Self-medication and Contributing Factors among Pregnant Women Attending Antenatal Care in Ethiopia: The Case of Jimma University Specialized Hospital

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Abstract

Self-medication is the selection and use of non-prescription medicines by individuals' own initiatives to treat self-recognized illnesses or symptoms. It is practiced significantly worldwide even though its type, extent and reasons for its practice may vary. In this study we aimed to determine the prevalence of self-medication and contributing factors among pregnant women attending antenatal care at JUSH, Jimma town, south west Ethiopia. A prospective hospital based cross-sectional study with a pre-tested semi-structured interview questionnaire was conducted on 315 pregnant women who are attending ANC at JUSH. Majority (54.8%, n=166) of the respondents were Oromo ethnically and 144 (47.5%) were Muslims, at least attended secondary education were 69%. The prevalence of self-medication in this study was 20.1%. The two main reasons for self-medication were easily available 35 (57.4%) and time saving 27 (44.3%). There was a significant association between self-medication and prior self-medication experience maternal education, age of the respondents, number of children and place of residence ($p<0.05$). The practice of self-medication is high both prior and during the pregnancy. Easily availability and time saving were the two main reasons for practicing self-medication.

Key words: Self-medication, pregnant women, antenatal care

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Introduction

Self-medication is defined as the use of manufactured or homemade drugs without a medical prescription seeking to treat symptoms or self-diagnosed health conditions [1]. Others also define Self-medication as the process by which some individuals may abuse substances in attempt to relieve problems such as anxiety, pain, sleeplessness or other symptoms of psychological or neurological disorders [2].

It is independent of age for both males and females [3]. Self-medication patterns vary among different population and are influenced by many factors, such as age, gender, income and expenditure, self-care orientation, education level, medical knowledge, satisfaction and perception of illnesses [4].

It is practiced in both developing and developed countries [5-7]. The type and extent of self - medication and the reasons for using it may vary from country to country. The prevalence of self- medication in Nepal was 59%, in Bambi 54%, in Mexico 34% and in Ethiopia 26.2% [8].

In developing countries, both modern drugs and traditional medicines are commonly used for self- medication. It was also noted that prescription-only-medication could easily be obtained without prescriptions for self- medication in developing countries like Ethiopia [9].

Although self-medication is difficult to eliminate, intervention can be made to discourage the abnormal practice. The increasing self-medication practice requires more and better education of both the public and health professionals to avoid irrational use of drugs [10,11]. If no action is taken, the danger of drug interaction and side effects will increase. It is expected that adverse reactions are mostly underreported since the use of over- the- counter (OTC) drugs may not be recorded or reported to the doctor. Little is known about self- medication in the third world. Thus overall self-medication with modern pharmaceuticals seems to be a field in which information are scarce [11].

No doubt drug treatment may be beneficial to the mother in some circumstances but the same agents may be hazardous to the unborn. Selection of drugs best suited to be administered to a pregnant woman is a challenging task to the doctors in view of the unique physiological changes. Though teratogenic risk is a biggest risk in the use of many drugs, it is unrealistic to

recommend, not using any drugs at all during pregnancy. This decision may even prove dangerous for the health of the mother [12]. Use of drugs during pregnancy is complicated because of the limited knowledge with regard to beneficial and possible adverse effects for both the mother and the fetus as pregnant women are rarely included in clinical trials [13].

Participants and methods

Study Setting

Institution-based cross sectional study was conducted by reviewing the antenatal care follow up charts and pregnant women were also interviewed using semi-structured pretested questionnaire. The Hospital has a bed capacity of 450 and it provides services for approximately 9.000 inpatient and 80.000 outpatient attendances a year from the catchment population of about 15.000 million. The ANC clinic gives service for about 2.595 clients annually. The study population was pregnant woman attending the antenatal clinic during the study. The sample size required for the study was calculated using the formula to estimate a single population proportion. A random sampling technique using lottery method was used on daily average number of clients of ANC clinic of JUSH. This was due to the absence of clear documentation of the clients' registry in the ANC unit.

Data collection

Data was collected by using semi-structured interviewer administrative questionnaire. The questionnaire was prepared in English language including all relevant variables based on the objectives of the study.

Data processing and analysis

After data collection, the data was coded, edited and cleaned to ensure accuracy, consistency and completeness before entering in to SPSS, version 16 by the principal investigator.

Ethical considerations

A formal letter was obtained from the department of Pharmacy, College of public health and medical sciences and participants were given an explanation on the purpose of the study. Confidentiality was kept up on approval and oral informed consent was asked to proceed.

