MOSUL JOURNAL OF NURSING
Online ISSN: 2663-0311 - Print ISSN: 2311-8784
Website: https://mjn.mosuljournals.com

RESEARCH ARTICLE

Effectiveness of An Educational Program on Nurse's' knowledge about Nutritional Status of Children with Leukemia at Hematology Center in Medical City

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ABSTRACT

Background: Leukemia is the most frequent malignancy in children, accounting for 30% of all cancer occurrences in this age group. Although there are some links between environmental and host variables, the majority of childhood leukemia cases are random. Acute lymphoblastic leukemia (ALL), acute myelogenous leukemia (AML), and chronic myelogenous leukemia are the three primary subtypes of leukemia (CML). The most prevalent subtype is ALL, which accounts for around 80% of cases.

Aim: Assess the impact of an educational program on nurses' comprehension of the dietary needs of children with leukemia. Examine the relationship between nurses' comprehension of nutritional status for children with leukemia and demographic factors like age (gender, age, level of education)

Methodology: For this descriptive study, the object-analytical sample was chosen at random from the 40 nurses working in the Hematology Center Pediatric Unit at Medical City. The questionnaire was constructed to collect data, and from 10th of May/2021 to 15th of August/2021, a study was conducted to evaluate a pilot questionnaire question set. In SPSS version 18, descriptive statistics (frequency and percentage) as well as deductive statistics (Chi-Square test) were used to examine the data (21).

Results: The study found that female participants in the study sample outnumbered men by a margin of (57.5) percent, with the majority of the sample (57.5%) being over 34 years old (37.5 percent). The majority of the sample members are graduates of the institutions, and the overall score of nursing knowledge was moderate (52.5%). (1.53). In addition. There is a link between nurses' knowledge and their degree of education.

Conclusion: The females of sample study are more than males, it is (57.5 %) females and (42.5 %) males. The highest percentage of age group (34 and more) years, (37.5 %) of the study sample, and the nurse's educational level is institution it (52.5 %).

Keywords: Effectiveness, Educational Program, Nurses', knowledge, Nutritional Status, Leukemia.

Received: 07 April 2022, Accepted: 14 June 2022, Available online: 21 July 2022

INTRODUCTION

The relationship between cancer (at least some forms) and diet has received a lot of attention in the scientific literature (Mayne, Playdon & Rock (2016). Foodstuffs, food preparation and cooking, macro- and micronutrient composition, pollutants, additives, and the overall food system have all been studied to see if food has a role in raising or lowering the risk of certain cancers (Andreescu, Puiu & Niculescu (2018). Human dietary habits and food production patterns have evolved considerably in the last 50 years, both in industrialized and developing nations. We've progressed from locally grown fresh foods—vegetables, tubers, and animal-sourced goods—to packaged and processed ready-to-eat or ready-to-heat foods (Swinburn, et all (2019). During therapy, patients develop dietary patterns that they keep throughout their lives (Barnea, Raghunathan, Friedman & Tonorezos, 2015). Process evaluation offers for a better understanding and explanation of a program's success or failure. Barriers and facilitators can be overcome, allowing for a more accurate attribution of outcomes to the intervention rather than its execution (Linnan, Steckler (2002).

Poor nutrition quality is a prominent and avoidable cause of ill health worldwide, affecting both mother and child health as well as non-communicable illnesses (Afshin, Sur, Ferrara, Salama, Murray, 2019). Children with cancer are especially vulnerable to malnutrition since their substrate requirements are higher as a result of the disease and its treatment. At the same time, children have higher nutritional needs in order to achieve proper growth and neurodevelopment (Bhoite (2016). The survival rate of youngsters with cancer has risen considerably in recent decades. Progress in early detection, multimodality therapy, and supportive care, including infection prevention and control, are also important considerations. Data completeness and quality assurance are also ensured in multicenter research (Creutzig, Zimmermann, Hannemann, Kraemer (2003).

Malnutrition is a common complication in children with cancer, with rates ranging from 8% to 60%. It is connected to diagnosis, illness progression, and evaluation methods. For children with cancer who have large tumor masses at the time of diagnosis, nutritional screening, which assesses body weight and height, may provide adequate nutritional status information. Malnutrition is a major public health issue for children in underdeveloped countries Because this is a phase of fast growth and development marked by changes in body size and composition as well as increased physical activity, children under the age of five are at a significant risk of malnutrition. When malnutrition strikes at a young age, the repercussions are severe and long-lasting (Factor (2015).

In this aspect, children require nutrient-dense meals to meet their increasing dietary requirements. Because most youngsters are still forming feeding habits at this age (Gregory (2005).

This is an excellent moment for childcare providers to promote healthy eating habits. The mother, who is generally the primary caretaker for her children, is normally in charge of ensuring that they are fed a nutritious meal (Kabahenda (2002).

Methodology

Non probability (purposive – sample) consist of 40 nurses had been chosen in this study from the Hematology Center Pediatric Ward at Medical City. A descriptive study was conducted on Effectiveness of An Educational Program on Nurse's' Knowledge about Nutritional Status of Children with Leukemia during the period of (18^{th} April/ 2021 to 10^{th} February/ 2022). The study is carried out in Baghdad City. These Hematology Center provide health to patients with oncological like leukemia and solid tumors…etc. attending

to the hospitals for receiving treatments, blood transfusion and their products and doing full investigations. The services provide for the patients free. The setting of these hospitals in the middle of Baghdad City. Data collection during period (1st May /2021 until 20th August/2021). With estimate time required for interview and other data collection from record was 15-20 minutes. And using the scale:

Mean of Score (MS) = (L) Low Less than (1.33), (M) Moderate = (1.33-1.67), (H) High= More than (1.67).

