Pregnant women’s knowledge toward the effects of drugs on mother health’s and foetus during pregnancy in Fatima Al Zahra hospital, Baghdad, Iraq

Shatha Mahmood Niazi1, Abeer Abed Gatea2

Abstract

Objective: To assess pregnant women’s awareness on medication use and its effects on their health and the health of their unborn child.

Methods: A descriptive cross-sectional study on pregnant women who frequently visited the outpatient clinic at the Fatima Al-Zahra Hospital was conducted using a non-probability sampling technique. A two-part questionnaire, the first of which inquired about socio-demographic information and the second inquired about mothers’ awareness of the effects of medications on their health and the health of the foetus while they were pregnant, was used to collect data through direct interviews. The content validity of the instrument was established with the assistance of 20 specialists. Cronbach’s alpha Coefficient was used to assess the instrument scales’ reliability. A Likert item was used to assess respondents’ understanding of a certain topic or statement. Using multivariate logistic regression analysis, the strength of the independent correlations between different components and the desired results was evaluated.

Results: The study’s findings show that participants’ awareness of how medications affect a pregnant woman’s health and the foetus had a bad overall mean score. On average, they were 27.4 8.34 years old. A 75 (75%) of the participants in the study were over the age of 21, had a secondary education, and were working in some capacity. A 50 (50%) of women had had three to five pregnancies, and 48 (48%) were in the third trimester. 11 (11%) of them utilized the medication illicitly.

Conclusion: Maternal awareness of medication use is statistically strongly associated with a number of factors influencing outcomes. In fact, pregnant adults over the age of 21 had little knowledge about it, little education, and used the drug without a prescription. The results of the study highlight the need for increased communication about medication use with expectant mothers in order to enhance their understanding and reduce self-medication.

Keywords: Knowledge, Pregnancy, Mothers, Fetus, Medication DOI: https://doi.org/10.47391/JPMA.IQ-22

Introduction

Even when a woman does not have a chronic illness, using medication to address a variety of symptoms and problems is typical during pregnancy. Pregnant women typically use a variety of pharmaceuticals, such as antibiotics, paracetamol, antidepressants, nausea meds, and thyroid supplements.1-2 Prevalence of self-medication (SM) among pregnant women was 46.24%, 20.1%, 62.9%, 40%, 55.3%, and 55% in Tanzania, Ethiopia, northern Europe, Pakistan, and Egypt, respectively.1-9 Both patients and medical professionals find the topic of drug prescription during pregnancy to be challenging.10 Pregnant mothers and their unborn children face serious medication safety concerns that call for extreme vigilance.10,11 Taking medication without a prescription is seen as a major health risk since it can result in toxicity, greater drug consumption per person, antibiotic-induced drug resistance, and unwanted therapy.11 Around 3% of congenital abnormalities are due to SM.10-12 Additionally, SM could occasionally increase the cost of the healthcare system.11 The high occurrence of SM is mostly a result of incomplete and wrong information, according to the association between knowledge and self-medication.11-13 Pregnant women’s parity and level of education can influence how they view using medications, although the effects are varied.14 Additionally, SM in women is more significant because they go through more delicate life stages like pregnancy and nursing. They also act as an example for the rest of the family. It may be possible to effectively counsel these women and help them adhere to their medicine if we have a better knowledge of the concerns and anxieties pregnant women have about using medications while they are pregnant. This study sought to evaluate pregnant women’s knowledge of drug use and its impact on both their health and the health of their unborn children.

Material and methods

A cross-sectional analysis was done in Fatima Al Zahra Hospital in Al-Rusafa side of Baghdad. The data was collected from the 1st of November 2020 to 30th of March...
2021 to identify the knowledge towards the impact of drugs on a pregnant woman's and foetus's health.

The formula for calculating the sample size was: \( n = \frac{N}{1+Ne^2} \).

\[ n = \frac{10,000}{1 + 10,000 \times 0.10^2} \]

\( n = 99 \approx 100; \) the number of samples was 100 cases

Non-probability convenient sampling technique was used to collect the sampling.

