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تحت شعار: التطورات التكنولوجية والاتجاهات الحديثة في التعليم

Original article

Assessment of Health Behaviors Related to Nutrition of Pregnant Women in Hospitals

Rasha Shehab Ahmed*, Hanaa Hussein Mukhlif

Department of Clinical of Nursing Science, College of Nursing, University of Mosul, Mosul, Iraq

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Corresponding Email. *rasha.22nup21@student.uomosul.edu.iq*

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ABSTRACT

This study aims to assess the behaviors of pregnant women regarding their nutritional status in hospitals within Mosul City to promote optimal nutrition during pregnancy. The study used a descriptive design from December 2023 to April 2024. A purposive sample of pregnant women who visited hospitals in Mosul was collected. The study tool consisted of demographic data about pregnant women, six questions about women's health histories, and seven questions about health behaviors related to nutrition, with four choices for each question. And eating meat during one week. Seven experts measured the tool and its reliability (0.81). Most of the women (63.6%) reported taking supplements, and (66.4%) were in the third trimester. A small percentage of women (15.6%) reported having a deformity. The majority of women (81.6%) reported having visited a healthcare center. The majority of women (72.8%) had 1-3 pregnancies. Most pregnant women never eat meat, fish, or dairy during the week. The study revealed that a significant number of pregnant women in the sample reported taking supplements and eating meat types and dairy are lower. The study recommended appropriate nutritional guidance be provided to pregnant women in health centers.

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INTRODUCTION

Proper nutrition is crucial for growth to be supported during pregnancy; a proper diet is essential. The way that expectant pregnant behave about their nutritional status has a big impact on the foods they eat and how healthy they are overall. The behaviors regarding nutritional status involve examining various aspects, including dietary habits, nutrient intake, adherence to recommended guidelines, supplement consumption, awareness of the importance of nutrition during pregnancy, and factors influencing behaviors [1,2].

Assessing pregnant women's behaviors regarding nutritional status is important for several reasons. It allows for the identification of gaps in nutritional needs during pregnancy. Also, healthcare providers can develop targeted educational programs and counseling sessions to address misconceptions and provide accurate information [2]. Furthermore, assessing behaviors related to nutritional status helps identify the prevalence of healthy dietary practices among pregnant women. It provides an opportunity to reinforce positive behaviors and encourage pregnant women to make informed dietary choices [3]. Cultural, social, and economic factors can significantly influence pregnant women's behaviors regarding their nutritional status. Socioeconomic status, including income level and access to resources, can affect the availability and affordability of nutritious foods [4].

Overall maternal and fetal health outcomes can be improved, leading to healthier pregnancies and healthier communities [4,5], guiding future interventions, and supporting strategies for pregnant women [6]. Dietary behaviors during pregnancy, are influenced by a complex set of factors, including physiologic developments [7-8]. Pregnancy-related gestational diabetes, gestational hypertension, hyperemesis gravidarum, and gastro-oesophageal reflux can affect the nutritional status of pregnant women [9]. Understanding factors impacting maternal behaviors is the most crucial element needed to control [10]. According to. Kazemi et al. (2018), nurses today play a crucial role in promoting health by identifying problems during pregnancy and providing high-quality prenatal care [11]. Women undergo substantial physiological, psychological, and behavioural changes during pregnancy, which affect their daily routines and way of life [12], and changes in maternal metabolism that are necessary to meet the demands raised by the rapid growth and development of the concepts during pregnancy [13]. The present study aimed to assess health behaviors related to nutrition of pregnant women in hospitals.

METHODS

Study design and setting

The study used a descriptive design to examine and evaluate dietary health behaviors among pregnant women. A study started from December 2023 to April 2024. A non-random sample (purposive sample) of (250) pregnant women was collected, consisting of women in different stages of pregnancy who visited the hospitals in the city of Mosul targeted in the study. The characteristics of the sample consisted of women in different stages of pregnancy who visited the hospitals in the city of Mosul targeted in the study, and agreed to consent form to participate in the study through answers to questions in the study tool.

