Awareness of risks associated with Self-medication among Patients attending General Out-patient Department of a Tertiary Hospital in South Western Nigeria

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ABSTRACT

Self-medication has become a common practice in many developing countries like Nigeria and mainly due to lack of access to health care, easy availability of over the counter drugs in markets and poor drug regulatory practices. The study assessed knowledge of people about the risks associated with self-medication; identify the causes of self-medication; assess the commonly misused drugs; and identify information sources for purchasing and using drugs without prescription. The study was conducted in General Outpatient Department of a tertiary hospital in Nigeria and Census was used to select the respondents. Descriptive cross-sectional design was adopted and questionnaire was used for this study. Data was analyzed by using SSPS version 22.0 while frequency tables, bar charts and chi square were used to present the data. Findings revealed that 82.3% of the respondents had high awareness of the risks associated with self-medication, high cost of treatment and previous experience were the most identified causes of self-medication. Commonly abused drugs were Analgesics and antibiotics. Major sources of information for purchasing the drugs were the pharmacy and family members while age, sex and educational were significantly associated with awareness of the risk of self-medication. The study concluded that patients had high awareness of the risks associated with self-medication, high cost of treatment and previous experience with disease accounted for the practice. It is therefore important for Nigerian government to enforcement the existing regulations against free display and sales of drugs in unauthorized places.

1. Background of the study

The practice of self-medication is a global phenomenon (Danshana, 2014). Every day, all over the world, individuals, irrespective of their level of education, engage in the act of managing their health without consulting qualified health personnel. While this is largely indisputable, the incidence of self-medication may be higher in the developing countries. Nigeria for instance stands out among the few countries of the world where medications are freely displayed for sale in un-authorized places such as markets, shops, roadside stalls, motor parks and other public places by individuals not duly licensed. It is easy to understand then, the widespread act of self-medication in many Nigerian communities.

The World Health Organization (WHO) defined self-medication as "the selection and use of medicines by individuals (or a member of the individuals' family) to treat self-recognized or self-diagnosed conditions or symptoms" (Pankaj et al., 2012; Aqeel et al., 2014; Eticha & Mesfin, 2014). It is the self-treatment of common health issues with pharmaceuticals, particularly planned/designed and labelled for use without medical supervision and endorsed as protected and effective for such

use (Awad, Al-Rabiy, & Abahussain, 2008). It includes the treatment of common health problems with medicines that are taken on patient's own initiative or on advice of a pharmacist, without professional supervision.

Reasons commonly adduced for indulgence in self-medication include: socio cultural belief; long delays in the health centres; relatively high cost of hospital treatment; previous experience of medical treatment of the same symptoms; illness being considered too trivial and health centres not being socially accessible; easy availability of over the counter (OTC) drugs; poor drug regulatory practice; urgency of the problem (emergency use); bureaucratic bottleneck; congestion (over-crowding in hospitals); and non-availability of essential drugs in most public health facilities (Gupta, Bobhatr, & Shrivastava, 2011; Kumari, Kumar, Bahl, & Gupta, 2012). Other factors like demographic factors have been found to influence self-medication. For instance, gender, age, sex and social role were discovered to have influence on self-medication (Awosusi & Konwea, 2015). Besides, some individuals engage in the practice out of ignorance, poverty, lack of access to health care and/or non-availability of health facilities.

Self-medication though contributes a fair degree of success to the

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management of minor ailments, its risks to the individual, family and community outweigh its benefits. In Burton (2012) words, self-medication gives temporary relief of sickness instead of permanent cure thereby delaying diagnosis. This it does by suppressing and masking the signs and symptoms of sickness, only for the sickness to relapse after some time. Self-medication is associated with problems of under and over-dosage with their attendant problems of treatment failure and development of drug resistant strains (Kalyan, Sudhakar, Srinivas, & Sudhakar, 2013), particularly in developing countries (Al-Ramahi, 2013; Koley, Saha, & Ghosh, 2013; Belkina, Al Warafi, & Hussein Eltom, 2014; Alo, Alo, Oguejiofor, & Akamike, 2017). The authors equally noted that it results in delay in care seeking, which results in paradoxical economic loss due to delay in the diagnosis of underlying conditions and inappropriate treatment (Kalyan et al., 2013).

