

Knowledge of Health-Risks Associated with Self-Medication Among Staff of Maiduguri Metropolitan Council, Borno State – Nigeria

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Abstract

The study was carried to assess awareness of health-risks associated with self-medication among staff of Maiduguri Metropolitan Council, Borno State, Nigeria. The purpose of this study is to empirically analyse the knowledge of health-risks associated with self-medication among staff of MMC. The study adopted quantitative survey method using structure questionnaires called knowledge of health-risks associated with self-medication. The population of this study comprises of all the civil servants in Maiduguri Metropolitan Council (MMC) Local Government Area (LGA), Borno State, Nigeria numbering six thousand, three hundred and seventy (6,370), while 361 was used as sample size. The instrument was validated for both face and content validity. Split-half reliability was used to test the reliability of the instrument. Spearman-Brown prophecy formula was used to determine reliability index for the full test, $r = 0.81$. The result of this study showed that majority these respondents had knowledge of self-medication. This can be seen as two-third of the respondents 249(68.9%) were aware of the hazards associated with self-medication, 211(58.4%) know that self-medication is the use of drug without prescription. This study indicates that there is no significant relationship in knowledge of health-risks associated with self-medication among staff of MMC ($P > 0.05$). Based on the findings of this study, it was obvious that the prevalence of self-medication is relatively high. It was recommended that there is need for health education on the implication and danger of self-medication.

Keywords: Knowledge, Health risk, self medication.

Introduction

Self-medication is the utilization of medicines or medical drugs mostly considered and labelled for use in the treatment of common health problems without the authority or prescription of a physician (Figueiras, Caamano & Gestal Otero, 2000), and it is one of the rapidly growing areas of concern to medical professionals, government and the general public. Self-medication may initially result in reduction of distress but in the long-run, it can cause many serious problems (Okumaraj, Wakai & Umenai, 2002). Individuals who feel unwell commonly tend to treat themselves probably due to the innate survival instinct in humans. It is a common habit and culture globally to see people globally acting on their health without proper consultation with qualified health personnel. According to World Self-Medication Industry of 2016, self-care is what people do for themselves to establish and maintain health as well as to prevent and deal with illness. Self-medication is a component of self-care which means the responsible selection and use of non-prescription medicines by individuals to treat themselves for a self-recognized illnesses or symptoms.

Currently, numerous drugs and drug combinations are available, and many of them have been released for general use and are sold directly to the public as over-the-counter (OTC) drugs. Proprietary drugs which are sold over-the-counter include pain relievers, cough remedies, anti-allergies, laxatives, vitamins, tonics, antacids, and many others. Furthermore, dangerous drugs like the antibiotics and hormones can be procured without a valid prescription, and the sale of both over-the-counter and controlled drugs without the prescription of a physician predisposes to self-medication (Gaillard, Dellasanta, Loutan & Kayser, 2004). The prevalence of irresponsible self-medication is high all over the world, and it is a very common practice, both in the advance (economically privileged) communities as much as it is in the economically deprived nations (Hughes, McElnay & Fleming, 2001). Globally, consumers commonly reach for self-care products to help them treat their common health problems fever, body pains, indigestion, diarrhea, vomiting, cough, and upper respiratory tract infections (Arikpo, Eja & Enyi-Idoh, 2014).

Awareness is the state or ability to know, to feel, or to be conscious of health risks associated with self-medications. Self-medication is a major healthcare concern as it may result in various health risks which has detrimental effects on the users such as misdiagnosis of the illness, antimicrobial resistance, harmful drug interactions, or even delay in the diagnosis of a serious disease. Other health risks are occurrence of adverse drug reaction, Wrong dosages, drug resistance, these could also play an important role in health costs rise (Yang, Chen, Wang, Li, & Jiang, 2016; Bogner, 2018). The Study of Pavydè et al. (2015), showed that a vast majority of people do not have proper knowledge and belief regarding the side effects of self-medication. They found that more than half of the respondents (61.1%) had poor knowledge of antibiotics, while half of the respondents incorrectly identified antibiotics as being effective either against viral (26.0%) or mixed (bacterial and viral) infections (21.7%). It is against this background that the current study was carried out to assess the awareness of health-risks associated with self-medication among staff of MMC.

