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## KNOWLEDGE, ATTITUDE AND PRACTICE OF SELF MEDICATION IN SOUTHWEST ETHIOPIA

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### ABSTRACT

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**BACKGROUND:** Self-medication is the selection and use of medicines by individuals to treat selfrecognised illnesses or symptoms and an important initial response to illnesses if successfully used. The objective of this study was to assess knowledge, attitude and practice of self medication among Medical Sciences Faculty students of Jimma University.

**METHODS:** A cross sectional study was conducted in Medical sciences Faculty students in 2009. The faculty and the three schools were selected by lottery method. Then, within the faculty respective number of students for each School was determined by proportion from the total sample size. Data was collected randomly from each School using self administered questionnaires and analyzed using SPSS version 16.0

**RESULTS:** From a total of 403 (100%) participants, 95 (45.89%) students practiced self medication in the past two months for commonly perceived illnesses such as headache 35 (36.85%), abdominal pain 29 (30.55%) and cough 33 (23.16%) using mainly analgesics 40 (49.38%) and antibiotics 29 (35.80%) mostly from drug retail outlets 88 (92.63). Fifty seven (60.00%) respondents can recall the dose, frequency and duration of the medicine while 38 (40%) did not know. Sixty five (68.42%) students agreed to practice self medication irrespective of the seriousness of illnesses.

**CONCLUSION:** Self mediation was widely practiced for minor symptoms with both OTC and prescription only drugs. Most of respondents use self medication irrespective of the seriousness of the illnesses. Lack of proper information and the ease of access from drug outlets were the most important problems.

**INTRODUCTION:** Self-medication is the selection and use of medicines by individuals to treat selfrecognised illnesses or symptoms. Self medication is the treatment of common health problems with medicines especially designed and labeled for use with out medical supervision and unproved as safe and effective for such use <sup>1</sup>.

Self medication is becoming an important component of health care in both developed and developing countries. Unlike in the developed countries, illegal

providers of drugs (seller in market, non licensed provider of injection etc) are common in developing counties along with some practitioners for further source of irrational and potentially dangerous drug use <sup>2</sup>.

In Ethiopia, the magnitude of self medication is not yet well known. Study conducted in Addis Ababa showed that the magnitude of self care was as high as 50%, and low severity of the disease and poverty were the major reasons for self care <sup>3</sup>.

A cross sectional study in Pakistan in the University students of Karachi to determine the prevalence, attitude and Knowledge of self medication among 295 medical students and 277 non medical students showed that the prevalence of self medication was found to be 76% and the most common symptoms for self medication were headache (72.4%), flu (65.5%) and fever (55.2%). The most commonly used drugs were analgesics (88.3%), antipyretics (65.1%) and antibiotics (35.2%). Students mostly obtained drugs from pharmacy stocks (64.4%) and from friends (9.7%)<sup>4</sup>.

The risk associated with self medications include a potential of delay in treating a serious medical conditions, masking of symptom of the serious condition through the use of non-prescription products, increase polypharmacy and interaction with other regularly used medication<sup>5</sup>.

Thus, understanding of knowledge, attitude and practice (KAP) of self medication and the reason for self medication among university students is crucial for countries like Ethiopia in general and Jimma University in particular, for reducing inappropriate use of medicines.

Even though there were some studies conducted in this area in general population, study on university students in general and medical science student in particular was very little in number at the study area during this study period. This study will show the level problems in general awareness and attitude of students, and the information gathered from this study will provide baseline data for further study.

Besides this, the study will provide baseline data to assist different governmental and non-governmental organizations in establishing appropriate evidence-based strategies to promote rational use of prescription and non-prescription medicines and to enhance visiting to health facilities for any self-unlimited and serious conditions.

The aim of this study was to explore the knowledge, attitudes and practices of self medication and the reason for self medication among Medical sciences Faculty students of Jimma University.

**MATERIALS AND METHODS:** A cross-sectional study was conducted to assess the knowledge, attitudes and practices of self medication among Medical Sciences Faculty students in Jimma University. There were eight faculties and one collage in the University during the study period. The Medical faculty and then the three schools (School of Medicine, School of Pharmacy and School of laboratory technology) were selected by lottery method from the existing eight faculties and one college and five Schools respectively. The study was conducted in January, 2009.

