SELF-MEDICATION AMONGST HOSPITAL STAFF IN A TERTIARY HEALTH FACILITY IN SOUTHERN NIGERIA

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Abstract

Self-medication is practiced globally, despite restrictions and effective regulation in some countries. This practice has been reported widely among healthcare providers, which could result in drug abuse and misuse.The study intended to assess the Self-medication practice amongst hospital staff in a tertiary health facility in Southern Nigeria. Methods: This was a cross-sectional descriptive study conducted in November 2021, Participants were selected using simple random sampling following proportionate to size allocation. Data was collected from 288 staff members of the Federal Medical Centre, Yenagoa using a semi-structured, pre-tested, self-administered questionnaire. Collected data were analysed with IBM Statistical Product and Service Solutions version 24.0. Test of significance between variables was done with Chi-square test, (p-Value <0.05). Results:Three hundred health professionals were selected for this study, 288 completed questionnaires were retrieved giving a response rate of 96.0%. A majority 184 (63.9%) of the participants were female, about a third 90 (31.3%) were nurses by profession and a vast majority 206 (71.5%) were clinical staff. Self-medication was reported in 172 (59.7%) of the study participants in the preceding year following this study. Factors that influenced self-medication included their profession (pharmacist, Doctors and nurses) ($\chi 2$ = 42.763, P = 0.000), area of work (clinical staff) ($\chi 2$ = 28.272, P = 0.000), familiarity with diagnosis and treatment modalities ($\chi 2$ = 15.192, P = 0.000) and thinking they can assess their symptoms better than anyone else ($\chi 2$ = 8.488, P = 0.004). Conclusion: The prevalence of self-medication was high among our study participants,

particularly among the clinical staff; the pharmacist, Doctors and nurses. Creating awareness, educating the medical community and enforcing restrictions and regulations on access to prescription-only drugs could begin to reverse this harmful practice.

Keywords: *Self-medication, Hospital Staff, Tertiary Health facility, Southern Nigeria*

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Introduction

Measures taken to achieve good health and prevent illness may vary based on individuals' attitudes, exposure, and experiences. Beliefs, emotions, thoughts, and education level significantly influence how individuals understand and address illness. Self-care have come to be accepted as what people do for themselves to achieve and maintain health, prevent illness and deal with diseases. This concept encompasses hygiene, nutrition, lifestyle, physical activity, risk avoidance (e.g. smoking, obesity), and responsible self-medication with non-prescription medicines.[1]

Self-medication plays an important role in self-care, as it involves individuals responsibly choosing and using over-the-counter medicines to address their self-recognized illnesses or symptoms. It dates back in history as the predominant measures people took to alleviate their illness or discomfort.[1] The practice of self-medication is prevalent globally in both developed and developing countries and may even exceed the use of prescribed medication.[2,3]

Self-medication has conventionally been defined as "the taking of drugs, herbs or home remedies on one's initiative, or on the advice of another person, without consulting a doctor." Self-medication refers to using drugs to treat symptoms or disorders that you have diagnosed yourself, or using a prescribed drug for a chronic or recurring condition without proper medical supervision. This can include using herbal remedies, re-using prescription drugs, or obtaining prescription-only drugs without consulting a doctor.[3,4] It is practiced globally, despite restrictions and effective regulation in some developed countries,[4] this practice is even more so among healthcare providers (HCP), who seem to be more conversant with disease symptoms, treatment, drug prescription and dosages.