In addition, it could lead to destruction of certain body organs such as the liver; and drug addiction especially when taken on a long term basis. Other potential risks of self-medication are incorrect self-diagnosis, incorrect choice of therapy, failure to recognize special pharmacological risks, severe adverse effects, failure to recognize or self-diagnose contraindication, interaction, warning and precaution, incorrect route and excessive dosage, risk of dependence and abuse (WHO, 2008).

Arikpo and Eja (2010) reported that 99.4% of Nigerian practice self-medication. This buttresses Afolabi (2008) earlier finding of 95% prevalence among Nigerians. In view of this high prevalence of self-medication in Nigeria and its associated adverse socio-economic effect on the individual and the society at large, this study therefore examined the awareness of the risks associated with self-medication among patients attending GOPD of a tertiary hospital in Nigeria; identify the causes of self-medication among the patients; assess the commonly misused drugs among the patients; identify the information sources for purchasing and using drugs without a prescription among the patients; and determine the association between some socio-demographic characteristics of respondents and awareness of the risk associated with self-medication.

2. Methods and materials

2.1. Research design

This study adopted a descriptive non-experimental research design to investigate the awareness of risks of self-medication among patients attending care in the General Out-patient Department (GOPD) of a tertiary hospital in Nigeria. Unlike the typical tertiary hospital, the research setting offers primary, secondary and tertiary healthcare services. The hospital has different clinics for various categories of patients: Adult Out-patient Clinic, Paediatric Outpatient Clinic, Surgical Outpatient Clinic, etc. The primary healthcare services are offered through the General Out-patient Clinics of the hospital. This peculiar characteristic of the research setting, its wide patronage and being a referral centre, make the hospital the preferred choice for the study. Being a tertiary institution and a referral centre, it is not unlikely that a majority of the patients that patronise it might have tried one or two drugs before presenting at the clinic.

2.2. Sampling technique

Adult patients aged 18 years and above attending General Out-patient Department on scheduled clinic appointment in the hospital formed the target population. On the average, one thousand, seven hundred and eighty-four (1784) attend this clinic on a monthly basis. The study employed a census, meaning all the patients on scheduled clinic appointments who voluntary accepted to be part of the study were selected for data collection. In all, a total of one thousand and three hundred (1300) representing 73% of the total patients accessing care at the General Out-patients' Clinic during the period of the study

formed the sample.

2.3. Instrument

Data collection was done with the aid of a structured self-administered questionnaire. The questionnaire was developed through extensive literature review and it comprised four sections: Section A, B, C and D. Section "A" elicits information on respondents' socio-demographic characteristics. Section "B", a 15-item scale that assesses respondents' awareness of the risks of self-medication. The options of answer are 'Yes', 'No' and 'Don't know'. The 'Correct option' attracts a score of 2, the 'Uncertain option' 1, while the 'Incorrect option' attracts zero (0). Maximum score obtainable is 30 points. A score of 15 and above is appraised as are categorized as 'high awareness while a score of 15 and below is classified as 'low awareness' of the risk of self-medication.

Section "C" comprises 11 items that sought information on the causes of self-medication from the respondents. Like Section B, the options of answer are 'Yes', 'No' and 'Don't know'. The 'Yes' is assigned 2 points, 'Don't know' '1', while the 'No' option is assigned zero (0). The mean of the responses for each of the items was calculated and used as a basis for determining causes of self-medication among the study population. Section "D" consists of 6 items with a yes/no responses directed at eliciting from respondents, the commonly misused drugs. Responses were coded 1 or 2; 1 for the 'No' option and 2 for the 'Yes' option. The mean of the responses was calculated to determine the most commonly misused drugs. Section "E" is made up of 9 items directed at investigating respondents' sources of information on procurement of drugs/medications without a prescription. The responses were yes/no and similarly scored 2 or 1. The mean value for the responses was then worked out to determine the respondents' significant information sources for purchasing and using drugs without a prescription.