**Inclusion criteria:** The participants in this study ranged in age from 15 to 45; they had chronic diseases such as anaemia, diabetes mellitus, hypertension, heart problems, etc.; and they were pregnant at any stage of their pregnancies.

**Exclusion criteria:** Age less than 15 years and over 45 years old; she is not pregnant and has no history of a chronic illness.

The information from the participants was gathered via the questionnaire. The questionnaire was written by the researchers in both Arabic and English to make it easier for the participants to use. The information for the questionnaire was compiled using literature research and the advice of specialists. In order to achieve the goals of the current study, the content validity of the questionnaire format for clarity and sufficiency. The experts have been working for more than fifteen years. Their comments suggested that a few items should go through minor adjustments; these adjustments were made in accordance with their advice and recommendations. The reliability of the questionnaire was used to determine the correctness of the questionnaire: internal consistency reliability was determined through the computation of the Cronbach alpha correlation coefficient which was 0.83 which indicates a high reliability. A Pilot Study was not considered necessary.

After the data gathering process was completed, the results were imported into an Excel sheet and analysed using SPSS version 22. The descriptive variables were frequency and percentage. The findings can be characterised as 1 to 2.4 representing (negative or poor), 2.5 to 3.4 representing (neutral or fair), and 3.5 till 5.0 representing (positive or good). A Likert scale was used to measure respondents' understanding of a specific subject or proposition. This data was represented using cross tabulation and chi-square. Multivariate logistic regression studies were used to evaluate the strength of the independent associations between different components and the intended outcomes while controlling for all other variables in the model. For analysis, this data is often coded as follows: 1 indicates agreement, 2 neutrality, and 3 disagreements. The range of the outcomes' average score is 1 to 2.4, which is considered to be “negative” or “poor,” 2.5 to 3.4, which is “neutral” or “fair,” and 3.5 to 5.0, which is “positive” or “good.” This data was represented using cross tabulation and chi-square. Multivariate logistic regression studies were used to evaluate the strength of the independent associations between different components and the intended outcomes while controlling for all other variables in the model.

**Results**

One hundred participants were recruited in this study. The mean age was 27.4 ± 8.34 years. Ages ranged from 15 to 44 years with, 45 (45%) of studied sample being in the age group of 21-35 years followed by 30 (30%) in the age more than 35 years, 49 (49%) were employed, 44 (44%) of women had a secondary educational level, 51 (51%) women had a gestational history 3-5 times. 48 (48%) were in the 3rd trimester of pregnancy. 59 (59%) had a pregnancy at risk. whereas 46 (46%) pregnant women reported taking medication, and 68 (68%) reported doing so at least once with and without a doctor's advice (Table 1).

As shown in the table 2. Nine questions were asked regarding the knowledge of mothers towards the effect of drugs on her own health and that of the foetus. The highest average was awarded to the Q4 [Do you have any health problem during pregnancy] with mean 2.2±0.848, followed by Q2 [Has your doctor prescribed a medicine for you during pregnancy] with mean 2.1±0.86; Q9 [The source of your information, TV, doctors, poster, net, facebook] with mean 2.0±0.87. While the lowest average was awarded to Q5 [Did you visit a hospital, health centre or private clinic for that] with mean 1.3±0.63; followed by Q7 [Do you take any vitamin with mean 1.3±0.65].

In table 3, the multivariate logistic regression model investigated the relationship between a variety of respondent characteristics and their level of knowledge about whether or not a woman at risk of pregnancy should use a medication prescribed by a doctor during pregnancy. The results showed that this knowledge was statistically significantly related to a number of maternal factors. In fact, women over 21 had a higher level of this knowledge, who were employed, had a low education level, and were pregnant in their second and third trimesters. The risk of
Variables | OR (95% CI) | p-value
--- | --- | ---
Age (years) groups
<20 | 1* | ---
21-35 | 2.92 (1.18–7.23) | 0.02
>35 | 3.5 (1.27–9.69) | 0.016
Employment status | 1.79 (1.05–3.05) | 0.032
Education
College degree | 1* | ---
Secondary | 1.71 (0.64–1.92) | 0.03
Primary | 2.11 (1.84–2.57) | 0.017
Gravidity
0-2 | 4.01 (3.41–6.74) | 0.002
3-5 | --- | ---
>5 | --- | ---
Stage of pregnancy
1st trimester | 1* | ---
2nd trimester | 2.54 (1.42–4.55) | <0.001
3rd trimester | 2.36 (1.58–3.61) | <0.001
Medication use during earlier pregnancies
No | 0.34 (0.19–0.61) | 0.415
Yes | 2.45 (1.62–3.7) | <0.001
Usage of at least one prescription drug
No | 1* | ---
Yes | 2.81 (1.41–5.58) | 0.003
Usage of at least one medication without prescription
No | 1* | ---
Yes | 4.88 (1.75–13.59) | 0.002

