

Dietary Habits of Iraqi Women with Breast Cancer at Oncology Hospitals in Baghdad City: Comparative Study

Hadeel Mousa Mahalhal¹, Hawraa Hussein Ghafel²

¹MSc, Ministry of Health Student at Maternal and Neonate Nursing Department, College of Nursing, University of Baghdad, ²Lecturer at, Maternal and Neonate Nursing Department, College of Nursing, University of Baghdad

Abstract

Background: Dietary pattern explains the overall diet; the food, food groups and nutrients included; their variety and combination. Breast cancer is the most prevalent cancer among women worldwide. Many risk factors for breast cancer contribute to personal habits, such as diet and exercise. Certain risk factors linked to lifestyle include decisions to have children and to take medicines containing hormones.

Objectives of the study : To assess women's dietary Habits, Foods Choices, and to find out the relation between demographic characteristics and breast cancer.

Methodology: A descriptive and analytic study, non-probability (a purposive sample) consist of (100) women was carried out at three Oncology Hospitals in Baghdad City, Iraq. The study group consist of (100) women divided in two groups the first one include (50) women as a (study group) that attending An oncology Hospitals and the second include (50) women as a (control group) that attending the Primary Health Care Centers.

Results: women in both groups are consuming red meat with low frequency and amount than normal consumption . More than half of women with breast cancer are eating red meat one time per week (54%) while those without breast cancer are eating red meat two times per week (50%).

Conclusion: women in both groups are consuming red meat with low frequency and amount than normal consumption

Recommendation Avoid eating canned and processed red meat with preservatives and replaced it with fresh well cooked meat. Community orientation towards a healthy, balanced nutrition that contains the basic elements that the body needs without focusing on a specific food. Activation the role of media in increase the awareness of women in the community about healthy diet. Instruct women with breast cancer to follow a healthy diet guideline and avoid eating canned and processed red meat with preservatives during their treatment courses.

Keywords: Dietary Pattern , Breast Cancer, Oncology Hospitals, Comparative Study

Introduction

Dietary pattern explains the overall diet; the food, food groups and nutrients included; their variety and combination; and the amount and quantity with which they are typically consumed. Among the most common methods for determining dietary patterns are a priori numerical indexes, which measure adherence to a dietary pattern that has been predefined on the basis

of previous scientific evidence. Numerous indices also define variants of the same dietary pattern (e.g. Mediterranean diet score) or use different scores and weighting systems, such as population-specific diets versus set intake reductions for prescribed intakes (e.g. Alternative Healthy Eating Index).

Another method is to empirically derive common patterns of foods that appear to be processed together

using principal component analysis or that explain the greatest variability in intermediate outcomes^[1]. Many risk factors for breast cancer contribute to personal habits, such as diet and exercise. Certain risk factors linked to lifestyle include decisions to have children and to take medicines containing hormones^[2].

No single food or diet can prevent or cause breast cancer, but while living with the disease, a person's dietary choices can make a difference to their risk of developing breast cancer or their overall wellbeing. Breast cancer has many common factors and is a complex disease. Some of these variables are not within a person's control, including age, family history, genetics and gender. A person can regulate other factors, such as smoking, levels of physical activity, body weight, and diet, though. Some researchers indicated that dietary factors could account for (30–40%) of all cancers^[3].

Breast cancer is the most prevalent cancer among women worldwide. Humans have long known about breast cancer. The Edwin Smith Surgical Papyrus for example explains breast cancer cases. This medical text is from 3000–2,500 B.C. And probably due to Imhotep (Egyptian doctor-architect), offers authentic breast cancer accounts^[4]. Food frequency intake consists of a finite list of foods and beverages with response categories that represent the normal level of consumption over the requested time period. The normal serving size can be ordered separately for each food and beverage.

To order to determine the overall diet, the amount of foods and beverages usually varies from (80 to 120). Alternatively, portion size can be paired with frequency information by asking respondents to convert the usual amount of consumption to the number of specified units (e.g. how often do you consume 1/2 cup of rice?). Many questionnaires contain portion size photographs in an attempt to improve reporting accuracy. Its objective is to obtain information on the frequency and, in some cases, the portion size of food and drink consumption over a specified period of time, usually the last month or year^[5]. Dietary habits and decisions play a key role in human health. Dietary habits are common decisions made by individuals or groups of people as to what food they consume. Proper dietary choices include the use of minerals, vitamins, proteins, carbohydrates and fats^[6].

Evidence has indicated that a healthy diet is associated with lower recurrence of breast cancer and increased overall mortality. Current food guidelines for cancer survivors have emphasized a plant-based diet rich in fruit and vegetables and low in red and processed meat^[7]. Highly motivated individuals who maintain large reductions in their very long-term meat intake (> 3 servings per week) may gain benefits.

For people interested in reducing meat consumption (whether to improve health or mitigate the environmental effects of meat production), certainly nothing in this guideline argues against that lifestyle change^[8]. Consuming meat can increase breast cancer risk. Possible causes include increased fat consumption, exposure to chemicals produced at high temperatures when cooking meat and exposure to meat hormones^[9]. Some studies, however, suggest that women who eat a lot of processed meat (such as sausage and bacon) may be at increased risk of breast cancer^[10].

