

Knowledge of pregnant women Who attending primary health care centers about folic acid supplementation in Al- medina district of Al-Basra city

معرفة النساء الحوامل اللواتي يترددن على مراكز الرعاية الصحية الأولية حول مكملات حمض الفوليك في قضاء المدينة لمدينة البصرة

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Abstract

Objectives: The goal of this work was to measure pregnant women's awareness of folic acid supplementations. **Methodology:** Descriptive, cross-sectional study has been conducted in Al-Basra city in primary health care centers of Al-medina districts from November 1st 2020 to May 1st 2021. The study included pregnant women in the primary health care centers they were (200) pregnant women. The instrument used for the study were questionnaire format, the data were presented in pre-designed questionnaire firstly. The questionnaire was divided into two sections: folic acid supplementation information and socio-demographic characteristics. The data was analyzed using descriptive as well as inferential statistics. Also, data has been manually evaluated before being processed with the use of a social science statistical software (SPSS, V23). **Results:** Most of the study samples were between the ages of 25 and 29, according to the findings, the majority of them were graduated from secondary school, more of them was housewife and have (0-4) children, their residence was urban and their source of information was nurses. There has been a strong relation between pregnant women's knowledge and their level of education and residence, but no considerable relation existed between pregnant women's age group and knowledge, women's occupational position, information source, or number of children. **Conclusion:** This research found that pregnant women had little understanding of folic acid supplementations. **Recommendation:** Enhancing women knowledge regarding folic acid through schools, premarital examination, maternity clinic, booklet, educating programs, mass media, and articles.... etc.

Key wards: Knowledge, pregnant, folic acid, primary health care centers.

Introduction

The deficiency in folic acid has become one of the most prevalent vitamin deficits among womens in recent years. Womens who don't get enough folic acid throughout pregnancy are more likely to have problems with their babies, like neural tube defects (NTD). The various kinds of NTDs, such as anencephaly, spine bifida, and encephalocele, cause death and premature death ⁽¹⁾. Supplementations of folic acid before conception protects roughly 70% of NTDs. Even though the majority of womens carrying an affected fetus don't have low blood folate levels, red cell folate levels in pregnancy are negatively associated to the chance of having an NTD-affected baby ⁽²⁾.

Folic acid is required during pregnancy since it is essential for both baby and fetus. It is vital for development and growth in fetus, and the lack of its results in congenital abnormalities, whereas the lack of it in the mother results in peripheral neuropathy and anemia. It has also been shown that there is a relation between autism and less folic acid, and it has also been indicated in a few researches that it led to Down syndrome ⁽³⁾.

With regard to embryonic as well as fetal organ development, the first trimester of pregnancy is critical. Folate, also known as folic acid, is especially important during the period of pre-conception. Folate is considered as this vitamin's natural form found in foods, while folic acid is the version utilized for fortifying grain products, along with the meals, as well as in vitamin supplements ^(2,3).

Defects at birth are a serious public health concern, with the (CDC) estimating that one out of every 33 infants in the United States have a birth defect, accounting for more than 20% of all infant deaths ⁽⁴⁾. NTDs are more likely in infants born to mothers who don't get enough folic acid. The neural tube must close properly for the spinal cord to mature normally, also the neural tube starts to close within the first month of pregnancy, frequently prior to the woman knows she is pregnant ⁽⁵⁾. Furthermore, NTDs are prevalent complicated multifactorial disorders in the neurulation of the spinal cord and brain taking place between 21- and 28-days following conception in humans ⁽⁶⁾.

NTDs, like anencephaly and spina bifida are a major source of infant mortality that affect people all over the world. NTDs affect no less than 300,000 pregnancies worldwide each year, with about 3,000 of them occurring in the US ⁽⁷⁾. An estimated 4000 pregnancies yearly lead to anencephaly or spin bifida. Supplementing with folic acid can lower the number of NTD-affected pregnancies by 50 to 70% each year. Despite this, the majority of womens are unaware that folic acid can help preventing NTDs, and supplementation rates are still low ⁽¹⁾.

Methodology

Design of the Study: A descriptive study was conducted on (200) pregnant women at primary health care centers at medina districts in al-Basra city to assess their knowledge through the period from November 1st 2020 to May 1st 2021.

Setting of the Study: The work has been carried out in (20) primary health care centers of Al-medina districts at Al –Basra city.

