



# Evaluation of The Quality Nutrition Services in Health Centers in Babylon Province

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## **Abstract:**

### **Background:**

The healthcare system in Iraq has been significantly affected by the events of the last few decades. The effects of various wars, internal conflicts, international sanctions, and political instability had also devastated the nation and its healthcare system.

### **Materials and Methods:**

This is a cross-sectional study done at 23 randomly chosen (multistage random sampling) health centers in Babylon Province. Data were gathered during the period beginning from the third of January 2021 until the first of March 2021.

### **Results:**

This study demonstrates that 87.0% of health centers had no medical staff trained in nutrition programs according to standards. While 95.7% of HCs had health staff trained in nutrition programs according to the same standards. As for the evaluation of nutrition services provider's performance, the study showed that most health centers had moderate scores for most indicators.

### **Conclusion:**

The current study showed that nutrition services were moderate in the health centers, despite the availability of supplements, guidelines and registers in most health centers.

### **Keywords:**

Evaluation, the quality, nutrition services, health centers.

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## تقييم جودة خدمات التغذية في المراكز الصحية في محافظة بابل

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### الخلاصة:

**المقدمة:** تأثر نظام الرعاية الصحية في العراق بشكل كبير بأحداث العقود القليلة الماضية. كما أدت آثار الحروب المختلفة والصراعات الداخلية والعقوبات الدولية وعدم الاستقرار السياسي إلى تدمير الأمة ونظام الرعاية الصحية فيها.

### طرق العمل:

هذه دراسة مقطعية أجريت في 23 مركزاً صحياً تم اختيارها عشوائياً (أخذ عينات عشوائية متعدد المراحل) في محافظة بابل. تم جمع البيانات خلال الفترة التي تبدأ من الثالث من يناير 2021 حتى الأول من مارس 2021.

### النتائج:

أظهرت هذه الدراسة أن 87.0% من المراكز الصحية لم يكن بها كادر طبي مدرب على برامج التغذية وفقاً لنفس المعايير. في حين أن 95.7% من المراكز الصحية لديها كوادر صحية مدربة على برامج التغذية وفق المعايير. أما فيما يتعلق بتقييم أداء مزود خدمات التغذية، فقد أظهرت الدراسة أن معظم المراكز الصحية لديها درجات متوسطة لمعظم المؤشرات.

### الاستنتاجات:

أظهرت الدراسة الحالية أن خدمات التغذية كانت معتدلة في المراكز الصحية، على الرغم من توافر المكملات الغذائية والإرشادات والسجلات في معظم المراكز الصحية.

### الكلمات المفتاحية:

تقييم, الجودة, خدمات التغذية, المراكز الصحية

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## Introduction

In primary health care institutions and local health administrations, diet and nutrition must become a core part of the medical and scientific discourse. This approach has the potential to promote community-led advocacy enhance existing food systems and contribute to more community-oriented ways of gathering information, understanding, and priorities[1].

As a developing country, Iraq has experienced the most difficult emergency, conflict, and instability conditions in the world today. Health-care services have been badly damaged and need immediate rehabilitation. Primary health care centers have also led to a decline in maintenance, lack of supplies, reduced or unavailable health staff, or insufficient support services [2].

Child malnutrition is considered to be the cause of 3.1 million deaths per year in low and middle-income countries, accounting for 45 percent of all child deaths [3]. Estimates indicate that 37 percent of children under the age of five (under five) are stunted and 46 percent are underweight in South Asia [4] , [5].

As part of comprehensive care, primary healthcare providers will play a vital role in providing promotional, preventive, curative, and rehabilitative dietary treatments. Primary care health practitioners are well placed to evaluate the diets of patients, test for dietary risk factors, diagnose obesity and other diet-related illnesses early, and take appropriate action [6]. By reaching all groups of people, especially those who are disadvantaged, in particular, because health care is free at the point of care, universal primary health systems are also in a strong position to ensure health equity. For an individual-level intervention to be effective, a greater degree of individual agency is often required. Therefore, interventions are more likely to favor those with a higher socio-economic status preferentially than those who have more restricted social and economic capital [6].

## Aims of the study

- 1- Evaluation of nutrition services in Babylon Province using health centers quality standards and indicators.
- 2- Identifying poor, moderate, and good indicators for nutrition services in Babylon Province.

## Materials and Methods

This is a cross-sectional study done in 23 randomly chosen health centers (multi-stage random sampling) in Babil Province. The number of main health centers in Babylon Province is 46 centers distributed in five primary health care sectors. Twenty-three health centers were randomly selected by the use of a multistage sampling technique from all sectors (Table 1).