Data collection procedure

Regarding the study tool, a study tool was used after measuring its validity by experts (7) and its reliability was (0.81). The tool consists of the first section of demographic data related to the pregnant woman (age, residence, educational level, occupation, and family income). The second section consisted of (6) questions of women's health history (do you take nutritional supplements during pregnancy?, in what month of the mother's pregnancy?, age at marriage, are there any abnormalities in a previous pregnancy?, number of visits to the health center during the month, and number of pregnant), and the third section was (7) questions about health behaviors related to nutrition (Were you following a special diet? How many meals do you give up each day (without sweets)? What do you eat between main meals? What type of bread do you eat most often? What fruit do you eatregularly?, What vegetables are you most likely to eat? What type of meat do you eat most often during pregnancy?). Finally, the fourth section related with eating food during one week, its including (once a week, twice a week, three times a week, or more. not once). The collected data took 25–30 minutes. The collected data was classified and then coded using Microsoft Excel. After this, the data was entered into the statistical package program version (26) to describe and clarify the study results.

RESULTS

The demographic data of the participants

In above table shows most of the participants (36.0%) in the age group of 30-39 years, with lower in 40 years and above. About residence in urban area was (73.6%). The participants had varying levels of education. The highest percentage (25.2%) had a bachelor's or higher certificate. The percentage of (72.8%) were housewives' occupation, but (25.6%) were employees and only (1.6%) were students. In terms of family income, the highest percentage was average income, reaching (33.2%), and the lowest percentage was family income, reaching to (16.0%).

Health history of pregnant women

This table shows that (63.6%) of women reported taking supplements. While (66.4%) were taking supplements in the third trimester. The age of marriage among women in age less than 20 years old was (57.2%). About a question about any abnormalities in a previous pregnancy (84.4%) answered no having a deformity. The majority of pregnant women (81.6%) reported having visited a healthcare center. The highest percentage of women (72.8%) had 1-3 pregnancies, followed by 4-6 pregnancies (17.6%). A small percentage of women (9.6%) 7 Pregnant and more.

Table 1. Distribution the demographic data of the sample (n=250)

Demographic data		Frequency	Percent
Age Group M=27.95, SD=8.65	Less than 20 Year	46	18.4
	From 20-29 Year	88	35.2
	From 30-39 Year	90	36.0
	From 40 year and above	26	10.4
Residence	Urban	184	73.6
	Rural	66	26.4
Educational level	Read and write	58	23.2
	Primary School	50	20.0
	Intermediate School	32	12.8
	Secondary School	16	6.4
	Diploma	31	12.4
	Bachelor and Higher	63	25.2
Occupation	Student	4	1.6
	Employee	64	25.6
	Housewife	182	72.8
Family Income	Weak	40	16.0
	Average	83	33.2
	Good	79	31.6
	Very good	48	19.2

Table 2. Women health history of the sample (n=250)

Women Health History		Frequency	Percent
Do you take nutritional supplements during pregnancy?	Yes	159	63.6
	No	91	36.4
In what month of the mother's pregnancy?	First Semester	3	1.2
	Second Semester	81	32.4
	Third Semester	166	66.4
Age at marriage M=19.72, SD=4.47	Less than 20 Year	143	57.2
	From 20-24 Year	61	24.4
	From25-29 Year	36	14.4
	From 30-34 Year	5	2.0
	From 35 Year and More	5	2.0
Are there any abnormalities in a previous pregnancy?	Yes	39	15.6
	No	211	84.4
Did you visit the health center during the month?	Yes	204	81.6
	No	46	18.4
Number of pregnant M=3.06, SD=2.27	1-3 Pregnant	182	72.8
	4-6 Pregnant	44	17.6
	7 Pregnant and More	24	9.6

Health behaviors of nutrition among pregnant women

The table above demonstrates that most women (71.2%) do not follow a special diet while a few follow a vegetarian system (10.8%) The lowest percentage followed a meat system (0.8%). The highest percentage of women (33.2%) reported having three meals a day. Food choices most women (37.2%) reported consuming dairy products, followed by sweets (35.2%) and fruits and vegetables (20.8%). A small percentage (6.8%) reported consuming nothing in particular. Bread preference more women (44.8%) reported consuming whole bread, followed by wheat bread (21.2%) and barley bread (23.6%). A smaller percentage (10.4%) reported not consuming bread. Fruit preference most commonly consumed fruits were bananas and oranges, with both categories having the same percentage (35.2%). Apples were consumed by 20.0% of the women, and 9.6% reported consuming more than one type of fruit. Vegetable preference (40.0%) of women reported consuming cucumber and onion, followed by celery and tomatoes (24.4%). Potatoes and carrots were consumed

by 18.4% of the women, and (17.2%) reported consuming a variety of vegetables. Eating meat and dairy (44.4%) reported consuming beef or lamb, followed closely by chicken (44.0%). A small percentage (10.4%) reported consuming fish, and only 1.2% reported not consuming meat.

