8)
Fair	2 (2.5)
Work Environment perceived as conducive	
Yes	72 (90.0)
No	8 (10.0)
Work dynamic stressors	
Narrow deadlines	35(43.8)
Unsupportive employers	17 (21.2)
Uncooperative colleagues	4 (5.0)
Unreasonable hours of work	10 (12.5)
Any other	14 (17.5)
Frustrations \Anger at work	
Frequently	6 (7.5)
Sometimes	60 (75.0)
Never	14 (17.5)
Reconsider Working in another environment	
Yes	32 (40.0)
No	48 (60.0)
Work duties associated stressors	
Increased Responsibility at work	47 (58.8)
A higher job designation	2 (2.5)
technical problems at work	14 (17.5)
Unrealistic time pressures	4 (5.0)
Lack of respect from colleagues, superiors or surbordinates	3 (3.8)
all of the above	6 (7.5)
None of the above	4 (5.0)
Perceived negative effect of Stress on work functioning.	
yes, to a large extent	35 (56.5)
No stress is inevitable	27 (43.5)
Employer stress	
Yes	11 (13.8)
No	69 (86.2)
Work Bullying	
Yes	24 (30.0)
No	56(70.0)
Feelings after work	
Exhausted	62 (77.5)
Happy/Excited	11 (13.7)
Indifferent	7 (8.8)

3. MATERIALS AND METHODS

This study was a cross-sectional study involving female medical doctors in Ilorin, Kwara State, Nigeria. Ilorin is an urban setting and serves as the capital city of Kwara State, one of the states in the North-Central geopolitical zone of Nigeria [9]. The Kwara state Chapter of the Medical Women's Association of Nigeria (MWAN) was contacted for a list of currently practicing female doctors in Kwara state. The MWAN is the umbrella body to which all female doctors in Nigeria belong. It is an association responsible for securing the welfare of female doctors in the country and has branches in almost every state of the country. About 208 members of this association are currently recognized as practicing in the state; but only 170 of this number were active members of the association who were practicing in either private or government owned hospitals within Kwara state-the study location.

3.1 Study Population

Participants were all consenting female doctors practicing within Kwara state in either privately owned or government hospitals or parastatals, who were present at the National Association Annual General Meeting of the MWAN held in Ilorin, the Kwara State Capital in June 2018. This gathering was regarded as the single largest gathering of female doctors in Kwara state and indeed all over Nigeria, in the year 2018 as it brought together many female doctors from across the state and other parts of country.

3.2 Inclusion and Exclusion Criteria

All consenting female doctors who were present at the gathering and who had been practicing for at least 6 months (either at the private or public sector) and resided or practiced within the state were included for the study. Female doctors who were retired or not actively practicing for other reasons or who had a previous or present history of mental illness or serious medical illnesses were excluded from the study.

Ninety (90) female doctors who met the inclusion criteria were approached for participation in the study at the conference venue but 10 declined, stating reasons of time constraints and lack of interest in the study. The response rate was 88.8%.

3.3 Sampling Technique

This was a total sampling as every member of the Kwara state Chapter of the MWAN who were present at the National Association Annual General Meeting of the MWAN held in Ilorin and who met the inclusion criteria and gave their written consent were recruited.

Table 3. Facilities for staff welfare in respondent's workplace

Annual leave	
Yes	75 (93.8)
No	5 (6.2)
Sick leave	
Yes	74 (92.5)
No	6 (7.5)
Maternity leave	
Yes	73 (91.2)
No	7 (8.8)
Presence of relaxation rooms	
Yes	29 (36.2)
No	54 (63.8)
Usage of relaxation room	
Daily	10 (12.5)
Once a week	2 (2.5)
Occasionally	12 (15.0)
Not at all	5 (6.2)
Presence of child care facilities	
Yes	44 (55.0)
No	36 (45.0)

3.4 Instruments

3.4.1 Semi-structured questionnaire

This was designed by the authors to assess for different factors associated with probable psychiatric morbidity in the study participants. Questions were adapted from factors documented by previous researchers and contained five sections such as bio-data, personal history, work related stress, family related history and self-care history of the participants.