Study instruments

Following the researcher's evaluation of pertinent literature and prior studies, a questionnaire format is devised and constructed to fulfill the study's goal. The questionnaire is divided into four sections, each with 48 questions:

Part 1:- Include socio-demographic data of nurses which are gender, age, level of education.

Part 2:- Which is about nurses' knowledge toward nutrition for children with leukemia.

Statistical analysis:

The data are analyzed through the application of statistical procedure and the package of SPSS version (20).

Result

List	Demographic characteristics	Frequency	Percent
1	**Gender**		
	Male	17	42.5
	Female	**23**	**57.5**
	Total	**40**	**100.0**
2	**Age (year)**		
	19 - 23	6	15.0
	24 - 28	13	32.5
	29 - 33	6	15.0
	34 - and more	**15**	**37.5**
	Total	**40**	**100.0**
3	**Educational level**		
	College	6	15.0
	Institute	**21**	**52.5**
	Secondary School	13	32.5
	Total	**40**	**100.0**

Table 1 shows the distribution of the research sample based on demographic parameters such as Nurse's Gender. Age. Education Level**.**

Table (2): Nurses' Knowledge toward Nutrition of Children with Leukemia.

 DOI: 10.33899/mjn.2022.175784

No.	Items	I know		Not sure		I don't know		M.S
		F	%	F	%	F	%	
1	Definition of Leukemia	37	94	2	4	1	2	1.08
Total		40 (100%)						
2	Definition of nutrition	33	86	2	4	5	10	1.24
Total		40 (100%)						
3	The importance of nutrition for a patient with leukemia	18	56	5	10	17	34	1.78
Total		40 (100%)						
4	What causes malnutrition in children with leukemia	36	92	1	2	3	6	1.14
Total		40 (100%)						
5	Types of food groups	35	90	2	4	3	6	1.16
Total		40 (100%)						
6	What are the nutrition that a child with leukemia should consume?	11	22	6	18	23	60	2.38
Total		40(100%)						
7	What nutrition's should a child with leukemia stay away from?	32	84	3	6	5	10	1.26
Total		40 (100%)						
8	What is the information do you have for parents	23	58	9	22	8	20	1.62
Total		40 (100%)						

Mean of Score (MS) = Low Less than (1.33), Moderate = (1.33-1.67), High= More than (1.67)

Dissection

The study included (40) nurses who worked in the cancer wards of Hematology Center at Medical City

Data studies of the distribution of demographic characteristics were conducted.

Table 1 shows that the largest percentage (57.5%) is female, while the lowest number (42.5%) is male; this conclusion is also consistent with (Zaid, 2010), who found that the highest percentage is female (65 percent). This result indicates that being a nurse is more likely for females because the job is based on female gender, and males only entered the field in the 1900s. This finding is consistent with a survey conducted in the United States, which revealed that there were 3.5 million employed nurses in 2011, with 3.2 million females and 330,000 males (Lammel, Ion, Roeper, & Malenka. 2011). And Figure (2) depicts the sample distribution by nursing age, indicating that more than 37.5 percent of ages are represented (34 and more). (Leila, Aysin. 2015). Agree with this conclusion (2015). It was found that more than half of them were between the ages of

20 and 30. (53.3 percent). The figure (3) depicts the distribution of samples by nursing education level, indicating that the institute (52.5%) has the largest proportion and college graduates (15%) have the lowest percentage. The American Association of Colleges of Nursing, the nation's voice for baccalaureate and graduate nursing schools, agrees that education has a substantial influence on the nurse clinician's knowledge and abilities, as it does for other health care professionals.

Table 2 demonstrates the total mean scores (1.45) is **moderate** for nurses' knowledge toward nutrition of children with leukemia, and the table also shows that the **high** score (2.38) is nurses answers which adequate knowledge concerning item (6) which is centered around what are the nutrition that a child with leukemia should consume and the moderate score (1.62) of nurses answers was inadequate knowledge concerning the item (8) which centered around what is the information do you have for parents. These results are supported by (Hossain. (2010). Whose study is Nurses Knowledge and Attitude, and Pain Management Practices of postoperative Pediatric in Bangladesh, which revealed that, total, nurses level of knowledge and attitudes to postoperative pain management in children was at the moderate level M=66.79%. Also the current study result disagreed with a study done by Lui, L. (2005) that showed knowledge score of pain management the mean total right score was **low** (M=9.49) with range from (4 to 16) score (Rosseter. (2014).

Conclusions:

According to the present study the following findings and conclusions are the females of sample study are more than males, it is (57.5 %) females and (42.5 %) males wheal the highest percentage of age group (34 and more) years, (37.5 %) of the study sample. And the nurse's educational level is institution it (52.5 %), and the nurse's number shows that the highest percentage it is (55.0 %) in Hematology Center Pediatric Ward at Medical City.

Ethical Considerations

One of the most important issues in any research using humans as subjects, according to St. Louis (2018), is ensuring that their rights are protected. Among them are the procedures' safety, informed consent, anonymity, and lack of undue pressure to participate. Participants were thoroughly informed about the present investigation and its aims before orally accepting to participate in the study. Furthermore, the confidentiality of the information obtained from carers was considered. As a consequence, the nursing college's ethical committee authorized the study after reviewing the research program procedure.

Funding

This study received no financing from governmental, private, or non-profit organizations.

Contributions of the Author

Study idea; original draft writing; data collection; data analysis; and final edition review by all authors.

Disclosure Statement:

The authors state that they do not have any competing interests.

Acknowledgments

The anonymous referees' suggestions were quite useful.

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