KNOWLEDGE OF PHYSICAL HEALTH CONSEQUENCES AND PRACTICE OF SELF-MEDICATION AMONG STUDENTS OF TERTIARY INSTITUTIONS IN NORTH-CENTRAL, NIGERIA

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ABSTRACT

The increase in the practice of self-medication based on the various health problems arising from the side-effects and drug resistance as reported by various scholars appears to be global in nature. Although, everyone is at some risk of self-medicated drug-related problems, students in tertiary institutions seem to be particularly vulnerable. This study focused not only on the risk taking behaviour involved in self-medicated drugs practiced but also investigated the knowledge of physical health effects as related to the practice of self-medication. The study adopted the survey research design. The sample consisted of 900 respondents who where sampled using multi-stage sampling procedure. A set of questionnaire developed and validated by the researchers was used to collect data for the study. The data collected were analyzed using descriptive statistics and inferential statistics of t-test were used answer the research questions and the hypotheses respectively. All the hypotheses were tested at 0.05 level of significance. The study revealed that a high percentage of respondents practiced self-medication. Also, the study showed a significance difference between male and female in the knowledge of self-medication with the p-value of 0.004 less than 0.05 alpha level of significance. While there were no significant difference on knowledge of physical health effects of self-medication. The study showed that the higher the knowledge of physical health consequences, the lower the practice of self-medication by the respondents. Based on the findings of this study, it was recommended that self-medication related course should be integrated into the General Studies courses in tertiary institutions in Nigeria.

Keywords: knowledge, practice of self-medication, physical health effects, tertiary institution

Introduction

Self-medication has become a public health concern based on the various health problems arising from the side-effects and drug resistance that are presumed to arise from the increased practice. The ancient trend in self-medication is as old as mankind. Man has from time immemorial use herbs, tree barks, roots and drugs to treat self-diagnosed ailments without prescription from health personnel. By the end of the 19th century, the emergence of new class and group of drugs owing to innovations and scientific discoveries in medicine and health also led to the emergence of new way of self-medication. (Jain, Sonam, Reetesh & Kumar, 2011).

Medication refer to the act of administering and consuming medicines for prevention, diagnosis and treatment of diseases. Correct medication is observed by reporting any disease to

the physician at the hospital or clinic who diagnoses and prescribes the needed drugs to alleviate the condition. The practice of using medicine for the recovery of the body abnormalities is called medication. Medication also connotes the use of chemical as well as natural substances to tackle the health problems such as illness and diseases (Ogar, 2014).

Self-medication is a form of self-care in the selection and use of medicines by individuals to treat self-recognized illness or symptoms (WHO, 2012). Self-medication is also an act by which a person, on their own account or as a result of recommendation from a third party, chooses to administer medicine to themselves in order to prevent, treat or cure a condition whose identity and severity is generally unknown (WHO, 2010). Measures taken to achieve well-being and freedom from illness are different based on the attitudes and experiences of individuals. Beliefs, feelings, and thoughts of an individual significantly influence his or her understanding of an illness, which in turn affects the decision taken to address it.

Self-medication indeed is the biggest socio-health and economic problems that is commonly practice both in economically deprived society as well as economically privilege society. Self-medication has the positive and negative aspect. Thus, it must be noted that self-medication has two Components, which are responsible (appropriate) and non-responsible (inappropriate) self-medication. Responsible self-medication practice which requires a certain level of knowledge and health orientation, can have a positive impact on individuals and health care system (Adeola et al., 2022).

According to World Health Organization (WHO, 2015) guidelines, the act of practicing responsible self-medications can help to prevent and treat ailments that do not require medical consultation. This action can therefore reduce the increasing pressure on medical services and provides a cheaper alternative for relief or treatment of minor illnesses especially when resources are limited. Furthermore, it can decrease the time spent in waiting to see the physician, even save lives in acute conditions, and thereby may contribute to decreasing health care costs, especially in economically deprived countries with limited health resources.

However, regardless of the unquestionable benefits obtained from self-medication with non-prescription drugs, there are risks or undesired outcomes associated with responsible usage. These can include lack of clinical evaluation of the condition by a health care provider which could result in misdiagnosis and incorrect choice of medicines, overdose of drugs or lower dosages, delays in seeking, proper treatments, incorrect duration in use of drugs, and adverse drug reactions

related to the improper use of self-medicated drugs. Inappropriate self-medication results in irrational use of drugs, wastage of resources, increased risk of unwanted effects, prolong suffering, delay in treating serious medical conditions, masking of symptoms of serious condition through the use of non-prescription drugs and development of antibiotic resistance (Adeola et al., 2022).

