

Original Paper

Nurses' Knowledge about Lymphoma: A Cross-Sectional Study

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ABSTRACT

Background: The most prevalent lymphatic illness is lymphoma. The nurse evaluates and handles a large portion of the problems that lymphoma patients encounter. Due to the systemic effects on both malignant and normal cells, these issues are frequently extensive and impact several body systems. **Aim:** The main aim of the study is to determine the level of nurses' knowledge regarding lymphoma at Basrah Teaching Hospitals. **Methods:** A cross-sectional study using a descriptive design was undertaken to identify the level of nurses' knowledge of lymphoma in Basrah Teaching Hospitals, and this study began from March 19, 2024, to July 2, 2025. Non-probability sampling (purposive sampling) was used to choose them. The study instrument was developed based on evaluations of the literature and earlier lymphoma-related research. The questionnaire tool consisted of (18) items to assess the nurse's knowledge about lymphoma. A team of specialists assessed the instrument's validity and confirmed its content (content validity index = 0.93). The Cronbach's alpha approach was used to assess the instrument's reliability, and the questionnaire items were modified in accordance with expert remarks and recommendations ($\alpha = 0.92$). **Results:** More than half of the nurses have fair knowledge (57%) about lymphoma, with a mean score= 2.27 and a standard deviation= 0.55, and with a significant difference between knowledge levels (P-value = <0.001). **Conclusion:** Nursing staff's knowledge of lymphoma was fair. The study consisted of female nurses with a bachelor's degree in nursing, who had 1–5 Years of service and also worked in nursing.

KEYWORDS : Nurses, Knowledge, Lymphoma

1-INTRODUCTION

When the lymphatic system malfunctions, lymph, or fluid, does not flow through the lymphatic vessels and nodes as it should. This condition is known as lymphatic illness. The most prevalent lymphatic illness is lymphoma [1]. Any disorder characterized by a deviation or disruption of the normal structure or function of the lymph or lymph vessels is referred to as lymphatic disease. Lymphatic system tumors, lymphedema, and lymphadenopathy are a few frequent illnesses and conditions that affect the lymphatic system [2]. The two primary subtypes of lymphoma are non-Hodgkin lymphoma and Hodgkin lymphoma, sometimes known as Hodgkin's disease [3]. Its pathologic characteristics and the need for therapy set it apart from other lymphomas known as non-Hodgkin lymphomas [NHLs] [4]. Hodgkin lymphoma variants may vary in how they develop, disseminate, and respond to therapy. Hodgkin's disease may be classified into two main categories: nodular lymphocyte-predominant Hodgkin lymphoma (NLPHL) and classical Hodgkin's disease (CHD) [5]. Non-Hodgkin lymphomas may be roughly classified into two groups: T-cell lymphomas, which originate from developing T-cells, and B-cell lymphomas, which derive from developing B-cells. Over 80% of lymphomas are B-cell lymphomas [6]. Numerous factors, such as the specific form of lymphoma, the location of its spread throughout the body, the patient's age, and overall health, influence the treatment plan used. Chemotherapy, radiation, immunotherapy, or a combination of these therapies may be used to treat lymphomas. Another option is a blood stem cell transplant. Treatment for lymphoma mostly consists of chemotherapy. A patient's age, general health, the specific ailment they are dealing with, and the treatment procedure will all affect the dosage, timing, and kinds of medications administered [7]. Major objectives for patients with lymphoma may include reducing pain and discomfort, preventing infection, achieving and maintaining adequate nutrition maintaining tissue integrity, activity tolerance, managing hair loss, minimizing vomiting and nausea episodes before, during, and after chemotherapy, being able to take care of oneself and deal with the diagnosis, having a positive body image, and comprehending the disease process and its treatment are all important factors to consider [8]. The nurse evaluates and handles a large portion of the problems that lymphoma patients encounter. Due to the systemic effects on both malignant and normal cells, these issues are frequently extensive and impact several body systems [9]. To administer port-a-cath care, nurses must insert, flush, and recap a needle into the port. Avoiding infections and air occlusions is crucial. Nurses must possess a sufficient level of knowledge regarding catheter challenges and port-a-cath proficiency [10]. Therefore, this study aims to identify the level of nurses' knowledge about lymphoma.

2- MATERIALS AND METHODS

Ethical and official approvals : The Research Ethical Committee gave its approval (ref. 1/3/127 in 1/3/2024). Written consent was obtained from participants. Any participant has the right to withdraw at any stage of this study without any consequences. All participants were kept as anonymous as possible and in confidence throughout the study.

Study Design

A descriptive cross-sectional study was conducted among nursing teams to evaluate nurses' knowledge of lymphoma.

Setting: This study was conducted at the Basrah Teaching Hospitals in Basrah city, which lies in the south of Iraq.

