

Awareness of health matters related to pregnancy: A cross-sectional study among women attending primary health care centers in Basra

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ABSTRACT

Background: Prenatal care is an effective health intervention for reducing the risk of maternal morbidity and mortality, the risk of which is significantly higher in Basra (or Iraq in general) due to ignorance compared to other regions who offer prenatal care. **Aim:** This study aimed to assess health awareness related to pregnancy among women visiting primary health care centers in Basra. **Methods:** A descriptive cross-sectional study was conducted with a convenience sample of 100 women of reproductive age (15–49 years) attending three primary health care centers in Basra, selected by random sampling technique. Data analysis was performed utilize the statistical package for the social sciences SPSS program (V23). Chi-square test (χ^2) was used to detect associations between variables, with a significance value set at ($p < 0.05$). **Results:** Most women had no knowledge about food patterns that are generally considered effective in controlling or reducing nausea and vomiting during early pregnancy (66%). About 41% of participants supported exercise during pregnancy. Approximately 71% of women were aware of the reasons for blood examination during antenatal care, with 62% identifying its necessity for diagnosing anemia and 46% for diagnosing diabetes during antenatal care. The need for adequate daily rest (68%) and the harmful effects of smoking (56%) were positively associated with the level of education ($p = 0.031$). The awareness of the reasons for blood examination (71%) were positively associated with the level of education ($p < 0.001$). **Conclusion:** Many primary health care users lack information about the significance of antenatal procedures, such as blood examinations, although they are well-informed about the necessity of adequate nutrition and daily rest. There is a need to enhance health education through mass media and to explain the significance of the different process in antenatal care, thus allowing women to be more proactive about it.

Keywords: health awareness, prenatal care, pregnancy, antenatal procedures, Basra

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INTRODUCTION

Pregnancy is a critical time in women's lives, with many physiological, hormonal, and anatomical changes requiring careful management.¹

Research shows that a mother's health behaviors during pregnancy significantly impact her child's health and development. Perinatal programming can influence risks during pregnancy, birth complications, and the child's

exposure to health issues such as obesity and chronic illnesses.^{2,3}

To maintain normal bodily functions, everyone requires a well-balanced and nutritious diet. A balanced diet during pregnancy can help maintain the expected weight gain of the mother while also supporting the growth and development of the fetus.⁴ In contrast, poor nutrition during pregnancy may lead to complications for the

fetus, such as neural tube defects, intrauterine growth retardation, and low birth weight.¹ Pregnancy-related complications such as anemia, miscarriage, gestational diabetes, pregnancy-induced hypertension, and the need for an early or caesarean delivery can also result from inadequate nutrition.⁵ Unnecessary weight gain increases the risk of birth complications, gestational diabetes,⁶ macrosomia,⁷ being large for gestational age,⁸ obesity to which the child is exposed during growth.⁹ Conversely, beneficial behaviors, such as exercise and physical activity, are positively associated with favorable pregnancy outcomes, including reduced risks of being large for gestational age and gestational diabetes mellitus,¹⁰ lower likelihood of preterm birth,¹¹ and enhanced probability of normal delivery.¹²

Pregnant women must be aware of the health factors affecting the development of their unborn child to adopt a healthy lifestyle. Usually, during prenatal visits, medical professionals offer these suggestions. This is frequently not the case, though, according to research; global studies reveal that women are often ignorant of pregnancy-related risk factors like alcohol consumption, passive smoking, and poor diet,¹³ and maternal obesity,¹⁴ that may harm the health and expansion of their fetuses. By identifying and preventing the causes of illness rather than concentrating only on treatment and cure, health promotion enables women to safeguard their health and quality of life.¹⁵ To preserve their health and achieve positive pregnancy outcomes, pregnant women can benefit from nutritional education as a health promotion activity by managing related risk factors and adopting healthy behavioral practices. Every care visit should include appropriate and sufficient nutritional education, according to the World Health Organization (WHO).¹⁶ In addition to ensuring the consumption of other pregnancy-specific foods, such as foods high in iron, nutritional education during pregnancy can be a good time to promote a balanced diet and encourage adequate daily intake of iron and folic acid. Pregnant women who receive nutritional education have better knowledge and dietary habits, which can improve their maternal health and delivery outcomes, according to strong evidence.¹⁷