Discussion
A 45 percent of the analysed sample was between the ages of 21 and 35 in the current study, however in an Indonesian study,17 the majority of cases were under the age of 27. Another study by Navaro et al. in Southern Italy found that the respondents’ ages ranged from 15 to 44 years, that over 60% had at least one kid, that 40.8% had a secondary education, that nearly half were in their third trimester, and that 17.9% were pregnant.18 In a cross-sectional study of 879 Saudi Arabian women, the average age of the participants was 29.5 years, and 49% of them were under 30.19

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Table-1: Knowledge of mothers towards the effect of drugs on her health's and fetus during pregnancy

<table>
<thead>
<tr>
<th>No</th>
<th>Knowledge of mothers towards the effect of drugs on her health's and fetus during pregnancy</th>
<th>Disagree n (%)</th>
<th>Neutral n (%)</th>
<th>Agree n (%)</th>
<th>Mean±SD</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Is your pregnancy good</td>
<td>20 (20)</td>
<td>29 (29)</td>
<td>51 (51)</td>
<td>1.7±0.79</td>
<td>06</td>
</tr>
<tr>
<td>2</td>
<td>Has your doctor prescribed a medicine for you during pregnancy</td>
<td>41 (41)</td>
<td>26 (26)</td>
<td>33 (33)</td>
<td>2.1±0.86</td>
<td>02</td>
</tr>
<tr>
<td>3</td>
<td>Do you take any medicine without doctor’s prescription</td>
<td>36 (36)</td>
<td>29 (29)</td>
<td>41 (41)</td>
<td>1.9±0.83</td>
<td>04</td>
</tr>
<tr>
<td>4</td>
<td>Do you have any health problem during pregnancy</td>
<td>44 (44)</td>
<td>27 (27)</td>
<td>29 (29)</td>
<td>2.2±0.84</td>
<td>01</td>
</tr>
<tr>
<td>5</td>
<td>Did you visit a hospital, health centre or private clinic for that?</td>
<td>10 (10)</td>
<td>8 (8)</td>
<td>82 (82)</td>
<td>1.3±0.63</td>
<td>08</td>
</tr>
<tr>
<td>6</td>
<td>Have you been tested</td>
<td>17 (17)</td>
<td>4 (4)</td>
<td>79 (79)</td>
<td>1.4±0.76</td>
<td>07</td>
</tr>
<tr>
<td>7</td>
<td>Do you take any vitamin before</td>
<td>19 (19)</td>
<td>14 (14)</td>
<td>67 (67)</td>
<td>1.3±0.65</td>
<td>09</td>
</tr>
<tr>
<td>8</td>
<td>Do you have any information about the harmful effects of medicines and their effects on your health and the health of your foetus</td>
<td>37 (37)</td>
<td>14 (14)</td>
<td>49 (49)</td>
<td>1.9±0.91</td>
<td>05</td>
</tr>
<tr>
<td>9</td>
<td>The source of your information, TV, doctors, poster, Net, Facebook</td>
<td>40 (40)</td>
<td>23 (23)</td>
<td>37 (37)</td>
<td>2.0±0.87</td>
<td>03</td>
</tr>
</tbody>
</table>
how different lifestyles and living standards are in other nations. In another Norwegian study, the authors claimed that the majority of cases were employees; in this study, 49 percent of the participants were employed. In the survey by Aljofan and Alkhamaiseh, (49%) of respondents reported full-time employment, with the remaining respondents being housewives. This is referring to the lifestyle and expense distinctions between the two nations, where each individual is accountable for his or her own means of support independent of family. In this research, women made up 44% of the population. This result was consistent with the Saudi Arabian report’s finding that 96% of respondents had a high school diploma or above. The bulk of the sample, comprising 150 pregnant women in Iraq, was between the ages of 16 and 20 (32.7%), and the majority of the sample had at least a primary education (20%), according to the authors’ cross-sectional study. The participants’ average age in Jordan, according to the authors, was 28.5±8.36 years. Only 78 (5.90%) of the participants were employed in the medical field at the time of the interviews (74.50% were unemployed). On the other hand, 818 (62.30%) of them possessed a college degree. Most nations endure security uncertainty, which leads to the majority of girls quitting school and choosing to stay at home or find employment. Quzmar et al., in a study conducted in 2021, showed that 168 (42%) of the 400 women participating in the study, were between the ages of 25 and 34. Those classified as overweight (BMI of 25.0-29.9) were 156 (39%). Regarding education, 233 (50.8%) had a college degree, 326 (81.5%) women were stay-at-home Mothers and 56 (14%) had chronic illnesses. While 101 (25.3%) women preferred using only complementary and alternative therapies throughout pregnancy, 141 (36.5%) women enjoyed combining all complementary and alternative therapies and conventional therapies.

