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## Assessment nutritional status among pregnant women in rural in Al-Manathera primary health center at Al- Najaf Governorate

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### Abstract

Because pregnancy is an anabolic process, a woman's typical nutritional needs rise to satisfy the demands of the developing fetus and the pregnant mother's tissues. Good maternal nutrition is essential for both the health and reproductive performance of women as well as the health, survival, and development of their offspring because the nutritional state of the expecting woman is one of the most significant factors impacting pregnancy outcomes. According to the Mora and Nestel study, out of 200 million pregnancies each year, many pregnancies in developing nations are marred by nutritional deficits and other issues.

**Methodology:** To accomplish the stated goals, a descriptive cross-sectional study was used. The research started at 20 November 2022 to 24 April 2023. A Non-Probability (Purposive Sample) of (50) pregnant the women who were chosen from those who visit primary health care center.

**Results:** The study show the significant association between age, Occupational status and nutritional status of pregnant women, high significant between Family income and nutritional status of pregnant women, significant association between the medical history of the pregnant women and nutritional status

**Recommend:** The study recommends increased health awareness and improve maternal nutritional status, Educational health programs for women regarding the age of marriage and the type of healthy food during pregnancy and the necessary nutritional supplements for pregnant women.

**Keywords:** Nutritional Status, pregnant women

### Introduction

Because pregnancy is an anabolic process, a woman's typical nutritional needs rise to satisfy the demands of the developing fetus and the pregnant mother's tissues. Good maternal nutrition is essential for both the health and reproductive performance of women as well as the health, survival, and development of their offspring because the nutritional state of the expecting woman is one of the most significant factors impacting pregnancy outcomes. According to the Mora and Nestel study, out of 200 million pregnancies each year, many pregnancies in developing nations are marred by nutritional deficits and other issues (Adikari, *et al.*, 2016) <sup>[1]</sup>. Maternal nutritional and metabolic factors affect the developmental process of the fetus which consequently influence the birth weight of the newborn. During pregnancy, many physiological and metabolic functions are changed to a great extent. Pregnant women need adequate energy and nutrients to meet the increased nutritional demands for growth of the fetus and to satisfy the increased body demands of the mother. Poor maternal nutritional status has been related to different adverse birth outcomes including intrauterine growth restriction and low birth weight (LBW), which can have lifelong consequences for development. Thus, improving maternal nutritional status before conception and during pregnancy are essential to improve birth weight of newborns. (Woldeamanuel, *et al.*, 2019) <sup>[2]</sup>. During pregnancy, the fetus is entirely dependent on maternal nutrients intake and store, mainly fats and protein. Thus, inadequate intake of fat and protein leads to poor nutrient availability to the fetus (Sharma and Mishra, 2014) <sup>[3]</sup>. Maternal dietary intake especially that of the pregnant women may have implications for both mother and child, because it is a key determinant of the nutritional status and depletion of nutrients during pregnancy and poses a risk factor for child malnutrition.

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Maternal undernutrition, including chronic energy and micronutrient deficiencies, is a leading cause of maternal and nutritional status of women, especially during pregnancy, is crucial for child survival because an undernourished mother is more likely to deliver an infant with low birth weight, significantly increasing its risk of dying (Saaka, *et al.*, 2021) [4]. Child mortality and morbidity especially in low- and middle-income countries. It is well documented that adequate

**The study objectives**

1. To evaluate the nutritional condition of pregnant women in rural.
2. To find out the relation between nutritional condition of pregnant women and demographic, Reproductive, medical variables.

**Methodology**

To accomplish the stated goals, a descriptive cross-sectional study was used. The research started at 20 November 2022 to 24 April 2023. The study was conducted at from in Al-Manathera primary health care center in AL-Najaf AL-Ashraf Governorate, Iraq, a total of (50) pregnant women to assess nutritional status.

**The Study Instrument**

An assessment instrument is constructed by the researcher

to evaluating the nutritional status for pregnant women. The whole instruments of study consists of the (3) parts:

**Part 1: (Socio demographic Data):** This part consists of (4) items, which includes age, level of education, family income, occupational.

**Part 2: (Medical History):** This part consists of (5) items, which includes hypertension, anemia, diabetes, other disease if find, haven't disease.

**Part 3: (Nutritional status) or (food intake):** This part consists of (9) questions, which includes Important questions about food intake.

**Analyses Statistical**

The methods for statistical data analysis is utilized to assess the study's data under investigation of the statistical package (SPSS) ver. (20), and the Microsoft excel (2010), Descriptive Data Analysis: A-Tables Frequencies (f), Percentages (%) C-Summary Statistics tables including: Mean. Inferential Data Analysis This approach is used to accept or reject the statistical hypothesis, which includes the following: A- Chi-Square test for testing the independency distribution of the observed frequencies, and for measuring the association between the studies variables according to its type.

