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Self-Medication Practices and Associated Factors among Nurses Working in Jigawa State, Nigeria

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Abstract
Self-medication is a contemporary public health issue because it has potential risks associated with many underlying health conditions that can lead to death. Despite all this, it is a common practice in both developed and developing countries. The study assessed the Self-medication Practices and associated factors among Nurses working in Birnin Kudu Metropolis, Jigawa State, Nigeria. A cross-sectional descriptive research design was used for the study to collect data from 246 respondents using a systematic sampling technique. A structured self-administered questionnaire was used as a tool for data collection. Data was analyzed using SPSS version 25. The result revealed that 62.8% of the respondents practised self–medication. Analgesic drugs were most commonly used in self–medication (66.2%), followed by Anti-allergy ((38.4%), Antibiotics (38.4%), Antipyretics (23.9%), Anti-diarrheal (20.6%), Antacid (17.3%), Vitamins (4.1%), and eye drops (2.1%). The respondents identified easy access to drugs, availability of drugs, easy relief of simple illnesses, fear of long queues in the health centres, high cost of care in the health centres, lack of access to health centres and peer group influence as the factors influencing their decision to engage in self-medication. It can be concluded that the level of self-medication is higher among Nurses. It is recommended that there should be increasing awareness and education through seminars and workshops at all levels regarding the importance of professional consultation before drug use.

Keywords: Self-medication Practice, Factors Influencing, Nurses, Perception of Self-Medication
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Introduction

Every day, people are practising self-medication in the form of self-care of our health and is a popular practice globally (Vizhi *et al.*, 2010, WHO 1998; WHO, 2000; WHO, 2021). Self-medication is defined as the selection and use of medicines by individuals to treat self-recognized or self-diagnosed conditions or symptoms, or the intermittent or continuous use of a prescribed treatment for chronic or acute diseases or symptoms. (Ruiz, 2010; Al-Qahtani et al., 2022). This is a contemporary public health issue because it has potential risks associated with many underlying health conditions that can lead to deaths (WHO, 2022). Despite all this, it is a common practice in both developed and developing countries (Razan et al., 2022; Al-Qahtani et al., 2022) and frequent in countries where it is easy to buy prescription medications without a prescription and where pharmacy practice standards and laws are

not enforced in accordance with applicable recommendations (Alam et al., 2015; Sawalha, 2008; WHO, 2021).

Economic, political, and cultural factors have stimulated a constant increase in self-medication worldwide, turning this practice into a major public health problem (Loyola et al., 2004). Consumption of drugs without a prescription is triggered by factors such as the availability of drugs, easy access to drugs without time limits, improved supply of different varieties of medicines at affordable prices, and convenience in access to drugs compared to seeking treatment in the healthcare facilities (Smith, 1996). Most self-medication practices are triggered by relatively long waiting times in health facilities, difficulties in securing an appointment with physicians, frequent closures of health facilities, recurrent stock-outs of essential medicines, and delays in getting treatment during emergencies (Parulekar et al., 2016).

Other factors influencing the frequency of self-medication in previous studies are age, educational level, family attitudes, advertising of drug manufacturers, legislation regulating the dispensing and sale of drugs, previous experiences with the symptoms or disease, and significance attributed to the disease (James et al., 2006). One of the most common reasons for which people self-medicate is the convenience of going to a pharmacy rather than seeing a doctor and avoiding the cost of hospital treatment (Kassie et al., 2018). People may practice self-medication for several reasons, like the lack of health services, poverty, ignorance, misbelief, excessive advertisements of drugs, and availability of drugs in establishments other than pharmacies (Lassie et al., 2018).

For healthcare workers, research has revealed that the circumstances and the environment in which they work predispose them to accessing drugs during their routine work. Although majority of the healthcare workers may be knowledgeable about the dangers posed as a result of self-medication, most of them find solace in self-medication especially when faced with work-related stress, pressure, discomfort, and anxiety (Omolase et al., 2011, Rotenberg, 2009). Recently, a study by Ibrahim et al., (2022) revealed that 94.3% of the respondents practiced self-medication.

