

## Assessment of Self-Medication Practices among Pregnant Women

1 Nagwa Ibrahim Elfeshawy 2 Sara Zenhom & 3 Hanan Elsayed Mohammed Elsayed



1 lecturer of Woman's Health and Midwifery Nursing, Faculty of Nursing, Mansoura University, Egypt

2 Nursing specialist, Faculty of Nursing, Mansoura University, Egypt

3 Professor of Woman's Health and Midwifery Nursing, Faculty of Nursing, Mansoura University, Egypt.

Corresponding author E-mail: rabiie63@gmail.com

### 1.ABSTRACT

**Background:** Self-medication can cause significant challenges for the individuals and community especially among women during pregnancy. **Aim:** This study aimed to assess self-medication practice among pregnant women. **Study design:** Descriptive cross sectional design. **Setting:** The study was carried out in antenatal clinics of Obstetric and Gynecological Specialty Center at Mansoura University Hospital, Mansoura New General Hospital and Mansoura Old General Hospital **Sample type:** Convenient sample was used. **Study subjects:** The study subjects included 382 pregnant women **Tools:** Two tools were used, structured interviewing questionnaires, assessment of self-medication practice questionnaires. **Results:** The current study showed that more than half of the pregnant women used vitamin D as a self-medication followed by vitamin A and iron. Also, two thirds of studied women took panadol as analgesic followed by paracetamol, more than two thirds of pregnant women took flummox followed by Augmentin. Moreover, the study results showed that most common reported symptom were headache followed by morning sickness. Also, that most common reasons for self-medication that medication were easily to obtain, illness not serious and that they have previous experience regarding the medications. Pharmacy and left over medications were the main source of self-medication practices. **Conclusion:** The current study concluded that, analgesics, herbs, antibiotics and vitamins were the most common drugs used as a self-medications. Headache and morning sickness were the most symptoms to take self-medications. **Recommendations:** Simple, well-designed brochures will be designed and distributed among pregnant women to increase their awareness regarding risks of self-medications.

**Keywords:** Assessment, pregnant women, self-medication practices.

### 2.Introduction:

Pregnancy is an extremely essential event in every female's life cycle; pregnancy is a time of significant physiological changes for both the mother and fetus (Fatema & Larisey, 2020). During this time, a pregnant woman may use medicine without a prescription to relieve pregnancy-related discomfort, which is known as self-medication. Self-medication during pregnancy has been reported to be common in many parts of the world, particularly in undeveloped countries (Atmadani et al., 2020).

“Self-medication (SM) is widely described as a pregnant woman's decision to use a substance with or without the consent of a health professional. It has traditionally been defined as "the use of medications, plants, or home remedies on one's own initiative or on the suggestion of another person without seeing a doctor (Rashid et al., 2020).

Self-medication is the use of drugs to treat self-diagnosed symptoms in the absence of a valid prescription from a health care professional (Rashid et al., 2020). According to the World

Health Organization (WHO), self-medication is the process of medicating oneself to cure self-identified ailments or illnesses. Medication obtained without a prescription is an increasing public health problem or phenomena throughout the world. Every year, self-medication is used to address billions of health concerns throughout the world (Al-Ghamdi et al., 2020).

Moreover, Self-medication is a serious health hazard that can lead to a variety of difficulties and considerable challenges for individuals and communities, particularly in pregnant women. Self-medication is a global issue that demands attention due to the possible risk not only to pregnant women but also to their unborn fetuses. (Teshfamariam et al., 2019).

Medication use during pregnancy has been a concern both for the mother and fetus since the discovery of birth defects resulting from thalidomide crisis in early pregnancy, this necessitates critical evaluation of the risk level of medication used during pregnancy (Ibironke et al., 2020).

### Significance of the study

Inappropriate drug usage during pregnancy can have substantial structural and functional consequences for the mother's health and the development of the fetus (Ibironke et al., 2020). The global frequency of self-medication is disturbingly high, ranging from 8.5 to 98 percent, with various nations demonstrating diversity between developed and developing regions. (Alani et al., 2020).

Non-prescribed drug use was 86 percent in developing countries such as Egypt and 68 percent in developed countries such as Europe, which differs significantly due to inherent cultural and socioeconomic differences, differences in health services and availability to healthcare, and drug delivery policies (Adane, Seyoum, & Alameh, 2020).

Non-prescribed drug usage was 86 percent in underdeveloped nations like Egypt and 68 percent in developed countries like Europe, owing to fundamental cultural and socioeconomic inequalities, differences in health services and access to healthcare, and medication distribution rules (Aljoher et al., 2018).

Self-medication can have a negative impact on both the fetus and the mother, resulting in malformation/teratogenicity, fetal toxicity, low birth weight, early birth, respiratory difficulties, and death. According to reports, drug exposure during pregnancy causes at least 10% of birth malformations ((Niriayo et al., 2021)

In Egypt, there are few studies that assess the potential use of self-medications among pregnant women. So, the present study was conducted.

### Aim of the study

The present study aimed to assess self-medication practice among pregnant women.

### Research question

What were the pregnant women self-medication used?

What are the symptoms and reasons for use self-medication practice?

What are the source of medication and source that recommend self-medication practice?

### Study design

A descriptive cross sectional design was used

## 3. method

### Study setting

The study was carry out at ante natal clinic

of Obstetric and Gynecological specialty center at Mansoura university hospital, Mansoura New General Hospital and Mansoura old general hospital

### Study Sample:

Convenient sample of 382 pregnant women divided equally on the previous mentioned settings.