Data quality assurance

The data was checked for its completeness by the principal investigator; pretest was done for validity and reliability of the instrument.

Delimitations (Scope) of the study

This study only addressed pregnant women who were attending Antenatal care for pregnancy follow-up at Jimma University specialized hospital, and was dealt with prevalence of self-medication and contributing factors for self-medication.

Results

A total of 315 pregnant women were included in the study and the response rate was 96.19%. Majority (41.6%, n=126) of the women were between age groups 20-24 years with the mean age of 25.58±4.29. Majority (84.8%, n=257) of the respondents were living in urban areas. Most (54.8%, n=166) of the respondents were from Oromo ethnic background. One hundred forty four (47.5%, n=144) of the women were Muslims and six respondents were Catholic.

Majority (37%, n=112) of the respondents had secondary education (Grade 9-12). One hundred seventeen (38.6%) of the women were employed and six of them were students. Ninety (29.7%) women had a monthly income of 501-1000 Ethiopian birr per month and, 49 (16.2%) of were had a monthly income of 1501.00-2000.00 birr per month.

Majority (96%, n=291) of the respondents were married and about half (50.5%) of the women were in the third trimester of pregnancy. One hundred twenty one (46.5%) of the respondents were nulli-para and 13 respondents had four or more children.

Respondents were interviewed for self-medication practice both before and during the current pregnancy. The response of the respondents was summarized in the Table 2.

About 63.7% of the respondents practiced self-medication prior to the current pregnancy, and 20.1% practiced self-medication during current pregnancy. Out of 63.7% who self-medicated prior to the current pregnancy, 54 (28%) were self-medicated during the current pregnancy. The type of medicine used by the respondents who practiced self-medication during this pregnancy was all modern medicines and the respondents denied the use of traditional medicine during pregnancy.

Table 1. Socio-demographic characteristics of pregnant women attending ANC in JUSH, July 1-30, 2012.

Variable	Number (%)	Remarks
Age (in year)		Mean=22.58
15-19	11 (3.6)	SD=4.298
20-24	126 (41.6)	
25-29	115 (38.0)	
30-34	36 (11.9)	
35-39	15 (5.0)	
Place of Residence		
Urban	257 (84.8)	
Rural	46 (15.2)	
Ethnicity		
Oromo	166 (54.8)	Others:
Amhara	55 (18.2)	Tigre=7
Gurage	22 (7.3)	Somali=2
Welamo	17 (5.6)	Yem=3
Dawro	16 (5.3)	
Keffa	15 (5.0)	
Others	12 (3.96)	
Religion		
Muslim	144 (47.5)	
Orthodox	99 (32.7)	
Protestant	54 (17.8)	
Catholic	6 (2.0)	
Maternal Educational		
Illiterate	19 (6.3)	
1-8	75 (24.8)	
9-12	112 (37.0)	
Higher Education	97 (32.0)	
Occupation		
Housewife	74 (24.4)	
Merchant	72 (23.8)	
Employed	117 (38.6)	
Student	6 (2.0)	
Farmer	22 (7.3)	
Self-employee	12 (4.0)	
Average Monthly Income (in birr)		
Below 500	60 (19.8)	
501-1000	90 (29.7)	
1001-1500	52 (17.2)	
1501-2000	49 (16.2)	
Above 2000	52 (17.2)	
Marital Status		
Single	**2 (0.7)**	
Married	291 (96.0)	
Divorced	5 (1.7)	
Widowed	5 (1.7)	
Distance between JUSH and respondent's Residence		Mean= 4.51, SD=5.485
1-5	241 (79.5)	
6-10	42 (13.9)	
11-15	11 (3.6)	
16-10	4 (1.3)	
>20	5 (1.7)	
Pregnancy stage		Mean= 27.92, SD=7.519
First trimester	11 (3.6)	
second trimester	139 (45.9)	
Third trimester	153 (50.5)	

Number of children		Mean= 0.95, SD=1.138
No	141 (46.5)	
1-3	149 (49.2)	
>3	13 (4.3)	

Table 2. Self-medication practices among pregnant women attending ANC in JUSH, July 1-30, 2012.

		Practice of Self-medication prior to current pregnancy		Total	P-value
		Yes	No		
Practice of self-medication during this pregnancy	Yes	54	7	61	P= 0.001
	No	139	103	242	
Total		193	110	303	

As per to the FDA pregnancy drug category, Paracetamol, Amoxicillin and cough syrup (diphenhydramine) were among the commonest category B medications used by the pregnant women (Table 3).