**Table (1): Multistage Sampling from Primary Health Care Sectors in Babylon Province**

Primary health-care sectors	Number of centers included in the study	Number of randomly selected centers in the study	%
Al-Hillah first sector	11	6	26.08
Al-Hillah second Sector	11	5	21.73
Al-Musayyib sector	9	5	21.73
Al-Mahawil Sector	5	2	8.69
Al- Hashemite sector	10	5	21.73
Total	46	23	100%

## Data collection technique:

Data were gathered through quality checklists created by the Iraqi Ministry of Health and accepted in this study. These checklists reflect minimum quality requirements for primary health care. Which includes evaluation standards for all healthcare units and services [7].

## Statistical analysis

Data were analyzed using the available statistical package from SPSS-25 (Statistical Package for Social Sciences-Edition 25). Simple frequency, percentage, mean, standard deviation, and range (minimum and maximum values) measurements were used to present the data [8].

## Results and Discussion

Table 2: Represents the evaluation of administrative indicators of Healthcare providers delivering nutrition services at health centers. The current study found that 87.0% of health centers had no medical staff trained in nutrition programs according to standards. While 95.7% of HCs had health staff trained in nutrition programs according to standards. As for the presence of nursing staff trained in nutrition programs, the study found that 87.0% of HCs were moderate.

**Table (2): Evaluating score for administrative indicators of healthcare providers delivering nutrition services at health centers**

Indicators	Poor (<50%)		Moderate (50%-79%)		Excellent (>=80%)	
	No	%	No	%	No	%
The presence of a medical staff trained in nutrition programs (pediatrician, community medicine or practicing medicine)	20	87.0	-	-	3	13.0
The presence of health staff trained in nutrition programs (Two Medical Assistant)	1	4.3	-	-	22	95.7
The presence of Nursing staff trained in nutrition programs (One Nurse)	-	-	20	87.0	3	13.0

Table 3: Two indicators had a complete evaluation score (100%) for the availability of the growth chart for females and males for different age groups, and the presence of a nutrition unit guide. A high percentage (91.3%, and 87.0%) of PHCCs had an excellent score (>80%) for the availability of the referral card to the nutritional rehabilitation, and availability of educational materials, respectively. Well as 95.7% of the study centers had an excellent score for the availability of the tape for measuring the height of adults, the existence of a special follow-up record for the spending of Ferro-folic pills, and the presence of a follow-up record about spending both types of vitamin A. While (69.6%, and 60.9%) of HCs had moderate score (50%-79%) regarding the availability of office furniture, and availability of computer nutrition assessment program ANTHRO PO METRIC and staff are trained, respectively. As for the presence of a record of the unit's internal and external educational activities, the study found that 65.2% of HCs had poor score (<50%).



**Table (3): Evaluating score for structural readiness of primary health care centers  
availability of equipment, supplements, instructions, and records**

Structural readiness of primary health care centers availability of equipment, supplements, instructions, and records	Poor (<50%)		Moderate (50%-79%)		Excellent (>=80%)	
	No	%	No	%	No	%
The presence of a suitable place for the nutrition unit	5	21.7	-	-	18	78.3
Office furniture is fully available	2	8.7	16	69.6	5	21.7
A computer is available in the unit	10	43.5	-	-	13	56.5
Uniscale balance (2 per unit)	6	26.1	-	-	17	73.9
Availability of the tape for measuring the height of adults	1	4.3	-	-	22	95.7
Availability of the wooden board to measure height / Stature	12	52.2	-	-	11	47.8
Availability of the referral card to the nutritional rehabilitation	2	8.7	-	-	21	91.3
Availability of the growth chart for females and males for different age groups	-	-	-	-	23	100.0
Existence of a mechanism to guarantee the treatment of all cases diagnosed by medical and health personnel	2	8.7	-	-	21	91.3
Existence of a special follow-up record for the spending of Ferro-folic pills	1	4.3	-	-	22	95.7
The presence of a follow-up record pertaining to spending both types of vitamin A	1	4.3	-	-	22	95.7
The presence of a record of the unit's internal and external educational activities	15	65.2	-	-	8	34.8
Availability of computer nutrition assessment program ANTHRO PO METRIC and staff are trained	5	21.7	14	60.9	4	17.4
Availability of nutrition units guide	-	-	-	-	23	100.0
Availability of educational materials	3	13.0	-	-	20	87.0

Table 4: the current study showed that 82.6% of HCs had moderate score regarding assessment of the nutritional status of children under five years of age and according to the visits specified for their ages, the accuracy of documentation in the register for the care of children over the age of five and adolescents, examination of new students for the first primary and middle class in schools within the geographical area, and giving nutritional advice to people with chronic diseases such as diabetes, hypertension, and others. As for other indicators, most of the health centers had moderate scores.