Previous research showed that medical students and healthcare professionals are facing difficulties when seeking health care for themselves (Brimstone, et al. 2007), partially because of the competitive environment they are exposed to, where commitment and regularity in studying or work, and thus good health, are required (Roberts, et al. 2001).

In Northern Nigeria, studies have been conducted among pregnant women and security personnel (Ibrahim et al., 2022; Ibrahim et al., 2022). However, to the best of the researchers' knowledge, the study has never been conducted on Nurses, hence the need to conduct the study on self-medication practices and associated factors among Nurses working in Jigawa State, Nigeria.

Materials and Methods

Design: A cross-sectional descriptive research design was used in this study to find out the self-medication practices, perceptions, factors influencing self-medication, and commonly used drugs for self-medication among Nurses at healthcare facilities.

Setting & Population: The study was conducted at Federal Medical Center Birnin Kudu, Jigawa State, School of Nursing Birnin Kudu and General Hospital Birnin Kudu respectively. The study population comprises all Nurses at the facilities.

Sampling: The Yamane Formula for sample size estimation was used to determine the appropriate size for the study and was established at 242 respondents. 10% was added to account for attrition which raised the final sample size to 503 respondents. A systematic sampling technique was used to enroll the respondents through random sampling, serving as the sampling frame.

Instrument for, and Method of, Data Collection: A pretested questionnaire was used to collect data from the respondents. The instrument has five sections: Section A: Demographic profile with seven items on age, gender, level of education, religion, marital status, year of experience, and place of work, Section B: practice of self-medication with six items, Section C: factors influencing self-medication with seven items, Section D: perception of self-medication with eight items and Section E: medications used for self-medication with nine items. Data collection was conducted over two (2) weeks at an average time of 15-20 minutes to fill the instrument according to rule of thumb. Out of 246 questionnaires distributed, 242 were successfully retrieved.

Data analysis: Data collected was entered and analyzed using SPSS V. 25. Frequency distribution tables were used to analyze the socio-demographic characteristics of the respondents, the practice of self-medication, factors influencing self-medication, perception of self-medication and medications used for self-medication. For the perception of self-medication practices (a 5-point Likert's questionnaire was used); the mean was calculated to determine the positive or negative perception of the respondents concerning each factor; and a mean score of 3.0 was used as a reference mean, where a mean score of ≥3.0 indicates that the respondents generally have positive perception while meaning below the reference indicates negative perception.

Ethical Consideration: Ethical clearance was obtained from the Jigawa State Health Research Ethics Committee with the assigned number JGHREC/2022/088, and informed consent was obtained from each respondent before the administration of the questionnaire, the aim of the study was explained and the respondents were fully assured that all responses would be treated with confidentiality.

Results

Respondents' Socio-Demographic Characteristics

The findings from the study show that 43.4% of the respondents were between the ages of 26-30 years, (11.1%) were of 31 years and above, and 68.1% were males. Most of the respondents (78.9%) practice Islam, and more than half (65.2%) are married. The majority of the respondents (68.1%) were diploma holders, with 40.2% having 6-10 years of experience, and 40.2% working at the School of Nursing Birnin Kudu (SON BKD) (Table 1).

Table 1: *Distribution of Respondents by Socio-Demographic data (N=242)*

Variables	Frequency (n)	Percentage (%)
Age (years)		
• <21	43	17.8
• 21-25	67	27.7
• 26-30	105	43.4
• 31 and above	27	11.1
Gender		
• Male	145	68.1
• Female	97	31.9
Religion		
• Islam	160	78.9
• Christianity	82	21.1
Educational level		
• Diploma	145	68.1
• BNSc	57	21.8
• MSc/PhD	40	10.1
Marital status		
• Single	135	65.2
• Married	107	34.8
Years of experience		
• <5	45	24.5
• 6-10	109	40.2
• >10	88	35.3
Place of work		
• FMC BKD	45	24.5
• General Hospital BKD	85	35.3
• SON BKD	112	40.2