The instrument was validated through face and content validity techniques. The face validity was achieved by giving the draft questionnaire to a few of our colleagues at Obafemi Awolowo University (OAU), Ile-Ife, to assess whether the instrument looks meaningful, well designed and/or a good measure of the construct to an innocent bystander. Information gathered from this exercise was used to refine the questionnaire further. The content validity was done by giving the resultant questionnaire to four independent scholars from the fields of Medical Surgical Nursing, Pharmacology, Psychology, and Demography and Social Statistics to assess its items for appropriateness, clarity, coverage and relevance to the study. The suggestions of these scholars were incorporated in the draft questionnaire. For instance, a few of the items that were identified as ambiguous were recast while those that were noted as repetitive were struck off.

The reliability of the validated questionnaire was ascertained by test retest method. The questionnaire was administered twice at three weeks interval on seven adult patients accessing care at the GOPD of another tertiary hospital in the same State in Nigeria. Their responses were compared and the reliability coefficient determined (r = 0.83).

2.4. Ethical consideration

An ethical clearance was obtained from Ethics and Research Board of the Institution with the protocol number ERC/2017/11/12 prior to the commencement of the study. The consent of the prospective respondents were taken and they were nonetheless assured that their responses will be treated with utmost privacy, anonymity and confidentiality and that their fundamental human rights will not be violated. They were also informed that they are at liberty to withdraw from the study at any time they feel their rights are being threatened.

2.5. Data collection

Upon obtainment of a formal permission to collect data from the

Table 1
Frequency Distribution of Respondents by their Socio-demographic Features.

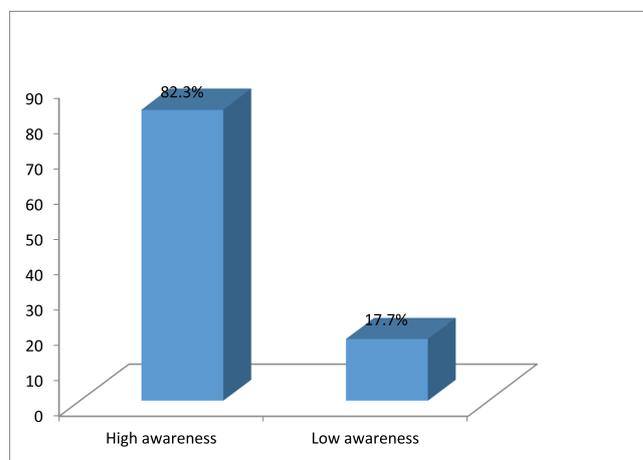| Variables	Frequency (n)	Percentage (%)
Age		
Less than 20	63	5.6
21–30	270	24.2
31–40	270	24.2
41–50	252	22.6
51–60	72	6.5
61–70	126	11.3
71–80	63	5.6
Marital Status		
Single	369	33.1
Married	630	56.5
Divorced	18	1.6
Widowed	99	8.9
Gender		
Male	414	37.1
Female	702	62.9
Religion		
Christian	837	75.0
Islam	279	25.0
Ethnicity		
Yoruba	972	87.1
Igbo	99	8.9
Hausa	9	0.8
Edo	18	1.6
Ijaw	18	1.6
Educational Status		
Primary	27	2.4
Secondary	180	16.1
Tertiary	819	73.4
No formal education	90	8.1
Work Status		
Civil servant	387	34.7
Self-employed	324	29.0
Retired	99	8.9
Unemployed	225	20.2
Students	81	7.3

Fig. 1. A bar graph showing respondents sum awareness about the risks of self-medication.

2.6. Data analysis

The questionnaires were collated and manually sorted. They were checked for errors. The properly filled ones were imputed into the Statistics Package for Social Sciences (SPSS) version 22.0 for analysis. Frequencies and percentage where determined, the mean calculated, frequency tables developed and appropriate bar charts generated. Chi square was used to test association between socio demographic characteristics of the respondents and awareness of the risk associated with self-medication at a significant level of $p > 0.05$.

