

Research article

# Self-medication among pregnant women attending antenatal clinic at Tertiary Care Center of Nepal

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## ABSTRACT

**Background and Objectives:** Self-medication can cause significant challenges for the individuals and community, especially in women during pregnancy. The aim of this study was to evaluate the prevalence of self-medication among the pregnant women attending antenatal clinic in a tertiary care center of Nepal.

**Material and Methods:** In this cross-sectional study, a total of 225 pregnant women were evaluated for the prevalence of self-medication during pregnancy. Descriptive statistics and chi-square tests were used for statistical analysis of data.

**Results:** The results showed that the prevalence of self-medication, in pregnant women was 41.3%. The leading illness/ symptoms which led to self-medication among pregnant women attending clinic were to relieve headaches 29 (31.2%), cough 21 (22.6%), vomiting 13 (14%), treat fever 11 (11.8%), urinary tract infections 11 (11.8%) and drugs commonly reported for self-medication were paracetamol (30.10%), cough remedies (19.30%), antiemetics (16.13%), analgesic (10.75%).

**Conclusion:** Prevalence of self-medication among pregnant women is high in Nepal. This is a threat to the safety of the developing foetus and the pregnant woman. Therefore, it seems necessary to provide public trainings for all women of reproductive age and train them about the dangers and side effects of self-medication.

**Key words:** Drug Safety, Fetus, Pregnancy, Self-medication

## INTRODUCTION

Self-medication can be defined as the use of drugs to treat self-diagnosed disorders or symptoms, or the intermittent or continued use of a prescribed drug for chronic or recurrent disease or symptoms [1]. Careful consideration of the benefit to the mother and the risk to the fetus is required while drugs are used during pregnancy. As it is a

challenging medical condition for the clinicians in the treatment and the selection of drugs for disease management because of various pharmacokinetic [2, 3] and physiological changes [4, 5] in woman's body. Those changes often present various complications during pregnancy [7]. Self-medication carries serious risk of drug interactions, poly-pharmacy, misdiagnosis, excessive drug dosage use, prolonged drug

use, incorrect drug choice, rare but severe adverse events, dependence or abuse and increased antimicrobial resistance [6 - 10].

The main reason for self-medication as reported from different countries include; the feeling that the condition/disease is mild thus not requiring doctor's consultation, previous good experience of treating similar illness, prompted by a pharmacist, feeling of independence to take care of him/herself and non-availability of doctors [11-13]. Advertisement by pharmaceutical companies or their agencies on drugs has also been established as a promoting factor for self-medication [14].

Self-medication practice is common worldwide [15-20]. In Nepal, as in other countries, self-medication is a widespread practice, and the majority of medications consumer by the population is sold without medical prescriptions. Self-medication is a serious economic, social and health problem throughout the world, including Nepal [21-23].

However, data on self-medication during pregnancy is scanty. There is a paucity of studies on self-medication among pregnant woman in Nepal. The present study was undertaken to identify the reasons for, and the patterns of, self-medication among medical students.

## **MATERIAL AND METHODS**

The study was conducted at COMS TH with approval from the Institutional Ethics Committee. The study was conducted in the pharmacy of hospitals from 20 to 20, 2017. An institution based cross sectional study was conducted using a structured questionnaire based interview of pregnant women who were attending the ANC. The questionnaire

was developed in Nepali then administered through face to face interviews after consent from the respondents. The questionnaire captured the information on the socio-demographic characteristics, self-medication and predictors for the practice. Pregnant women attending to antenatal clinic and willing to participate in the study were included in the study.

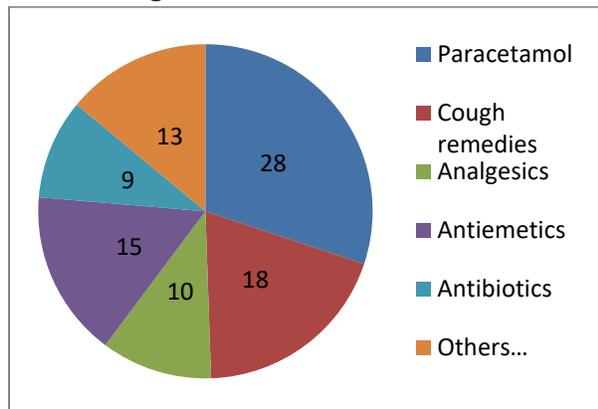
The collected data were entered into MS Excel and analyzed with SPSS version 16. Descriptive analysis was carried out on the study variables and prevalence rates were reported as percentages and 95% confidence intervals. Chi-square was used to evaluate significant association among the study variables and p values of <0.05 were considered statistically significant.

## **RESULTS**

Two hundred and twenty five out of the 235 study participants participated in the study making the response rate of 95.7%. The majority of the respondents, 93 (41.3%), were in the age group of 24–29 years. Out of 225 respondents, 54 (24%) were in first trimester, 99 (44%) were in the second trimester and 72 (32%) were in third trimester. Out of 225, 71(31.6%), 93 (41.3%) and 42 (18.7%) were aged 18–23, 24–29 and 30-35 years respectively while only 19 (8.4%) were ≥35 years. Majority of participants were 143 (63.6%) house wives while 82 (36.4%) were employed.