3.4.2 General health questionnaire

This instrument was designed by Goldberg in 1972 in England as a self-administered questionnaire to screen for psychiatric morbidity in the community and in non-psychiatric clinical settings and has many versions [10]. The GHQ-12 has been found to be useful in measuring psychological distress in designated populations. This instrument has been validated for use in Nigeria by Abiodun, who recommended a cut-off of 3 for determining probable psychiatric morbidity [11,12].

4. RESULTS

The highest proportion of respondents (45%) was between the ages of 31 to 40 years, while only 13 percent of respondents were between ages 41 to 50 years. About twenty-eight percent were single, while fifty-two percent were married and all married respondents were in monogamous marriages. Seventy- five percent of respondents were of Yoruba ethnicity. About forty-four percent of respondents consisted of medical officers and house officers.

4.1 Work Stress and Work Relationships

In this study, about ninety- four percent of respondents worked in government –owned hospitals and establishments and most respondents worked between six to ten hours per day with about 3.8% worked more than 15 hours per day. Also, eighty percent of female doctors who participated in this study had their work supervised by superiors. Only two out of the eighty female doctors who participated in this study described their relationship with co-workers as fair, while the remaining seventy- eight respondents described their relationship with co-workers as excellent, very good and good. Narrow deadlines and unsupportive employers were reported by most respondents as work dynamics stressors, while increased responsibilities at work and technical problems at work such problems with performing procedures and understanding new techniques were reported by a high proportion of respondents as work duties -associated stressors. About sixty percent of respondents reported sometimes feeling frustrated and angry at work, with about forty percent actually considering working in a different environment entirely. More than half of respondents reported that stress impacted negatively on their work performance. Thirty percent of female doctors reported being bullied at work, with only five percent of those bullied reporting the bullies to a superior. Also, almost eighty percent of respondents reported feeling exhausted after work, while about nine percent reported feeling indifferent after work.

4.2 Presence of Facilities for Staff Welfare

In this study, the presence of facilities for staff welfare were assessed in respondents, which included if they were entitled to annual leave, sick leave and maternity leave, amongst others. More than ninety percent of respondents worked in hospitals that gave them access to annual leave, sick leave and maternity leave. Sixty- four percent of respondents worked in establishments and hospitals with no relaxation rooms, while about forty-five percent had no child care facility within the premises of their workplace.

4.3 GHQ -12 Scores of Respondents

Nineteen respondents (23.8%) scored three and above on the 12- item General Health Questionnaire signifying probable psychiatric morbidity, while sixty-one (76.2%) respondents had scored three and below.

4.3.1 Factors associated with GHQ scores in respondents

The results of this study showed that the following factors were significantly associated with the GHQ scores of the respondents and they included: the age of the respondent (x^2 =12.596, p=0.002), relationship with co-workers (x^2 =9.305, p =0.026), feelings of frustration and anger at work (x^2 = 6.939, p=0.031), reconsidering a change in work environment (x^2 =15.749, p=<0.001),views of negative effect of stress on work (x^2 =15.749, p=0.004) as well as

access to a maternity leave (x^2 =16-265, p=0.001).

4.3.2 Predictors of psychiatric morbidity in respondents

On logistic regression, only reconsidering working in another environment was shown as a significant predictor of probable psychiatric morbidity. Respondents who admitted to reconsidering working in another environment were almost eight times more likely to have a psychiatric morbidity than those who did not. (*P*=0.024, OR=7.963).

5. DISCUSSION

Professional stress reflects the direct and indirect consequences of the harmful impact of poor work environment and relationships as well as the unfilled economic and social expectations of the worker [13]. It has been documented by many researchers that female doctors frequently report being more stressed than their male counterparts and the sources of stress for the female doctor are myriad. Stress most times may then be a precursor of or a perpetrator of a mental illness.