Globally, the prevalence of self-medication varied from 32.5% to 81.5% depending on the country in which a study has been conducted and the study design. For example, in the United State of America (USA) in a period of months, about 71% of men and 82% of women had self-medicated at least once (Gutema, 2011). In the United Kingdom of Great Britain and Northern Ireland, 41.5% of people had used drugs without doctor's prescription. Also, self-medication among University students is high and previous studies have reported prevalence of 27% in Span, 75% in Chile, 40-60% in Vietnam and 32% in China (Hashemzael, 2021). In India, Hong Kong, Pakistan, Brazil and Palestine the prevalence of self-medication have been 87%, 94%, 76%, 86.4% and 98% respectively (Kifle et al., 2021). In Sub-Saharan African countries including Nigeria, self-medication has become a common practice. Studies conducted in Egypt revealed prevalence of 55%, 43.2% in Ethiopia and 56.6% to 90.7% in Nigeria (Bassi, Osakwe & Builders, 2021).

Studies have reported high prevalence rates of self-medication in Nigeria ranging from 92.3% in Lagos, (Ayanwale, Okafor & Odukoya, 2017), 80.4% in Zaria, (Olayemi, Olayinka & Musa, 2010) and 66.0% in Jos (Auta, 2017). A study of the prevalence of self-medication practice among University Students in South-west Nigeria, indicated that majority of the respondents (91.4 %) were involved in self-medication practices. Fifty three point eight percent of the students used antibiotics while 46.3 % used anti-malarial drugs for self-medication (Osemene & Lamikanra, 2012). In another study to determine the practice of self- medication among university students in Southwestern, Nigeria high rate of self-medication was reported among students with anti-malaria drugs and antibiotics as the common drugs being used because these drugs are readily available and cheap (Osemene & Lamikanra, 2012).

Previous studies conducted in different areas suggested that students (undergraduate) had a poor knowledge about the pros and cons of self-medication as well as practices of self-medication, as a result of their outlook toward self-medication practice were majorly favourable for any perceived illness. The misuse of non-prescription drugs amongst students become a serious problem. The youth is especially exposed to the media and the increased advertising of pharmaceuticals posed a larger threat to the young population (Sridher & Shariff, 2018).

Many studies exist on practices and health consequences of self-medication among students in various regions of Nigeria but to the best of our knowledge and the literature reviewed, there is a relative dearth (paucity) of empirical studies on self-medication in the North Central Nigeria where the study was conducted. Therefore, the objective of this study was set at assessing the practices of self-medication and physical health effects associated among tertiary students in North central, Nigeria. In achieving the stated objectives, the following research questions and hypotheses were posed and formulated. The hypotheses were tested at 0.05 level of significance.

Research Questions

Q1. What is the difference in the knowledge of physical health consequences of self-medication between male and female students of tertiary institution in North Central, Nigeria?

Q2. What is the difference in the practice of self-medication between male and female students of tertiary institution in North Central, Nigeria?

Research Hypotheses

Ho_1: There is no significant difference in the knowledge of physical health consequences of self-medication between male and female students of tertiary institution in North Central, Nigeria based on gender.

Ho_2: There is no significant difference in the practice of self-medication between male and female students of tertiary institutions in North central, Nigeria.

Methods

The study area is located in North Central Nigeria. A cross-sectional research design was adopted for the study. The population of the study composed of students area is a heterogeneous group of both gender, different age groups, religions, tribes and institutions undergoing regular study in two universities, two polytechnics and two colleges of education. Purposive sampling technique was used to select institution types while simple random technique was used to select 150 students from each of the higher institutions, six departments from three faculties of the two universities, six departments from three schools of polytechnics and six departments from three schools of colleges of education, making a total of 900 students.

Instrument

A pre-tested, structured questionnaire was used for the study. The questionnaire was in three sections. The first section sought information on demographic characteristics of the respondents such as gender, type and ownership of institution. The second section contained questions on knowledge of physical health consequences of self-medication. Items on this section were measured using the four Likert scale of Strongly Agree (SA) - 4, Agree (A) - 3, Disagree (D) - 2 and Strongly Disagree (SD) - 1. The questionnaire was by two experts from human kinetics and health education department of Prince Abubakar Audu University, Anyigba Kogi state. The validated questionnaire was tested for reliability and distributed to the students by the researcher with the help of 12 trained research assistants who administered the questionnaire to the students in their various institutions to gather information about their knowledge of physical health effects and practice of self-medication.

Data analysis

Data were analyzed by using descriptive statistics of mean and standard deviation to answer the research questions while the *t*- test statistics was employed to test the hypotheses at 0.05 level of significance. Any mean response score of 2.50 above is regarded as positive while any mean response score of or acceptable while any mean response score of less than 2.50 is regarded as not acceptable.