3. Results

Result as presented in "Table 1" showed that 56.5% of the respondents are married and 62.9% were females. Also, majority (75.0%) is Christian and 87.1% are of Yoruba origin. Interestingly, 73.4% of the respondents are educated up to tertiary level while only 34.7% are civil servants. Almost all the respondents (96.8%) are aware of the concept of self-medication i.e. the use of drug(s) without prescription. However, a few of the respondents (23.4%) still see it as a good practice. On the contrary, 80.6% of the respondents believe that self-medication leads to drug addiction and dependence with its associated menace. Nonetheless, 29.8% of the respondents indicated that self-medication reduces time wasting in the hospital (Table 2).

As shown in "Fig. 1", majority (82.3%) of the respondents have a high awareness of the dangers of self-medication while only 17.7% has low awareness.

Head of Department of the GOPD and Nursing Services of the hospital, two members of the research team made repeated visits to the GOPD of the hospital to administer the questionnaire on respondents (patients accessing care at the GOPD of the hospital). With the cooperation of the staff at the Clinic, questionnaire administrations were done before consultation with physicians commences thrice weekly. Data collection was from November 2017 to January 2018 (eighth weeks). Within that period, a total of one thousand, three hundred (1300) questionnaires were administered, one thousand, two hundred and twenty-five retrieved, but only one thousand one hundred and sixteen (86% response rate) that were satisfactorily filled were eventually used for the study.

Table 2
Respondents Knowledge about the risks of self-medication.

VARIABLES	YES n (%)	NO n (%)	DON'T KNOW n (%)
Self-medication is a good practice since it reduces symptoms of medical condition.	261 (23.4)	684 (61.3)	171 (15.3)
Self-medication is good for me since it reduces time wasted in the hospital	333 (29.8)	693 (62.1)	90 (8.1)
Self-medication can delay medical diagnosis	720 (64.5)	144 (12.9)	252 (22.6)
Self-medication results into peptic ulcer.	738 (66.1)	126 (11.3)	252 (22.6)
Self-medication can lead to wrong treatment	846 (75.8)	81 (7.3)	189 (16.9)
Self-medication can lead to wrong diagnosis	810 (72.6)	90 (8.1)	216 (19.4)
Self-medication can results into kidney damage.	846 (75.8)	63 (5.6)	201 (18.5)
Self-medication can cause organ damage e.g Liver or kidney	846 (75.8)	90 (8.1)	180 (16.1)
Adverts on medication on television, radio & newspaper can lead to self-medication	828 (74.2)	171 (15.3)	117 (10.5)
Influence of family members can lead to self-medication	864 (77.4)	1117 (10.5)	135 (12.1)
Self-medication leads to drug addiction and dependence	900 (80.6)	117 (10.5)	99 (8.9)
Death can result from self-medication due to over dosage	918 (82.3)	9 (8.9)	99 (8.9)
Influence of friends can lead to self-medication	954 (85.5)	90 (8.1)	72 (6.5)
I am aware of the hazards associated with self-medication	1026 (91.9)	54 (4.8)	36 (3.2)
Self-medication is the use of drug without prescription	1080 (96.8)	351 (2.4)	9 (0.8)

Table 3
Identified causes of self-medication.

VARIABLES	YES n (%)	NO n (%)	DON'T KNOW n (%)
The difficulty of accessing health facilities	765 (68.5)	252 (22.6)	81 (7.3)
No trust in the doctors.	351 (31.5)	549 (49.2)	216 (19.4)
Drug supply in the hospitals were unavailable	544 (45.2)	432 (38.7)	180 (16.1)
Length of therapy time.	549 (49.2)	405 (36.3)	162 (14.5)
Given of Doctor's prescription away from the hospital premises	666 (59.7)	234 (21.0)	216 (19.4)
Lack of transportation to the hospital	522 (46.8)	567 (50.8)	27 (2.4)
Prior knowledge that the doctors will give some drugs	756 (67.7)	180 (16.1)	180 (16.1)
Feel no need to consult doctors "mild illness"	711 (63.7)	279 (25.0)	126 (11.3)
Previous experience with disease and treatment.	801 (71.8)	144 (12.9)	171 (15.3)
High cost of treatment	801 (71.8)	270 (24.2)	45 (4.0)
You make use of the drugs in emergency cases	918 (82.3)	126 (11.3)	72 (6.5)

Table 4
Assessing the commonly misused drugs.