The sample size was determined taking the following assumptions; since there was no previous study in the area, the estimated prevalence rate of population who practice and have positive agreement towards self medication to be 50%, with confidence of 95%, margin of error 5% and non response rate of 5% was taken. The sample size, there fore, was 403. Then; the sample was allocated to each school in the faculty by using simple random sampling method. The total number of students in the three Schools was 1214 (School of Medicine 618, School of Pharmacy 319 and School of Laboratory technology 277). Accordingly the distribution appeared as, School of Medicine (205), School of Pharmacy (106), School of Laboratory Technology (92). The distribution of students by the year also determined by proportion of students in respective year.

Data were collected using a structured pre-tested self-administered questionnaire. The questionnaire contained information about socio-demographic characteristics of the students (age, sex, income, Year of study and School category), knowledge, attitude, practice and reasons about using self medication. We determined the knowledge about self medication using 6 multiple questions. Each correct question corresponded to 1 point, and there was a total of 6 points for the 6 questions. Students were considered to have adequate knowledge if they scored 4, 5 or 6 out of 6. They were considered to have inadequate knowledge if they scored between 0, 1, 2, and 3 out of 6. The students' attitudes were measured using five items rated on a three-point likert scale as;

- (1) agree (A),
- (2) disagree (D) and
- (3) neutral (N).

Using the three-point scale for five questions we arbitrarily set the maximum score for each respondent at 15 and the minimum at 5. We decided that a high score was indicative of positive attitude while a low score would be indicative of a negative attitude. The students' practice was measured identifying whether self medicated or not.

Data were then coded, checked for completeness and consistency. Then the data were entered analyzed using SPSS for windows version 16.0 statistical software program. For descriptive statistics, results were expressed in terms of percentages and association between some variables was calculated using Chi-square test and the P-value of < 0.05 was considered as significant.

For ethical clearance, a formal letter was written from School of Pharmacy, Jimma University to Student research program (SRP) of the Medical Faculty and permission was obtained and given to registrar office to know the total number of students. Oral consent was obtained from the respondents and brief explanation of the aim of study was provided with questionnaire. Respective number of self administered questionnaire was filled randomly by the students in the class.

**RESULTS:** Of the 403 students participated in the study giving a response rate of 100%, majority of the respondents 302(74.20%) were within the age group of 18-24 years. Most of the respondents 245 (60.79%) were males and half of the respondents 202 (50.13%) have a monthly income of more than 150 birr. From 403 respondents, 205(50.87%), 106(26.30 %) and 92 (22.83%) were Medicine, Pharmacy and Medical Laboratory Technology students respectively (**Table 1**).

From a total of 95(45.89%) respondents who self medicate themselves, the commonly perceived illnesses by the respondents were headache 35 (36.85%), abdominal pain 29 (30.55%) and cough 22 (23.16%). The most commonly encountered reason for self medication as replied by the students were previous experience with similar illness 44 (46.32%), for minor illness 24 (25.26%) and for time saving 23 (24.25%) (**Table 2**).

**TABLE 1: SOCIO- DEMOGRAPHIC CHARACTERISTICS DISTRIBUTION OF MEDICAL SCIENCES FACULTY STUDENTS OF JIMMA UNIVERSITY, JANUARY 2009**

Variables	Number (N=403)	Percent
<b>Age</b>		
18-24	302	74.20
25-34	101	25.06
<b>Sex</b>		
Male	245	60.79
Female	60	39.21
<b>Monthly income (Birr)</b>		
<100	105	26.05
101-150	96	23.82
>150	202	50.13
<b>Schools</b>		
Medicine students	205	50.87
Pharmacy students	106	26.30
Laboratory students	92	22.83

**TABLE 2: COMMONLY PERCEIVED ILLNESSES AND REASON FOR SELF MEDICATION BY STUDENTS OF FACULTY OF MEDICAL SCIENCE OF JIMMA UNIVERSITY, JANUARY 2009**

Variable	Number (n=95)	Percent
<b>Perceived illnesses</b>		
Headache	35	36.85
Abdominal pain	29	30.53
Cough	22	23.16
Fever	6	6.32
Other ≠	3	3.12
<b>Reason for self medication</b>		
Previous experience with similar illness	44	46.32
Minor illness	24	25.26
Time saving	23	24.21
Low cost	4	4.21

≠ Athlete's foot

From those 95 (45.89%) respondents who used self medication, the main sources of information were the individual respondents themselves 33 (34.74%), family 26 (27.37%) friends 19 (20.00%) even though significant number of students 17 (17.89%) obtain information from health professionals. The majority of drug sources were drug retail outlets 88 (92.63%) (**Table 3**). Regarding to respondents' knowledge about self medication, 81 (85.26%) replied that they can recall the name of a drug used for self medication. Of those 81 (85.26%) respondents who recalled the drug, most commonly used class of drugs are analgesic 40 (49.38%) and antibiotics 29 (39.80%).