Distribution of Respondents by Level of Practice of Self-Medication

From Table 2, the majority (91.3%) of the respondents knew about self-medication, with 40.4% reported radio as the source of information. Most (62.8%) of the respondents reported their level of practice of self-medication as "anytime I am sick". Pharmacy (40.4%) and private clinics (24.7%) were the most common source of drugs. Most of the reasons for self-medication were "to cure minor ailment" (37.1%), long queue at the hospital (21.6%), and Sufficient pharmacological knowledge (16.5%) to treat malaria (62.8%), headache (16.5%) and Cold/Flu (12.4%).

Table 2: *Distribution of Respondents by Level of Practice of Self-Medication (N= 242)*

Variable	Frequency	Percentage (%)
Knowledge about self-medication		
• Yes	221	91.3
• No	21	8.6
Ways information obtained		
• Radio	98	40.4
• Television	43	17.8
• Newspaper	66	27.3
• Others	35	14.5
Level of practice of self-medication		
• Anytime when I am sick	152	62.8
• Anytime I feel	30	12.4
• Only when I didn't have money to visit the hospital	40	16.5
• When am angry	20	8.3
Sources of drugs for self-medication		
• Home	0	0
• Pharmacy	97	40.4
• Private clinic	60	24.7
• Government health centres	40	16.5
• Drug hawkers	23	9.4
• Multiple responses	22	9.0
Reasons for self-medication		
• To cure minor ailments	90	37.1
• Sufficient pharmacological knowledge	40	16.5
• Long queues at the hospital	52	21.6
• It is less expensive	20	8.3
• Multiple responses	40	16.5
Self-medication is used to treat		
• Headache	40	16.5
• Malaria	152	62.8
• Cold/flu	30	12.4
• Others	20	8.3

Distribution of Respondents by Perception of Self-Medication

From Table 3, the respondents have a positive perception of self-medication with an overall mean score of 3.56. The items in which the respondents show positive perception are Self-medication is a form of self-care (mean=3.93), it is influenced by several factors(mean=4.07), it provides quick relief of symptoms (mean=3.70), Self-medication saves time (mean=3.90), Self-medication is unsafe and could affect health (mean=3.91), and it is used to treat self-recognized

illnesses/symptoms (mean=4.05). The table also shows that the respondents have a negative perception that Self-medication should be encouraged with a mean score of 2.42 and Self-medication is common in Nigeria with mean score of 2.46.

Table 3: *Distribution of Respondents by Perception of Self-Medication (N= 242)*

VARIABLE	S A	A	U	D	S D	MN	Remarks
• Self-medication is a form of self-care	121(50%)	53(21.9%)	10(4.1%)	47(19.4%)	11(4.5%)	3.93	Positive
• Self-medication should be encouraged	27(11.1%)	32(13.2%)	3(1.2%)	136(56.1%)	44(18.1%)	2.42	Negative
• Self-medication is influenced by several factors	113(46.6%)	87(35.9%)	0(0%)	31(12.8%)	11(4.5%)	4.07	Positive
• Self-medication provides quick relief of symptoms	102(42.1%)	72(29.7%)	2(0.82%)	34(14.0%)	32(13.2%)	3.70	Positive
• Self-medication saves time	97(0.4%)	103(42.5%)	0(0%)	5(2.5%)	37(15.2%)	3.90	Positive
• Self-medication is unsafe and could affect health	81(33.4%)	118(48.7%)	3(1.2%)	21(8.6%)	19(7.8%)	3.91	Positive
• Self-medication is used to treat self-recognized illnesses/symptoms	130(53.7%)	62(25.6)	0(0%)	33(13.6%)	17(7.1%)	4.05	Positive
• Self-medication is common in Nigeria	7(2.8%)	75(30.9%)	12(4.9%)	79(32.6%)	168(28.0%)	2.46	Negative
Overall Mean						3.56	Positive

Distribution of Respondents by Perceived Factors Influencing Self-Medication

As presented in Table 4, the majority (66.9%) of the respondents reported easy relief of simple illness as the main factor that prompts them to self-medication, followed by 66.2% of the respondents choosing the availability of the drugs and easy access to the drugs as their factors, and 61.9% stating the high cost of care in the health centres as the factor influencing their self-medication habits.