Sample of the Study: cross-sectional sample of the study were (200) pregnant women in the primary health care centers in Al –Basra city. A sample was taken from the al medina districts health centers, which amount to 20 health centers, and each center was taken from a percentage of 10 % of the total weekly reviews of pregnant women for each center.

The instrument of the present study was conducted to reach the objective of the study and the questionnaire was derived from previous studies, they detail the following: Part One: It is concerned with the identification of the study group's socio demographic characteristics, which comprise the variables (education level for women, age, residency, occupation for women, source of information, and number of children). Part Two: This part consists of items concerning the knowledge about folic acid and this domain and they are responded by yes, (correct answer, scored 2), or no, (incorrect answer, scored 1), and I don't know, (incorrect answer, scored 0) includes (14) items.

Validity of the instrument: The validity of the instrument had been achieved by (7) experts from different scientific branches from faculty on nursing university of Basra having at least 10 years of experience in their field of work. Minor changes have been performed on few items; such as change demographic data, and nurse's knowledge and practice about personal protective equipment.

Statistical Analysis: Statistical programs such as SPSS, V23 was used to analyze the data. There were two types of statistical data analysis which were used to obtain the results of the research study: Descriptive Data Analysis and Inferential Data Analysis.

Results

Table 1: Distribution of the study sample through socio-demographic characteristics:

| Variables | Classification | Frequency | Percentage (%) |
|--------------------------------------|------------------------------|------------|----------------|
| Age | > 20 years | 28 | 14.0 |
| | 20-24 years | 49 | 24.5 |
| | 25 – 29 years | 68 | 34.0 |
| | 30-34 years | 28 | 14.0 |
| | 35 years and more | 27 | 13.5 |
| | Total | 200 | 100.0 |
| Level of education | Illiterate | 7 | 3.5 |
| | Read and write | 33 | 16.5 |
| | Primary school graduate | 33 | 16.5 |
| | Intermediate school graduate | 11 | 5.5 |
| | Secondary school graduate | 21 | 26.5 |
| | Institute graduate | 42 | 21.0 |
| | College graduate and more | 53 | 10.5 |
| | Total | 200 | 100.0 |
| Occupational status for women | House wife | 119 | 59.5 |
| | Student | 19 | 9.5 |
| | Employee | 62 | 31.0 |
| | Total | 200 | 100.0 |
| Number of children | (0-4)children | 133 | 66.5 |
| | (5-9)children | 67 | 33.5 |

| | | | |
|------------------------------|----------------------|------------|--------------|
| | Total | 200 | 100.0 |
| Residence | Urban | 142 | 71.0 |
| | Rural | 58 | 29.0 |
| | Total | 200 | 100.0 |
| Source of information | Doctors | 55 | 27.5 |
| | Nutritionists | 20 | 10.0 |
| | Nurses | 61 | 30.5 |
| | Mass media | 19 | 9.5 |
| | Family and relatives | 45 | 22.5 |
| | Total | 200 | 100.0 |

Table 1: presented the high percent (34.0%) of the study sample are in the age group (25 – 29),(26.5%) of them their graduated was secondary school, (59.5%) of them was housewife,(66.5%) of them have (0-4) children,(71%) of them their residence was urban, (30.5%) of them their source of information was nurses.

Table 2: Assessment of the pregnant women’s knowledge regarding folic acid supplementations

| No. | Items of knowledge | Yes | No | I don't know | M.S | Assess. |
|-----|--|-----|----|--------------|-------------|-------------|
| | | F | F | F | | |
| 1 | Knew of folic acid | 184 | 13 | 3 | 2.91 | Good |
| 2 | Folic acid important in pregnancy | 173 | 12 | 15 | 2.79 | Good |
| 3 | Foods are rich of folic acid was green vegetables | 43 | 18 | 139 | 1.52 | Poor |
| 4 | Proper time of folate supplementation was before pregnancy | 45 | 36 | 119 | 1.63 | Poor |
| 5 | Neural tube defects was dangerous problem | 27 | 25 | 151 | 1.41 | Poor |
| 6 | Un pregnant mother need folic acid supplement | 30 | 32 | 138 | 1.46 | Poor |
| 7 | First trimester of pregnancy was the ideal time for folic acid consumption | 104 | 10 | 86 | 2.09 | Good |
| 8 | Dosage of folic acid was 1tab daily | 154 | 9 | 37 | 2.59 | Good |
| 9 | Supplementation of folic acid was daily used | 135 | 22 | 43 | 2.46 | Good |
| 10 | Folic acid deficiency may cause anemia | 42 | 25 | 133 | 1.55 | Poor |
| 11 | Folic acid deficiency in pregnancy may cause congenital anomalies | 31 | 39 | 139 | 1.55 | Poor |
| 12 | Folic acid supplements are important in pre-pregnancy | 44 | 17 | 139 | 1.53 | Poor |
| 13 | It was necessary to take folic acid supplement during pregnancy | 56 | 23 | 121 | 1.68 | Poor |
| 14 | Take folic acid from diet it is enough to prevent deficiency | 36 | 23 | 141 | 1.48 | Poor |
| | Total | | | | 1.90 | Poor |