VARIABLE	YES n (%)	NO n (%)
Anti-fungal e.g. clotrimaxole, withfied, Diflucan,fulcin etc.	351 (31.9)	765 (68.5)
Antacid e.g. Aluminium hydroxide, magnesium carbonate, magnesium hydroxide	369 (33.1)	747 (66.9)
Anti-microbial e.g. Iodine, povidone, TBC	621 (55.6)	495 (44.4)
Antibiotics e.g. Amoxicillin, ampiclox, ciprotab etc	927 (83.1)	189 (16.9)
Vitamin Supplements e.g. vitamin A, E or B complex.	945 (84.7)	171 (15.3)
Analgesics e.g. paracetamol, aspirin, ibuprofen, camphor.	1062 (95.2)	54 (4.8)

Table 5
Information sources for purchasing and using non-prescribed drug.

VARIABLES	YES N (%)	NO N (%)
Lectures	504 (45.2)	612 (54.8)
Books and specialist journal	567 (50.8)	549 (49.2)
Internet and advertisements	675 (60.5)	441 (39.5)
Mass media	693 (62.1)	423 (37.9)
Previous prescriptions	819 (73.4)	297 (26.6)
Nurses	846 (75.8)	270 (24.2)
Other health care workers	873 (78.2)	243 (21.8)
Friends	900 (80.6)	216 (19.4)
Family	990 (88.7)	126 (11.3)
Pharmaceutical/Chemist store	999 (89.5)	117 (10.5)

Table 6
Fisher exact chi square to test association between socio demographic and awareness to self-medication.

Variables	Low awareness	High awareness	Total	χ^2	df	p-value
Age						
Less than 20	9 (4.5)	54 (5.9)	63 (5.6)	25.49	6	0.01*
21–30	36 (18.2)	234 (25.5)	270 (24.2)			
31–40	36 (18.2)	234 (25.5)	270 (24.2)			
41–50	63 (31.8)	189 (20.6)	252 (22.6)			
51–60	18 (9.1)	54 (5.9)	72 (6.5)			
61–70	18 (9.1)	108 (11.8)	126 (11.3)			
71–80	18 (9.1)	45 (4.9)	63 (5.6)			
Gender						
Male	54 (27.3)	360 (39.2)	414 (37.1)	9.95	1	0.01*
Female	144 (72.7)	558 (60.8)	702 (62.9)			
Religion						
Christian	126 (63.6)	711 (77.5)	837 (75.0)	16.57	1	0.01*
Islam	72 (36.4)	207 (22.5)	279 (25.0)			
Educational Status						
Primary	0 (0.0)	27 (2.9)	27 (2.4)	16.03	3	0.01*
Secondary	27 (13.6)	153 (16.7)	180 (16.1)			
Tertiary	144 (72.7)	675 (73.5)	819 (73.4)			
No formal education	27 (13.6)	63 (6.9)	90 (8.1)			
Work Status						
Civil servants	63 (31.8)	324 (35.3)	387 (34.7)	10.21	4	0.03*
Self-employed	54 (27.3)	270 (29.4)	324 (29.0)			
Retired	27 (13.6)	72 (7.8)	99 (8.9)			
Unemployed	45 (22.7)	180 (19.6)	225 (20.2)			
Students	9 (4.5)	72 (7.8)	81 (7.3)			

Among the chief causes of self-medication as revealed by this study are: make use of the drugs in emergency cases (82.3%), high cost of treatment and previous experience with disease and treatment as evident by 71.8% of the respondents respectively (Table 3). Other causes that were identified by respondents were: difficulty of accessing health facilities (68.5%), prior knowledge that the doctors will give some drugs (67.7%) and mild illness (63.7%).