A large proportion of female doctors who participated in this study was between the ages of 31-40 and was married. This is not surprising considering the age of the respondents as well as the Nigerian culture where the common age for marriage in females is most times put at 17 years and above [14]. Also, in this study, the largest proportion of respondents was made up of the house officers, medical officers and junior residents, who are considered junior doctors. The reason for this may not be far- fetched as this group of doctors usually makes up the largest number in most hospitals, not only in Kwara state, but all over the country [15]. This is possibly linked to the fact that residency and specialist training is very strenuous and fraught with various challenges, therefore those who make it to the specialist cadre are the select few who are usually of lesser number than those in the lower strata of the profession. A large percentage of doctors who responded worked in government owned hospitals and health facilities. This is not surprising as the government is still considered the largest employer of labour including doctors especially in a country like Nigeria [16] where the private health sector is still not yet well developed.

Almost forty percent of the respondents in this study reported a feeling of anger and frustration at their work, this is very close to what has been earlier reported by previous workers [17] and may be a reflection of the attendant stress of medical practice coupled with other challenges of medical practice in a low resource setting such as Nigeria. This may include lack of good equipments to work with, poor facilities for the doctors themselves, unnecessary bottlenecks in assessing health care for patients, poorly paid salaries just to mention a few.

More than twenty-three percent of respondents in this study had a GHQ score of 3 or more indicating a probable psychiatric morbidity in them. This may be reflective of the intense pressure and stress which women in a busy and demanding profession such as medicine go through in combining professional, family and societal demands [18]. The doctor herself is after all not a different species of human, and so has to undergo the same stresses of life and even much more than a non-doctor. This finding will therefore hopefully serve as a call for interventional measures to directly address mental health issues in female doctors, while taking into cognizance the peculiarities of their gender. The prevalence of 23.9% for probable psychiatric morbidity found in this study is however higher than that found in earlier researchers who examined psychiatric morbidity in both genders of doctors using the same instrument as used in this study. For instance, a study by Issa et al. [18] reported a prevalence of 14.9%, while a similar study done by Ogualili in Onitsha, Nigeria [19] reported a prevalence of 13.4% for depression among doctors, who were predominantly male. This difference in prevalence may most likely be accounted for by the differences in study population. It also worthy of note, that this percentage is also higher than the prevalence reported in the general population [20].

A greater proportion of female doctors in this study, who were less than 30 years of age had GHQ-12 scores of three or more signifying probable psychiatric morbidity. Although very few studies have been done specifically among female doctors in Nigeria, previous studies assessing probable psychiatric morbidity in doctors in Nigeria have reported younger doctors as having a higher odd of psychiatric morbidity [13]. Azmi et al. [21] in a study conducted among female doctors across four tertiary hospitals in Karachi, Pakistan, reported that female doctors who were less than 35 years old were more stressed than their older counterparts. The

reasons for higher GHQ scores in younger female doctors may be possibly linked to the fact that younger female doctors may be at the lower stratum of the medical profession and so may be saddled with heavier clinical duties which stress them and in turn causes psychological distress in them, thereby making them more prone to developing psychiatric morbidities later in life. Also, younger female doctors may more likely have younger children who still need regular supervision and care (if married) and may be saddled with more marital and child care duties unlike older female doctors. These duties may be a source of stress which may increase the likelihood of a probable psychiatric morbidity in them.

In addition, younger female doctors are likely to be relatively new or junior in the profession and therefore may find it more difficult to adapt to and cope with the demands of professional life such as attending revision courses in different parts of the country, writing professional exams e.t. c. than older female doctors who may have more personal experience in the profession and may have developed personal coping styles to the stress of work over time. Additionally, younger female doctors may be likely less paid than the older ones who may have reached the highest stratum of the medical profession and so have more intense financial burdens. Also, most individuals with mental illness have their first episode before 40 years [20].

