

Original Research Article

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

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Abstract

Aims: The aim of this study was to investigate 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. A pre-tested structured questionnaire was used to collect information from respondents within a period of six months. –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.

Results: The study revealed that 386 (80.4%) of the respondents do engage in the practise of self-medication. Also, analgesic 186 (38.8%) was the commonest of topped the types of drugs used in self-medication. On the reasons adduced for self-medication, the response “I know what to do always” has the highest response of 72 (15.0%) followed by “I know what to do sometimes” of 218 (45.5%). The t calculated 0.82 was lesser than t table value 1.96 at P=0.05, which denotes that there is no significant difference between male and female in the practice of self-medication. Also, at 2; 477 degree of freedom, f calculated of 3.54 was greater than f table value of 3.01 at P=0.05 which 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. Also, analgesic was the commonest of the drugs being most self-medicated and significant difference exists among between the age groups in the practice of self-medication. It was recommended that, health educators should organize health campaigns and sensitization program in secondary schools to enlighten students on the health implication of self-medication.

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

Introduction

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43 The practice of self-medication is a global phenomenon [1] and it has become an
44 issue under debate in health care [2]. Evidence has shown that self-medication is
45 not restricted to a region or race since both developing and developed countries are
46 experiencing the menace of inappropriate self-medication [3, 4]. The variations in
47 the level and patterns of self-medication among developing and developed nations
48 may be due to the disparities in the cultural, economic, health care system and
49 policies in each nation. Self-medication as a behaviour could be classified as
50 responsible or non-responsible and as a result, the behaviour cannot be considered
51 entirely harmful [5].

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

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

71 In Nigeria, high degree of irresponsible self-medication is practised [12]. The most
72 common drugs used without prescription include antimalarial, analgesics,
73 antipyretics [4], antibiotics and cough syrup [13]. The sources of the drugs people
74 use without prescription, sometimes are from pharmacy and left over drugs from
75 previous medication [14]. Students have reasonable information about drugs
76 through print media, pharmaceutical shops, medicine dealers, family and friends
77 [15] or patent medicine shops [13]

78 The factors influencing self-medication remains issues of intense debate in
79 academic discourse [16]. Availability of drugs in markets and poor drug regulatory
80 practices [17] contribute to self-medication. Many Nigerians, most times, trivialized
81 ailments such as headache, fever, cough, throat infection, common cold and
82 stomach ache [18] while, some do perceive some ailments to be too mild to
83 necessitate medical consultation [19] resulting into self-medication to manage such
84 ailments. Other factors like demographic factors have been found to influence self-

85 medication. For instance, gender, age, sex and social role were discovered to have
86 influence on self-medication [16]. Studies revealed higher prevalence of self-
87 medication among males than females while some scholars found no strong
88 association between gender [18, 17].

89 The fact remains, that many rural communities have little or no access to modern
90 medical care because of the uneven distribution or inadequate health facilities [22].
91 This may encourage the practice of self- medication.

92 The practice of self-medication among secondary school students seems to be on
93 the increase. Many literatures exist on practice of self-medication among university
94 students [1] and among workers of tertiary institutions [16] but it was observed
95 that there is a relative dearth of literature on self-medication among secondary
96 school students. Therefore, this study was set out to investigate the practice of self-
97 medication among students of secondary schools, the types of drugs used and the
98 factors influencing the practice. In addition, it would determine the differences in
99 the practice of self-medication between gender as well as among age groups.

102 **Methods**

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

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

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

116 **Instrumentation:** A pre tested, structured questionnaire was designed from related
117 studies. The questionnaire was in two parts. Part A elicited information on the
118 demographic variables of respondents and Part B was used to collect the data on
119 practice and the factors influencing self-medication as well as the types of drugs
120 used in self-medication. The first two questions used in eliciting information on
121 practice of self-medication are: 'Do you practise The first question was if students
122 engage in self-medication'? and 'What type of drug do you use without doctor's
123 prescription'? These were followed by a set of questions to determine the reasons
124 for the practice of self-medication. The items were measured with a three-point
125 Likert-type scale of "Always", "Sometimes" and "Never". The content validity of the
126 questionnaire was determined by experts in health education. Pilot testing of the

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instrument on 20 respondents using test **re-test** method of reliability gave reliability co-efficient of 0.73. The researchers ~~sought~~**obtained** verbal ~~and written~~-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 **analyzed** using SPSS 17.0. Descriptive statistics of frequency and percentage were used to answer the research questions. Inferential statistics **were** used to find the differences in the practice of self-medication using t test between male and female and Analysis of Variance (ANOVA) ~~among between~~ the age groups. The formulated hypotheses were tested at $P = 0.05$ level of significance.