Due to cultural and lifestyle variations between the two nations, 51 (51%) percent of the women in this study had a gestational history of three to five pregnancies, compared to a lower percentage of women in an Australian study who had more than two. Forty six (46%) percent of the sample used a medicine that was prescribed by a doctor during the current pregnancy. This figure is lower than the 85.2 percent in Scotland, the 82.5 percent in the United States, and the 76.4 percent in the United Kingdom, but it is equivalent to the 64 percent in Ethiopia, the 64 percent in Canada, and the 59 percent in the United States. Additionally, Navaro et al. found that 74.7 percent of respondents were aware that women with chronic illnesses should consult their doctor before taking medications during pregnancy, 81.1 percent were aware that doing so could harm the unborn child, 41.9 percent were aware that taking medications without a doctor’s prescription could harm their health, and 83.1 percent were aware that doing so could be risky. Karwi conducted a study in Baquba City Centre of Diyala Province in Iraq. He reported that the study population was aware of the drug’s risks (10% said the drug poses a risk to the mother, 45% said the drug poses a risk to the baby, and 25% said the drug poses a risk to both the mother and the baby), while 15% said the drug is safe during pregnancy. The results show that (73%) of the population of the research takes medications with a prescription from a doctor, (20%) of people use drugs without a prescription from a doctor, and 7% of people use other substances. In this study, we used twelve questions to assess participants’ pharmaceutical knowledge, and we found that yes responses to those questions were given by 51, 69, 33, 41, 29, 82, 79, 9, 67, 49, 37 and 18 percent of participants. It is important to note that multivariate logistic regression analysis found that some sociodemographic variable findings were in the predicted direction. Given that women from higher socioeconomic strata are more aware of the potential risks of using over-the-counter medications during pregnancy than are women from lower socioeconomic strata, one important finding is that the respondent’s occupation, a critical socioeconomic indicator, had a significant impact on their knowledge. The results of the current study also substantially support earlier findings linking knowledge level and occupation. Additionally, older persons were more likely to utilize a medicine, which is consistent with earlier studies. All ages of women use different drugs. This may be based on the idea that adults over 65 have some prior experience using medications.

**Conclusion**

Maternal awareness of medication use is statistically strongly associated with a number of factors influencing outcomes. In fact, pregnant adults over the age of 21 had little knowledge about it, little education, and used the drug without a prescription. The results of the study highlight the need for increased communication about medication use with expectant mothers in order to enhance their understanding and reduce self-medication.

**Limitation of this study:** A pilot study could not be conducted. The sample size was small as we had little time. The data was collected from one location which could not portray the results in entirety

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**Disclaimer:** Ethical approval was taken from the Iraqi Ministry of Health Ethics Committee. Also, the consent form was taken from the participant before starting this study.

**Conflict of interest:** None.

**Funding disclosure:** None
References


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