Study Population and Sampling

The research sample of the study consisted of (30) nurses at Basrah Teaching Hospitals, (18) females and (12) males; they had different levels of education: secondary school nurse, diploma, and college of nursing, and all of them were in current service. Purposive sampling, often known as non-probability sampling, was used to choose them .

Data Collection Tools

This study began on March 19, 2024, to July 2, 2025. The research tool was developed based on evaluations of the literature and earlier lymphoma investigations. The inclusion criteria included both sexes, at least one year of experience, and all levels of education. Exclusion criteria included less than one year of experience and nurses who refused to participate in this study. The questionnaire tool consisted of (18) items to assess the level of nurses' knowledge about lymphoma in Basrah Teaching Hospitals, and also included variables (name of the hospital, gender, age, years of service, academic achievement, type of work). The questionnaire was distributed to (30) male and female nurses with no less than one year of experience. All participants answered (18) questions through an electronic questionnaire, and then we collected the results according to the correct model answer. The scores for the items were as follows (Strongly Agree = 3, Agree = 2, Disagree =1), with a total score of 48 .

Pilot Study

A pilot study was conducted on 10 nurses to identify any obstacles and to estimate the time required for data collection. A panel of experts (7) completed the instrument validation and achieved content validity by using the content validity index (CVI = 0.93). Additionally, the questionnaire items were modified based on expert comments and suggestions, and the Cronbach's alpha ($\alpha = 0.92$) was used to assess the instrument's reliability.

Statically Analysis

The data were examined using SPSS software, version 26. Descriptive data included frequency (f), mean score (M.S.), standard deviation (S.D.), and percentage. Inferential data analysis methods included the T-test for paired samples and one-way analysis of variance (one-way ANOVA).

3-RESULTES

According to Table 1, most of the nurses were female (60%) and within the age group (20-24) (70%). Regarding the type of work, most were in nursing (83%), and most had a baccalaureate degree (43%). Most nurses had 1-5 years of experience (67%), worked in the surgery department (30%), and were from Al-Sadder Teaching Hospital (37%). According to Table 2, most nurses had a good knowledge in most questions (except Q1, which was fair). According to Table 3, most of the nurses had good knowledge about lymphoma, with a mean score = 2.566.

Table (1): Distribution of nurses according to their Demographic Characteristics (NO. 30 Nurse)

Demographic Variables	Variables Classes	Frequency	Percent
Gender	Male	12	40 %
	Female	18	60 %
	Total	30	100 %
Age	20-24	21	70 %
	25-29	9	30 %
	Total	30	100 %
Type of work	Nursing	25	83 %
	Administrative	5	17 %
	Total	30	100 %
Education level	Secondary school	5	17 %
	Institute	12	40 %
	College	13	43 %
Years of Service	Total	30	100 %
	1-5	20	67 %
	6-10	10	33 %
Workplace	Total	30	100 %
	Surgery	9	30 %
	Internal medicine	6	20 %
Hospital	Cardiac surgery	8	27 %
	Emergency	7	23 %
	Total	30	100 %
Hospital	Al-Basrah Teaching	9	30 %
	Al-Sadder	11	37 %
	Al-Shiafaa	6	20 %
Hospital	Oil Hospital	4	13 %
	Total	30	100 %

Table (2): Evaluation of Nurses' Knowledge about the lymphatic system

Information domain	N	Min Score	Max Score	Mean Score	SD	Evaluation
Q1	30	1	3	2.07	0.64	Fair
Q2	30	1	3	2.67	0.54	Good
Q3	30	2	3	2.87	0.34	Good
Q4	30	1	3	2.40	0.67	Good
Q5	30	2	3	2.73	0.45	Good
Q6	30	2	3	2.80	0.40	Good
Q7	30	2	3	2.43	0.50	Good

The range of scores is as follows: poor (mean score 1-1.66), fair (mean score = 1.67-2.33), and good (2.34-3). SD = Standard Deviation.

Table 3: Evaluation of Nurses' Knowledge about Lymphoma

Statistics	N	Mean	SD	Evaluation		
Information domain	30	2.566	0.26	Poor 0	Fair 7	Good 23

SD = Standard Deviation

Table (4): Evaluation of Nurses' Knowledge about lymphoma

Knowledge domain	N	Min Score	Max Score	Mean Score	Sd.	Evaluation
Q1	30	1	3	2.13	0.507	Fair
Q2	30	1	3	2.07	0.450	Fair
Q3	30	1	3	1.60	0.563	Poor
Q4	30	1	2	1.63	0.490	Poor
Q5	30	1	3	1.90	0.403	Fair
Q6	30	1	3	1.73	0.691	Fair
Q7	30	1	3	1.87	0.571	Fair
Q8	30	1	3	2.13	0.507	Fair
Q9	30	1	3	1.97	0.669	Fair
Q10	30	1	3	1.93	0.583	Fair
Q11	30	1	3	1.90	0.759	Fair

Sd. = Standard Deviation

According to Table 5, more than half of the nurses have fair knowledge (57%) about lymphoma, with a mean score = 2.27 and a standard deviation = 0.55, and with a significant difference between knowledge levels (P-value = <0.001). According to Table 6, there is a significant relationship between nurses' knowledge and type of work (p-value = 0.04). There is a non-significant relationship between nurses' knowledge and (education level and years of experience) (p-value = 0.29 and 0.38, respectively).