### Study size calculation

Based on data from literature (Marwa et al., 2018), to calculate the sample size with precision/absolute error of 5% and type 1 error of 5%:

$$\text{Sample size} = [(Z_{1-\alpha/2})^2 \cdot P(1-P)]/d^2$$

Where,

$Z_{1-\alpha/2}$  = is the standard normal variate, at 5% type 1 error ( $p < 0.05$ ) it is 1.96.

P = the expected proportion in population based on previous studies.

d = absolute error or precision.

$$\text{So, Sample size} = [(1.96)^2 \cdot (0.462) \cdot (1 - 0.462)] / (0.05)^2 = 381.9.$$

Based on the above formula, the sample size required for the study is 382 which will be divided equally on the previous mentioned settings.

### Tools of data collection:

Two were utilized for data collection: **The tool 1 was a Structured Interview Questionnaire:** It was designed by the researcher after reviewing relevant literature (Gbagbo, & Nkrumah, 2020) and consisted of two parts:

**Part (1)** socio-demographic data of pregnant women (age, marital status, occupation, education and residence).

**Part (2): Reproductive history the pregnant women** included: gravidity, parity, mode of last delivery, obstetric problems in last pregnancy, medical diseases in last pregnancy, current pregnancy data included gestational age, and ante natal visits)

**The tool 2: Assessment of self-medication practice Questionnaire:** It was developed by the researcher after reviewing the relevant literature (Ibironke et al., 2020; Karol JM et al., 2018) to assess self-medications practice among pregnant women. It included six domains

It included medications used, symptoms, reasons for use, source of modern medication, and recommendation for self-medication of the pregnant women, information gets from the leaflet and awareness to side effect to mother & fetus.

### Validity of the study tools:

The study tools were reviewed by five women's health and midwifery nursing field, the expert assessed the tool for clarity, relevance and applicability. Changes were considered according to their comments as certain sentences were simplified to be easily understood by the pregnant women.

#### **Reliability of the tool 2:**

Reliability of the tool 2 was tested for its internal consistency by using Cranach's Alpha test it was (0.736) this indicated that tool was highly reliable.

#### **Pilot study:**

A pilot study was conducted on 39 women (10% from the sample size) who attended at the antenatal clinics in the previous mentioned settings. The aim of the pilot study was to assess the clarity and applicability of the tools. And to assess the time needed for answer. The results of the pilot didn't include in the sample size and according to the data analysis of pilot results, modifications of the tools were done as paraphrasing of some sentences.

#### **Ethical consideration**

The Ethics Committee of the Faculty of Nursing, Mansoura University granted official permission, and an official letter from the Faculty of Nursing, Mansoura University was directed to the head of the Antenatal clinic of the Obstetric and Gynecological specialty center at Mansoura University Hospitals, Old and General Hospital in Mansoura city to obtain official permission to conduct the study after explaining its goal.

The research's purpose was explained to the subjects, and signed permission to participate in the study was acquired. Participation in the study was entirely optional, and all participants were free to leave at any moment. Throughout the study, anonymity, privacy, safety, and confidentiality were strictly maintained. The study participants were informed that the findings will be utilized as part of the required research for their Master's degree, as well as for publishing, education and research process

#### **Study procedure**

The current study was done through of two process; preparatory phase and data collection phase as following:

#### **Preparation of the work**

This process was started by obtaining approval from the concerned authorities in the previous mentioned settings. Tool for data

collection was designed after reviewing the national and international related literatures. Then pilot study was conducted on 39 pregnant women before collecting the actual sample. This process took about one month from beginning of January 2021 to the beginning February 2021.

#### **Data Collection Phase:**

The current study was carried out from the beginning of February to the end of July 2021. The researcher started data collection first from three hospital, obstetrics and gynecology center at Mansoura university hospital, then from old general hospital and finally from the new general hospital.

The researcher attended the previously mentioned setting three days weekly from 9 A.M. to 1 P.M.

-The researcher introduced herself to the nurses and the pregnant women, clarified the aim of the study and obtained the women's permission to participate in the study after assuring the confidentiality of data.

-The researcher interviewed each woman individually for about 10 - 15 minutes in a comfortable room to collect data by using the data collection tool.

- The researcher started first by asking the pregnant woman about socio-demographic data then ask studied women about obstetrical data (gravidity, parity) and current pregnancy (gestational age, antenatal visits.)

-Then the researcher assess evaluate self-medication practice among the studied women as (assess drug used as self-medication, then ask about common symptoms the necessitate medications used, reasons for use self-medication, recommended person for self-medication, and ask pregnant women about information get from the leaflet).

- Pregnant women were permitted to ask for any interpretation and explanation.

The researcher asked the pregnant woman and recorded her answers in the data collection sheet.

- The researcher followed the recommended personal protective measures during data collection process as well as, privacy and safety was not were absolutely assured.

- Data were gathered by the researcher until the end of data collection period.