Research has shown that many HCP engage in self-care through self-prescription and self-medication.[5–8] no sector in the healthcare community is immune to drug abuse or misuse. Prevalence of self-medication among healthcare providers ranged from 54.4% to 100% in developing countries;[5,8–14] physicians and pharmacists have been implicated as the worst culprits.[13,15] A study done amongst doctors and nurses in Pakistan noted a very high prevalence of self-medication (100% and 99.7%, respectively).[5] A similar study conducted in a tertiary health facility in South-western Nigeria reported high rates (61.8% and 78.3%) of self-prescription and self-medication respectively.[7] Surveys across Nigeria, have reported prevalence ranging from 52.1% to 96.2%.[8,10,16]

In low and middle-income countries, factors such as limited access to healthcare, shortage of trained HCP, low quality of healthcare, poor health-seeking behaviour, easy access to medications, and patients' misconceptions contribute to higher self-medication practices among the general public. While for HCPs familiarity with illnesses, diagnosis and treatment regime and the perceived severity or mildness of illness were the main reasons for Self-medication.[10,11,14,15] "It has been found that inappropriate self-medication is associated with poor health-seeking behaviour, as well as the inappropriate and irrational use of medicines.[14] Several studies have shown that inappropriate self-medication leads to the wastage of resources, resistance to pathogens, and serious health hazards such as drug reactions, prolonged suffering, under or overdosing, drug dependence, missed diagnoses, and delays in receiving appropriate treatment,[4,10] other issues reported included the incorrect selection of antibiotics, inadequate dosage, and unnecessary medication.[11,13]

Surveys of Self-medication among HCWs is of utmost importance as this segment of the population represents the human resources for health, However, this area is largely under-researched in low-income countries. Some studies have been carried out in Nigeria among specific segments of this occupational group, such as doctors, pharmacists, and nurses. The results of these studies are in line with findings from similar studies conducted in other regions. There is a dearth of knowledge of the topic amongst the entirety of the hospital staff both the clinical and non-clinical staff. The study intends to assess self-medication practices among the entire hospital staff and to identify the reasons for this practice at a tertiary health facility in Southern Nigeria. This information is essential for guiding the development of interventions aimed at promoting responsible self-medication practices among healthcare workers.

Methodology

This was a descriptive cross-sectional study amongst all the staff employed for at least 6 months in Federal Medical Centre, Yenagoa, a

tertiary hospital in Bayelsa state in South-south Nigeria. It is a 520-bedded hospital that provides comprehensive health care services to the people of Bayelsa state and neighbouring Rivers and Delta States. At the time of the study, the hospital had 25 clinical and 17 non-clinical departments, totalling 42 departments. About 1,208 clinical staff (doctors, nurses, laboratory scientists/technicians, pharmacists, radiographers and Health attendants amongst others) and 243 non-clinical staff (administrative staff, accountants, drivers, nutritionists, and health record officers).

The desired minimum sample size was calculated using the Cochrane formula for cross-sectional studies: ($n = Z^2PQ/d^2$)[17] where 'n' is minimum sample size, Z is standard normal deviate at 95% confidence interval: 1.96; 'P' is prevalence 20.5% from a previous study[7] and 'Q' is the complementary proportion for 'P' given as 1 – 'P' which is 0.795. 'd' is acceptable margin of error or degree of precision set at 5% (0.05) for this study. To account for non-response and incorrect entries, an upward adjustment of 10% was made giving a sample size of 278 participant. Proportionate to-size allocation was done to determine the number of Participants per department while simple random sampling was done to select participants.

Data was collected from 288 respondents using a self-administered, structured, questionnaire adapted from previous studies.[5–7,18] The Questionnaire consisted of three sections: socio-demographic data of respondents, self-medication practices of health workers and its enabling factors, reasons for and factors associated with self-medication practices.

The completed questionnaires were checked for accuracy and completeness at the end of each day of data collection and entered into Statistical Product and Service Solutions (SPSS) software version 24 for data cleaning and analysis. Qualitative variables such as gender, age group, religion, marital status, and work area of participants were presented as frequencies and percentages while quantitative variables such as age and duration of work experience were presented as mean and standard deviation. The proportion of Self-medication practices was determined using percentages, and the relationship between self-medication practice (dependent variable) and socio-demographic characteristics, professional factors, enabling and prohibitive factors (independent variables) was explored using the Chi-square test of proportion. The level of significance was set at a p-value of less than 0.05.