From 95 (45.89%) self medicated respondents, 57 (60.00%) can remember the dose, frequency and duration of administration of the medicine while 38 (40%) did not know.

Majority of the respondents 88 (92.63%) replied that they did not recall any discomfort they face during self medication by the respective drug. From those 95 (45.89%) self medicated respondents, 45 (47.37%) did not finish the drug and the main reasons for not finishing was getting immediate relief 25 (55.56%) and sharing to friends 16 (35.55%) (**Table 4**).

**TABLE 3: SOURCE OF INFORMATION AND DRUGS FOR SELF MEDICATION AMONG STUDENTS OF MEDICAL SCIENCE FACULTY OF JIMMA UNIVERSITY, JANUARY 2009**

Variables	Number (n=95)	Percent
<b>Information sources</b>		
My self decision	33	34.74
Family	26	27.37
Friends	19	20.00
Health professionals	17	17.89
<b>Drug sources</b>		
Drug outlets	88	92.63
Shops/supermarkets	3	3.16
Relatives/friends	3	3.16
Left over medicine from previous medicine	1	1.05

**TABLE 4: KNOWLEDGE OF STUDENTS REGARDING RECALLING OF THE NAME OF THE DRUG USED, REGIMEN RECOMMENDED, DISCOMFORT FACED AND SHARING OF MEDICINES OF SELF MEDICATION AMONG STUDENTS OF MEDICAL SCIENCE FACULTY OF JIMMA UNIVERSITY, JANUARY 2009**

Variables	Number	Percent
<b>Did you remember the name of the drug (n=95)</b>		
Yes	81	85.26
No	14	14.74
<b>Did you identify which drug class you use from the following list (N=81)</b>		
Analgesics	40	49.38
Antimicrobial	29	35.80
Antacids	6	7.41
Others	6	7.41
<b>Did you recall the regimen(dose, frequency and duration) (N=95)</b>		
Yes	57	60.00
No	38	40.00
<b>Did you remember any discomfort you face (N=95)</b>		
Yes	7	7.37
No	88	92.63
<b>Did you finish the drug (N=95)</b>		
Yes	50	52.63
No	45	47.37
<b>Did you give reason for not finishing (N=45)</b>		
Get immediate relief	25	55.56
Put for next emergency time	4	8.89
Share to friends	16	35.55

≠ Clotrimazole, Dextromethrophan

General awareness about self medication with respect to School category and year of study showed that there was significant association with respect to School of Medicine year of study (P-value <0.05) while for School of Pharmacy and Laboratory was not (**Table 5**).

Of the 95 (45.89%) self medicate students, 65 (68.42%) agreed to use self medication irrespective of the seriousness of illness and 52 (53.68%) replied that self medication saves time and money (**Table 6**).

**DISCUSSIONS:** Although responsible self medication is the practice whereby individuals treat their ailments and conditions with medicines which are approved and available without prescription, and which are safe and effective when used as directed, it will lead to

unintended effect if inappropriately used. The result from this study revealed that the prevalence of self medication was 95 (45.89%) where as the study conducted in Bahrain (Arabian Gulf University) reported that the prevalence was 44.8%<sup>6</sup> and which are almost similar and this might be due to the students have similar perception towards illness because both are medical students irrespective of other parameters, may be availability of health facility and access to drug(s).

Headache, a predisposing factor, was the primary symptom for practicing self medication 35 (36.85%) which is supported by the study else where reported 70.90% in Baharain, 72.4% in Pakistan, 60% in Jimma town<sup>4, 6, 7</sup>.

**TABLE 5: GENERAL AWARENESS OF SELF MEDICATION WITH RESPECT TO EDUCATIONAL LEVEL AND SCHOOL CATEGORY AMONG STUDENTS OF MEDICAL SCIENCE FACULTY OF JIMMA UNIVERSITY, JANUARY 2009 (N=207)**