#### **Statistical Analysis**

Collected data were coded, computed and statistically analyzed using SPSS (statistical package

of social sciences), version 22. Data were presented as frequency and percentages (quantitative variables). Chi square ( $\chi^2$ ) was used for comparison

of categorical variables, and was Exact test if the expected value of any cell was less than 5. The difference was considered significant at  $P \leq 0.05$

#### 4. Results

**Table (1): Distribution of the pregnant women according to their socio demographic characteristics**

Items	no (382)	%
<b>Age (years)</b>		
- < 20	24	6.3
- 20 –	220	57.6
- 30 –	127	33.2
- 40 – 50	11	2.9
	Mean $\pm$ SD = 27.90 $\pm$ 5.81 years	
<b>Marital Status</b>		
- Married	353	92.4
- Divorced	23	6.0
- Widow	6	1.6
<b>Occupation</b>		
- Working	142	37.2
- House wife	240	62.8
<b>Education:</b>		
- Basic or less	106	27.7
- Secondary	145	38.0
- University or more	131	34.3
<b>Income:</b>		
- Not enough	149	39.0
- Enough	219	57.3
- Enough & save	14	3.7
<b>Residence</b>		
- Rural	253	66.2
- Urban	129	33.8

Table (1) shows that more than half (57.6%) of the pregnant women aged from 20-30 years with average 27.90  $\pm$  5.81 years. Most of them (92.4%) are married. More than half of them were house

wife and had enough income (62.8%) & (57.3%) respectively, about (38.0%) of pregnant women had secondary education (33.8%) of them from urban areas.

**Table (2): Distribution of the pregnant women according their reproductive history**

Items	no (382)	%
<b>Gravidity</b>		
- Primigravida	58	15.2
- Multigravida	324	84.8
<b>Parity:</b>		
- Nulliparas	62	16.2
- Primipara	141	36.9
- Multiparas	179	46.8
<b>Mode of last delivery (320)</b>		
- Vaginal	91	28.4
- CS	229	71.6
<b>Obstetric problems in last pregnancy(75)</b>		
- Pre-eclampsia	17	22.7
- Placenta previa	6	8
- Gestational hypertension	22	29.3
- Gestational DM	24	32
- Hyperemesis gravidrum	6	8
<b>Medical diseases in last pregnancy(46)</b>		
- DM	18	39.1
- HTN	18	39.1
- Heart diseases	8	17.4
- Asthma	2	4.4

Table (2) shows that majority (84.8%) of the pregnant women were multigravida and near half of them (46.8%) were multiparous. About (71.6%) of the pregnant women had previous CS.

Gestational DM and Gestational hypertension were the common problem in last pregnancy (39.1% & 39.1%). Wrong percentages

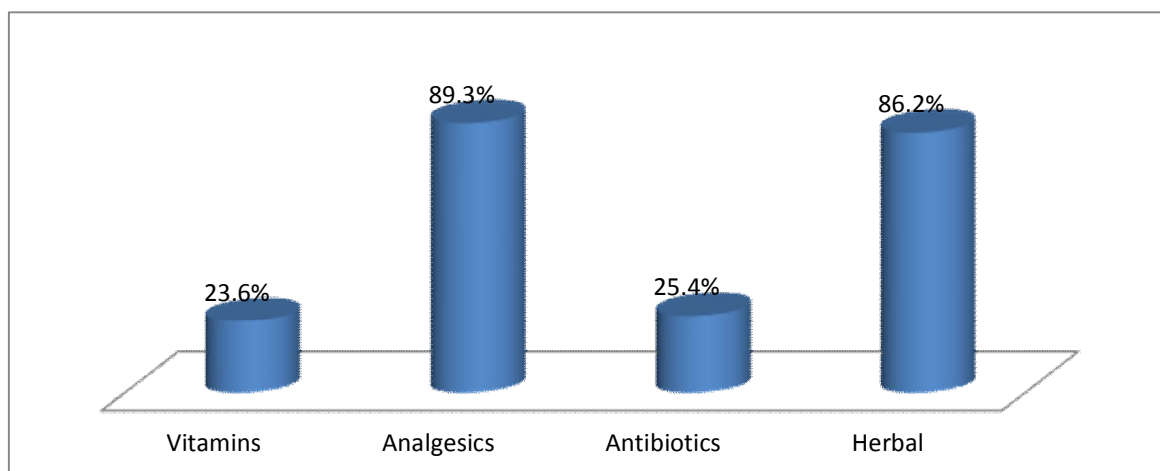
**Table (3): Types of self-medications used by the pregnant women**

Medications	no (382)	%
<b>Vitamins</b>	<b>90</b>	<b>23.6</b>
- Iron	25	27.8
- Folic acid	15	16.7
- Calcium	16	17.8
- Vit A	28	31.1
- Vit. D	47	52.2
<b>Analgesics</b>	<b>341</b>	<b>89.3</b>
- Panadol	208	61.0
- Epoprophin	24	7.0
- Paracetamol	129	37.8
- Aspirin	23	6.7
- Adol	18	5.3
<b>Antibiotics</b>	<b>97</b>	<b>25.4</b>
- Augmentin	8	8.2
- High Biotics	18	18.6
- Flummox	65	67.0
- Ceftriaxone	7	7.7
<b>Herbal</b>	<b>329</b>	<b>86.1</b>
- Pepper men	277	84.2
- Anise	237	72.0
- Rosella	85	25.8
- Latency	30	9.1
- Habit El baraka	37	11.2
- Ginger	14	4.3
- Grown berry	5	1.5
- Chamomile	13	4.0
- Thyme	3	1.0
- Rosehip	3	0.9

\* Many choices are possible

Table (3) show more than half (52.2%) of the pregnant women use vitamin D as a self-medication, also use vitamin A and iron (31.1% & 27.8%) respectively. Nearly two third (61.0%) of pregnant women take Panadol as analgesic

followed by Paracetamol (37.8%). Nearly two third (67.0%) of pregnant women take flummox followed by Augmentin (25.4%). Majority (84.2%) of studied women take Pepper men as an herbal medicine followed by anise (72.0%)