Results

Socio-Demographic Characteristics of Respondents

Three hundred healthcare provider were selected for this study and 288 completed questionnaire was retrieved giving a response rate of 96.0%. Table 1 reveals that a majority 184 (63.9%) were females and the mean age of the study participants was 41.5±7.8 years. Over half 154 (53.5%) have had less than 10 years' work experience while a little over a third 100 (34.7%) have worked between 11 – 20 years. About a third 90 (31.3%) of the respondents were nurses by profession and a vast majority 206 (71.5%) were clinical staff.

Table 1: Socio-demographic characteristics and Professional features of the respondents.

Characteristics	Frequency (n=288)	Percent (%)
Age	16	5.6
21-30 years	121	42.0
31-40 years	114	39.6
41-50 years	37	12.8
51-60 years		
Mean age (SD)	**41.5± 7.8**	
Gender		
Male	104	36.1
Female	184	63.9
Religion		
Christianity	282	97.9
Others	6	2.1
Profession		
Nurses	90	31.3
Doctors	41	14.2
Admin Staff	32	11.1
Health Attendants	24	8.3
Pharmacist	17	5.9
Med Lab Scientists	12	4.2
Other*	67	24.9
Area of work		
Clinical	206	71.5
Non-clinical	82	28.5
Marital status		
Single	66	22.9
Married	222	77.1
Local		

government of practice		
FMC Yenagoa	251	87.2
FMC Otuoke	37	12.8
Years of work experience		
<10years	154	53.5
11-20 years	100	34.7
>20years	34	11.8

***** *includes Optometrists, Physiotherapists, Health information and Records, ICT, Works dept. Mortuary, Social welfare, Dieticians etc*

Self-Medication Practices

Self-medication was reported in 172 (59.7%) study participants in the preceding year following this study, with about 76 (44.2%) of those self-medicating, doing so, for more than one week and 24 (14.0%) self-medicating until symptoms get worse. Most, 130 (45.1%) of the respondents think self-medication is dangerous while a little more than a quarter 81(28.1%) thinks it's helpful. About a third, 90(31.3%) of the respondents prefer seeing a doctor before taking any medication, while about two-thirds 183(63.5%) admit adjusting their prescription according to their knowledge of medical sciences. However, 210(72.9%) disagree that experience as a health worker and familiarity with illness and treatment is enough to treat oneself, 209(72.6%) disagree that they can assess their symptoms better than anyone else. Table 2

Table 2: Self-medication practice of health workers and Enabling factors.

Variables	**Frequency (N)**	**Percent (%)**
Do you self-medicate in times of illness?		
Yes	172	59.7
No	116	40.3
If yes, for how long before seeing a doctor?	N=172	
Less than 1 week	96	55.8
1-2 weeks	46	26.7
3-4 weeks	3	1.7
More than 4 weeks	3	1.7
Till symptoms get severe	24	14.8
In your own opinion, how helpful is self-medication to treat self?		
Yes, helpful	81	28.1
Neutral	77	26.7
No, dangerous	130	45.1
I usually see a doctor before taking any medication		
Always	90	31.3
Sometimes	164	56.9
Rarely	33	11.5
Never	1	0.3
I make adjustments to my prescription on my knowledge as a HCP		
Always	53	18.4
Sometimes	130	45.1
Rarely	1.5	36.5
Never		
Knowledge as a HCP is enough to treat myself		
Agree	78	27.1
Disagree	210	72.9
I can thoroughly assess my symptoms better than anyone		
Agree	79	27.4
Disagree	209	72.6
Do you have challenges in seeing a doctor?		
Yes	64	22.2
No	224	77.8

Reasons for Self-Medication

The common reasons cited for self-medication by the respondents included; financial cost 20.5%, long waiting time 52.4%, workload with no spare time 24.3%, Experience and familiarity with illness and treatment modalities 27.1%, and believing that they can assess their symptoms better than anyone else 27.4% as shown in Figure 1