Table 3. Health behaviors related to nutrition of pregnant women in hospitals (n=250)

Health behaviors		Frequency	Percent
Were you following a special diet?	Yes	43	17.2
	No	178	71.2
	Vegetarian system	27	10.8
	Meat system	2	0.8
How many meals do you give up each day (without sweets)?	1-2 meals	75	30.0
	3 meals	83	33.2
	4 meals	56	22.4
	5 Meals and more	36	14.4
What do you eat between main meals?	Fruits and Vegetables	52	20.8
	Dairy products	93	37.2
	Sweets	88	35.2
	Nothing	17	6.8
What type of bread do you eat most often?	Wheat bread	53	21.2
	Whole bread	112	44.8
	Barley bread	59	23.6
	I don't eat bread	26	10.4
What fruit do you eat regularly?	Apple	50	20.0
	Banana	88	35.2
	Orange	88	35.2
	More than one type of fruits	24	9.6
What vegetables are you most likely to eat?	Potatoes and carrots	46	18.4
	Cucumber and Onion	100	40.0
	Celery tomatoes	61	24.4
	Variant vegetables	43	17.2
What type of meat do you eat most often during pregnancy?	Chicken	110	44.0
	Beef or lamb	111	44.4
	Fish	26	10.4
	I don't eat meat	3	1.2

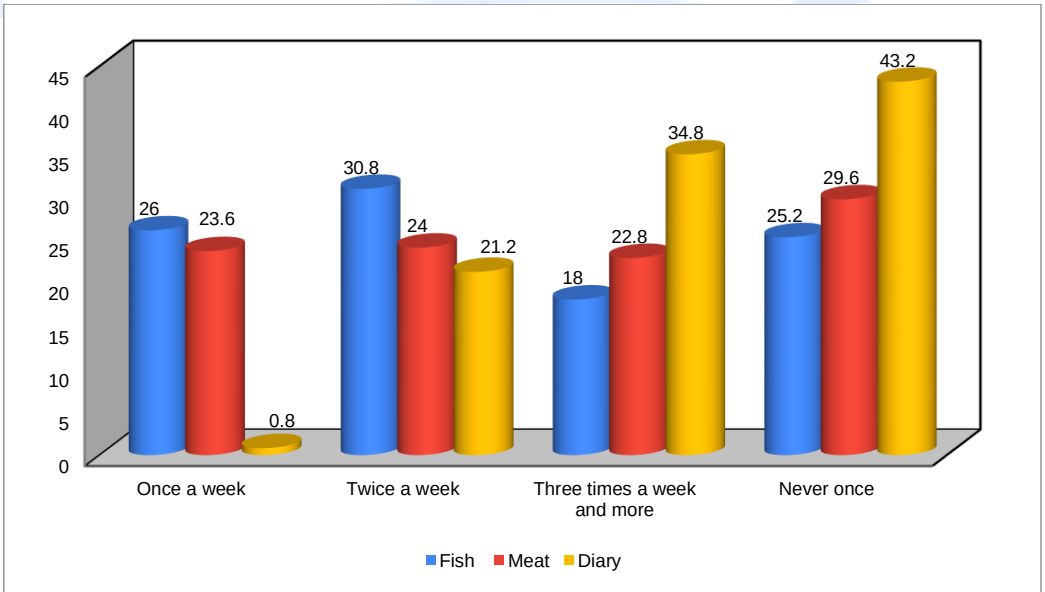

Figure 1. The consumption of meat and fish and Diary among pregnant women participants.

DISCUSSION

Analysis of the data highlighted instances of inappropriate nutritional behaviour, both among the women with higher education and also among those who read and write, the results of the study are also confirmed by other authors. [14]. In the present study over 50% of the women in this study said they took supplements, and the same proportion of women reported taking supplements during the third trimester. Over 50% of women under the age of 20 were married. The majority of women stated that they had visited a healthcare facility and that they had no anomalies from a previous pregnancy. The largest percentage of women had 1-3 pregnancies, followed by 4-6 pregnancies. Fewer women than expected have seven pregnancies or more, as table (2). The demand for energy, nutrients and fluids increases during pregnancy. These result from higher resting energy expenditure. During pregnancy, the body uses more energy for growth (foetus and placenta) and more intensive work of the lungs and heart. The increased requirements for nutrients during pregnancy also applies to most vitamins and minerals. It is recommended to eat meals regularly and compose them using products from all groups (vegetables and fruit, cereal, dairy, meat, fish, eggs, vegetable oils, nuts and legumes) [15].