Methodology

The data was collected through the use of a questionnaire. After getting the official approval from previous mentioned hospitals and primary health care centers, the sample was include (100) women divided in two groups the first one (Study Group) is consist of (50) women that with breast cancer that attending Oncology Hospitals and the second one (Control Group) consist of (50) women without breast cancer that attending Primary Health Care Centers in Baghdad City in the two directors AL-Karch and AL-Rasafa. for the purpose of dietary pattern assessment there are four methods including (Anthropometric measurement, Biochemical/ biophysical methods, Clinical methods and Dietary assessment) in this study using the last one (Dietary assessment) The measurement of food and fluid intake is an essential part of the diet assessment. It provides information on dietary quality and quantity, food allergies, changes in appetite and explanations and sensitivity, for insufficient intake of food during or after illness. In this method the researcher collects the information from the participants depend on the recording or memory of the participant, so in this study the researcher depend on the memory of the women to collect the data about the dietary pattern because the data was collected about the dietary pattern before the

incidence of breast cancer and then compared with the dietary pattern of women without breast cancer. The time consumed for filling the questionnaire is 15-30 minutes.

Results and Findings

Table (1): Distribution of Women according to their Demographic Characteristics

Control group		Case group		Characteristics
%	f	%	f	
				Age group
0	0	0	0	≤ 19 years
28	14	0	0	20 – 29 years
16	8	20	10	30 – 39 years
12	6	18	9	40 – 49 years
38	19	50	25	50 – 59 years
6	3	12	6	60 ≤ years
100	50	100	50	Total
35 ± 11		50 ± 9		Average mean
%	f	%	f	Occupation
30	15	32	16	Employee
54	27	58	30	Housewife
10	5	10	5	Retired
6	3	0	0	Free Job
100	50	100	50	Total
%	f	%	f	Residency
80	40	64	32	Urban
8	4	32	16	Rural
12	6	4	2	Sub-urban
100	50	100	50	Total
%	f	%	f	Education
12	6	18	9	Not read and write
24	12	24	12	Read and write
16	8	14	7	Intermediate school graduate
16	8	10	5	Secondary school graduate
10	5	18	9	Institute
22	11	16	8	Bachelor and above
100	50	100	50	Total
%	f	%	f	Marital status
66	33	62	31	Married
18	9	22	11	Widowed
6	3	12	6	Single
6	3	4	2	Divorced
4	2	0	0	Separated
100	50	100	50	Total
%	f	%	f	BMI
4	2	4	2	Underweight
30	15	24	12	Normal
44	22	38	19	Overweight
20	10	30	15	Obese
2	1	4	2	Extremely obese
100	50	100	50	Total
%	f	%	f	Income / IQD
18	9	0	0	< 300,000
22	11	10	5	301,000 – 600,000
30	15	54	27	601,000 – 900,000
16	8	20	10	901,000 – 1,200,000
12	6	16	8	1,201,000 – 1,500,000
2	1	0	0	1,501,000 ≤

100	50	100	50	Total
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f: Frequency, %: Percentage, IQD: Iraqi Dinar

Table (2): Distribution of Women according to the their Dietary Habits

Control group		Case group		Variables
%	f	%	f	
				Types of red meat
8	4	2	1	Beef
58	29	70	35	Sheep
34	17	28	14	Both
100	50	100	50	Total
				Eating red meat with:
8	4	0	0	Breakfast
50	25	68	34	Lunch
0	0	2	1	Dinner
2	1	2	1	Between meals
40	20	28	14	More than meals
100	50	100	50	Total
				Eating meat at restaurant
58	29	72	36	None
38	19	24	12	One time/week
2	1	4	2	2 – 3 time/week
2	1	0	0	4 ≤ / week
100	50	100	50	Total
				Preferred food
50	25	20	10	Red meat
18	9	24	12	White meat
2	1	0	0	Vegetables
30	15	56	28	More than one type
100	50	100	50	Total
				Type of red meat
66	33	82	41	Fresh
2	1	0	0	Frozen
2	1	6	3	Processed
30	15	12	6	Others
100	50	100	50	Total

f: Frequency, %: Percentage

Table (3): Evaluation of Red Meat Frequency Consumption per Week among Women

Sig.	P-value	X ²	Control group		Case group		Frequency Red meat
			Ass.	M	Ass.	M	
N.S	0.954	0.681	Low	0.30	Low	0.18	Grilled meet
H.S	0.001	11.735	Low	0.08	Low	0.08	Boiled meat
H.S	0.001	50.639	Low	0.30	Low	0.16	Pasty
N.S	0.974	0.499	Low	0.38	Low	0.22	Beef burger
N.S	0.552	0.335	Low	0.05	Low	0.10	Meatballs (kofta)
N.S	0.980	2.530	Low	0.43	Low	0.22	Processed meat (canned)
N.S	0.694	3.875	Low	0.63	Low	0.40	Minced meat foods
N.S	0.982	1.098	Low	0.45	Low	0.20	Shawarma (as)
N.S	0.312	7.095	Low	1.10	Low	0.70	A piece of meat with soup
N.S	0.183	3.367	Low	0.55	Low	0.48	Meat kebab
S	0.050	3.618	Low	0.18	Low	0.02	Meat sausage
N.S	0.837	0.043	Low	0.03	Low	0.02	Others