The most commonly self-medicated drugs among the respondents were analgesics (95.2%), vitamin supplements (84.7%) and antibiotics (83.1%). The least self-medicated drug among the participants was observed to be anti-fungal medication (31.9%); closely followed by antacids (33.1%) (Table 4). As regards the respondents' sources of drug information as depicted on Table 5, were pharmaceutical store/chemist store (89.5%), family members (88.6%), and friends (80.6%). The least common source was found to be lectures (45.2%) followed by books and journals (50.8%).

Table 6 shows the Fischer Exact Chi-square used to test the association between socio demographic characteristics of the respondents and awareness of self-medication. From the result age were statistically associated with awareness of self-medication {χ^2 = 25.49, df = 6, p = 0.01} with the higher proportion of 24.2% who were aware was between the age of 21–30 and 31–40 years respectively. Also, gender were statistically associated with awareness of self-medication

{χ^2 = 9.95, df = 1, p = 0.01} with the higher percent of the respondents were female. While, religion were statistically associated with self-medication {χ^2 = 16.57, df = 1, p = 0.01} with the higher percent of the respondents were Christian. Educational status were statistically associated with self-medication {χ^2 = 16.03, df = 3, p = 0.01} with the higher percent of the respondents were tertiary holder. Finally, work status were statistically associated with self-medication {χ^2 = 10.21, df = 4, p = 0.03} with the higher proportion of the respondents were civil servant.

4. Discussion of findings

Respondents within the age categories of 21–30 and 31–40 years had the highest percentage (48.4%) among all, this was in accordance with Oluwole et al. (2016), who stated that the age distribution of patients attending adult GOPD was (18–52) years, the age group with the largest number of participants was 30–39 years. Most of the respondents (62.9%) in our study were female, this was in contrast to Oluwole et al. (2016), who claimed that more than half of the respondents in their own study were male (51.8%).

Almost all the participants (96.8%) are aware that self-medication is

the use of drug without prescription, though one in every four respondents believes it is still a good practice. Again, majority of the patients that participated in the study believes self-medication leads to drug addiction and dependence; however about one third of the respondents claimed that self-medication reduces time wasted in the hospital. Many of them correctly perceived that self-medication might lead to wrong diagnosis, lead to wrong treatment, lead to drug addiction and dependence, cause organ damage, interact with body systems and cause allergic reactions. This was in accordance with the research findings of Raj and Sujata (2015) who reported that more than half of the respondents in their study had high awareness regarding self-medication, but this is in contrast with the findings of Selveraj, Kumar, & Ramalingam (2014) where majority of the respondents in their own study had low awareness.

In this study, majority of the respondents (82.3%) claimed that usage of drugs in emergency cases is a major cause of self-medication, while more than half (71.8%) believe it's due to high cost treatment, also a good fraction (71.8%) of the respondents claimed previous experience with disease and treatment, difficulty in accessing health facilities, mild illness, given of doctor's prescription away from the hospital premises. This is in buttresses Kumari et al. (2012) submission that self-medication is becoming a common practice in many countries due to lack of access to health care, easy availability of OTC drugs in market and poor drug regulatory practice.

In other words, different studies reported the reasons of self-medication. For example, the study in Pakistan confirmed that the most common reasons of self-medication practice were lack of time and economic issues (Khan, Maheen, & Alamgeer, 2014) this is different from what we find in our study. The difference in our findings and those Khan et al might be the differences in the setting where the studies were carried out. A similar study, also in Pakistan (Aqeel, Shabbir, & Basharat, 2014) reported that the mild illness was determined as the most common reason. Generally higher proportion of participants reported "previous experience" and "time saving" as the most common reasons for the practice of self-medication in contrast to "economical" and "lack of health care facilities" described by rural participants. The mild illness and the previous experience also were reported by other researchers (Alghanim, 2011; Girma, Gadisa, Kidanemariam, et al., 2011; Heidarifar, Koohbor, Kazemian Mansourabad, et al., 2013; and Al-Ramahi, 2013). Probably while economic and access might be the most predicting factor in rural settings it is mostly time saving in the urban settings. This implies that setting must be taking into consideration in addressing the menace of self-medication.