In terms of nutrition-related health habits, the majority of women do not adhere to any particular diet, while some do follow a vegetarian regimen. The proportion that used a meat system was the lowest. The majority of women said they ate three meals a day. The majority of women stated that they ate dairy items, followed by desserts, fruits, and vegetables. The majority of women said they ate whole bread, then wheat and barley bread. a lower proportion abstaining from bread. Oranges and bananas were the most popular fruit categories, with the same percentage of each ingested. Twenty percent of the ladies ate apples, while other women ate multiple types of fruit. Women also eat onions and cucumbers, after which comes celery and tomatoes. The women eat a higher number of potatoes and carrots than veggies. Women eat lamb or beef, with chicken coming in a close second. Just 1% of respondents claimed to not consume meat, and very few reported eating fishes. This results in table (3), and figure (1). The importance of vegetables and fruit in the diet of pregnant women is significant. They provide a large number of antioxidants (vitamin C, carotenoids, vitamin E, flavonoids), folates, potassium and fibre. have typically been characterised as poor in nutritional value, consisting mainly fat and sugars [16], where more than half of the women consumed fruit between meals, and almost 1/3 reached for sweets found a higher incidence of whole grain bread [17].

It is recommended to consume whole grain products (cereals, bread, whole meal pasta, at least 3 meals a day. Dairy products are rich in calcium and riboflavin. Recommended calcium intake varies between countries. The Food and Agriculture Organization and the World Health Organization recommend that pregnant women consume 1,200 mg/day of calcium women. The main source of animal protein can be lean meat and its products, skimmed milk and its products, fish, poultry and eggs.

The pregnant women in our study chose white meat (poultry) much more frequently than red meat, 2/3 of women ate white meat several times a week, and 1/5 once a week [18]. where 37% of pregnant women ate white meat 3–4 times a week, 31% ate it 2–3 times a week, and 27% at least once a day. In the case of red meat, our study found that subjects most frequently ate it either 1–3 times a month (27.34%), or once a week (26.65%). Only 22.25% of the women ate red meat several times a week., 43% of women ate red meat 3–4 times a week, 12% ate it 2–3 times a week, while 33% ate it only occasionally [16].

CONCLUSION

In conclusion, the assessment of health behaviors related to nutrition among pregnant women in hospitals provides valuable insights into their dietary practices and preferences. The findings from the study shed light on various aspects of health behaviors, including supplement intake, meal frequency, food choices, bread and fruit preferences, vegetable consumption, and meat preferences. The study revealed that a significant number of pregnant women in the sample reported taking supplements, indicating a recognition of the importance of additional nutritional support during pregnancy. The study recommended appropriate nutritional guidance is provided to pregnant women in health centers. Encourage behavioral sessions for pregnant women that focus on the great importance of proper nutrition during pregnant.