**Figure (1): Types of self-medications used by the pregnant women**

Figure (1) shows that the commonest type of self-medications among **pregnant** women were analgesics (89.3%) followed by herbal, antibiotics

and vitamins (86.1%, 25.4%, &23.6 %) respectively

**Table (4): Common reported symptoms that affect self-medications use by the pregnant women**

Symptoms	no (382)	%
<b>General</b>		
- Headache	197	51.6
- Toothache	62	16.2
- Weakness & fatigue	85	22.3
- Cough & cold	34	8.9
<b>Gastro intestinal tract</b>		
- Colic	170	44.5
- Indigestion	23	6.0
- Heartburn	64	16.8
- Diarrhea	15	3.9
- Constipation	39	10.2
- Morning sickness	147	38.5
<b>Musculoskeletal</b>		
- Joint pain	19	5.0
- Back pain	38	9.9
- Arthritis	3	0.9
<b>Cardiovascular</b>		
- Hypertension	22	5.8
- Hypotension	3	0.8
- Anemia	39	10.2
<b>Respiratory</b>		
- Asthma	12	3.1
- Shortness of breath	7	1.8
<b>Genitourinary</b>		
- UTI	28	7.3
- Fungal infection	22	5.8
- Bacterial infection	67	17.5

\* Many choices are possible

Table (4) shows that the commonest reported symptoms were headache (51.6%), followed by colic (44.5%), morning sickness

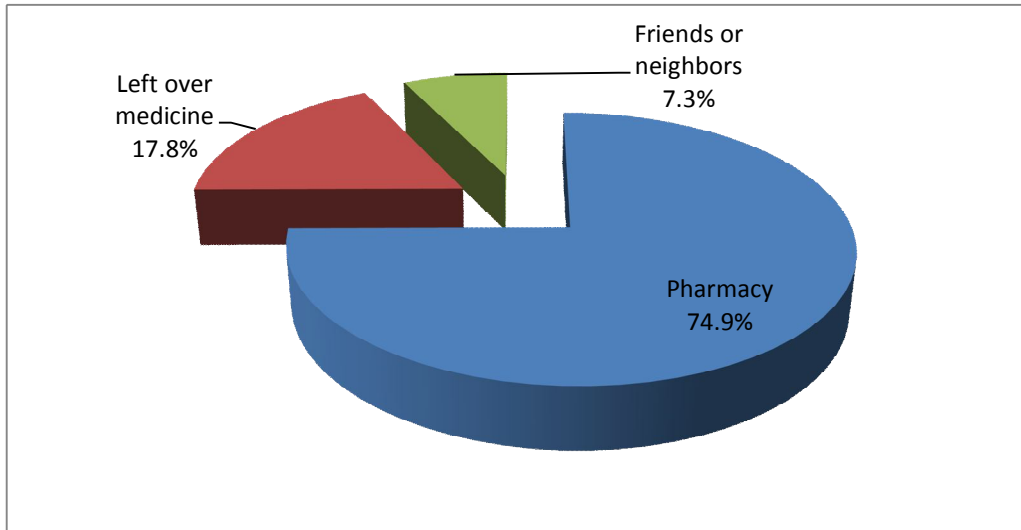
(38.5%), weakness and fatigue (22.3%), bacterial infection (17.5%), heartburn(16.8%), constipation (10.2%), anemia (10.2%) and back pain (9.9%).

**Table (5): Reasons for used self-medications by the pregnant women**

Reasons	no (382)	%
Drug is expensive	26	6.8
Illness is not serious	184	48.2
No time to go health facility	108	28.3
Going to hospital is time wasting	40	10.5
Cost of treatment is high	21	5.5
Available of previous medications	89	23.3
Experience from previous medications	157	41.1
Being embarrassed from disease	24	6.3
High cost of doctor's visit	130	34.0
Poor health services	44	11.5
Poor communications	31	8.1
Obtain medications easily	198	51.8
Time saving	157	41.1

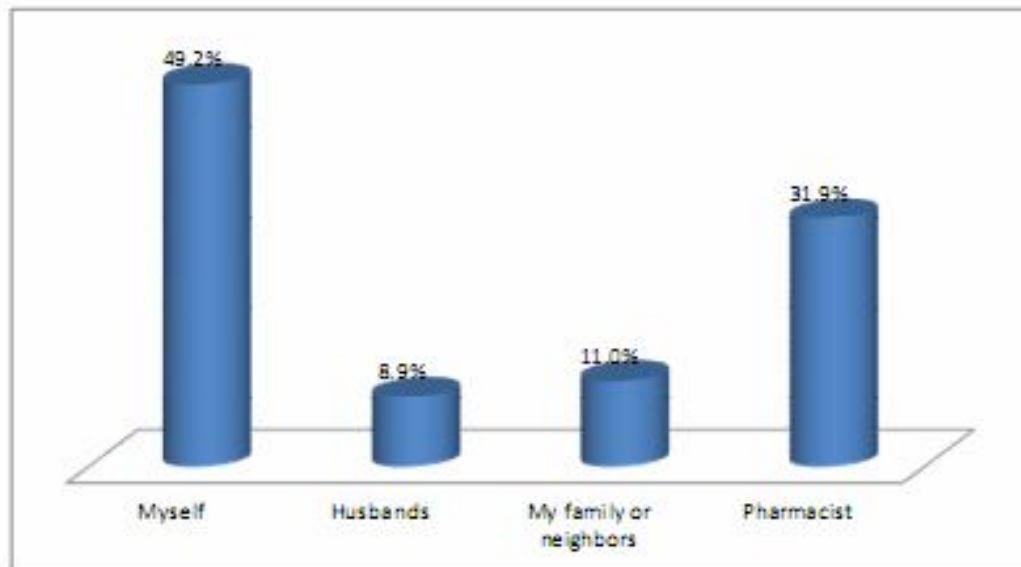
Table (5) shows that the most common reasons for obtaining self-medication were medications easily (51.8%), illness is not serious (48.2%), experience from previous medications