*Poor knowledge =Less than 2, good knowledge = more than 2.

Table 2: shows that assessment of the pregnant women’s knowledge regarding folic acid supplementations which result good level at the (1,2,7,8,9) items and poor level at the all-remaining items. And that knowledge at the total means of scores (1.90) were poor level.

Table 3: Relationship between the pregnant women’s knowledge and demographic data as age group, Level of education, occupational status for women, number of children, residence, and source of information.

| Nurse’s knowledge Variables | Pearson Chi-Square | |
|--------------------------------|--------------------|------|
| | P-Value | Sig. |
| Age | 0.662 | NS |
| Level of education | 0.025 | S |
| Occupational status for women | 0.142 | NS |
| Number of children | 0.165 | NS |
| Residence | 0.038 | S |
| Source of information | 0.069 | NS |

*Correlation is significant at the $p \leq 0.05$ level.

Table (3): presents that there was significant association between the pregnant women s' knowledge and Level of education and residence, and there was no significant association between pregnant women s’ knowledge and their age group, Occupational status for women, Number of children and Source of information.

Discussion

Most of the participants 200 (34.0%) in the age group (25–29 years). This result is consistent with that obtained by (Abouzeid et al., 2010) who stated that Majority of the pregnant women (34.3%) in the age group from (25-29). Majority (26.5%) of participants showed that their graduated were secondary school. This inconsistent with result of the study ⁽⁸⁾ who stated that most of the participants their graduated were high school (79.2%). Regarding occupational status for women majority of the pregnant women 119 (59.5%) were housewives. This finding is consistent with result of study finding that the occupational of more of participants (87%) were housewives ⁽⁵⁾. Most of the pregnant mothers 133 (66.5%) have (0-4) children. This result is agreement with result of study ⁽⁹⁾ who find that the majority of participants (58%) have one child. Regarding the residence area the majority of the pregnant women (71%) from urban area. This finding agreement with study ⁽⁵⁾ who reported that more of participants (76%) their residence from urban area. The study showed that more of participants (30.5%) their source of information from nurses.

The study shown that the participants had poor knowledge about folic acid supplementation, total means of scores (1.90). This finding consistent with result of study ⁽¹⁰⁾ who said that the participants have poor knowledge about this object. The findings show that there has been a significant relation between pregnant women's knowledge and their level of education and residence, but no significant relation between pregnant women's age group and knowledge, number of children, women's occupational position, or information source. This result is compatible with ⁽¹⁾ who find that there was significant association between respondents' education with knowledge about folic acid supplementation.

Conclusions

The next are the findings of the current research: the majority of the work participants are between the ages of 25 and 29, have graduated from secondary school, are housewives with (0-4) children, live in urban areas, and rely on nurses for information. Pregnant women's understanding of folic acid supplementations was inadequate, as was their overall knowledge of all items. There was a strong relationship between pregnant women's knowledge and their level of education and residence, but no significant relation existed between pregnant women's age group and knowledge, number of children, women's occupational position, or information source.

Recommendations

1. There is a pressing need for a public health education program to be launched right away. All tiers of healthcare system, as well as the media, can boost folic acid intake throughout the protective period through especially informing women regarding the requirement for taking folic acid to prevent NTDs.
2. Enhancing women knowledge regarding folic acid through schools, premarital examination, maternity clinic, booklet, educating programs, mass media, articles.... etc.
3. More prospective researches in larger populations related to such topic in several Iraqi governorates are required in the future.

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