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Conflicts of Interest. Nil

REFERENCES

1. Fan X, Hu J. Early arrivals: association of maternal obstetric factors with preterm births and their survival in India. Public health. 2023;222(2023):e18.
2. Laelago T, Yohannes T, Tsige G. Determinants of preterm birth among mothers who gave birth in East Africa: systematic review and meta-analysis. Ital J Pediatr. 2020 Jan 28;46(1):10. doi: 10.1186/s13052-020-0772-1.
3. Agbeno EK, Osarfo J, Ashong J, Anane-Fenin B, Okai E, Ofori AA, et al. Determinants of preterm survival in a tertiary hospital in Ghana: A ten-year review. PLoS One. 2021 Jan 22;16(1):e0246005. doi: 10.1371/journal.pone.0246005.
4. Berghella V, Saccone G. Cervical assessment by ultrasound for preventing preterm delivery. Cochrane Database Syst Rev. 2019 Sep 25;9(9):CD007235. doi: 10.1002/14651858.CD007235.pub4.
5. Farpour-Lambert N. Obesity and weight gain in pregnancy and postpartum: an evidence review of lifestyle interventions to inform maternal and child health policies. Frontiers in endocrinology (2019) 9: 546.
6. Jańczewska I, Cichoń-Kotek M, Glińska M, Deptulska-Hurko K, Basiński K, Woźniak M, Wiergowski M, Biziuk M, Szablewska A, Cichoń M, Wierzba Jet al. Contributors to Preterm Birth: Data from a Single Polish Perinatal Center. Children (Basel). 2023 Feb 25;10(3):447. doi: 10.3390/children10030447.
7. Fathnezhad-Kazemi A, Hajian S. Factors influencing the adoption of health promoting behaviors in overweight pregnant women: a qualitative study. BMC Pregnancy Childbirth. 2019 Jan 28;19(1):43. doi: 10.1186/s12884-019-2199-5.
8. Gamel W, Fathy M, El-Nemer A , Abou Shabana K. Utilization of Self-Care Brochure for Relieving Mother's Minor Discomforts during Pregnanc. Journal of Nursing and Women's Health 2017;2(3).
9. Omar, H. Assessment of the health behaviors patterns among women during pregnancy. Iraqi National Journal of Nursing Specialties. 2019;32(1):182-202
10. Garbes A. Like a mother: A Feminist Journey Through the Science and Culture of Pregnancy. NY, USA: Harper Wave; 2018: 256.
11. Langley-Evans SC. Nutrition in early life and the programming of adult disease: a review. J Hum Nutr Diet. 2015 Jan;28 Suppl 1:1-14. doi: 10.1111/jhn.12212.
12. Aynaci, G. Nutrition perspective from the view of pregnant women: Their understanding of fetal well-being relative to their diet. Progress in Nutrition. 2019;21(2):356366.
13. Larqué E, Labayen I, Flodmark C-E. From conception to infancy — early risk factors for childhood obesity. Nat Rev Endocrinol. 2019;15(8):456-478.
14. Desta M, Akibu M, Tadese M, Tesfaye M. Dietary Diversity and Associated Factors among Pregnant Women Attending Antenatal Clinic in Shashemane, Oromia, Central Ethiopia: A Cross-Sectional Study. J Nutr Metab. 2019 Mar 12;2019:3916864.
15. Kaiser LL, Campbell CG; Academy Positions Committee Workgroup. Practice paper of the Academy of Nutrition and Dietetics abstract: nutrition and lifestyle for a healthy pregnancy outcome. J Acad Nutr Diet. 2014 Sep;114(9):1447. doi: 10.1016/j.jand.2014.07.001.
16. Tuncalp Ö, Rogers LM, Lawrie TA, Barreix M, Peña-Rosas JP, Bucagu M, Neilson J, Oladapo OT. WHO recommendations on antenatal nutrition: an update on multiple micronutrient supplements. BMJ Glob Health. 2020 Jul;5(7):e003375. doi: 10.1136/bmjgh-2020-003375.
17. Slavin J, Tucker M, Harriman C, Jonnalagadda S. Whole grains: Definition, dietary recommendations, and health benefits. Cereal Foods World. 2013;58:191–198.

تقييم السلوكيات الصحية المتعلقة بتغذية النساء الحوامل في المستشفيات

رشا شهاب أحمد , هناء حسين مخلف

قسم علوم التمريض السريري، كلية التمريض، جامعة الموصل، الموصل، العراق.

المستخلص

تهدف هذه الدراسة إلى تقييم سلوكيات النساء الحوامل فيما يتعلق بحالتهن التغذوية في المستشفيات داخل مدينة الموصل لتعزيز التغذية المثالية أثناء الحمل. الطرق: استخدمت الدراسة تصميماً وصفياً من كانون الأول 2023 إلى نيسان 2024. تم جمع عينة هادفة من النساء الحوامل اللواتي زارن المستشفيات في الموصل. تكونت أداة الدراسة من البيانات الديموغرافية عن النساء الحوامل، وستة أسئلة حول التاريخ الصحي للمرأة، وسبعة أسئلة حول السلوكيات الصحية المرتبطة بالتغذية، بواقع أربعة اختيارات لكل سؤال. وتناول اللحوم خلال أسبوع واحد. قام سبعة خبراء بقياس الأداة ومدى موثوقيتها (0.81). أبلغت معظم النساء (63.6%) عن تناول المكملات الغذائية، و(66.4%) كن في الثلث الثالث من الحمل. وأفادت نسبة صغيرة من النساء (15.6%) بوجود تشوه. وأفادت غالبية النساء (81.6%) بأنهن قمن بزيارة أحد مراكز الرعاية الصحية. غالبية النساء (72.8٪) حصلن على 1-3 حالات حمل. لا تأكل معظم النساء الحوامل اللحوم أو الأسماك أو منتجات الألبان أبدًا خلال الأسبوع. كشفت الدراسة أن عدداً كبيراً من النساء الحوامل في العينة أفادنا بأن تناول المكملات الغذائية وتناول أنواع اللحوم والألبان أقل. وأوصت الدراسة بتقديم الإرشاد الغذائي المناسب للنساء الحوامل في المراكز الصحية.

الكلمات الدالة. السلوكيات الصحية، التغذية، النظام الغذائي، النساء الحوامل