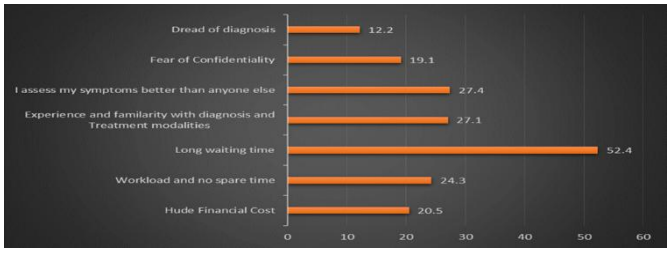

Figure 1: Reasons for Self-medication among respondents.

Factors influencing self-medication

We found that the proportion of self-medication was highest amongst the Pharmacists (94.1%), Doctors (92.7%) and nurses (71.1%) and this was significant ($\chi 2 = 42.763$, P = 0.000). Respondents working in the clinical area had a higher proportion 69.4% for self-medication than those working in the non-clinical areas 35.4%, this was also significant ($\chi 2 = 28.272$, P = 0.000). Age, sex, marital status and years of work experience were not significantly associated with self-medication. Other factors include experience and familiarity with diagnosis and treatment modalities ($\chi 2 = 15.192$, P = 0.000), thinking they can assess their symptoms better than anyone else ($\chi 2 = 8.488$, P = 0.004), difficulty seeing a doctor ($\chi 2 = 7.984$, P = 0.005), workload with no spare time ($\chi 2 = 13.659$, P = 0.000). (Table 3)

Table 3: Factors associated with self-medication.

Variables	**Self-Medication**		**χ^2**	**pValue**
Age	**Yes n=172**	**No n=116**		
21-30	10(62.5)	6(37.5)	1.013	0.798
31-40	76(62.8)	45(37.2)		
41-50	65(57.0)	49(43.0)		
51-60	21(56.8)	1643.2		
Sex				
Male	59(56.7)	45(43.3)	0.606	0.436
Female	113 (61.4)	71(38.6)		
Marital Status				
Married	138 (62.2)	84(37.8)	2.397	0.122
Single	34(51.5)	32(48.)		
Professional group				
Doctor/Dentist	32(92.7)	3(7.3)	42.763**	0.000*
Nurse	64(71.1)	26(28.9)		
Pharmacist	46(94.1)	1(5.9)		
Med-lab Scientist	8(66.7)	4(33.3)		
Admin staff	10(31.3)	22(68.8)		
Health attendants	37.5	15(62.5)		
Others*	27(37.5)	45(62.5)		
Area of work				
Clinical	143 (69.4)	63(30.6)	28.272	0.000*
Non-clinical	29(35.4)	53(64.6)		
Years of work experience				
<10years	84(54.5)	70(45.5)	3.977	0.137
11 years	67(67.0)	33(33.0)		
>20years	21(61.8)	13(38.2)		
Experience and Familiarity with diagnosis and Treatment modalities				
Yes	61(78.2)	17(21.8)	15.192	0.000*
No	111 (52.9)	99(47.1)		
I assess my symptoms better than anyone else				
Yes	58(73.4)	21(26.6)	8.488	0.004*
No	114(54.5)	95(45.5)		
Difficulty seeing a Doctor				
Yes	48(75.0)	16(25.0)	7.984	0.005*
No	124(55.4)	100(44.6)		
Huge Financial Cost				
Yes	37(62.7)	22 (27.7(	0.276	0.600
No	135(57.3)	94(42.7)		
Long waiting time and delays				
Yes	95(62.9)	56(3701)	1.334	0.246
No	77(56.2)	60(43.8)		
Workload and no spare time				
Yes	55(78.6)	15(21.4)	13.659	0.000*
No	117(35.7)	100(46.3)		

*Statistically Significant ** fishers exact test

Discussion

This study investigated self-medication practices among staff of a tertiary health facility. Although self-medication is practiced globally, it is more prevailing in some developing nations like ours where drug regulatory mechanisms are not sufficiently enforced. This has led to indiscriminate self-medication, even in cases of severe illness, which can be deleterious to one's health.