The most commonly abused drug is Analgesics as majority of the patients (95.2%) that participated in the study indicated, followed by antibiotics (84.7%), this result was in accordance with Solomon, Fantahun, & Wondim (2014); Abrha, Molla, and Melkam, (2014) and Lukovic, Miletic, Pekmezovic, Trajkovic, and Ratkovic (2014) where analgesics was majorly used by the respondents in their study followed by anti-biotics. Also, this supports the finding of a study carried out by Oluwole et al. (2016), where the most commonly mis-used drugs were analgesics and antibiotics among others. Conversely, just a fraction of 31.9% claimed that Anti-fungal too are commonly abused. This might be due to the fact that fungal infection is less common than pain and bacterial infection especially in most urban areas. Commonly, self-medicated drug might be determined by the most common health challenge in a particular locality. Pain and bacterial infections are commonly encountered by patients and this might account for the abuse of analgesics and antibiotics among the study population coupled with the fact that the drugs are readily available in pharmacy shops and street hawkers due to poor drug regulatory policy in country where this study was conducted.

It is shown that the major source of information for the purchase and using non-prescribed drug is the pharmaceutical/chemist store (89.5%), followed by family (88.7%) and friends. Nurses and other health workers (78.2%) are also identified as common sources by the respondents in the study. This buttresses Osemene & Lamikanra (2012) in their study of self-medication among university students in southwestern Nigeria where the prevalence rate of major sources of drugs used for self-medication were the patent medicine store, community pharmacies, friends, relative and left over drugs from previous prescriptions.

5. Implications for nursing

Nurses play vital role in health promotion, including aiding clients to develop responsible, informed self-medication and self-care patency. Despite the fact that people have good knowledge of the risks associated with the practice of self-medication they still practice it due to factors such as high cost of treatment, previous experience with disease and treatment. Clients should be made to understand that minor ailments that could easily be treated by a physician could easily be mismanaged through self-medication, therefore health education is an important tool that should be employed by all Nurses in order to influence patients positively as regards to self-medication.

It is important that nurses are knowledgeable about self-medication and self-medicated products so that they can inform the patients on each medication, including its name, appearance, purpose and effects, potential adverse effects and interactions of each medication, accurate dosage, importance of contacting the health care provider with concerns or questions and importance of taking medications exactly as directed.

6. Conclusion

The study revealed that a majority of the respondents are aware of the risks associated with self-medication, however they still engage in this dangerous practice for various reasons such as to provide quick relief for mild illness. It is thus shows that knowledge does not automatically translate to practice. In addition, stemming down the tide of self-medication in Nigeria may require effective and efficient enforcement of the existing regulations against free display and sales of drugs in unauthorized places such as markets, shops, roadside stalls, motor parks and other public places by individuals not duly licensed.

Disclosure

There is no any interest to disclose with respect to this paper.

What is already known about the Topic

- It has been established that self-medication is a common practice among patients in many countries due to lack of access to health care, easy availability of over the counter (OTC) drugs in market and poor drug regulatory practices.
- Some benefits like easy access to drugs when some people do not have time to meet the doctors and wait in hospitals for long time are associated with self-medication.
- Patients may not be aware of any associated risks of self-medication

What this Paper Adds

- The study determined the level of patients awareness of risks associated with self-medication.
- It also identified the commonly abused drugs among the respondents.
- The study was able to isolate the sources of information for the purchase and use non-prescribed drug; the pharmaceutical/chemist store, family and friends. Nurses and other health workers were also implicated in this study.
- This study discovered that it is pertinent for health care professionals to health educate patients to stop self-medication practice

and that such education can be guided by the nature of health problems prevalent in an area and the setting of this study.

Conflict of interest

None.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.ijans.2019.03.001.

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