Women's preferred formats for obtaining nutritional information have been determined by a prior study. While some say that the best way to learn about nutrition is to listen to teachers and healthcare providers, many people prefer to receive written booklets from their healthcare providers.¹⁸

In 2016, the World Health Organization (WHO) advised that medical professionals provide nutritional education during every prenatal visit. According to a prior study, health education has a positive impact on pregnant women's levels of nutritional knowledge and practices.¹⁹ For example, a study conducted in Iran with 100 pregnant women found that awareness of good eating practices rose from 3% prior to the intervention to 31% following it.²⁰ Similarly, a randomized clinical trial in Australia with 360 pregnant women found that the intervention group's antenatal dietary practices and physical activity levels were better than those of the control group.²¹ This suggests that more successful education programs are required to assist women in gaining the necessary knowledge and cultivating positive attitudes that support healthy pregnancies.

The main objectives of this study are:

1. To assess the level of health awareness related to pregnancy and the sources of information (families, health care provider) among women visiting primary health care centers in Basra (nutrition, exercise, vaccination).
2. To assess the relationship between the educational level of these women and their health awareness related to pregnancy, including the importance of the various procedures in antenatal care.

MATERIALS AND METHODS

Study site and duration: This study was conducted at three primary health care centers in Al-Basra over a two-month period from February 1 to March 31, 2017. It obtained the approval of Basrah health directorate before initiation.

Study design and participant selection: Employing This descriptive cross-sectional study with a convenience sample of 100 women of reproductive age (15–49 years) attending the primary health care centers from different sectors of Basra were included. Inclusion criteria required that the women visit the primary health care centers independently and be aged 15–49 years. The study's purpose and nature, along with its confidentiality, were explained to the participants, and verbal consent was obtained from each subject before enrollment. Each selected woman was interviewed using a structured questionnaire prepared for data collection. Exclusion criteria included women who refused to participate (only 3 women) outside of the actual number of survey participants) and those who fell outside the age limit.

Statistical Analysis:

Statistical analysis of the data was conducted using the Statistical Packages for Social Sciences (SPSS) program version 23. Chi-square test (χ^2) was used to detect associations between variables. Statistical significance was considered when the $p < 0.05$.

RESULTS

The study included 100 respondents. The age of the study population ranged from 15 to 49 years, with the majority (58%) being between 20 and 29 years. The mean age was 29.0 ± 7.29 years. Most women (76%) were married between the ages of 16–25 years, and about 45% of them were multipara (have two or more children). About 95% of the women resided in urban areas, and approximately 50% had completed primary or intermediate education (Table 1).

Table 1: Socio-demographic characteristics of the study population.

	Category	Frequency	Percent
Age of respondents	< 20 years	16	16
	20–29 years	58	58
	30–39 years	21	21
	40 years and above	5	5
Age at marriage	≤ 15 years	13	13
	16–25 years	76	76
	26–35 years	11	11
	> 36 years	0	0
Parity	Nullipara	26	26
	Para one	29	29
	Multipara	45	45
Place of residence	Urban	95	95
	Rural	5	5
Level of education	Illiterate or read & write	13	13
	Primary or intermediate	50	50
	Secondary or high school education	37	37
Total		100	100

Most women (66%) were unaware of food patterns that are generally thought to be effective in controlling or reducing nausea and vomiting during early pregnancy. Approximately 41% of participants supported exercise

during pregnancy, with 59% believing walking was the best form of exercise and only 4% choosing swimming. Approximately 56% of women were aware of the negative effects of smoking during pregnancy. About 71% were aware of the reasons for blood examinations during antenatal care, with 62% identifying its necessity for diagnosing anemia and 46% for diagnosing diabetes. Most women relied on doctors or nurses as sources of health information (80%), while some (20%) also referred to their mothers, relatives, friends, or television as sources of health information (Table 2).

Table 2: Health information related to pregnancy.