**Table (4): Evaluating score for nutrition services providers performance**

Evaluation of nutrition services providers performance	Poor (<50%)		Moderate (50%-79%)		Excellent (>=80%)	
	No	%	No	%	No	%
Assessment of the nutritional status of children under five years of age and according to the visits specified for their ages	-	-	19	82.6	4	17.4
Accuracy of documentation in the register for the care of children under the age of five	-	-	18	78.3	5	21.7
Accuracy of documentation in the register for the care of children over the age of five and adolescents (including school students)	-	-	19	82.6	4	17.4
Examination of new students for the first primary and middle class in schools within the geographical area	-	-	19	82.6	4	17.4
Giving nutritional advice to pregnant and lactating women	2	8.7	17	73.9	4	17.4
Giving nutritional advice to people with chronic diseases such as diabetes, hypertension, and others	-	-	19	82.6	4	17.4
Giving nutritional advice to people suffering from malnutrition diseases for those five years and over, such as losing or gaining weight	-	-	20	87.0	3	13.0
Referring to people with obesity or thinness to nutrition clinics in hospitals	6	26.1	15	65.2	2	8.7
Accuracy of documentation in the record of follow-up of the spending of Ferro-folic pills	1	4.3	11	47.8	11	47.8
Accuracy of documentation in the follow-up record of vitamin A diversion	1	4.3	14	60.9	8	34.8
Conduct regular monthly seminars for pregnant and lactating women and reviews to explain the benefits of balanced foods and how to prevent malnutrition diseases	16	69.6	4	17.4	3	13.0
Conducting weekly seminars on nutrition education	16	69.6	3	13.0	4	17.4
Accuracy of documentation in the register of educational activities	15	65.2	4	17.4	4	17.4



Nutritional transformation is one of the greatest obstacles for public health policies as it requires a health care system driven by integrality and health promotion, particularly in Healthcare Services. Good nutrition are the basic requirements for public health and they allow the accomplishment of the functioning of the human development (We know).

Regarding the presence of a medical staff trained in nutrition programs (pediatrician, community medicine, or practicing medicine), the study demonstrated that 87.0% of PHCCs were poorly. This result agreed with the finding of a previous study done in Erbil governorate [9] which revealed that 87.5% of PHCCs had no pediatrician according to standard.

The study demonstrated that 95.7% of health centers had an excellent score for the existence of health staff trained in nutrition programs according to standards. This result differed from the study conducted in the West Nile region [10] which found that all health centers lack trained health staff.

A high percentage ( 95.7%) of HCs had an excellent score for the availability of the tape for measuring the height of adults. This result agreed with a study conducted in the regions of Tajikistan [11] which found that 93.7% of the study samples were good for the availability of the tape for measuring the height of adults.

Regarding the availability of the wooden board to measure height /stature, the study showed that only 47.8% of HCs had an excellent score. This result agreed with the finding of a previous study conducted in Albania [12] which revealed that only (20%-50%) of the facilities had the wooden board to measure height /stature. A possible explanation for this result is the lack of financial support for purchasing basic supplies and equipment for the health center.

All HCs (100%) had the growth chart for females and males for different age groups. This result disagrees with the results of a study conducted in Albania [13] which showed that 61.5% of HCs had a growth chart.

As for the availability of a computer in the unit, the study showed that only 43.5% of PHCCs had a poor score. This result agreed when compared with a previous study conducted in Iraq [14] which revealed that half of the study centers had no essential supplies of the nutrition units.



Regarding the availability of uniscale balance, the study showed that 73.9% of HCs had an excellent score. This result agreed with the similar study conducted in Diwaniyah City [15] which showed that 63.9% of the study centers had uniscale balance.

The study showed that 87.0% of HCs had an excellent score for the availability of educational materials. This result agreed with another study done in the regions of Tajikistan [11] which showed that 94.0% of the study samples were good for the availability of advice to pregnant and lactating women. educational materials.

Regarding giving nutritional advice to pregnant and lactating women, the study showed that 73.9% of HCs were moderate. This result disagreed with the findings of a previous study conducted in Basra city [16] which found that 49% of the study centers had an excellent score for giving nutritional

In this study, about 82.6% of HCs were moderate for assessment of the nutritional status of children under five years of age and according to the visits specified for their ages. This result disagreed when compared with the findings published study conducted in the West Nile region [10] which found that all HCs (6) were poorly about assessment of the nutritional status of children under five years of age. The possible explanation for the emergence of the moderate result is due to the severe shortage of medical staff trained to assess the nutritional status of children under five years of age.

### Conclusions:

- 1- The current study showed that nutrition services were moderate in the health center, despite the availability of supplements, guidelines, and registers in most health centers.
- 2- We conclude there are clear deficiencies in medical staff and some equipment in most health centers.

### Recommendations:

- 1- Provide financial allocations from the competent authorities to purchase some equipment and tools necessary for the health center.
- 2- The cooperation between all branches of the health directorates is important to improve the poor indicators that fall within the level of their duties.



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### Conflict of interests.

There are non-conflicts of interest.

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