Hypothesis

HO₁: There is no significant relationship in awareness of health-risks associated with self-medication among staff of Maiduguri Metropolitan Council, Borno State, Nigeria.

Methodology

Design: A cross sectional research design was used for this study.

Population and Sample: The population of this study comprises of staff of MMC numbering 6,370, this forms the target population for the study. The sample size for the target population according to Krejcie and Morgan Table, 1970 is 361. Proportionate sample technique was used because the population of staff in each Department differs; while accidental sample technique was used select the respondents. Chi-square statistical technique was applied to test the hypothesis.

Table: 1 Population Distribution and Sample Size of the Respondents

S/N	Department	Population	Sample
1.	Administrative	760	43
2.	Agric	510	28
3.	Budget and Planning	151	8
4.	Primary Health Care	1288	72
5.	Treasury	618	35
6.	Education	2525	143
7.	Works	518	29
8.	Total	6,370	361

Research Instrument

The instrument used for this work is a self-developed questionnaire named Knowledge of health risks of Self-medication. Data collection was done with the aid of a structured self-administered questionnaire. The questionnaire was developed through thorough literature review and it is divided into two sections. Section A deals with demographic information of the respondents (age, gender, educational background), while section B deals with knowledge of respondents about health risks of self-medication. It has 11 items with Yes or No response mode.

The instrument was validated for both face and content validity. Split-half reliability was used to test the reliability of the instrument using 25 respondents in Jere Local Government Area, Borno State, Maiduguri. Spearman-Brown prophecy formula was used to determine reliability index for the full test, $r = 0.81$. The questionnaires were distributed to the workers during the working days in their offices from Monday to Friday. A total of 361 hard copies questionnaires were distributed, and all the questionnaires were retrieved.

Data Analysis

Descriptive statistics of frequency counts and percentages were used to descript demographic characteristic of the respondents, while Chai-square was used to test the hypotheses at $p < 0.05$ level of significant.

Results

Table 2: Demographic Characteristics of the Respondents

n=361

S/NO	ITEMS	FREQUENCY	PERCENTAGE (%)
1.	Age		
	18-----25	18	4.9%
	26-----33	55	15.2%
	34-----41	63	17.4%
	42-----49	75	21.0%
	50-----57	95	26.3%
	58-----65	55	15.2%
2.	Gender		
	Male	210	58.1%
	Female	151	41.8%
3.	Education		
	No Formal Education	41	11.3%
	Primary Leaving Certificate	51	14.1%
	Secondary	67	18.5%
	Diploma/NCE	85	23.5%
	HND/B.Sc	117	32.4%
	Master	0	0.0%
6.	Ethnicity		
	Kanuri	207	57.3%
	Babru-bura	40	11.0%
	Shua-arab	91	25.2%
	Others	23	6.3%

Table 2 which is on demographic characteristics of the respondents revealed that 18 (4.9%) of the respondents were between the ages of 18---25, 55 (15.2%) of the respondents were between the ages of 26-----33, 63 (17.4%) of the respondents were between the ages of 34---41, 75 (21.4%) of the respondents were between the ages of 42--49, 95 (26.3%) of the respondents were between the ages of 50-----57, while 55 (15.2%) of the respondents were between the ages of 58--65. This implies that majority of the respondents were between the ages of 50---57. Similarly, the also indicated that 210 (58.1%) of the participants were male, while 151 (41.8%) of the respondents were female. This means that majority of the respondents were male. The table also showed that 41(11.3%) of the respondents had no formal education, 51(14.1%) of the respondents had primary leaving certificate, 67(18.5%) had secondary school certificate, 85(23.5%) had Diploma/NCE, 117(32.4%) had HND/B.Sc, while none of the respondents had master. This indicates that education qualifications of the participants are HND/B.Sc. Moreover, 207 (57.3%) of the respondents were Kanuri, 40(11.0%) were Babru-bura, 91 (25.2%) were Shua-arab, while 23(6.3%) of the respondents were from other ethnic group.

