

# Perception of women on the adverse effect of drugs on the fetus during pregnancy

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## ABSTRACT

To conduct a study on the awareness of perception on the adverse effect of drugs on the fetus during pregnancy among married women. A questionnaire was drafted to assess the awareness of married women on the adverse effect of drugs on the fetus during pregnancy. The questionnaire was given randomly and completed by 100 married women. Data obtained were tabulated and analyzed. Most of the participants (94%) of this study have been prescribed with medication during their previous pregnancy, and the majority (92%) of them have knowledge about the prescribed drugs. During their previous pregnancy, 15% of the respondents take other medication like supplement and only 7% from them take herbs. About 97% of the respondents knew that certain drugs can cause negative effect to their baby and possibility to lead to child abnormalities. About 89% of the respondents also believed they will lose their baby if they taking medicine excessively or unmonitored by doctor. Drugs are used by pregnant mother to relief pain and discomfort during pregnancy. The drugs used must be safe for both mother and fetus. Therefore, this study helps to increase their awareness on the medication used during pregnancy as well as its adverse effect toward them and also the fetus.

**Keywords:** Awareness, perception, adverse effects, pregnancy, drugs

## Introduction

Drugs play a significant role in treating variety of disease. As the world becomes modernized, the drugs are improvised to give a better result and become more effective to fight against the infection. Therefore, human become dependent on it due to its ability to relieve pain and feeling better. However, although drugs provide lots of benefit to the body, it may cause side effect to the body.

This study is emphasizing on the married women's perception on the adverse effect of drugs. During the period of pregnancy, pregnant women would commonly experience morning sickness, headache, as well as vomiting. To accommodate with this situation, pregnant women usually will be prescribed with medication by their physicians to control and minimize their pain and discomfort.

Physician usually will prescribe drugs that provide relief and soothing action for the pregnant mother<sup>[1]</sup> which are drugs that are compatible

for pregnancy. Usually, these drugs are able to pass through the placenta and then pass to the fetus through the blood circulation.<sup>[2]</sup> The placenta is a unique organs that act as a barrier between the mother and fetus and it performs lot of function which is beneficial for both mother and fetus.<sup>[3]</sup> The administered drugs may give benefits to the fetus, but it also could cause teratogenicity or impairment to the fetal growth and development.<sup>[3,4]</sup>

In general, medicine prescribed for pregnant mother has a therapeutic effect. However, it may result to serious structural and functional adverse effects in the developing newborn.<sup>[5]</sup> Thus, to minimize the rate of occurrence, medication errors should be reduced and patient safety should be increased.<sup>[6]</sup> Therefore, US Food and Drug Administrations (FDA) had established strict regulations on the drug labeling, usage of medicine during pregnancy, as well as demonstrations on the safety of drugs and its efficiency before it is supplied to the market or pharmacist.<sup>[4]</sup>

The FDA also introduced the classification of the teratogenic effects of drugs in 1979, by indicating each class with the alphabet of A, B, C, D, and X.<sup>[4,7,8]</sup> The A class drug is not risk to use, while Class B is vice versa to it. The Class C drugs are defined as the drugs which lack of information and Class D is characterized as drug which is highly risk to human being. Although it causes fatal risk, it is still beneficial for childbearing women, especially during the emergency. Whereas for the X class, it indicates as the drugs that are contraindicated for women who are pregnant or may be pregnant.<sup>[8]</sup>

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This classification of drugs will help in recognizing better drugs to be used during pregnancy. Although these drugs may cause adverse effects to the fetus, most pharmacist believes that some of the drugs are still good for the fetus. Thus, it is important for every married woman to have sufficient knowledge regarding pregnancy, as well as the adverse effects of drugs during pregnancy.

Therefore, this study was done with a goal to increase the awareness of society especially married women, on the adverse effect of drugs. This survey also will help them to become more considerate on what type of medicine they will be used during their pregnancy.