Our study reveal a prevalence of 59.7% self-medication practice amongst our study participants, which is comparable to rate from other Nigeria studies[9] but lower than rates that have been reported in other studies from other developing countries where rates ranged from 70% to 100%.[5,13,15]. This variance could be due to demographic and socioeconomic dissimilarity across the study population and geographical location. Another reason could be because Nigeria has an evolving social health insurance scheme that caters for all HCWs in Tertiary health facility unlike some other developing countries reducing

the need for self-medication. A little below half (44.2%) of the study participants who self-medicated, did so for more than one week and 14.0% self-medicated until symptoms get worse, this is quite disturbing, as this is enough time for illness that could have been easy to manage, could now get worse and complicated and also posing the possibility for drug resistance.

Females are more apt to respond to signs and symptoms of disease, and thus are quick to self-medication to relief these symptoms, even before they see a doctor.as was documented in this study and some other studies[9,13] where Self-medication was notably higher amongst the females.

Self-medication was most prevalent among pharmacists and Doctors, at 94.1% and 92.7% respectively, consistent with other studies.[8,15,19] This is conceivable because they may tend to believe they can self-treat because of their exposure to the what, why, and how of diseases and medications. However, this belief may be erroneous as it may lead to either an over or under-dosing on medication or even taking unnecessary medication, sometimes this has also led to drug addictions and invariably abuse. The prevalence of self-medication was also notably high amongst Nurses (71.1%) in this study with a majority of nurses being females. This practice by healthcare personnel calls for concern as it implies an unhealthy trend for healthcare practitioners.

A key finding in this study was that self-medication practices was more among the clinical staff than the non-clinical staff, this difference was also found to be statistically significant. Thus, buttressing the finding from other studies; that the knowledge of disease conditions, diagnosis, treatment and access to medication which is presumed to be higher amongst the clinical staff than the non-clinical staff, could actually encourage the practice of self-medications.

Notable in this study is the fact that almost two-thirds of the respondents agreed to adjusting their prescription even after seeing a doctor, this they do not categorize as self-medication and was attributed to the fact that most of them claimed to know about their illness and stated that they could assess their symptoms better than anyone else, thus if they felt that the doctor they saw didn't address their issue properly, they tend to adjust the doctor's prescription to suit their judgment of the illness and what the appropriate drug or dosage should be. Humorously majority of respondents disagrees that experience as a health care provider is enough to treat self. As only 45.1% of the respondents believed self-medicating was acceptable, which is consistent with studies conducted in Pakistan and Nigeria.

In addition, as health workers, another reason for self-medication apart from knowledge of diseases/treatment, is their ease of access to drugs. When compared with the general public, the healthcare workers can easily obtain a variety of medicines since they can either prescribe medicines for themselves or ask a colleague to make a prescription for them; this is because they have acquired more knowledge and work experiences related to disease conditions and treatment options. However, when their knowledge of diagnosis and convenience of self-medication are executed under the improper patterns of medicine use, indiscriminate drug consumption of non-lethal amounts of medicines are often the case leading to drug resistance and abuse.

Conclusion

The prevalence of self-medication was high among our study participants, particularly among the clinical staff; the pharmacist, Doctors and nurses. Ability to assess one symptoms and ease of access to medicines contributed significantly to this practice, thus highlighting the importance of promoting responsible and informed self-care practices within the healthcare community.

Apt strategies are necessary to restrain this potentially harmful practice by creating awareness, educating the medical community and enforcing restrictions and regulations of access to prescription only drugs.

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The authors declare no conflict of interest.

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