Table: 3**Knowledge of Respondents on Health-risks of Self Medication**

		n=361	
S/N	Variable	Yes	No
1.	Self-medication is a good practice since it reduces symptoms of medical condition	164(45.4%)	197(54.6%)
2.	Self-medication is good for me since it reduces time wasted in the hospital	217(60.1%)	144(39.9%)
3.	Self-medication can delay medical diagnosis	235(65.1%)	126(34.9%)
4.	Self-medication results into peptic ulcer	229(63.4%)	132(36.6%)
5.	Self-medication can lead to wrong treatment	231(63.9%)	130(36.1%)
6.	Self-medication can lead to wrong diagnosis	237(65.7%)	124(34.3%)
7.	Self-medication can cause organ damage e.g Liver or kidney	168(46.5%)	193(53.5%)
8.	Self-medication leads to drug addiction and dependence	178(49.3%)	183(50.7%)
9.	Death can result from self-medication due to over dosage	201(55.7%)	160(44.3%)
10.	I am aware of the hazards associated with self-medication	249(68.9%)	112(31.1%)
11.	Self-medication is the use of drug without prescription	211(58.4%)	150(41.6%)

Table 3 which is on knowledge of the respondents on health risks of self-medication indicated that 197(54.6%) said self-medication is a good practice because it reduces symptoms of medical condition, while 217(60.1%) respondents stated that Self-medication is good for them since it reduces time wasted in the hospital. Similarly, 235(65.1%) respondents said Self-medication can delay medical diagnosis, while almost two-third 231(63.9%) of the respondent know that self-medication can lead to wrong treatment. One hundred and thirty-seven 237(65.7%) of the participants agreed that self-medication can lead to wrong diagnosis. 201(55.7%) were aware that self-medication due to over dosage can lead to death. Moreover, two-third of the respondents 249(68.9%) were aware of the hazards associated with self-medication. 211(58.4%) know that self-medication is the use of drug without prescription. This implies that most these respondents had knowledge of self-medication.

HO₁: There is no significant relationship in awareness of health-risks associated with self-medication among staff of MMC.

Table 4: Chi-Square Summary on Knowledge of Health-risks Associated with Self-medication among Staff of MMC

	Observed N	Expected N	Residual	df	Chi-Square	Prob
Agreed	195	180.0	12.0	1	1.712 ^a	0.165
Disagreed	166	181.0	-12.0			
Total	361					

(N=361; df=1; Chi-Square=1.712; table value=3.841)

Table 4 indicates there is no significant relationship in awareness of health-risks associated with self-medication among staff of MMC. Responses from the questionnaire on the tested chi-square (X^2) calculated is 1.712^a which is less than the table value of 3.841 at 0.05 level of significant ($P>0.05$), therefore the null hypothesis was accepted. This indicates that there is no significant relationship in awareness of health-risks associated with self-medication among staff of MMC ($P>0.05$).

Discussion

Self-medication is a major healthcare concern as it may result in various health risks which has detrimental effects on the users. The result of this study indicated that awareness of health-risks associated with self-medication among staff of MMC is considerably low. This can be seen as 197(54.6%) said self-medication is a good practice because it reduces symptoms of medical condition. The result of this study correlate with the study of Asekun-Olarinmoye, Akindiya, Olowookere and Omishakin (2019), where they reported that 97.8% of the undergraduate students had awareness about self-medication and 76.8% practiced self-medication. Findings from a study conducted by Raj and Sujata, 2016 among medical students is also in consistent with the result of this study. The respondents explained that the reasons for performing self-medication included easy to access (48.6%), lack of trust in medical practitioners (24.6%), cost saving (23.0%) and fast & effective (0.2%).