## Materials and Methods

The study was designed to assess the awareness of married women on the adverse effect of drugs on the fetus during pregnancy. A pretested of validated questionnaire was drafted and emphasizing to know about the knowledge of married women on the medication (drugs) and its affect to the fetus. The pretested questionnaire was directly given randomly to married women in Chennai. About 100 of anonymous married woman completed the questionnaire, which consists of 12 questions.

The goal of this study was to know about their knowledge on the medication (drugs) and its effect to the fetus. The respondents were given a brief explanation regarding the purpose of study before they began answering the questionnaire. The questionnaire collected will be kept as confidential information. Data obtained from the questionnaire were analyzed and tabulated.

## Results and Discussion

### Demographic

In this study, 100 questionnaires were distributed to the respondents who are married women with various range of age as illustrated in Table 1. Most of the respondents were in the range of age of 30-40 years old, which are about 47% and 20-30 years old (41%). Woman whom age more than 35-year-old tend to exposed to the

medical risks due to aging of the reproductive system and body aging.<sup>[9]</sup> Therefore, they need to be highly cautious during pregnancy. Background information of all respondents was asked and tabulated in Table 1, including their education and occupation. Based on their level of education, about 11% is having only secondary education, 67% university graduate, and 22% postgraduate students.

Most of the respondents worked as the nonhealth employee, 23% of them are health-related employee, and the remains are housewife and others. In general, individual who has higher education tend to have better knowledge about drugs and their pregnancy. However, it does not mean people with lower education do not need to know about this. In a study, it stated that due to the lack of knowledge and fear on the teratogenic effect of antiepileptic drug, it may promote the theoretically preconceptive estrogen, changes in gastric motility as well as nausea and vomiting which could result to increase in the seizure in pregnancy.<sup>[10]</sup> Therefore, it is important for every woman to have better knowledge about their medicine as it affects the fetus as well as themselves.

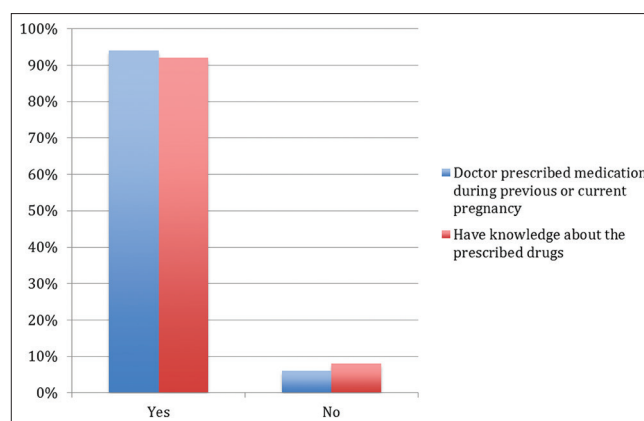
In addition to this, as illustrated in Graph 1, 94% of the married women are prescribed with medication by their doctors during their pregnancy and only 6% does not. The majority (92%) of the respondents knew the function and effects of the prescribed drugs toward themselves.

As shown in Graph 2, almost 15% of the respondents take other medication prescribed by their doctor, who can be in the form of vitamin or supplement and 85% does not. The majority (93%) of the respondents does not consume any herbs during their pregnancy and only minority (7%) of them take herbs during pregnancy. Through this study, 97% of the respondents knew that certain drugs may cause negative effect to their baby.

Next, based on Chart 1, approximately 16% of the respondents have special (abnormal) child or children from their previous pregnancy and 84% does not have. From this study, as demonstrated in Chart 2, about 97% of the respondents believe drugs can cause child abnormalities and only 3% does not. In addition to this, based on Chart 3, 89% of the respondents agree that if they take drugs or medicine unmonitored