Table 4: *Distribution of Respondents by Perceived Factors Influencing Self-Medication (N= 242)*

Variables	Yes	No
• Availability of the drugs	160(66.2%)	82(33.8%)
• Easy access to the drugs	160(66.2%)	82(33.8%)
• Lack of access to health centres	90(37.2%)	152(62.8%)
• High cost of care in the health centres	150(61.9%)	92(38.1%)
• Fear of long queues in the health centres	152(62.8%)	90(37.2%)
• Easy relief of simple illnesses	162(66.9%)	80(33.1%)
• Peer group influence	50(2.6%)	192(79.4%)

Distribution of Respondents by Medications used for Self-Medication

Table 5 below depicts that analgesics (66.2%), anti-allergy (38.4%), antibiotics (24.7%), and anti-emetics (24.7%) were mostly used for self-medication by respondents. Very few (2.1%) respondents used eye drops.

Table 5: *Distribution of Respondents by Medications used for Self-Medication (N= 242)*

Variable	Yes	No
• Antibiotics	60(24.7%)	182(75.3%)
• Analgesics	160(66.2%)	82(33.8%)
• Antipyretics	58(23.9%)	184(76.1%)
• Antacids	42(17.3%)	200(82.7%)
• Anti-diarrheal	50(20.6%)	192(79.4%)
• Anti-allergy	93(38.4%)	149(61.6%)
• Anti-emetics	60(24.7%)	182(75.3%)
• Vitamins	10(4.1%)	232(95.9%)
• Eye drops	5(2.1%)	237(97.9%)

Discussion of Findings

The patterns of socio-demographic characteristics among the respondents in this study were found to be similar to those observed in a study conducted in Northern Nigeria by Ibrahim et al. (2019), where the ages of respondents were mainly within the range of 24-35 years, similar to this study's findings where 43.4% of the respondents were between the ages of 26-30 years. This shows that respondents are in their youthful age, and as such, that could give them more motivation to work hard to impress people around them. Same as in the study by Ibrahim et al. (2019), the majority of respondents were males, most practised Islam, were of the Hausa ethnic group, and the majority were married. This is because the study setting is located in the Muslim dominant part of the Country whose cultural affiliations encourage early marriage, irrespective of the tribe and most are of the Hausa tribe.

Most 91.3% of the respondents knew about self-medication, this is in line with the study conducted by Lawan et al., (2013), which reported that about 65% of adults are aware and practice SM. More than half of the respondents from this study practised self-medication anytime they were sick, most practice self-medication to cure minor ailments, with a few of them having other reasons like sufficient pharmacological knowledge, the drug being less expensive and long queue at the hospital. This is similar to the findings of Karthik and Gopalakrishnan, (2015) whose study found that practice for self-medication is majorly to cure minor illnesses, due to escalating health care costs, lack of adequate time to visit a physician, prior experience in using a drug and long waiting time to visit a qualified practitioner. This study also supports Babatunde (2016) who shows that the factors that influence self-medication practice are mild sickness, knowledge of diagnosis, financial problems, and lack of time. The majority of the respondents in

this study use analgesics for self-medication and most of them considered headache as a condition treated with self-medication. This is similar to the findings in the study conducted by Gutema et al., (2011) which discovered that Paracetamol and NSAIDs were the two most frequently consumed medications where common conditions treated are headache, followed by cough/common cold.