The result of this study showed that 217(60.1%) stated that Self-medication is good for them since it reduces time wasted in the hospital. This is in line with the study of Karimy, Rezaee-Momtaz, Tavousi, Montazeri and Araban, (2019) among women in Iran. In their study, they found that 76% of the sample reported that they are aware of self-medication, of these, 69% indicated that husband or a friend encouraged them to take drugs without prescription and almost all women (98.9%) reported that they store drugs at home. Similar, the result of this study is in accord previous of Lawan, Abubakar, Jibo and Rufai (2013), conducted in Kano, where the writers reported that three-quarter (78.95%) of the respondents admitted that they are aware of self-medication and its effects, but still use it because it reduces cost and safe time. They listed commonly consumed drugs to include antimalarial, analgesics, antibiotics and cough mixtures. In contrast, a study conducted in another part of western Nigeria among dental patients by Afolabi, Akinmoladun, Adebose and Elekwachi, (2010) reported that majority of the respondents are highly aware of self-medication, and this could be attributed to their high level of education, as most of them did not engage in self-medication. The disagreement could also be due to the fact that their study was conducted in an urban health facility, and so their respondents were probably more health-conscious about the consequences of self-medication hence the lower practice.

Consequently, 211(58.4%) of the respondents know that self-medication is the use of drug without prescription. The result of this study corroborates the study of Oyedirana, Ayandirana, Olatubib and Olabode, (2019), where almost all the respondents (96.8%) are aware of the concept of self-medication as the use of drug(s) without prescription. On the contrary, 80.6% of the respondents believe that self-medication leads to drug addiction and dependence with its associated menace. Majority (82.3%) of the respondents have a high awareness of the dangers of self-medication. Also, the result of this study is in line with prior study of Babatunde, Fadare, Ojo, Durowade, Atoyebi, Ajayi, Olaniyan, (2016). They found that majority of respondents were aware of self-medication (94.8%), but only 47.2% had good knowledge of it. Reasons for practicing self-medication were financial problem, minor illness, no enough time, knowledge of diagnosis, convenience and non-availability of doctors. However, the findings of this study contradict Selveraj, Kumar and Ramalingam (2014) where majority of the respondents in their own study had low awareness.

Moreover, the result of this study revealed that almost two-third 231(63.9%) of the respondent know that self-medication can lead to wrong treatment. This is concurring with recent study

conducted by Shah, Halder and Haider, (2021). The study results revealed that 95.4% of students had correct awareness of self-medication, among which analgesics and antipyretic medications were mostly used (66 %). The findings of this study also buttress the study conducted in Sokoto by Musa, Awosan, Ibrahim, Abdullahi, Mohammed, Godwin, Onimisi, Isah, (2019). More than half, 153 (51.2%) of the 299 respondents defined self-medication as using drugs without been prescribed by the doctor. The authors admitted that all 299 respondents had good knowledge of the dangers associated with self-medication. Furthermore, majority 283 (95%) of the respondents are aware of self-medication. This study indicates that there is no significant relationship in awareness of health-risks and self-medication among staff of MMC ($P>0.05$). This is inconsistency with the study of Asekun-Olarinmoye, Akindiya, Olowookere and Omishakin (2019), where they reported that that there was a statistically significant relationship between age and knowledge of harmful effects of self-medication ($p=0.028$). Those within the age group of 15-19 years had more knowledge on self-medication than older aged respondents. Also, there was a statistically significant relationship between sex and knowledge on self-medication ($p=0.01$) as female students were found to have more knowledge on self-medication than their male counterparts. The disparities in the results could be attributed to the fact that this study used local government civil servants, while they used undergraduate medical students.

Conclusion

Based on the findings of this study, it was obvious that the prevalence of self-medication is relatively high.

Recommendations

The following recommendations were made:

- There is need for health education on the implication and danger of self-medication.
- There is also need for government to pass and enforce law to restrict free access to drugs.

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