Results

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

The demographic data of the respondents in Table 1 shows that respondents within that 10-14 years of age were 280 (58.3%) are 10-14 year, s 15-19 years of age were 190 (39.6%) and 20-24 years of age were 10 (2.1%). The sex of respondents reveals that males were 216 (45%) and females were 264 (55%). The location of respondents' schools reveals that 20 (2.1%) were schooling in the urban areas and 238 (49.6%) were schooling in the rural areas. Finally, the level of education in addition, 45% were males and 55% were females. Finally, of respondents shows that those in Junior Secondary Schools (JSS) were 274 (57.1%) and of the respondents were in junior secondary school (JSS) and Senior Secondary Schools (SSS) were 206 (42.9%) were in senior secondary school (SSS).

Table 1: Distribution of the demographic variables of respondents

Variables		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

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Table 2 reveals that respondents who indulged in the act of self-medication were 386 (80.4%) ~~indulged in the act of self-medication while~~ and those who did not practice self-medication were 94 (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 of age were 214 (44.6%), 15-19 years of age were 164 (34.2%) and 20-24 years of age were 8 (8.1.6%) which comprise of including male 170 (35.4%) males ~~and female 216 (45.5%)~~ females

Table 2: Frequency distribution of practice of self-medication

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 3 shows the analysis of the types of drugs the 386 respondents self-medicate. Analgesics 186 (38.8%) topped the list, followed by antibiotics 86 (17.9%) and antipyretics 68 (14.2%). Others, such as sedatives, blood supplement and appetite stimulant has 6 (1.2%) responses each.

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

Types of Drugs	F	%
Analgesics	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 4 shows the reasons respondents engage in self-medication. Response to “I know what to do always” was 72 (15%) and sometimes 218 (45.5%)~~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” with response to ‘always’ 34 (7.1%) and ‘sometimes’ 246 (51.2%). Also, 58.3% and “using left over drugs “using left over drugs applied on previous health problem” had ‘always’ 56 (57.1%, 11.7%) and ‘sometimes’ 218 (45.4%). The item with least response is “lack of money to pay the doctor’s bill” with ‘always’ 30 (6.3%) and ‘sometimes’ 146 (30.4%)~~41.7%.~~

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Table 4: Frequency Distribution and Percentages of the reason for practising self-medication

	<u>Always</u>		<u>Sometimes</u>		<u>Never</u>	
<u>I engage in self-medication because:</u>	<u>F</u>	<u>%</u>	<u>F</u>	<u>%</u>	<u>F</u>	<u>%</u>
<u>Ailment/disease is not serious enough to warrant going to hospital</u>	<u>34</u>	<u>7.1</u>	<u>246</u>	<u>51.2</u>	<u>200</u>	<u>41.7</u>
<u>Using left over drugs applied on previous health problem</u>	<u>56</u>	<u>11.7</u>	<u>218</u>	<u>45.4</u>	<u>206</u>	<u>42.9</u>

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<u>Lack of money to pay hospital bill</u>	<u>30</u>	<u>6.3</u>	<u>146</u>	<u>30.4</u>	<u>304</u>	<u>63.3</u>
<u>Health facility too far away from my residence</u>	<u>48</u>	<u>10.0</u>	<u>174</u>	<u>36.2</u>	<u>258</u>	<u>53.8</u>
<u>Long duration of waiting to see doctor</u>	<u>24</u>	<u>5.0</u>	<u>176</u>	<u>36.7</u>	<u>280</u>	<u>58.3</u>
<u>No physician to prescribe drug for me</u>	<u>38</u>	<u>7.9</u>	<u>166</u>	<u>34.6</u>	<u>276</u>	<u>57.5</u>
<u>I know what to do always</u>	<u>72</u>	<u>15.0</u>	<u>218</u>	<u>45.5</u>	<u>190</u>	<u>39.5</u>

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	Never					
I engage in self-medication because:						
Ailment/disease is not serious warrant going to hospital						
Using left over drugs applied on previous health problem						
No physician to prescribe drug for me						
I know what to do always						

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

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	Sometimes		Never	
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 previous 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 residence	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

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Table 5 shows the t test analysis of gender and practice of self-medication. The findings shows that the calculated value ($t_{cal}=0.82$) is lesser than the table value ($t_{tab}=1.96$) at $P=0.05$. 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.

