Original Research Article

Self-Medication Practice among Secondary School Students in Ekiti-State, Southwest Nigeria

Abstract

Aims: This study investigated the practice of self-medication and the types of drugs students self-medicate as well as factors influencing practice of self-medication among secondary school students in Ekiti State, Southwest Nigeria.

Methods: The study employed a descriptive survey design using a combination of simple random and stratified sampling techniques to select 500 respondents to form the study group.

~~Instrumentation:~~ A pre-tested structured questionnaire was used to collect information from respondents.

~~Data Analysis:~~ SPSS 17.0 was used to analyse the data. The research questions were answered using descriptive statistics of frequency and percentages. Inferential statistics of t test and Analysis of Variance (ANOVA) were used to test the difference in the practice of self-medication between age groups and sex at 95% confidence level.

~~Major Findings~~Results: The study revealed that 80.4% of the respondents practised self-medication. Also, analgesic 38.8% topped the type of drug that students self-medicated. On the reasons adduced for self-medication, "I know what to do always" has the highest response of 60.4%. The t cal 0.82<t tab 1.96 at P=0.05 denotes that that there is no significant difference between male and female in the practice of self-medication. Also, a df 2; 477, f cal 3.544>f tab 3.01 at P=0.05 signifies a significant difference between age groups in the practice of self-medication.

Conclusion: The practice of self-medication was found to be prevalent among secondary school students with. Analgesic was the drug most self-medicated and significant difference exists between the age groups in the practice of self-medication. It was recommended that, health educators should organize health campaigns and sensitization programme in secondary schools to enlighten students on the health implication of self-medication.

Keywords: *self-medication, gender, age, practice, students*

Introduction

Self-care behaviour in form of self-medication is a global phenomenon [1] and it has become an issue under debate in health care [2]. Evidence has shown that self-medication is not restricted to a region or race since both developing and developed countries are experiencing the menace of inappropriate self-medication [3, 4]. The variations in the level and patterns of self-medication among developing and developed nations may be due to the disparities in the cultural, economic, health care system and policies in each nation. Self –medication as a behaviour could be

classified as responsible or non-responsible and as a result, the behaviour cannot be considered entirely harmful [5].

Responsible self-medication entails using approved and available medicine in a safe and effective way as directed though, without prescription [6]. The types of drugs used are indicated for a self-recognisable condition following initial medical diagnosis, which means that users have previous knowledge of the dose, time and side effect of the overdose of the drug. Responsible self-medication is possible in the developed nations because of high quality of education, accessibility to health information, safety and quality health care including government policies on health coupled with the health seeking behaviour and sceptical expert knowledge [10].

Non-responsible self-medication is the use of drugs in the treatment of self-diagnosed ailments or symptoms of diseases without supervision or prescription by a physician [7]. It is characterised by indiscriminate use of medicine for the management of ailment many of which have resulted into intoxication [8]. Major problem of non-responsible self-medication is the lack of clinical evaluation by medical professional which can result into missed diagnosis and delay in appropriate treatment [9], drug resistance, use of expired drugs, wrong doses and prolonged duration of usage [4]. The act of non-responsible self-medication seems to be prevalent in the developing countries because of the poor level of literacy, scarcity of health information and non-implementation of government policies on health issues [11].

In Nigeria, high degree of irresponsible self-medication is practised [12]. The most common drugs used without prescription include antimalarial, analgesics, antipyretics [4], antibiotics and cough syrup [13]. The sources of the drugs people use without prescription, sometimes are from pharmacy and left over drugs from previous medication [14]. Students have reasonable information about drugs through print media, pharmacy shops, medicine dealers, family and friends [15] or patent medicine shops [13]

The factors influencing self-medication remains issues of intense debate in academic discourse [16]. Un-controlled drugs in open market and poor drug regulatory practices [17] contribute to self-medication. Many Nigerians, most times, trivialised ailments such as headache, fever, cough, throat infection, common cold and stomach ache [18] while, some do perceive some ailments to be too mild to necessitate medical consultation [19]resulting into self-medication to manage such ailments**.** 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 [16]. Studies revealed higher prevalence of self-medication among males than females while some found no strong association between gender [18, 17].