The findings of this study revealed a positive perception of self-medication among the respondents and that Self-medication is perceived as a form of self-care that is influenced by several factors, provides quick relief of symptoms but is unsafe and could affect health, and Self-medication is used to treat self-recognized illnesses/symptoms. The positive perception could be due to the professional background of the study participants. This finding is consistent with Donald et al., (2016), Bitrus et al (2017) and Akande-Sholabi et al., (2021) whose findings indicate a positive perception of self-medication using different study populations from the current study.

The current study findings demonstrate how pervasive the practice of self-medication is among nurses. The fact that the majority of the respondents cited the same set of factors as influencing their behaviour illustrates the gross lack of regard for the dangers associated with self-medication despite being health personnel. The majority of the respondents reported agreeing with the factors influencing self-medication; which are the availability of the drugs, easy access to the drugs, lack of access to health centres, high cost to health care centres, fear of long queues, easy relief of simple illnesses, and peer group influence. This result is similar to the findings in a study conducted by Halappa, (2016), on factors associated with self-medication in some West African countries, where factors such as availability, easy access, peer group pressure and socioeconomic factors were reported. The study findings also go in line with that of Prasad (2016) on Hazards and factors associated with self-medication include; whose findings reported lack of access to health facilities as well as high healthcare costs in the health centres were reported as the factors influencing self-medication.

The common drugs for self-medication are Analgesics, Anti-Allergic, Antibiotic, Antiemetic, Antipyretics, Antidiarrheal, Antacids, and eye drops respectively. This is similar to several results from many studies, such as the findings in the study conducted by Gutema et al., (2011), which established that Paracetamol and NSAIDs were the two most frequently consumed medications for self-medication. A similar finding from a study by Ibrahim et al. (2019) is also concurrent with our findings, where it was reported that Paracetamol, Antimalarial, Flagyl, etc., were the most common drugs used for self-medication. This study also agrees with the submissions of Awad and Eltayeb (2007) that antibiotics and anti-malarial are the drugs commonly used for self-medication in Khartoum. Also, Sawalha (2007) discovered that analgesics and antibiotics are drugs commonly used for self-medication in Palestine. This study also goes in line with Goel & Gupta's (2013) findings that paracetamol, other analgesics and antibiotics are drugs commonly used for self-medication. Also, Ali et al. (2016) reveal that antibiotics are commonly drugs used for self-medication.in Karachi.

This study is also consistent with Osemene and Lamikanra's (2012) identification of antibiotics and anti-malarial as commonly used self-medication drugs in Western Nigeria, while Auta (2001) reveals analgesics and antimalarial as drugs commonly used self-medication drugs in Jos. This study is similar to Babatunde et. al. (2016) report of analgesics, antibiotics and anti-malarial drugs commonly used for self-medication in South-West Nigeria and Emmanuel (2011) also reports that Analgesics, Anti-malarial and Antibiotics as most commonly used drugs/drug groups for self-medication in Jos.

The result of this study is however inconsistent with the findings of Sawalha (2007), who discovered that herbal remedies are drugs commonly used for self-medication in Palestine; and Auta (2001) who revealed vitamins and hematinic preparations as drugs commonly used self --medication drugs in Jos.

Conclusion

Self-medication practices are higher in the study area, despite its dangers to the health of the Nurses are still practiced by a large number of Nurses. Pharmacy and government health centres were found to be places where most nurses obtain drugs for self-medication. It can be inferred that the common conditions treated by self-medication are to relieve symptoms of malaria, fever, pain and allergy. This could be due to the fact that the most frequent endemic disease among the study participants is malaria. This might be because most of them were not sleeping inside insecticide-treated nets due to night shift duty.

Recommendations

1. It is recommended that there is a need for the Government at all levels to enforce the laws for selling drugs based on prescription to help in reducing self-medication among Nurses thereby reducing it is risk to the study population.
2. It is also important to intensify more campaigns in the area to curtail the malaria burden among the study participants. Most especially using other methods rather than insecticide-treated nets as the majority of the participants stayed overnight in the facilities.

Conflict of Interest

No conflict of interest was declared by the authors.

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