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

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

$P=0.05$

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Table 6 shows the Analysis of Variance (ANOVA) of age and the practice of self-medication. The degree of freedom of $df=2; 477; 477$, the calculated value $F_{cal}=3.54$ is greater than the table value $F_{tab}=3.01$ at $P=0.05$. The fact that F_{cal} is greater than the table value finding denotes that the stated hypothesis is not accepted.

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

Practice	SS	Df	MSS	F cal	F tab	Sig.
Between Group	1.107	2	.553	3.544*	3.01	S

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Within Group	74.485	477	.156
Total	75.592		

P=0.05

Discussion

This study discovered a high prevalence 396 (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~~ major 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 [24]. On the contrary, a study carried out among adult population in Southwest Nigeria, discovered that antibiotics is the most common drugs ~~used without prescription~~~~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 ~~and~~ with most of them just attaining the stage of puberty. Findings ~~another in~~ ~~study~~ ~~ies~~ 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 ~~reducetreat~~ ~~dysmenorrheadysmenorrhoea~~ among the girls may increase the use of analgesic. ~~The increase in the prevalence of self-medication as well as commonness of analgesics on the list of self medicated drugs may be attributed to~~ ~~the higher number of females~~ who are just entering into puberty ~~used~~ in this study. ~~I 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 ~~gave for~~ self-medication~~ged~~ was “I know what to do always” ~~. -t~~This was closely followed by “ailment/disease is not serious ~~enough~~ to warrant going to hospital” and “using left over of drugs applied on previous health problem”. These findings are almost similar to the discoveries ~~in other works~~ that students perceive some ailments to be too minor to necessitate medical consultation [19, 24] but disagreed with the study in which non- availability and ~~non~~-accessibility to healthcare facilities and trained physicians were found to increase the practice of self-medication [20,21]. 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,

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321 waiting time to see doctor or no physician to prescribe drugs, shows that the act of
322 self-medication among the students was motivated by their attitude. The
323 perception of knowing what to do could result into misplaced confidence which can
324 cause inappropriate self-medication that would expose the respondents to risks
325 associated with the practice of self-medication [27]
326 The present study discovered that there is no significant difference between male and
327 female students in the practice of self-medication. This finding disagreed with the
328 significant difference that was found in some other study between male and female in
329 the practice of self-medication [23] and no strong association between gender and the
330 practice of self-medication [17] in similar studies. The slightly higher mean among
331 female recorded in the study which shows that female practises self-medication more
332 than males negates the findings that showed a higher prevalence among male than
333 female [17, 18] but agreed with similar finding with higher proportion of females
334 (64.3%) self-medicating than males (45.7%)—males [28]. The reason for this finding
335 could be linked to the fact that adolescent females may need to relieve pains while
336 more than their male counterparts and male on the other hand, has the tendency to
337 trivialize illness or neglect mild illness.
338 The significant difference between age groups of respondents in the practice of self-
339 medication disagreed with the assertions in previous studies. For instance, no
340 significant difference was observed between different age groups and self-
341 medication [29] and significant relationship were found to exist between age and
342 the practice of self-medication [16,18]. The variations in this study and others could
343 be as a result of the age of the respondents in this study because many of the
344 respondents at the time of this study were experiencing major physiological,
345 emotional and psychological changes. The fact that the practice of self medication
346 was more prevalent among respondents of 10 to 14 years of age is instructive in
347 that it may not be unconnected with the fact that the group are more susceptible to
348 imitation of peer group behaviours. The pull to be self independent may be
349 accountable for the feeling that they could solve their health problems their own
350 way in which case they may not consider consulting medical practitioners as an
351 option.

352
353 **Conclusion**

354 The practice of self-medication was found to be prevalent among secondary school
355 students. Respondents self-medicated analgesics more than antibiotics. The major
356 reason identified for self-medication was the perception that they know what to
357 do always followed by the feeling that the ailment/disease was not serious enough
358 to necessitate going to hospital. Thus, non-availability or non-accessibility to health
359 care facilities could not be adduced to be the reason for self medication among
360 these students. The danger in this perception is that serious ailment could be
361 trivialised and delay in the proper management of such ailment could be fatal.
362 There was no significant difference between males and females in the practice of

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self-medication. Finally, a significant difference was found to exist between age groups 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

Only students in the final classes in Junior and Senior public secondary schools were included because they are regarded to be able to interpret the questionnaire more than those in lowerjunior classes of each group. 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 A. O. initiated the study, y. drafted the questionnaire, participated actively in the administration of the questionnaire and worked on the data analysis. 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 P. E. 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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Conflicts of Interest: None

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