(41.1%), time saving (41.1%) and high cost of doctor's visit (34.0%), no time to go health facility (28.3%) and Available of previous medications(23.3%).



**Figure (2): Sources of self-medications use by the pregnant women**

Figure (2) illustrates that the most common source for self-medications is the pharmacy (74.9%), followed by left over medicine (17.8%) and lastly friends or neighbors (7.3%).



**Figure (3): Recommended persons for self-medications used by the pregnant women.**

Figure (3) describes that nearly half of the **pregnant** women used self- medication by themselves (49.2%), followed by pharmacist

(31.9%). Only (11.0% & 8.9%) of them use self-medications according to family and husbands' recommendations.

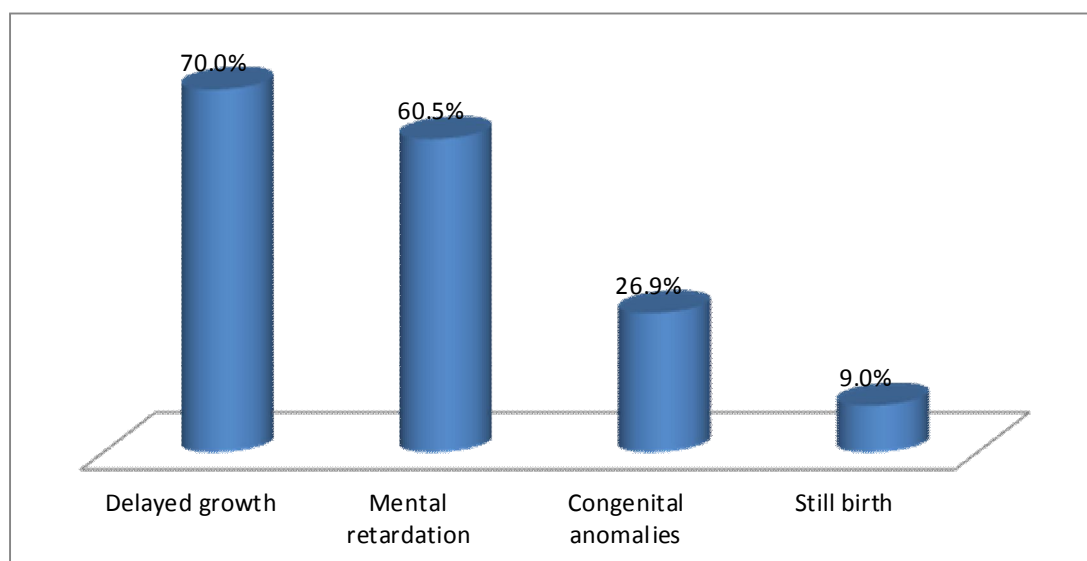
**Table (6): Reported awareness of the pregnant women during using self-medications.**

Behaviors	no (382s)	%
<b>Checking leaflets</b>		
- Yes	169	44.2
- No	213	55.8
<b>Knowledge obtained from leaflets (169)</b>		
- Dose	75	44.4
- Frequency	88	52.1
- Components	17	10.1
- Safety during pregnancy	142	84.0
- Side effects	88	52.1
<b>Reasons for do not reading leaflets (213)</b>		
- No time	44	20.7
- Laziness	79	37.1
- Forgetting	63	29.6
- Do not read English	57	26.8
<b>Awareness of side effects of self-medications</b>		
- Yes	167	43.7
- No	215	56.3

\* Many choices are possible

Table (6) shows that more than half (55.8) of the pregnant women didn't check leaflets before use medications. Laziness and forgetfulness were the commonest causes for not reading the leaflets

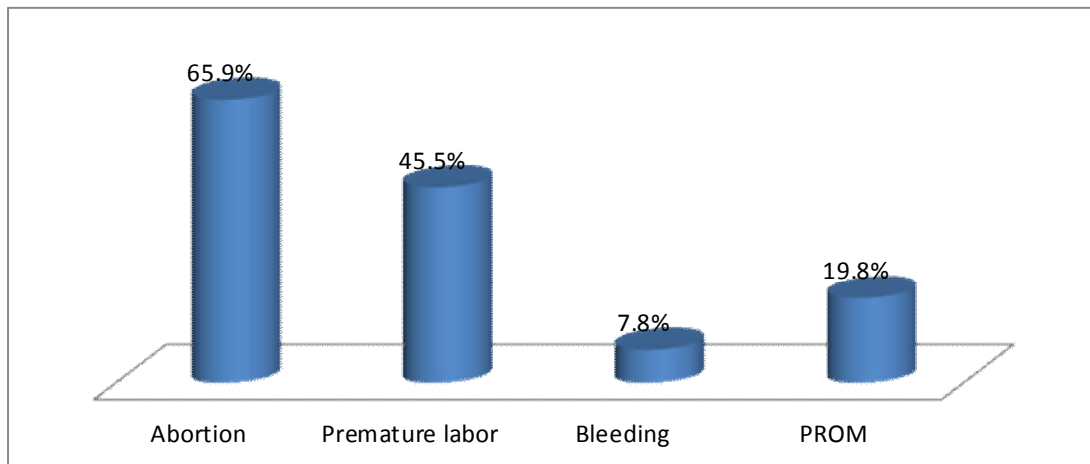
(37.1%& 29.6% respectively). More than half (56.3) of pregnant women didn't aware of the side effects of self-medications on the fetus or pregnant women.