Table (5): Overall Evaluation of Nurses' Knowledge about Lymphoma

Evaluation levels	F	%	Overall Evaluation			Significant		
			MS	SD	Eva.	Anova	P- value	Sig.
Poor	1	3 %	2.27	0.55	Good	53.80	<0.001	S
Fair	17	57 %						
Good	12	40 %						
Sum	30	100 %						

F= Frequency, % = Percentage, MS = Mean Score, poor (MS 1-1.66), Fair (MS 1.67-2.33), good (MS 2.34-3), S.D = Standard deviation, Eva= Evaluation, S = significant

Table (6): The Relationship between Nurses' Knowledge and their Demographic Characteristics

Demographic Variables	Variables Classes	MS	Sd	Val.	Significant			
					Cal.	Tab.	P-value	Sig.
Type of work	Nursing	2.19	0.20	M	T-test =2.10	T-test=2.04	0.04	S
	Administrative	2.39	0.05	G				
	Secondary School	2.10	0.07	M				
Education level	Institute	2.26	0.16	M	Anova=1.27	Anova =3.45	0.29	NS
	College	2.24	0.25	M				
Years of Service	1-5	2.25	0.16	M	T-test =0.89	T-test =2.04	0.38	NS
	6-10	2.18	0.26	M				

NS = non-significant, S = Significant, MS = mean score, and values for independent samples when two groups are using a t-test, and for three or more groups, using one-way ANOVA.

4-DISCUSSION

Thirty samples were presented during the data gathering and analysis process. It was observed that the majority of people who are aware of lymphoma are between the ages of 20 and 24, and that the percentage of nurses is high (60%). Regarding the educational background of nurses, 43% had completed college, 40% had completed an institute, and 17% had just completed high school. According to this study, women were more likely than men. [11] provided support for this outcome. The majority of the nurses in the study, "Impact of Nursing Practice on Nurses' Function and Venous Thromboembolism Hazards Among the Patients with Non-Hodgkin Lymphoma Getting Surgery," were married women. In Basrah Teaching Hospital, Shifa, Oil, and Chest, the percentage of health care personnel who know about lymphoma cancer is high for questions Q1, Q4, Q3, Q5, Q6, Q7, and Q2. The degree of knowledge about lymphoma was average, as shown in table (2-4).

Low Level (3%), Intermediate Level (57%), and High Level (40%) are the percentages. This suggests that a higher proportion of people had a moderate level of lymphoma knowledge. According to the current study, 57% of the nurses under investigation had an intermediate level of familiarity with the words, causes, warning signs, and side effects of lymphoma. This could be the result of insufficient continuing efforts to educate people about sickness. Our findings align with [12]. In a study titled "Assessment of Nurses' Knowledge about Non-Hodgkin's Lymphoma," researchers found that over 75% of study nurses had insufficient knowledge about the disease.

The findings of his ANOVA and t-test comparison of demographic data and nurses' knowledge of lymphoma were not significant for the variables gender, age, workplace, education level, and years of experience, but they were significant for the type of employment, as Table (5-4) illustrates. For the variables related to lymphoma (kind of job), the p-value was significant. The variables that were shown had a 0.04 correlation with lymphoma in connection to workplace. These results may be due to the lack of staff training programs. Based on the relationship between demographic parameters and an overall appropriate level of knowledge, there is a statistically significant correlation between nurses' knowledge of patients with lymphoma and their demographic information as a type of job. Even though there isn't a statistically significant relationship between their years of service and education level, this outcome was in line with [13]. The study, titled "Effectiveness of Educational Program on Nurses' Knowledge and Practice toward Malignant Lymphatic Tumors at the Oncology Centre," found no statistically significant relationship between general knowledge level and demographic variables like educational attainment.

Several limitations include a short period, small sample size, and a cross-sectional study. **Conclusions**

Most of the study sample of nursing staff for the study were bachelor's degree in Nursing; they were female and had (1-5) years of service, and also had nursing work. The majority of nurses demonstrated a fair level of knowledge regarding lymphoma. There is a statistically significant relationship in the knowledge of nurses according to the type of nursing work. Further studies were recommended with a large sample size and longitudinal design.

Conflict of interest: No conflict of interest.

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