Results

Table 1: Mean and standard deviation score of students on knowledge of health consequences of self-medication

S/N	Statement	Mean	Std.D
1	Adverse drug reaction	2.74	0.76
2	Increase misdiagnosis or incorrect self-diagnosis	2.57	0.54
3	Incorrect dosage	2.82	0.48
4	Potential delay in seeking medical advice or treating serious medical conditions	3.26	0.67
5	Masking of several disease	2.84	0.55
6	Prolong suffering	2.57	0.63
7	Increase complications	2.66	0.72
8	Development of antibiotics resistance	3.16	0.84
9	Dangerous drug interaction	2.58	0.45
10	Prolong duration of use of medicines withdrawal symptoms.	2.63	0.63
	Aggregate mean	**2.78**	

Table 1 data was use to answer the research question1, which sought information on knowledge of physical health consequences of self-medication. From the table, students responded positively to all items with the aggregate mean of 2.78. The implication of this finding is that students of tertiary institutions in North Central Nigeria have a good or adequate knowledge on physical health consequences of self-medication.

Table 2: T-test analysis of student's knowledge on physical health consequences of self-medication by gender

Sex	N	Mean	Std. D	Df	T-cal value	*p*-value
Male	375	2.64	0.81	888	1.74	0.006
Female	525	2.67	0.79		1.32	

Table 2 data was used to test the hypothesis 1. The result revealed a t-test calculated value of 1.32 with a degree of freedom of 888 and a probability value of 0.006. Since the probability value (p-value) is less than. 0.05 at alpha level of significance for testing the hypothesis, the

hypothesis is therefore rejected. The implication is that there is significant differences in the mean response score of students on physical health consequences of self –medication.

Table 3: Mean and Standard deviation score of students on the magnitude of self-medication practice

S/N	Statement	Mean	Std.D
1	I engage in self-medication when ailment and disease is not serious enough to warrant going to hospital.	2.73	0.345
2	I engage in self-medication when there is no money to pay hospital bill.	3.24	0.262
3	I engage in self-medication when to overcome academic and examination stress.	3.46	0.064
4	Sometimes before I use drug, I must be aware of its possible side effects.	3.361	0.176
5	I engage in self-medication to avoid unfriendly attitude of healthcare workers.	3.48	0.048
	Aggregate Mean	**3.25**	

Table 3 is used to answer research question 2. The result shows the mean score of the responses of the student on the magnitude of self-medication practice. The result shows that all items from the responses were positive with the aggregate mean score of the items of 3.25. Thus, tertiary institution students of North Central, Nigeria indulged in self-medication practices.

Table 4: T-test analysis of student's practice of self-medication by gender

Sex	N	Mean	Std. D	Df	T-cal value	*p* value
Male	375	2.46	0.53	888	1.74	0.004
Female	525	3.63	0.82			

Table 4 shows the t-test analysis of male and female respondents on the practice of self-medication. The result revealed a t-test of 1.74 with a degree of freedom of 888 and a probability value of 0.004. Since the probability value (p-value) is less than the 0.05 at alpha level of significance set for testing the hypothesis, the hypothesis is therefore rejected. This means that there is significant difference in the mean response score of male and female students on practice self-medication.

Discussion of Findings

The result of table 1 showed the average on aggregate mean knowledge score of 2.78. On the basis of mean knowledge score we can interpret that tertiary institution students in North Central Nigeria were having good or adequate knowledge on physical health consequences of self-medication. Students express their good level of knowledge on physical health consequences of self-medication on items such as development of antibiotics resistance, masking of disease, prolong suffering, adverse drug reaction, and delay in seeking medical treatment and increase misdiagnosis among others. A similar description studies conducted to assess knowledge on health consequences of self-medication showed that the knowledge was good on 75% and 64.5% respondents and 25% and 34% respondents were having poor knowledge related to health consequences of self-medication respectively (Osemene & Lamikanra, 2012).

The findings of this study also found that respondents were highly involved in the practice of self-medication despite having good knowledge of the harmful consequences of self-medication. This is similar to previous studies done among Nigerian undergraduates in different parts of the country where a high proportion of students practice self-medication ranging from 56.6% to 90% (Bassi & Osakwe, 2021).

Finally, the present study revealed there is significant difference between male and female undergraduates in relation to their level of knowledge on physical health effects of self-medication. This finding is in variance to discoveries of other works that student's knowledge on health consequences of self-medication were not influenced by gender. (Sridher & Shariff, 2018).

Conclusion

Based on the finding of this study, the following conclusions were made that there was a high level of knowledge of physical health effects and indulgence in poor practice of self-medication (almost all of the respondents practiced self-medication) among the tertiary institution students in North Central Nigeria. There was a cognitive discord between the respondent's knowledge and practice of self-medication as knowledge did not translate into good practice.

Recommendation

Based on the conclusion of this study, it is therefore recommended that;

1. Awareness campaign on self-medication and its health related hazards should be embarked upon by health practitioners and intensive institutions health education should be carried out.
2. Also, Students should lay off the practice of non-responsible self-medication.
3. Finally, the government should ensure that there is regulation, control and law enforcement on the sale of drugs by untrained personnel's as this will reduce drastically, indiscriminate use of drugs and non-responsive self-medication.

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