**Results**

**Table 1:** Distribution of the Study Sample by their Demographic Data

Demographic Data	Groups	Frequency	Percent
Age	15 - 24 years	25	50.0
	25 - 34 years	21	42.0
	35 - 44 years	4	8.0
	Total	50	100.0
	Mean ± SD	24.32 ± 6.77	
Educational Status	Unable read & write	7	14.0
	Primary school Graduated	24	48.0
	Secondary school Graduated	12	24.0
	Institute & college	7	14.0
	Total	50	100.0
Family income	Insufficient	4	8.0
	Barely Sufficient	39	78.0
	Sufficient	7	14.0
	Total	50	100.0
Occupational status	Employed	45	90.0
	Housewife	5	10.0
	Total	50	100.0

This table show the high percent of age group between 15-24 years was 50%, educational status was primary school

graduated 48%, family income barely sufficient was 78%, occupational status the women was 90% are employed.

**Table 2:** Assessment Nutritional Status among Pregnant Women in Rural Area in Al-Manathera Primary Health Care Center at Al- Najaf Governorate

No	Nutritional Status	Rating	Frequency	Percent	M.S	Asse.
1	How many times a day do you eat?	One times	3	6.0	2.62	Good
		Two times	13	26.0		
		Three times	34	68.0		
		Total	50	100.0		
2	Are you having breakfast?	No	41	82.0	1.32	Poor
		Sometimes	2	4.0		
		Yes	7	14.0		
		Total	50	100.0		
3	Do you eat snacks between main meals?	No	26	52.0	1.64	Fair
		Sometimes	16	32.0		

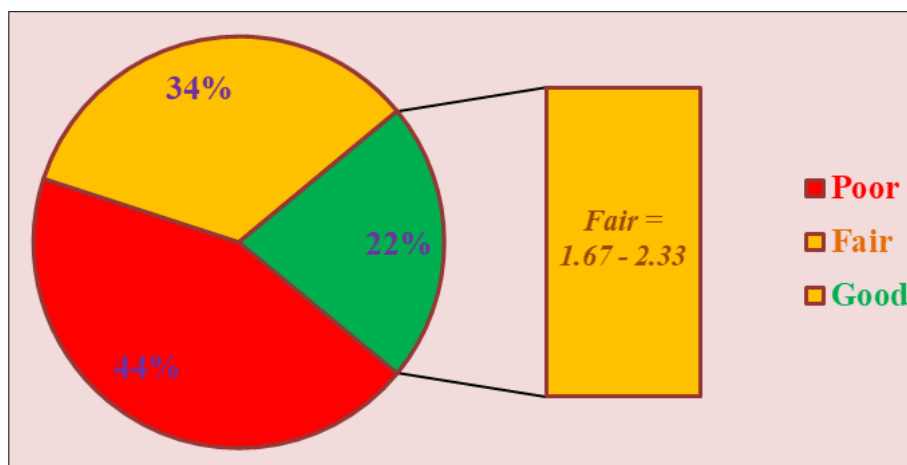
		Yes	8	16.0		
		Total	50	100.0		
4	Do you eat fried foods?	No	41	82.0	1.28	Poor
		Sometimes	4	8.0		
		Yes	5	10.0		
		Total	50	100.0		
5	Do you eat fatty foods?	No	2	4.0	2.76	Good
		Sometimes	8	16.0		
		Yes	40	80.0		
		Total	50	100.0		
6	Do you drink milk?	No	25	50.0	1.72	Fair
		Sometimes	14	28.0		
		Yes	11	22.0		
		Total	50	100.0		
7	Do you drink tea?	No	36	72.0	1.38	Poor
		Sometimes	9	18.0		
		Yes	5	10.0		
		Total	50	100.0		
8	Do you eat fruit?	No	44	88.0	1.16	Fair
		Sometimes	4	8.0		
		Yes	2	4.0		
		Total	50	100.0		
9	Are you taking supplements and pharmaceutical vitamins?	No	39	78.0	1.26	Poor
		Sometimes	9	18.0		
		Yes	2	4.0		
		Total	50	100.0		

Table (2) represent the means and assessment of nutrients intakes, it includes number of meals per day, breakfast, snacks, fried foods, fatty foods, milk, tea, fruit, supplements and pharmaceutical vitamins. It could be noticed that

number of meals per day and fatty foods show good assessment than recommended dietary intake with mean (2.62), (2.76).

**Table 3:** Overall Assessment Nutritional Status among Pregnant Women in Rural Area in Al-Manathera Primary Health Care Center at Al-Najaf Governorate.

Nutritional Status	Rating	Freq.	Perc. %	M.S	Asse.
Dietary	Poor	22	44.0	1.78	Fair
	Fair	17	34.0		
	Good	11	22.0		
* Poor = 1 - 1.66,		Fair = 1.67 - 2.33,		Good = 2.34-3	



**Fig 1:** Distribution of the study subjects by their overall assessment nutritional status among pregnant women in rural area in Al-Manathera Primary Health Care Center at Al- Najaf Governorate.