Table 3. Medications used by pregnant women and their USFDA pregnancy risk classes, Jimma University Specialized Hospital, July 1-30, 2012.

Drugs	Frequency (%)	FDA category	Remark
Iron	7 (11.5)	Not assigned	
Paracetamol	21 (34.4)	B	
Aspirin	8 (13.1)	D	
CAF	5 (8.2)	C	*As reported by the respondents, some used more than one drug category respondents used*
TTC	1 (1.6)	D	
Paracetamol and CAF	2 (3.3)		
Paracetamol and TTC	2 (3.3)		
ASA and CAF	1 (1.6)		
Amoxicillin	4 (6.6)	B	
cough syrup	6 (9.8)	B	
Salbutamol tablet	4 (6.6)	C	
Total	61 (100.0)		

Headache 29 (47.5%) and typhoid 9 (14.8%) were the most common ailments for which the women practiced self-medication (Table 4).

The knowledge of the respondents about the drug they consumed for the perceived ailments were summarized in table 5. Accordingly, 22 (36.1%) of the study subjects had some sort of knowledge only about dose of the medication they used, 15 (24.6%) of the respondents had no any information about the medications they used for self-medication, and only 3 women had knowledge about the side effects of the medications they used for self-medication.

About 52.5% of the women did not get improvement for the perceived illness after taking the medications and the illness of three women was self reported to be worsened (Figure 1).

Table 4. Perceived Illness/ailments for which self-medication was practiced by pregnant women Jimma University Specialized Hospital, July 1-30, 2012.

Ailments	Frequency (%)
Cough	8 (13.1)
Typhoid	9 (14.8)
Headache	29 (47.5)
Common cold	1 (1.6)
Diarrhea	2 (3.3)
Anemia	8 (13.1)
Asthma	4 (6.6)
Total	61 (100.0)

Table 5. Knowledge of the pregnant women about the medications they used for self-medication, Jimma University Specialized Hospital, July 1-30, 2012.

Knowledge	Frequency (%)	Remarks
Dose	22 (36.1)	
Side effect	3 (4.9)	*The addition of the frequency is above 61, indicating that more than one response is possible.*
How to take	6 (9.8)	
No Information	15 (24.6)	
Indication and Dose	10 (16.4)	
Indication, Dose and side effect	5 (8.2)	
Total	61 (100.0)	

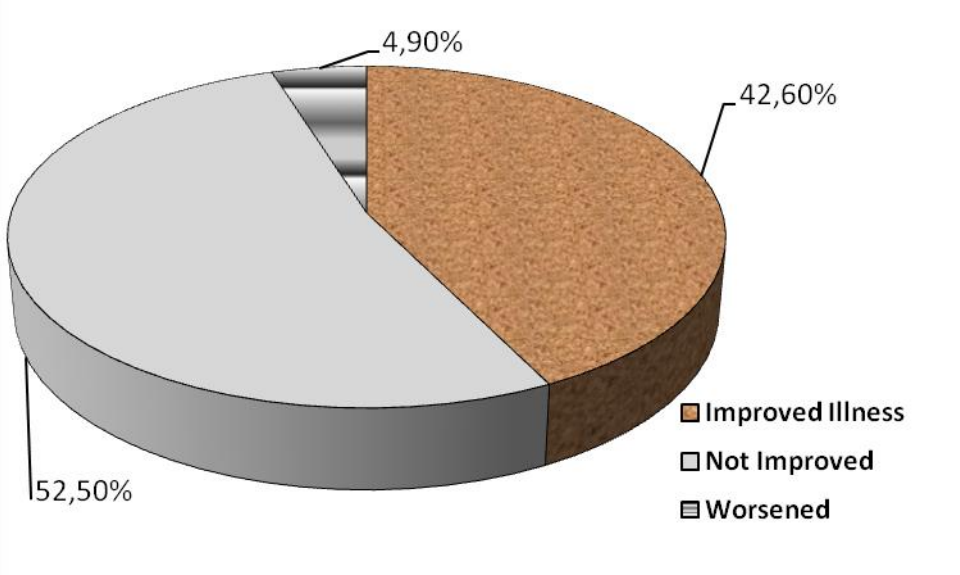

Figure 1. Outcome of the drug consumed for Self-medication by pregnant women attending Antenatal care in Jimma University Specialized Hospital, July 1-30, 2012.