This study also found that female doctors who worked more than 10 hours per day were six times more likely to have psychiatric morbidity than those who worked shorter hours A similar finding was reported in a recent study done by Fabiyi in resident doctors of both genders in University of Ilorin Teaching Hospital who reported that working long hours was associated with psychiatric morbidity in both male and female doctors working in a teaching hospital in Nigeria [22]. The reasons for this finding may be possibly due to the fact that working long hours may be associated with feelings of fatigue, tiredness and even reduced sleep in a doctor. This especially so in female doctors who may have to combine marital and child-rearing responsibilities with long working hours. This in turn may predispose the doctor to a likelihood of psychiatric illness in the future.

This study revealed that having no access to maternity leave at their place of work was significantly associated with low GHQ scores. This factor has been emphasized in an earlier study done in the same state in Nigeria as this study [18]. This is of particular importance, as it underscores the need for statutory leave periods for female doctors in order to help with coping

Table 4. Predictors of psychiatric morbidity in respondents

Variables	P-values	Odd ratio	Confidence interval
Age groupings			
Others	0.210	3.616	0.484 – 27.015
31 – 40	RC		
Hours of work classified			
Others	0.720	1.496	0.165 – 13.532
6 – 10	RC		
Relationship with co-workers			
Others	0.999	57442579.18	0.000 -
Excellent	RC		
Frustration /Anger at work			
Others	0.340	3.463	0.270 – 44.390
Never	**RC**		
Reconsider working in another environmen			
Yes	0.024*	7.963	1.313 – 48.287
No	RC		
Effect of stress			
Yes to a large extent	0.339	3.016	0.313 – 29.031
No , Stress is inevitable	RC		
Maternity leave			
No	0.148	9.150	0.457- 183.253
Yes	RC		

RC- Reference category

with the demands of work, as the leave period provides a period of rest and respite from the heavy demands of clinical practice.

This study also revealed that the type of work relationships which the doctor had with other colleagues was significantly associated with psychiatric morbidity. Although this did not remain significant on logistic regression, this finding is similar to that found in other studies done in other climes which emphasized the importance of a good working relationship and its effect on psychological health [23]. The reason for this finding may not be far- fetched, as a good relationship with other co-workers will most likely increase the worker's enthusiasm for work and help reduce the psychological feeling of being overworked or frustrated at work [17]. Of particular importance is the finding that respondents who agreed to having a wish of working in a better environment were almost eight times more likely to have a psychiatric morbidity. This finding is much more important now, considering the current brain drain in the country's health sector, with many doctors immigrating out of Nigeria in search of greener pastures. This finding may be explained by the fact that female doctors who expressed a wish to work in a better environment are those who are possibly very stressed by the dynamics of practice and the day to day living in a country with few amenities like Nigeria and may feel frustrated and angry and this may form a template for a psychiatric illness.

6. CONCLUSION

These findings underline the need to pay attention to the welfare of female doctors and a need for routine evaluation this figure is higher than those reported when whole population of doctors was studied without particular preference for their gender. This figure is also higher than those reported in the general population. The personal and work related factors identified as being significantly associated to GHQ scores in this study included age of the patient, relationship with co-workers, feelings of frustration and anger at work , reconsidering a change in work environment ,views of negative effect of stress on work as well as access to a maternity leave. These findings underline strongly the need for particular and conscientious attention to be paid to the welfare of female doctors as pertains to their work environment and dynamics. It also points out a need for routine, frequent psychological evaluation for doctors to help in quickly identifying those who may need psychological support and intervention. All these will help in improving their quality of life and empower them to deliver better health care to their patients.

LIMITATIONS OF THE STUDY

This study was performed in a cross sectional manner and so causality could not be established.

CONSENT

In all, eighty female doctors from both private and public hospitals and health organizations within the state gave their consent and participated in the study.

ETHICAL APPROVAL

The study was performed in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki [12].

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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