Self-medication during pregnancy was practiced by 93 (41.3%) pregnant women. Self-medication was 45 (48.4%) during first trimester which significantly high with second trimester ( $p<0.001$ ), 9 (9.6%) during second trimester and 39 (42%) during third trimester. The most commonly drugs reported for self-medication were

paracetamol, cough remedies, analgesics etc. Details of drug used for self-medication are shown in Fig 1.



**Figure 1. Drugs used for self-medication**

The main reasons for self-medication were the disease not serious 43 (46.2%), high cost to visit doctor 27 (29%), time saving 18 (19.3%) which is shown in Table 1.

**Table 1: Main reason for self-medication**

Reason for self-medication	Frequency	Percent (%)
Disease were not serious	43	46.2
High cost to visit doctor	27	29
It is time saving	18	19.3
Drugs are easily available	5	5.4

**Table 2: Source of information for self-medication among pregnant women**

Source of information	Frequency (N)	Percent (%)
Friends	26	28
Health professionals	22	23.6
Neighbour	12	12.9
Social network	11	11.8
Others	14	15.1
Husband	8	8.6

Self-medication was practiced mainly for relieve headaches 29 (31.2%), treat fever 11 (11.8%), cough 21 (22.6%), vomiting 13 (14%), urinary tract infections 11 (11.8%) and others 8 (8.6%). Among pregnant women who practice self-medication the most

common source of information were their friend (28.2%) which is shown in Table 2.

## DISCUSSION

The present study was carried out in a tertiary care center in central Nepal to evaluate the prevalence and predictors of self-medication among pregnant women attending an antenatal clinic. We found that the prevalence of pregnant women using self-medication was 41.3 percent. These results are comparable to those of other developing countries, especially Tanzania [24] {19} and lower than Ethiopia (48%) [25] and higher than Pakistan (37.9%) [26], Iran 35.6% [27] and Netherland (12.5%) [28]. The possible explanations for the discrepancy may be due to differences in study methods, health care environments, and restriction policies of dispensing practices. Self-medication may cause significant difficulties for individuals and the community, especially in women during pregnancy, and it is important to be aware of the dangers and side effects of self-medication by all women of reproductive age by public awareness.

The reasons why pregnant women practiced self-medication were ailments that were not serious, high doctor visit prices, time savings and quick access to prescription-free drugs from pharmacies or drug stores. Patients can prefer self-medication due to a lack of information about illnesses and symptoms. In developing countries, the lack of convenient access to government health care facilities makes it expensive in private hospitals. The ease of access to prescription-free drugs may be attributed to poor regulatory regulation of dispensing practices. The easy access to medicines without prescription might be due to inadequate regulatory enforcements of dispensing practices. This finding was similar

to other studies conducted in Pakistan [26] and Indonesia [29].

Self-medication was greater in the first trimester and less frequent in the second trimester of pregnancy (Table 1). This result is a troubling hazard because drug exposure is likely to cause congenital malformations during this period given the high prevalence of congenital malformations recorded in our sample area [30]. In the first trimester, the greater self-medication activity can be due to the incidence of certain symptoms, discomforts and diseases such as nausea or vomiting, headache, dizziness and fevers in the first trimester than other trimesters during pregnancy [24].

Headache, cough and vomiting were the prominent problems/ symptoms requiring self-medication among pregnant women attending the clinic (Table 3). It is not shocking that headache is among the leading problems among pregnant women because it is a stressed condition that may lead to headache. Motion sickness is a common symptom experienced in pregnancy, especially in the first trimester, which correlates to the results of the current study that most pregnant women self-medicate when they have headache, nausea and vomiting [24].

Self-medication practice is one of the most common public health concerns during pregnancy. Unless necessary care is provided by responsible health professionals, it may lead to high risk, including maternal and neonatal mortality and morbidity [24, 25]. In this study, more than one third (41.3%) of the pregnant women had self-medicated with medicines. Drugs commonly used in self-medication among pregnant women were paracetamol, cough remedies, analgesics, antiemetics and antibiotics. This indicated

that some pregnant women were potentially at higher risk. For instance paracetamol, the commonest non-steroidal anti-inflammatory drugs (NSAIDs), may also cause a risk of attention deficit hyperactivity in babies and reduced implantation sites at any time of pregnancy. Other NSAID like aspirin and ibuprofen cause premature closure of ductusarteriosus during the third trimester, miscarriage, cardiac malformation, fetal renal impairment, pulmonary hypertension, and delayed onset of labor and prolongation of bleeding time in mother [25].

## CONCLUSION

The study conducted with the objective of A considerable proportion of pregnant women attending antenatal care practiced self-medication. There is lack of attention among policy makers and program designers on addressing the risk of self-medication. There were no guidelines and recommendations on self-medication during pregnancy. There was also weak regulation enforcement on medicine retail outlets as they were good sources of medicines for self-medication. In addition, the pregnant women have limited awareness on self-medication, and they believe the advices of their friends and families.

Therefore, it is important to aware the pregnant women with risks of self-medication and train health care providers on how to help pregnant women stay safe from self-medication. Moreover, concerted efforts need to be exerted to strengthen regulatory enforcements and routinely screen pregnant women. We recommend further research to assess the consequences of self-medication practice on pregnancy outcomes and community-based studies to identify factors

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