**Figure (4): Percentage of pregnant women knowledge about side effects of drugs used during pregnancy on the fetus**

More than two third (70.0%) of pregnant women know that delayed growth as side effect of fetus followed by mental retardation (60.5%).





**Figure (5): Percentage of pregnant women knowledge about side effects of drugs used during pregnancy on the women**

Nearly two third (65.9%) of pregnant women know side effect of mother such as abortion followed by preterm labor (45.5%).

### 5. Discussion

The current study aimed to assess self-medication practice among pregnant women. The results of the study answered the study questions as the current study assessed the most common medications used for self-medication practice. Symptoms, reasons, sources, factors that responsible for self-medications were also determined.

Considering to the self-medications used by the pregnant women, the current study found that more than half of the studied women took vitamin D followed by vitamin A and iron as a self-medication during the current pregnancy. Nearly two thirds of them took Panadol as analgesic followed by Paracetamol, about two thirds of them took flumox followed by Augmentin, and the majority of them took Pepper men followed by Anise as an herbal medicine. These results were in consistent with **Beza, (2018)** who reported that majority of the study participants took modern medicine as vitamin D and analgesic followed by herbal medicine.

As well as, **Mohd-Azmi et al., (2020)** who investigate self-medication practice during pregnancy in Kuantan and reported that more than two-thirds of the studied participants took health supplements (vitamin D, vitamin A and iron followed by herbs. Furthermore, **Shafie et al., (2018)** who studied the determinants of self-medication practice among pregnant women in Addis Ababa and reported that the majority of the studied participants used vitamins and herbs as a

self-medication during pregnancy. These results can be explained as high use of herbal drugs in developed and developing countries may be due to promotions and beliefs that herbs are natural and safe which attract pregnant women who are in most cases concerned about the health of their unborn fetuses

Which present study finding was contradicted with **Marwa et al., (2018)** who assessed self-medication practice among pregnant women in Mwanza health center, Tanzania and revealed that most common drugs used by pregnant women were ante-emetics and anti-malarial drugs. This disharmony can be explained as this region is a pandemic for malaria and GIT problems is common, so the pregnant women took these drugs as a protective measure to prevent infection. In addition, the current study results were in a disagreement with **Zewdie et al., (2018)** who studied the associated factors of self-medication practice during pregnancy in Goba town, Ethiopia, and reported that paracetamol and diclofenac were the most commonly used medications during pregnancies. This might be due to the accessibility of such drugs with rural drug venders and drug shops in this town.

Considering associated symptoms with self-medication practice, the current study reported that the commonest symptoms were headache, followed by colic, morning sickness, weakness and fatigue, bacterial infection, and heartburn. Also, constipation, anemia, and back pain reported by less than quarter of the studied participants. These findings were supported by **Zewdie et al., (2018)** who found that headache, nausea and heart burn were the most common associated symptoms for self-medication practice. Moreover, the study

results were in the same line with (Niriayo et al., 2021) who revealed that headache and morning sickness was the most common drug used for self-medication.

Similarly, a study conducted by Jambo et al., (2018) to assess the contributing factors with self-medication in Harar town public hospital in Ethiopia, and illustrated that the most common symptoms affect self-medication during pregnancy were headache, morning sickness and cold. Also, in a Tanzanian study conducted by Marwa et al., (2018) reported that headache and morning sickness were the leading symptoms that associated with self-medication. The previous similarity can be explained as morning sickness is one of the commonest minor discomforts that experienced by most of the pregnant women. Headache also was common among the current study participants due to chronic HTN and gestational HTN was experienced by nearly one-third of them which is responsible for this symptom.

The current study were contradicted with Mohd-Azmi et al., (2020) who showed that fever and flu were the most common symptoms responsible for self-medication during pregnancy. This could be due to the high prevalence of pandemic infections as seasonal influenza and malaria in this study setting. *Considering reasons for obtaining self-medications, the present study showed that most common reasons were easy accessibility of medications, considering illness is not serious having previous experience regarding the medications, and self-medication was a time saving. Also, high cost of doctor's visita, having no time to go health facility, and availability of previous medications were other reasons for self-medication. These findings were in adherence with Ojo et al., (2020) who conducted research to identify factors influencing practice of self-medication during pregnancy in a primary health care facility in Akure, and found that the majority of the respondents perceived that the disease condition is minor, followed by Expansive prescription of drugs in the hospitals, as well as availability of old prescription at home. Other causes such as the cost of health practitioner treatment was high, no time to visit the health facilities.*

Furthermore, the current study results are in the same line with Mohamad 2016and Sima,

(2020) who carried out a study to identify knowledge, attitude, and practice of pregnant women toward self-medication in Congo, and reported that illness was not serious, availability of previous drugs, and time saving were the major factors affecting self-medications use. Also, the previous finding were supported by the results of a study conducted by Shafie et al., (2018) to assess determinant factors and prevalence of self-medication among pregnant women in Addis Ababa community and revealed that previous knowledge about medication, mildness of illness, and time saving were the major reasons for practicing self-medication.