Out of all sources of medications used for self-medications, majority 44 (72.1%) were obtained from private drug retail outlets and only 3 women obtained medications from neighbors/friends regarding medications they used.

Table 6. Source of drug used Self-medication by pregnant women attending ANC in Jimma University Specialized Hospital, July 1-30, 2012.

Source of medication	Frequency (%)	Remark
Private drug retail outlets	44 (72.1)	
Neighbors/Friend	3 (4.9)	*As reported by the*
Private drug retail outlets and shops	5 (8.2)	*respondents, some*
Shops and neighbors/friend	4 (6.6)	*used obtained drug*
Private drug retail outlets and neighbors/friend	5 (8.2)	*from more than one source.*
Total	61 (100.0)	

Majority (39.3%) of the choice of medications used was made by the women themselves and followed by pharmacists/druggists working in the drug retail outlet (34.4%), (Figure 2).

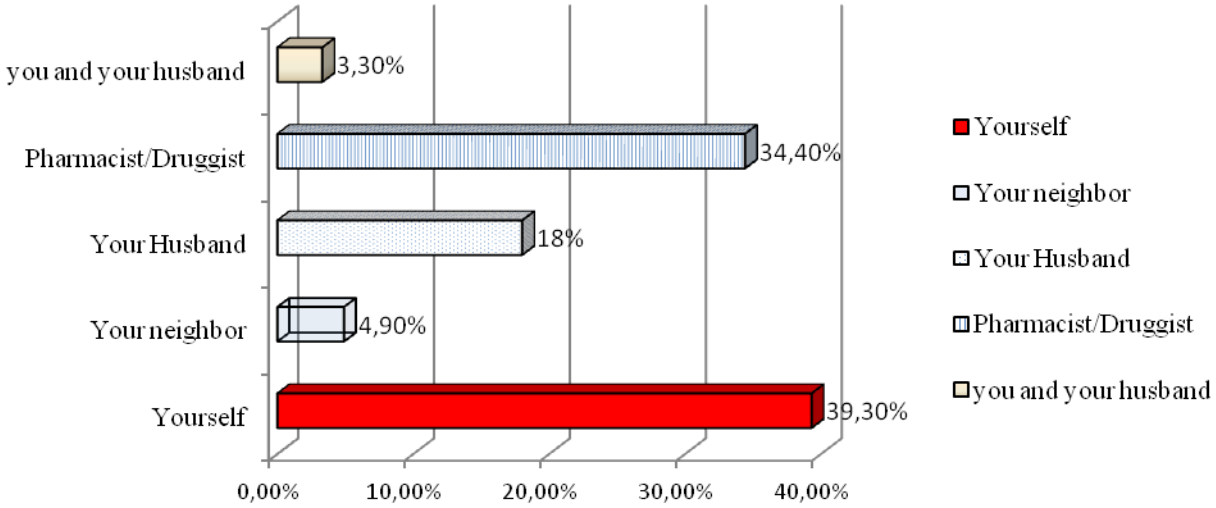

Figure 2. Sources of recommendation for Self-medication by pregnant women Jimma University Specialized Hospital, July 1-30, 2012.

Out of total 315 women, only 55(17.5%) reported to have information on the consequences of self-medication practices. Of 55 women, majority 24 (43. 6%) reported no Consequences of self-medication practices during pregnancy and 15 (27.2%) women reported that self-medication can lead to using of wrong medications, inappropriate doses and frequency of administration (Table 7).

The reported reasons for committing self-medication (table 8) were because drugs were easily available (45.9%, n=28), time saving for 20(32.8%) of the respondents, for 5 of them Time Saving and Easily available, for four study subjects because they had Better knowledge about the disease and the treatment, and Better knowledge about the disease and the treatment among 8 respondents.

Table 7. Pregnant women information of the consequences of practicing self-medications during pregnancy Jimma University Specialized Hospital, July 1-30, 2012 (n= 55).

Consequences	Frequency (%)
ADRs	8 (14.5)
Wrong medication, dose and frequency	15 (27.2)
Contraindications	2 (3.6)
No consequences	24 (43.6)
Drug Interactions	2 (3.6)
ADRS and Wrong medication	4 (7.3)

Table 8. Reason for selecting practice of Self-medication by pregnant women attending ANC in JUSH, July 1-30, 2012.