Easy availability and accessibility to healthcare facilities and trained physicians remain a cornerstone for reducing the practice of self-medication [20, 21]. The fact remains, that many rural communities have little or no access to modern medical

care because of the uneven distribution or inadequate health facilities [22]. This may encourage the practice of self- medication.

The practice of self-medication among secondary school students seems to be on the increase. Many literatures exist on prevalence of self-medication among university students [1] and among workers of tertiary institutions [16] but it was observed that there is a relative dearth of literature on self-medication among secondary school students. Therefore, this study investigated the practice of self-medication among students of secondary schools, the types of drugs students self-medicate and the factors influencing the practice. Lastly, the differences in the practice of self-medication between gender as well as age group were also determined.

Methods

Study setting: The study was conducted among secondary school students in Ekiti State, Southwest Nigeria.

Study Design: Descriptive research design of the survey type was used to conduct the study among students in rural and urban secondary schools in Ekiti State, Southwest Nigeria.

Sampling techniques: A total of 500 students were selected using simple random and stratified sampling techniques. Ekiti State was stratified into urban and rural towns, after which simple random sampling was used to select two towns each from each stratum and two secondary schools from each town. The schools were stratified into junior secondary (JSS) and senior secondary schools (SSS). Due to the difference in school population, proportionate sampling was used to select respondents. Finally, 290 were selected from JSS and 210 from SSS making a total of 500 respondents.

Instrumentation: A pre tested, structured questionnaire was designed from related studies. The questionnaire was in two parts. Part A elicited information on the demographic variables of respondents and Part B was used to collect the data on practice, reasons for practice of self-medication and types of drugs students self-medicate. The first question was if students engage in self-medication followed questions to determine the reasons for the practice of self-medication. The items were measured with a two- point scale of “sometimes” and “Never”. The content validity of the questionnaire was determined by experts in health education. Pilot testing of the instrument on 20 respondents using test retest method of reliability gave reliability co-efficient of 0.73. The researchers sought verbal consent from the school principals before administering the questionnaire and selected respondents. Copies of the questionnaire were administered to the respondents by the researchers with the support of trained research assistants after explaining the items in the questionnaire. The voluntary return of the completed questionnaire by respondents signified consent and were included in the study

Statistical Analysis: Data were analysed using SPSS 17.0. Descriptive statistics of frequency and percentage were used to answer the research questions. Inferential statistics was used to find the differences in the practice of self-medication using t test between male and female and Analysis of Variance (ANOVA) between the age groups. The formulated hypotheses were tested at P= 0.05 level of significance.

Results

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The response rate for the administered questionnaire was 96% because only 480 copies of questionnaire were fully completed and returned out of 500.

Table 1 shows that 58.3% respondents are 10-14 years, 15-19 years 39.6% while, those in 20-24 years were 2.1%. Also, 50.4% were schooling in the urban areas and 49.6% in the rural areas. In addition, 45% were males and 55% were females. Finally, 57.1% of the respondents were in junior secondary school (JSS) and 42.9% were in senior secondary school (SSS).