As regards to source of self-medication during pregnancy, the current study revealed that most common source for self-medications was the pharmacy, followed by left over medicine, and friends or neighbors. The study results were supported by Alsous et al., (2021) who carried out a study to self-medication practice during pregnancy in Jordan and reported that pharmacy e considered to be the first point of contact for patients in the northern region of Jordan. In addition Ojo et al., (2020) found that most of the study participant obtained self-medication drugs from the pharmacies followed by left over medications. Also, the study results were in an agreement with Niriayo et al., (2021) who revealed that pharmacies were the most common source to obtain self-medication drugs. This can be explained as most of the pharmacies sell medicines without a doctor's prescription, especially unscheduled medicines which make it easily for the pregnant women to obtain self-medications.

Inversely, a study conducted by Abu-Helalah et al., (2015) to evaluate the determinants of primary health care services in Jordon and revealed that pharmacists were not the primary source of self-medications among pregnant women the most common source for obtaining drugs was neighbors or friends. This is due to low socioeconomic status of the study participants as they ask their family or friends first before buying the medications.

Considering the recommended person for self-medication, the present study illustrated that nearly half of the studied women used self-medication by themselves, followed by pharmacist. Only few present of them used self-medications according to their family and husbands' recommendations. This was in the same line with Alsous et al., (2021) who reported that most of the studied subjects used self-medications by themselves. In case of they not have the

medications or new symptoms, they ask the pharmacists. Also, the current study finding was in adherence with **Ake et al., (2021)** who assessed predictors of self-medications among pregnant women in Gedeo Zone, Ethiopia, and revealed that majority of the studied subjects take self-medication by themselves. This can be explained as the previous experience of the studied subjects regarding the medications allow them to take these drugs by own selves without doctor prescriptions.

Regarding the reported behavior of the studied women during self-medication use, the present study revealed that more than half of the studied women didn't check leaflets before use medications. Laziness and forgetfulness were the commonest causes for not reading the leaflets. More than half of studied women didn't aware of the side effects of self-medications on the fetus or mothers. The study results were in an agreement with **Niriayo et al., (2021)** who found that more than half of the studied women did not read the leaflet before taking the medications. Also, they did not concern with the possible side effects of these drugs to themselves or to their fetuses. Moreover, **Marwa et al., (2018)** reported that the pregnant women not concerned with reading the leaflets before taking the medications, and not interested in determining the possible side effects of these drugs to themselves or their fetuses.

Which the current study are in disagreement with **Alsous et al., (2021)** who revealed that majority of the pregnant women checked the leaflets of the medication before taking it. Also, they were concerned with identifying the possible side effects of these drugs to their fetuses. This disharmony may be due to difference in the level of education between the study subjects.

Finally, self-medication practice is one of the most common public health concerns during pregnancy. Unless necessary care is provided by maternity care health professionals, it may be a leading cause of increasing maternal and neonatal mortality and morbidity. **WHO, (2020)** recommended that self-medication is a universal challenge that requires great attention because of its potential threats not only to the women but also to the unborn fetus. So, great effort should be provide to increase awareness of pregnant women regarding this practice.

## **6. Conclusion**

The current study concluded that, self-medication was reported among pregnant women. Vitamins, analgesics, antibiotics, and herbs were the most common drugs used as a self-medications.

Headache, morning sickness, heart burn, and constipation were the most common symptoms associated with self-medication used. The main source of self-medications was the pharmacy, followed by left over medications. Most of the pregnant women practiced self-medications by themselves, pharmacist and family members also can recommend the self-medication drugs.

## **7.Recommendations:**

Based on the study finding, the current study recommended the following:

- Simple, well-designed brochures will be designed and distributed among pregnant women to increase their awareness regarding risks of self-medications.
- Medications guidelines and recommendations of its use during pregnancy should be a part of ante-natal care education.
- Ante-natal care assessment should focused on careful assessment of self-medication history among pregnant women.
- Concerted efforts need to be exerted to strengthen regulatory enforcements and routinely screen pregnant women for self-medication practice.
- Formulate Ante Natal Care charts or forms to address risk of self-medication practices and continuously presented in antenatal out patients clinics.
- **Further researches** should be recommended to assess the consequences of self-medication practice on pregnancy outcomes and community-based studies to identify factors for self-medication practice

## **8.Acknowledgement**

Researchers would like to thank all women who took part in the study for their cooperation during the research process, as well as the health team for their crucial support during the research's implementation

## **9.Declaration of conflicting interests**

The researchers reported that they had no possible conflicts of interest.

## **10.Funding**

This research did not get a particular grant from any funding sources in order to carry out the current study.