M: Mean, Ass: Assessment, χ^2 : Chi-square, P: Probability, Sig: Significance

N.S: Not significant, S: Significant, H.S: High significant

Low= 0 – 1.33, Moderate= 1.34 – 2.67, High= 2.68 – 4

Table (4): Evaluation of Red Meat Amount Consumption per Week among Women

Sig.	P-value	X ²	Control group		Case group		Amount Red meat
			Ass.	M	Ass.	M	
N.S	0.393	2.990	Low	0.30	Low	0.18	Grilled meet
H.S	0.001	12.650	Low	0.08	Low	0.10	Boiled meat
N.S	0.777	1.778	Low	0.31	Low	0.16	Pasty
N.S	0.903	0.203	Low	0.38	Low	0.16	Beef burger
N.S	0.629	0.203	Low	0.05	Low	0.12	Meatballs (kofta)
N.S	0.457	3.636	Low	0.43	Low	0.26	Processed meat (canned)
N.S	0.362	6.572	Low	0.55	Low	0.48	Minced meat foods

Cont... Table (4): Evaluation of Red Meat Amount Consumption per Week among Women

N.S	0.688	3.915	Low	0.43	Low	0.22	Shawarma (as)
N.S	0.754	1.898	Low	0.88	Low	0.74	A piece of meat with soup
N.S	0.094	10.837	Low	0.70	Low	0.76	Meat kebab
N.S	0.754	1.898	Low	0.10	Low	0.02	Meat sausage
N.S	0.903	0.203	Low	0.00	Low	0.02	Others

M: Mean, Ass: Assessment, χ^2 : Chi-square, P: Probability, Sig: Significance

N.S: Not significant, S: Significant, H.S: High significant

Low= 0 – 1, Moderate= 1.1 – 2, High= 2.1 – 3

Results and Discussion

The analysis of table (1) shows that the highest percentage regarding women's age is refer to age (50 – 59) years among the women in the case study group (50%) and the women in the control group (38%). The occupational status reveals that more than half of women in both group; the case and control group are housewives (58%) and only (32%) among case group and (30%) among control group are governmental employee. Regarding residency, the women are reporting that they are resident in an urban areas (case group= 64% and control group= 80%). The educational level variable indicates that the highest percentage is referring that women are reading and writing among both groups; the case and control groups (24%). More than half of women in both groups are showing normal marital status that are married (case group=62% and control group= 66%). Regarding body mass indicators, the highest percentage is referring that women are overweight in both groups; the case and study (38% and 44%). The socioeconomic status is referring to moderate as presented by highest percentage of monthly income that is (601,000-900,000) Iraqi dinars among both groups (case group=50% and control group=30%).

The table (2) reveals that women are preferring sheep meat (study group=70% and control group= 58%). The women are preferred to eat red meat with lunch meal (study group=68% and control group=50%).

(24%) of women with breast cancer are eating red meat at restaurant while (38%) of women without breast cancer are eating at restaurant. Those with breast cancer are preferred more than one type of red meat (56%) while those without are preferred the red meat (50%). They preferred the fresh meat (study= 82% and control= 66%).

The table (3) depicts the evaluation of frequency of red meat items consuming by women; the finding shows that women in both groups are consuming red meat low frequency than normal consumption as indicated by the low mean scores for all item, but the findings indicate that the boiled meat and Pasty have high significant among the items of red meat in addition to meat sausage that show significant also.

The table (4) depicts the evaluation of amount of red meat items consuming by women; the finding shows that women in both groups are consuming red meat with low amount than normal consumption as indicated by the low mean scores for all item, but the findings indicate that the boiled meat has high significant among the items of red meat consumption.

Conclusion

Women in both groups are consuming red meat with low frequency and amount than normal consumption

Recommendation: Avoid eating canned and processed red meat with preservatives and replaced it with fresh well cooked meat. Community orientation towards a healthy, balanced nutrition that contains the basic elements that the body needs without focusing on a specific food. Activation the role of media in increase the awareness of women in the community about healthy diet. Instruct women with breast cancer to follow a healthy diet guideline and avoid eating canned and processed red meat with preservatives during their treatment courses. Presence of nutritional consultant in every oncology hospital to guiding all women with breast cancer about a healthy diet and finally more studies to identify the impact of nutrition upon the incidence of breast cancer in women.

Ethical Clearance: The Research Ethical Committee at scientific research by ethical approval of both environmental and health and higher education and scientific research ministries in Iraq

Conflict of Interest: The authors declare that they have no conflict of interest.

Funding: Self-funding

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