Variable		**F**	**%**
Age	10-14	280	58.3
	15-19	190	39.6
	20-24	10	2.1
	Total	480	100.0
Sex	Male	216	45.0
	Female	264	55.0
	Total	480	100.0
Location	Urban	242	50.4
	Rural	238	49.6
	Total	480	100.0
Level	JSS	274	57.1
	SSS	206	42.9
	Total	480	100.0

Table 1: Distribution of the demographic variables of respondents

Table 2 reveals that 80.4% indulged in the act of self-medication while 19.6% of the respondents did not practice self-medication. The breakdown of self-medication practice among respondents were as follows; those within 10-14 years 44.6%, 15-19 years 34.2% and 20-24 years 8 1.6% including male 35.4% and female 45.5%

Variable		Yes		No	
		F	%	F	%
Age	10-14	214	44.6	66	13.8
	15-19	164	34.2	26	5.4
	20-24	8	1.6	2	0.4
	Total	386	80.4	94	19.6
Sex	Male	170	35.4	46	9.6
	Female	216	45	48	10
	Total	386	80.4	94	19.6

Table 2: Frequency distribution of practice of self-medication

Table 3 shows the analysis of the types of drugs the 386 respondents self-medicate. Analgesics 38.8% topped the list, followed by antibiotics 17.9% and antipyretics 14.2%. Others such as sedatives, blood supplement and appetite stimulant has 1.2% responses each.

Types of Drugs	F	%
Analgesic	186	38.8
Antibiotics	86	17.9
Antipyretics	68	14.2
Sedatives	6	1.2
Antimalarial	28	5.9
Blood Supplement	6	1.2
Appetite stimulant	6	1.2
Total	386	80.4

Table 3: Frequency distribution of the types of drugs students self-medicate

Table 4 shows the reasons respondents engage in self-medication. I know what to do always, 60.4% of the respondents sometimes engaged in self-medication because they perceived that they know what to do. This was closely followed by "Ailment/disease is not serious to warrant going to the hospital" 58.3% and "using left over drugs drugs applied on previous health problem" 57.1%. The item with least response is lack of money to pay the doctor's bill 41.7%.

	Sometimes		Never	
I engage in self-medication because:	**F**	**%**	**F**	**%**
Ailment/disease is not serious to warrant going to hospital	280	58.3	200	41.7
Using left over of drugs applied on previo health problem	274	57.1	206	42.9
Lack of money to pay for doctor's bill	176	36.7	304	63.3
Health facility too far away to my residen	222	46.3	258	53.7
Long duration of waiting to see doctor	200	41.7	280	58.3
No physician to prescribe drug for me	204	42.5	276	57.5
I know what to do always	290	60.4	190	39.6

Table 4: Frequency Distribution and Percentages responses on the reason for practicing self-medication

Table 5 shows that t cal.0.82< t tab 1.96 *P=0.05.* The finding signifies that there is no significant difference between male and female in the practice of self-medication. The stated hypothesis that there is no significant difference between male and female in the practice of self-medication is thus not rejected.

		N	$\overline{X}$	SD	df	t cal	t tab	Remark
Practice	**Male**	216	1.79	.410	478	0.82	1.96	NS
	Female	264	1.82	.386				

P=0.05

Table 5: t test analysis of Gender and practice of Self-Medication

Table 6 shows the df 2;477, F cal 3.54> F tab 3.01at P=0.05. The fact that F calculated is greater than the table value denotes that the stated hypothesis that there is no significant difference between age groups of respondents in the practice of self-medication is significant and thus not accepted.

Practice	**SS**	**df**	**MSS**	**F cal**	**F tab**	**Sig.**
Between Group	1.107	2	.553	3.544*	3.01	S
Within Group	74.485	477	.156			
Total	75.592					

P=0.05

Table 6: Analysis of Variance showing the difference between age and practice of Self-Medication