**Table 1: Demographic of the respondents**

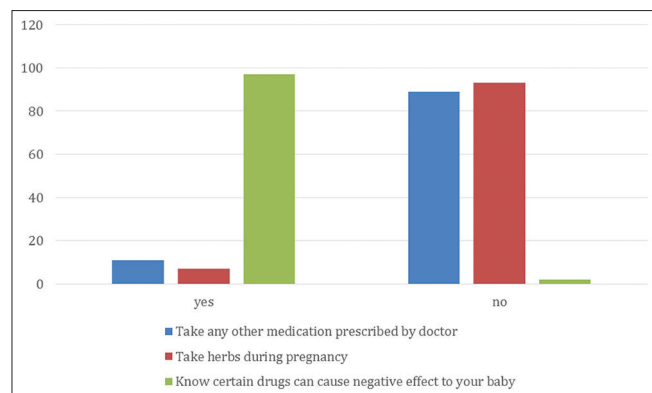
Variable	Number of respondents (n)
Age group	
20-30 years old	41 (41)
30-40 years old	47 (47)
40-50 years old	8 (8)
More than 50 years old	7 (7)
Education	
Primary	0
Secondary	11 (11)
University	67 (67)
Postgraduate	22 (22)
Occupation	
Housewife	11 (11)
Students	7 (7)
Health-related employee	23 (23)
Other employee	59 (59)



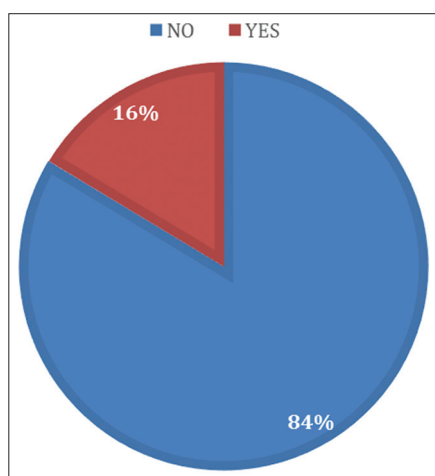
**Graph 1:** Doctors prescribed drugs during pregnancy and respondents have knowledge about the drugs

by the incharge doctor (excessively), there is high possibility for them to lose their baby.

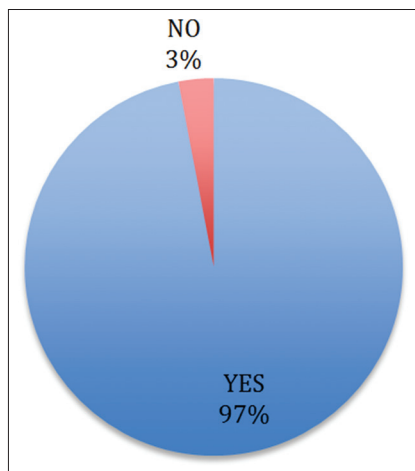
Table 2 demonstrated the respondents' opinion, regarding the medication that being prescribed by the physician for them. Most women's believe that medication give lots of benefit for them during



**Graph 2:** Take medication prescribes by doctor, take herbs during pregnancy and know certain drugs can cause negative effect to baby



**Chart 1:** Respondents have abnormal children from previous pregnancy



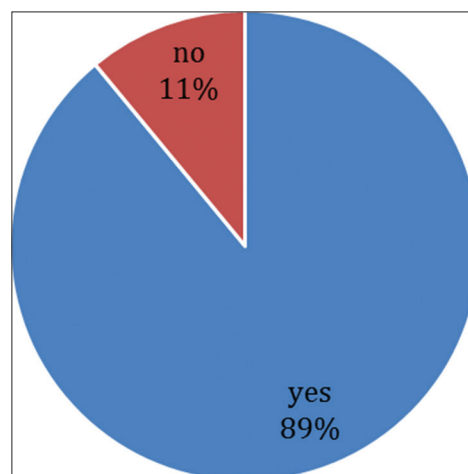
**Chart 2:** Respondents heard about child abnormalities due to drugs

pregnancy and it helps to save many unborn children from developing abnormalities. There are only few people think that doctor prescribed too many medicine and they are addictive and do more harm than good.