	Category	Frequency	Percent
Aware of food patterns that control or reduce nausea and vomiting in early pregnancy	No	66	66
	Yes	34	34
In favor of exercise during pregnancy	No	59	59
	Yes	41	41
Walking as the best exercise during pregnancy	No	41	41
	Yes	59	59
Swimming as exercise during pregnancy	No	96	96
	Yes	4	4
Harmful influence of smoking during pregnancy	No	44	44
	Yes	56	56
Awareness of the reasons of blood examination during antenatal care	No	29	29
	Yes	71	71
To diagnose anemia during antenatal care	No	38	38
	Yes	62	62
To diagnose diabetes during antenatal care	No	54	54
	Yes	46	46
Sources of health information	Relatives, friends, or TV	20	20
	Doctors or nurses	80	80
Total		100	100

Most women had a good understanding of the required rest during pregnancy, with 68% stating that 7–8 hours of rest at night was necessary (Fig. 1). Additionally, 74% women believed that the safe age for being pregnant is under 39 years (Fig. 2).

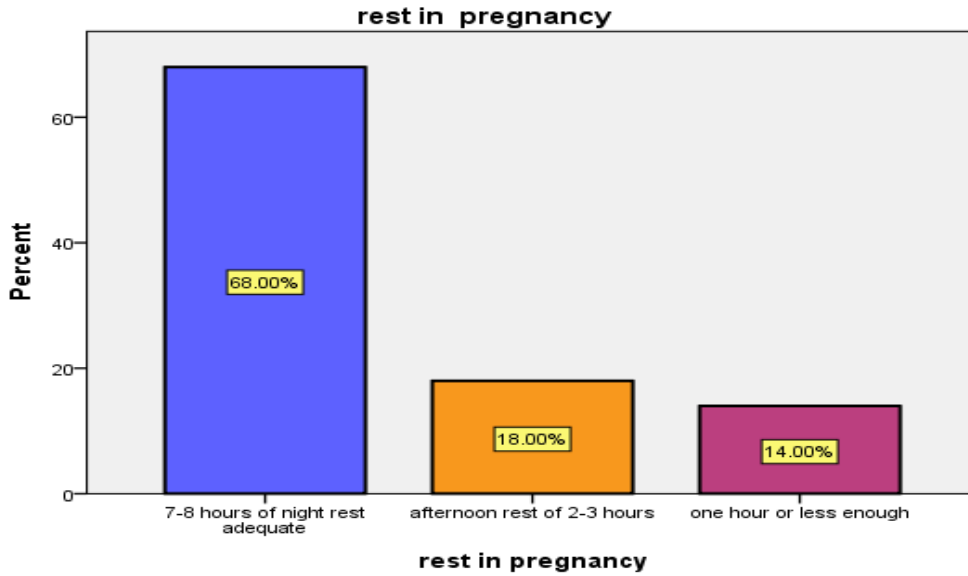


Figure 1: Rest required during pregnancy.

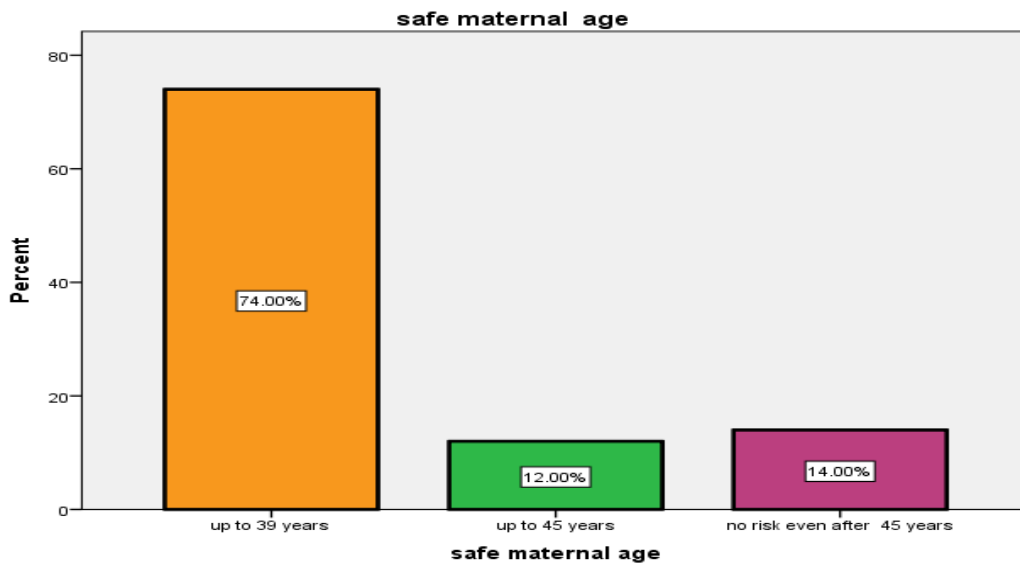


Figure 2: Knowledge about safe maternal age for pregnancy.