School category and year of study	Action taken		P-value	Chi- square	
	Self medication No (%)	Visit health facility No (%)	No action taken No (%)		
<b>Medicine</b>					
First year	13(6.28)	10(4.83)	3(1.45)	0.016	13.90
Second year	7(3.38)	5 (2.42)	16 (7.25)		
Third year	12(5.80)	2 (0.97)	4 (1.93)		
Fourth year	8(3.86)	3(1.45)	4(1.93)		
Fifth year	3 (1.45)	3(1.45)	4(1.93)		
Sixth year	3 (1.45)	2 (0.97)	5 (2.420)		
<b>Pharmacy</b>					
First year	7 (3.380)	4 (1.93)	-	0.235	4.26
Second year	6 (2.90)	2 (0.97)	3 (1.45)		
Third year	2 (0.97)	6 (2.90)	2 (0.97)		
Fourth year	16 (7.73)	1 (0.48)	5(2.42)		
<b>Med. Laboratory</b>					
First year	2 (0.97)	5 (2.42)	3 (1.45)	0.881	0.245
Second year	5 (2.42)	8 (3.86)	4 (1.93)		
Third year	11 (5.31)	4 (1.93)	4 (1.93)		
<b>Total</b>	95 (45.89%)	55(26.57%)	57 (27.05)		

**TABLE 6: ATTITUDES TOWARDS SELF MEDICATION AMONG STUDENTS OF MEDICAL SCIENCE FACULTY OF JIMMA UNIVERSITY, JANUARY 2009 (N=95)**

Options	Students Attitudes		
	Agree No (%)	Disagree No (%)	Neutral No (%)
I will use self medication irrespective of the seriousness of the illness	65(68.42)	17(18.89)	13(13.68)
Self medication may enhance inappropriate use of medicine	50(52.63)	26(27.37)	19(20.00)
I share medicines to and from my relatives.	21(22.11)	43(45.26)	31(32.63)
Self medication saves time and money	51(53.68.)	29(30.53)	15(15.79)
Self medication may have negative impact	43(45.26)	43(45.26)	9(9.47)

The common reason for self medication was previous experience with similar illness 44 (46.32%) in the study population which was almost similar result with the study in Pakistan 50%; for minor illness 24 (25.26%) which was also comparable with the study in Western Nepal 25%<sup>4,9</sup>. This indicated that many diseases may have similar symptoms and a person using previous experience may be exposed to the potential danger due to misdiagnosing and consequently wrong treatment.

The study showed that drug outlets 88 (92.63%) are the major sources of drug(s) for self medication and the study done in Jimma town reported that drug outlets was the major sources of drug(s) 52.3%<sup>7</sup>, which is almost half of the study area. This might be due to ease of access to drug outlets for students than general population. Drug(s) obtained from non professional or improper place such as shops or supermarkets 3 (3.16%) and from family and relative 3 (3.16%) in the study area but in Pakistan 9.7% obtained from family, and 64.44% from stock kept at home<sup>4</sup>.

The study revealed that 81 (85.26%) of self medicated students were able to recall the name of drug(s) they used which was higher than the study done in Jimma town 73.8%<sup>7</sup>. This might be the students have better knowledge to remember the name of drug(s) than the community peoples in Jimma town.

The major class of drugs used for self medication were analgesics 40 (49.38%), of which paracetamol was the most commonly used drug in contrast to the study in Addis Ababa 88.3%<sup>3</sup> and 81.3% in Baharine<sup>6</sup>; and the next class were antibiotics 29 (35.80%) which was similar with the study reported in Pakistan 35.2%<sup>4</sup>. This might be due to the access of prescription and non prescription drugs from drug outlets and negligence of pharmacy professionals about regulatory policy of prescription and OTC drugs and poor usage of antimicrobials. The study result revealed that from 95 (45.89%) self medicated students, 45 (47.37%) didn't finish the drug(s) already started, and 7 (7.73%) faced side effects which was almost similar to study done in three towns of North Ethiopia 10%<sup>12</sup>.

Even though the reason given from the respondents were immediate relief 25 (55.56%) from their illness, this might cause risk of pathogenic resistance especially with antimicrobials, and further complicates the illness.

Finally, the study result revealed that from 95 (45.89%) self medicated students, 65 (68.42%) students agreed to practice self medication irrespective of the level of illness for the future, which was higher than the study in Jimma zone <sup>8</sup> but in Baharian, 76.9% which was more than the study area; and 17 (18.89% in the study area disagree self medication but half of the study area in Baharian 9% <sup>6</sup>; this might be a means for drug interaction with regular medicine, drug resistance for antimicrobials, masking and complication of illnesses and increase irrational use of medicines.

**CONCLUSION:** In conclusion, this study showed that awareness of Medical Faculty students about self medication was high even though there was some malpractice. The main reasons for self medication were found to be previous experiences with similar illness and for minor illness. Drug retail outlets were the major sources of drugs and availability of drugs largely contribute to increasing practice for self medication. Analgesics and antimicrobials were commonly used for self medication. Most respondents decided to use self medication irrespective of the seriousness of the illnesses.

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