Disadvantage	Frequency (%)
Time Saving	20 (32.8)
Easily available	28 (45.9)
Better knowledge about the disease and the treatment	4 (6.6)
Time Saving and Easily available	5 (8.2)
Time Saving and Better knowledge about the disease and the treatment	2 (3.3)
Easily available and Better knowledge about the disease and the treatment	2 (3.3)
Total	61 (100.0)

A significant association was observed between self-medication practices with age (p=0.005), number of parity (p=0.001), Place of residence (p=0.007), maternal education (p=0.03) and previous self-medication experience (p=0.001) of the women.

Discussion

In the present study, majority 241 (79.5%) of the respondents' place of residence is nearer to Jimma University Specialized Hospital with a range of 1-5Km. According to World Bank report on health and poverty, the access to Clinical or health services is at distance of 5km [14]. In the present study the mean distance was found to be 4.51 Km which is in line within the range reported by World Bank.

In this study, prior self-medication experience/practice is found to be 63.7%, self-medication during this pregnancy is 20.1%. The prevalence of self-medication during pregnancy in our study in higher than the results in Arak city (12%) [15], Addis Ababa (12.4%) [16], Peru (10.5%) [17], England (8.8%) [18], but lower than the results of the study done in Egypt (86%) [19]. Our result is in line with study done in Nigeria [20] which reported the prevalence of self-medication during pregnancy to be 19.6%. The higher prevalence of self-medications observed in our study compared to the above studies might be due to the settings such as distant place of residence, low maternal education level and other factors. But the

inconsistency in results between our result and the results of the study done in Nigeria might be due the difference in methodology and sample size.

In the present study, Paracetamol, Aspirin, CAF, Iron, cough syrup, Amoxicillin, TTC, and Salbutamol were the commonly used medications for self-medications during pregnancy. Paracetamol was the most commonly used during pregnancy among the study participants. Similar to our findings, the study done in Peru [17] revealed that Paracetamol and amoxicillin were the most commonly used drugs for self-medication. The study done in England [18] revealed that non-narcotic analgesics were the most commonly used drugs for self-medication. Similarly, analgesics were the most commonly used for self-medications during pregnancy in the study done in Addis Ababa [16] and Palestine [21].

In this study, out of all the medications used during pregnancy, 11.6% were from USFDA pregnancy category C and 27.9% were from category-D drugs. Overall category C and D were used by 39.3% of the study participants [22].

In our study, the most common perceived ailments for which the pregnant women practiced self-medication were headache, typhoid, cough, anemia, Asthma, diarrhea and common cold. In line with our study, the study done in Peru [16], revealed that respiratory diseases, anemia, and alimentary disorders were the commonest ailments for which the pregnant women practiced self-medications. Similarly, pain, heart burn and indigestion were the commonest ailments that lead to self-medications in the study done in Palestine [21]. On the other hand, the study done in Nigeria [23] showed that body pains/fever, joint pains and cough were the commonest ailments which made the women practice self-medications. Both from our findings and the findings of these studies it appears that pregnant women practiced self-medication for various ailments.

In the present study, of 55 women who reported to have information regarding the medications they use, 22 (36.1%) had some information only about dose of the medication they used whilst 15 (27.3%) had no any information about the drug they were using for self-medication. Comparable to our finding, a study conducted in Egypt [19] indicated that 19.5% of the respondents had no information regarding the potential risks self-medication during pregnancy. On the other hand, the study done in Nigeria [23] showed that body pains/fever, joint pains and cough were the commonest ailments which made the women practice self-

medications. The inconsistency between our findings and these studies in Egypt may be attributed to the difference in the sample size and study period.

In the present study, self recommendation (39.3%) followed by private drug retail outlets (34.4%) by pharmacist/druggists were the commonest source of information for self-medication. Opposed to our study, the study conducted in Peru [15] revealed that friends were the main source of recommendations for self-medication.

In our study, easily accessibility of medications and saving of time which is spent in doctors' office was among the commonest reasons for self-medications as reported by the pregnant women. Similar to our finding, the study conducted in Peru [17] showed that time saving, difficulty in accessing health services and economic problems were reported to be the main reasons for self-medication. Similarly, the study conducted in Arak city [15] revealed that, lack of knowledge about the disease, lack of access to insurance and high expenses of health care were the commonest reasons for self-medication.

Conclusion

- The prevalence of self-medication among pregnant women attending ANC clinic of Jimma university specialized hospital was found to be higher.
- Paracetamol was found to be the most self-medicated drug among the pregnant women.
- USFDA category C and D medications were found to be among the commonly self-medicated drugs.
- Tetracycline and Aspirin were found to be the commonly used pregnancy category D drugs.

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