## 11.Reference

- Abu-Helalah M, Nawafleh A, Al-Sheraideh H. (2015).** *Determinants of Access to Primary Healthcare Services in Jordan-A National Cross-sectional study.* High Health Council;
- Ahmed S, Siraj N, Yousif M. (2015).** Pregnant women's awareness and perception about medicines. *Lat Am J Pharm.*;34(5):869–74.
- Ake, S. F., Yimam, G. N., & Bekele, N. A. (2021).** Self-Medication and its Predictors among Pregnant Women in Gedeo Zone, South Ethiopia; *12(6):60-66.*
- Al-Ghamdi, S., Alfauri, T. M., Alharbi, M. A., Alsaihati, M. M., Alshaykh, M. M., Alharbi, A. A., ... & Alharbi, A. S. (2020).** Current self-medication practices in the Kingdom of Saudi Arabia: an observational study. *The Pan African Medical Journal, 37(51):1-17*
- Alsous, M. M., I. Al-Azzam, S., Nusair, M. B., Alnahar, S. A., & Obeidat, N. A. (2021).** Self-medication among pregnant women attending outpatients' clinics in northern Jordan—a cross-sectional study. *Pharmacology research & perspectives, 9(2), 1-12*
- Atmadani, R. N., Nkoka, O., Yunita, S. L., & Chen, Y. H. (2020).** Self-medication and knowledge among pregnant women attending primary healthcare services in Malang, Indonesia: a cross-sectional study. *BMC pregnancy and childbirth, 20(1):1-11.*
- Beza, S. W. (2018).** Self-medication practice and associated factors among pregnant women in Addis Ababa, Ethiopia. *Tropical medicine and health, 46(1), 1-14.*
- Bohio R, Brohi Z, Bohio F** medication among pregnant women; a cross-sectional study conducted at Isra University Hospital, Hyderabad. *The Journal of the Pakistan Medical Association.* 2016;66(1):68–71
- Fatema, K., & Lariscy, J. T. (2020).** Mass media exposure and maternal healthcare utilization in South Asia. *SSM-Population Health, 11(8):1-12.*
- Ibironke C. Ojo,etal. (2020).** Factors Influencing Self-Medication Practice among Pregnant Women Attending Antenatal Clinic in Primary Health Facilities in Akure South Local Government, Ondo State.” *IOSR Journal of Nursing and Health Science, 9(2), 16-22*
- Jambo, A., Mengistu, G., Sisay, M., Amare, F., & Edessa, D. (2018).** Self-medication and contributing factors among pregnant women attending antenatal care at public hospitals of Harar town, Ethiopia. *Frontiers in pharmacology, 9(12): 1-10.*
- Marwa, K. J., Njalika, A., Ruganuza, D., Katabalo, D., & Kamugisha, E. (2018).** Self-medication among pregnant women attending antenatal clinic at Makongoro health centre in Mwanza, Tanzania: a challenge to health systems. *BMC pregnancy and childbirth, 18(1), 16-25.*
- Mbarambara PM, Songa PB, Wansubi LM, et al.** Self-medication practice among pregnant women attending antenatal care at health centers in Bukavu, Eastern DR Congo. *IJIAS.* 2016;16(1):38-45.
- Mohamad, S. Sima S.** Knowledge, attitude and practice of self-medication among pregnant women in the city of zabol. *International Journal of Pharmacy and Technology* 2016, 8(4):21588-21599.
- Mohd Azmi, W. N. W., Nahas, A. R. F., & Taufek, N. H. M. (2020).** Investigating Self-medication Practice among Pregnant Women in Kuantan, Pahang. *Journal of Pharmacy & Bioallied Sciences, 12(1): 852-855.*
- Niriayo, Y. L., Mohammed, K., Asgedom, S. W., Demoz, G. T., Wahdey, S., & Gidey, K. (2021).** Self-medication practice and contributing factors among pregnant women. *PloS one, 16(5): 1-8.*
- Ojo, I. C., Okafor, N. A., Adeola, O. E., Adamolekun, M. M., & Adewoyin, R. F. (2020).** Factors influencing self-medication practice among pregnant women attending antenatal clinic in primary health facilities in Akure South Local Government, Ondo State. *IOSR Journal of Nursing and Health Science (IOSR-JNHS), 9(2), 16-22.*
- Rashid, M., Chhabra, M., Kashyap, A., Undela, K., & Gudi, S. K. (2020).** Prevalence and predictors of self-medication practices in India: a systematic literature review and meta-analysis. *Current clinical pharmacology, 15(2), 90-101.*

- Sema, F. D., Addis, D. G., Melese, E. A., Nassa, D. D., & Kifle, Z. D. (2020).** Prevalence and Associated Factors of Self-Medication among Pregnant Women on Antenatal Care Follow-Up at University of Gondar Comprehensive Specialized Hospital in Gondar, Northwest Ethiopia: A Cross-Sectional Study. *International journal of reproductive medicine*, 2020(12)1-9.
- Shafie M, Eyasu M, Muzeyin K, Worku Y, Martín-Aragón ,S .(2018)** Prevalence and determinants of self-medication practice among selected households in Addis Ababa community. *PLoS ONE* 13(3):1-7.
- Tesfamariam, S., Anand, I. S., Kaleab, G., Berhane, S., Woldai, B., Habte, E., & Russom, M. (2019).** Self-medication with over the counter drugs, prevalence of risky practice and its associated factors in pharmacy outlets of Asmara, Eritrea. *BMC public health*, 19(1), 1-9.
- World Health Organization (WHO), 2020.** *Guidelines for the regulatory assessment of Medicinal Products for use in self-medication.* World Health Organization; 2020.
- Zewdie, T., Azale, T., Shimeka, A., & Lakew, A. M. (2018).** Self-medication during pregnancy and associated factors among pregnant women in Goba town, southeast Ethiopia: a community based cross sectional study. *BMC research notes*, 11(1), 1-6.