Basically, when a doctor prescribed a medicine, the prescription it is based on the particular patient, particular disease (problems) and even based on particular drugs.<sup>[11]</sup> Thus, there will vary of prescribed drugs among the patients, and one individual may give a small quantity of drugs compare to others as it may vary depend on the doctor itself. The effect on the individual also will be differ. Besides, individuals believe may also differ from each other as they experience different effect on themselves. Hence, their perceptions on drugs also differ.

In general, drugs prescribed by doctor for pregnant mother are safe for both mother and fetus. However, they may have developed adverse effect from taking those drugs, especially when taking it unmonitored or excessively. Harmful drugs also may be taken due to lack of knowledge about the drug. In addition to this, these drugs also would cause teratogenic effect to the fetus like child abnormalities.

Drugs consume during pregnancy, can give a long-lasting impact on the fetus brain, which could cause defect on the development of nervous systems, which in turn affect the mechanisms process inside the fetus body.<sup>[12]</sup> This will then result to retardation on their growth and development.



**Chart 3:** Possibility to lose baby if taking drugs unmonitored by their incharge doctor

**Table 2: Respondents opinion regarding the prescribed drugs**

Opinion regarding the prescribed medication	Number of respondents
I have higher tendency to use medicine when I'm pregnant than when I'm not pregnant	15
It is better for me to take medicine for my fetus, to treat my illness during pregnancy	36
Thanks to medicine and treatment many unborn children are saved	39
Natural remedies can generally use by pregnant woman	6
Doctor prescribed too many medicines	2
Most medicines are addictive	1
Medicines do more harm than good	1

There is also possibility for the newborn to have low birth weight, facial dysmorphism and developmental delayed.<sup>[13]</sup> The newborn also may develop fetal valvulopathy symptoms, which related to administration of anticonvulsant.<sup>[14]</sup> Thus, it is important for every pregnant mother to understand and know about their drugs, including the types of drugs, its use, way to administer and how it will affect to the body. This is because the prescribed drugs may considered as teratogenic for the fetus.<sup>[15]</sup>

Example of drug which may cause teratogenic effect is benzodiazepine (diazepam). It is the most common drugs used during pregnancy, but it is still dangerous for them. It usually prescribed for women in the reproductive age and childbearing mother to reduce anxiety and in the management of preeclampsia or eclampsia. However, it also can cause adverse effects such as oral cleft, congenital heart disease, malformation, and intrauterine growth retardation.<sup>[16]</sup> Other common drugs prescribed for pregnant women are bismuth subsalicylate which used for upset stomach or nausea.<sup>[17]</sup> Usage of drugs such as cocaine and opioids should be prevented as it can lead to major complication in the developing fetus, especially when it is used illegally or in large dosage.<sup>[4,18]</sup>

On top of that, some of the pregnant mothers also take vitamins or supplements, that can be easily bought from the pharmacists, without having prescription from doctor. This is because they can easily get it without any problem. Nowadays, people no longer take traditional herbs during pregnancy, unless it is processed. This may due to its bitter after taste. However, ginger, cranberry, raspberry, echinacea, and chamomile are also categorized as herbal medicines which can act as complement therapy for the body.<sup>[19]</sup> Therefore, pregnant mother can used this initiative to take a good care of their body in a natural way, and on the same time reduce the consumption of the synthetic drugs. Hence, the most important thing is, every woman should take right drug, at the exact dose on right time<sup>[20]</sup> for effective result. If not, the problems may get worsen.

## Conclusion

Drugs are given to the pregnant mother to relieve their pain and to reduce their discomfort. Although it is beneficial for the body, it still can become a threat to the individuals. Therefore, it is important for every people, especially pregnant women to study about drugs prescribed or consult for them, before having it. This may help to minimize complications and serious problems to the body as well as to the fetus. This study helps to educate people, especially married women on the adverse effect of drugs on the fetus. It helps to increase their awareness on the medication they being prescribed for and their effects to them and also to the fetus. In conclusion, every pregnant mother should take drugs that are save for their fetus as well as themselves.

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