**Table 4:** Relationship between the sample Demographical Data with their Overall Assessment Nutritional Status among Pregnant Women in Rural Area in Al-Manathera Primary Health Care Center at Al- Najaf Governorate:-

Demographic Data	Groups	Overall Assessment Nutritional Status			Chi-Square			
		Poor	Fair	Good	$\chi^2$	d.f	P-value	Sig.
Age	15 - 24 years	7	12	6	49.617	4	0.031	S
	25 - 34 years	13	5	3				
	35 - 44 years	2	0	2				

	Total	22	17	11				
Educational Status	Unable read & write	3	4	0	3.990	6	0.476	N.S
	Primary school Graduated	10	7	7				
	Secondary school Graduated	5	4	3				
	Institute & college	4	2	1				
	Total	22	17	11				
Family income	Insufficient	4	0	0	15.992	4	0.015	H.S
	Barely Sufficient	15	14	10				
	Sufficient	3	3	1				
	Total	22	17	11				
Occupational status	Employed	21	15	9	21.604	2	0.027	S
	Housewife	1	2	2				
	Total	22	17	11				

This table show the significant association between age, Occupational status and nutritional status of pregnant women, high significant between Family income and

nutritional status of pregnant women, but there are non-significant association between Educational Status and nutritional status of pregnant women.

**Table 5:** Association between the sample Clinical Data with their Overall Assessment Nutritional Status among Pregnant Women in Rural Area in Al-Manathera Primary Health Care Center at Al- Najaf Governorate

Clinical Data	Groups	Overall Assessment Nutritional Status			Chi-Square			
		Poor	Fair	Good	$\chi^2$	d.f	P-value	Sig.
The medical history of the pregnant woman	Hypertension	4	4	0	12.964	8	0.037	S
	Anemia	2	4	1				
	Diabetes	0	0	2				
	Other diseases	1	0	1				
	There is no disease	15	9	7				
	Total	22	17	11				

This table show the significant association between the medical history of the pregnant women and nutritional status.

**Discussion**

**Table 1 in Part I: Discussion of Socio-Demographic Data:**

In relation to table (1), the outcomes show majority of the sample of age group between 15- 24 years was 50%. This outcome disagree with the findings of a study done by Adikari *et al.*, (2016) [1], which found that the age of women (20 – 29 years old).while agrees with him about the educational level in my study was high percent of pregnant women was primary school graduated (48%), also he found in their study the One of the potential risk factors for poor nutritional status in pregnancy is low educational level. As for the occupational status, the current investigation demonstrates that most women occupational status was 90% are employed. This outcome disagree with the study of Tsegaye *et al.*, (2020) [5], in their study results of sample outcome showed the high percent of women are Housewife (84.1).About the family income, The results of this investigation show that most study family income barely sufficient was 78%. This result is supported by Shenka *et al.*, (2018) [6], they discovered that Low monthly income women have poor nutritional status.

**Part- II: Discussion of Assessment Nutritional Status among Pregnant Women in Rural Area in Al-Manathera Primary Health Care Center at Al- Najaf Governorate**

Table (2) represent the means and assessment of nutrients intakes, the study show poor dietary assessment with mean (1.78).also could be noticed that number of meals per day and fatty foods show good assessment than recommended dietary intake. The study showed were malnourished, and pregnant women's nutritional intakes were almost

universally below the recommended range. These results are supported by Kuche, *et al.*, (2015) [7], Their results show that the majority of the study's findings. One of the primary causes of the high prevalence of malnutrition in pregnant women is an inadequate quality and quantity diet. The current study participants' age, poor educational status, and family income status may all be contributing factors to the undernutrition that has been identified in them.

**Part-III: Association between the sample Demographical Data with their Overall Assessment Nutritional Status among Pregnant Women in Rural Area in Al-Manathera Primary Health Care Center at Al- Najaf Governorate**

Concerning Table 4 from this investigation demonstrates that the important correlation between age, Occupational status and nutritional status of pregnant women, high significant between Family income and nutritional status of pregnant women, but there are non-significant association between Educational Status, Initial body weight, Current body weight and nutritional status of pregnant women. This results in present study disagree with Ali *et al.*, (2014) [8], that found in their no statistically significant correlation between age, occupation, and dietary diversity was found in the study. Similarly, there was no correlation between socioeconomic position and the pregnant women's dietary diversity score.

**Part-IV: Association between the sample Clinical Data with their Overall Assessment Nutritional Status among Pregnant Women in Rural Area in Al-Manathera Primary Health Care Center at Al- Najaf Governorate**

Table (5) from this study demonstrates that this table show the significant association between the medical history of the pregnant women and nutritional status. This result agrees with Taleb *et al.*, (2011) [9], who concluded that there was 40% suffer from multiple illnesses, including anemia,

hypertension, diabetes, and others, the difference is significant ( $p = 0.0001$ ).

### Conclusions

**The following conclusion can be drawn in light of the data and interpretations of the current study**

1. The results of the current study demonstrate a strong correlation between family income and pregnant women's nutritional status as well as a substantial link between age, occupational status, and nutritional status.
2. The results of the current study demonstrate a strong correlation between pregnant women's medical histories and nutritional status.

### Recommendations

According to the study's initial conclusions, the following actions should be taken:

- 1) Increased health awareness and improve maternal nutritional status.
- 2) Educational health programs for women regarding the age of marriage and the type of healthy food during pregnancy and the necessary nutritional supplements for pregnant women.

### Conflict of Interest

Not available

### Financial Support

Not available

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#### How to Cite This Article

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