Discussion

This study discovered a high prevalence 80.4% of self-medication practice among the respondents. This finding is in line with previous similar study where a higher prevalence 97.8% was discovered among students of secondary school [23] as well as the submission that self-medication is prevalent among individuals in many developing countries of the world [11]. Nonetheless, a study on practice of self-medication revealed a lower prevalence of 11.9% [5]. The discrepancy in the prevalence could be because self-medication practice was limited to the preceding three months while this study did not limit self-medication to a particular period. Finding analgesics to be the drugs most used for self-medication agreed with a study conducted in Islamabad, Pakistan where analgesics were the most class of medicine used [24]. The similarities could be linked with the method of obtaining drugs in Nigeria which is similar to what happens in Pakistan where almost every pharmacy sells drug without demanding for prescription. On the contrary, a study carried out among adult population in Southwest Nigeria, discovered that antibiotics is the most common drugs used by students [13]. The difference could be attributed to the stage of development and exposure because the population in this study are younger generation with more female than male with most of them just attaining the stage of puberty. Findings in studies revealed that 84% of girls used analgesics without prescription to relieve themselves of menstrual pains [25] and over 67% girls take palliative drugs medicine for their menstrual pains without prescription [26]. The need to reduce dysmenorrhea among the girls may increase the use of analgesic. The higher number of female who are just entering into puberty in this study may be attributed to the increase in the prevalence of self-medication as well as using analgesics.

This survey showed that the most common reasons students self-medicated was “I know what to do always” this was closely followed by “ailment/disease is not serious to warrant going to hospital” and “using left over of drugs applied on previous health problem”. These findings are almost similar to the discoveries that students perceive some ailments to be too minor to necessitate medical consultation [19, 24] but disagreed with the finding that non- availability and accessibility to healthcare facilities increased the practice of self-medication [20]. Since, more than 50% of the respondents did not self-medicate because of the reasons relating to lack of money to pay doctors bill, health facility too far to residence, waiting time to see doctor or no physician to prescribe drugs, shows that the act of self-medication among the students was motivated by their attitude. The perception of knowing what to do could result into misplaced confidence which can cause inappropriate self-medication that would expose the respondents to risks associated with the practice of self-medication [27]

The present study discovered that there is no significant difference between male and female students in the practice of self-medication. This finding disagreed with the significant difference that was found between male and female in the practice of self-medication [23] and no strong association between gender and the practice of self-

medication [17] in similar studies. The slightly higher mean among female shows that female practices self-medication than male negates the findings that showed a higher prevalence among male than female [17, 18] but agreed with similar finding with higher proportion of females 64.3% self-medicating than males 45.7% males [28]. The reason for this finding could be linked to the fact that adolescent female may need to relieve pains more than their male counterparts and male on the other hand, has the tendency to trivialize illness or neglect mild illness.

The significant difference between age groups of respondents in the practice of self-medication disagreed with the assertions in previous studies. For instance, no significant difference was observed between different age groups and self-medication [29] and significant relationship were found to exist between age and the practice of self-medication. [16,18]. The variations in this study and others could be as a result of the age of the respondents in this study because many of the respondents at the time of this study were experiencing major physiological, emotional and psychological changes.

Conclusion

The practice of self-medication was found to be prevalent among secondary school students. Respondents self-medicated analgesic more than antibiotics. The major reason identified for self-medicating was the perception that they know what to do always followed by the feeling that the ailment/disease was not serious enough to necessitate going to hospital. The danger in this perception is that serious ailment could be trivialised and delay in the proper management of such ailment could be fatal. There was no significant difference between males and females in the practice of self-medication. Finally, a significant difference was found to exist between age in the practice of self-medication. Based on the findings, health educators should organize health campaign and sensitization programme in secondary schools to enlighten students on the negative health implications of self-medication. Also, secondary school students should be encouraged on the need to make use of health care facilities

Inclusion and Exclusion Criteria

The final classes in Junior and Senior secondary schools were included because they are regarded to be able to interpret the questionnaire than those in junior classes All those who completed the questionnaire were also included.

Limitations

Students in private secondary schools were not included in the study hence generalization of this study would not be related to them.

Contribution of Authors

Awosusi AO initiated the study, wrote the introduction and designed drafted the questionnaire from related studies. Actively participated in the administration and collation of the questionnaire and data analysis

Konwea PE selected the respondents; pilot tested the instrument, participated in data administration and interpreted the data analysis for the study including the discussion of the study.

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Conflict of Interest: None declared

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