The awareness of the reasons of blood examinations during antenatal care was positively associated with the level of education of the women, with a highly significant association ($p < 0.001$). Table 3 shows that awareness of the diagnosis of anemia as a reason for blood

examination during antenatal care was also positively associated with the level of education, with a highly significant association ($p = 0.001$). Finally, Table 3 also suggests that the general effects of smoking were

positively associated with the level of education of the women, with a significant association ($p = 0.031$).

Table 3: Association between the level of education of participants and health information (importance of blood examination during ANC, the general effects of smoking on pregnancy).				
Awareness of the reasons of blood examination				
Level of education	Yes	%	No	%
Illiterate or read & write	4	30.8	9	69.2
Primary or intermediate	34	68	16	32
Secondary or high school education	33	89.2	4	10.8
$\chi^2 = 16.383$		DF = 2		p < 0.001
To diagnose anemia				
Level of education	Yes	%	No	%
Illiterate or read & write	3	23.1	10	76.9
Primary or intermediate	29	58	21	42
Secondary or high school education	30	81.1	7	18.9
$\chi^2 = 14.417$		DF = 2		p = 0.001
The general effects of smoking				
Level of education	Yes	%	No	%
Illiterate or read & write	5	38.5	8	61.5
Primary or intermediate	12	24	38	76
Secondary or high school education	19	51.4	18	48.6
$\chi^2 = 6.944$		DF = 2		p = 0.031

DISCUSSION

Approximately 66% of the women were not aware of the dietary patterns that are typically thought to be useful in preventing or controlling nausea and vomiting in the early stages of pregnancy. Similar results from a different study conducted in the UK on young primiparas also showed that many women were not aware of the dietary adjustments that must be made during pregnancy.²² About 59% of the women in this study recommended walking as their only type of exercise, and about 41% supported exercise during pregnancy. In comparison, about two-thirds (74.5%) of the women in another study conducted in Al Khobar (581 women) supported exercise during pregnancy, with the majority (64.4%) also recommending walking as the sole activity.²³ This disparity may be due to a lack of literature or health education on the importance of exercise during

pregnancy in Basra. Since swimming is not a common form of exercise among women in this area, it was rarely reported (4%), which is consistent with the study in Al Khobar²³. Swimming is a passable physical activity during pregnancy.

Approximately 56% of the women knew that smoking during pregnancy had negative effects. Although young primiparous women were aware of the general risks of smoking during pregnancy, there was a general lack of concern about the specific risks smoking posed to their own pregnancies, according to a study conducted in the UK. This finding contrasts with the study in Al Khobar^{23,22}. Similar findings were noted among American women in the medical field.²⁴ Among low-income pregnant women in Louisiana, USA, knowledge of the harmful health effects of smoking during pregnancy varied significantly based on literacy levels.²⁵ This is in contrast to the results of the current study, which may be because there isn't much public health literature or education about maternal smoking in this area. The participants' educational attainment was positively correlated with the overall effects of smoking; this significant correlation ($p = 0.031$) was probably caused by the effectiveness of health education regarding smoking in Iraq.

Out of the participants, 74% of them knew when it was safe to get pregnant, suggesting that conversations about this topic at health centers or in the media have brought attention to the fact that getting older than 35 can have negative effects on pregnancy outcomes, including a higher chance of having a child with Down syndrome.¹ Most women relied on doctors or nurses as sources of health information (80%), consistent with a study in Malaysia which indicated that healthcare providers were the primary source of information for pregnant women.²⁶

CONCLUSIONS

Many primary health care users lack information about the significance of antenatal procedures, such as blood examinations, although they are well-informed about the necessity of adequate daily rest. This study suggests using the media to inform women of childbearing age about the significance of the various antenatal care procedures and how to prevent health issues during pregnancy by adopting healthy habits. This will help them proactively take care of themselves, develop perinatal outcomes, and reduce the burden of

preventable pregnancy-related problems on health services.

Limitations: This study's sample only consisted of 100 participants, due to the limited sample size, this study could not determine the presence of other health matters related to pregnancy, future studies should conduct a prospective study to ascertain any correlation between the education of pregnant women and effect on pregnancy outcome.

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