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## **Assessment Need of Nurses Knowledge About Nutrition for Children with Leukemia at Hematology Pediatric Ward in Medical City**

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**Abstract**--Background: Leukemia in childhood is the second leading cause of death among children that stated in the bone marrow and affected for producing stem cells. The nurse's and health care provider role is to help children and their families to accept the disease based on their education and its treatment.Objectives: The study aim to assess the nurses' knowledge towards nutrition and identify the relationship between demographic characteristics of the nurses with the knowledge (such as age, sex, educational level, marital status and years of experience).Research Methodology: descriptive study dealt with object-analytical sample randomly from the 40 nurses working in the Hematology Center pediatric ward at Medical City. The questionnaire was designed to gather information, and conducted a study to test a pilot questionnaire questions period (18th April/2021 to 10th July/ 2021). Data was analyzed by applying descriptive statistics (frequency and percentage) and deductive statistics (Chi-Square test) SPSS version (20).Results: The study has shown that female participants in the study sample more than males, and the percentage (57.5%) and over the sample aged more than 34 years, and the proportion (37.5%). And most of sample members are graduates of the institutes, and the proportion (52.5%), the total score of nurses knowledge was moderate (1.53). There is a significant association between nurses' knowledge with level of education and participant in training course in addition to significant relationship between knowledge and years of experience inside oncology ward. Recommendation: The researcher suggests that establishment of training courses for the nursing staff to increase their knowledge and

develop their experience. Establish specialized department for nutrition in the hematology center.

**Keywords**---knowledge, leukemia, nurses, nutrition.

## **Introduction**

knowing of the relevance of nutrition statuses for children with leukemia and research on cancer in children is increasing. This is changing the clinical care of these children and the understanding of the biology of their cancers. Nutritional oncology is an interdisciplinary approach in which cancers are investigated as both systemic and local diseases originating by changes in the genome and developed through a multistep process that may be modified by nutritional factors. These dietary preemptive principles are critical for cancer prevention, cancer patient quality of life, and cancer recurrence decrease. The increased understanding of the gene-nutrient relationship is changing how we think about cancer and other chronic diseases, as well as how we treat them<sup>1,2</sup>. Nutritional status—both underweight and Overweight is a modifiable predictive factor that has an influence on cancer clinical outcomes<sup>3</sup>. According to a recent assessment published in the Lancet, the problem of underweight and overweight is a twin plague in developing countries<sup>4</sup>. From conception through adulthood, nutrition is critical for good health. It is self-evident and well-documented that optimum nutrition is critical to children's well-being during their developmental phases. The fact that the fetus, child, and adolescent are all going through a growth and development process distinguishes pediatrics from adult medicine. The spectrum of disorders and their pathophysiology throughout this time differs from that seen in maturity. This is also reflected in the varying rates of cancer in newborns, babies, children, and adolescents, as well as their biology. Underweight, overweight, and/or micronutrient deficiency are all symptoms of poor nutrition. This may happen to children with cancer before they are diagnosed, throughout their treatment, and after they are finished<sup>5</sup>.

## **Methodology**

descriptive study dealt with object-analytical sample randomly from the 40 nurses working in the Hematology Center pediatric ward at Medical City. The questionnaire was designed to gather information, and conducted a study to test a pilot questionnaire questions period (18<sup>th</sup> April / 2021 to 10<sup>th</sup> July/ 2021). Data was analyzed by applying descriptive statistics (frequency and percentage) and deductive statistics (Chi-Square test) SPSS version (20). Non probability (purposive – sample) consist of 40 nurses had been chosen in this study from Hematology Center Pediatric Ward at Medical City. Data collection during period (26<sup>th</sup> June/2020 until 1st November/2020). 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).

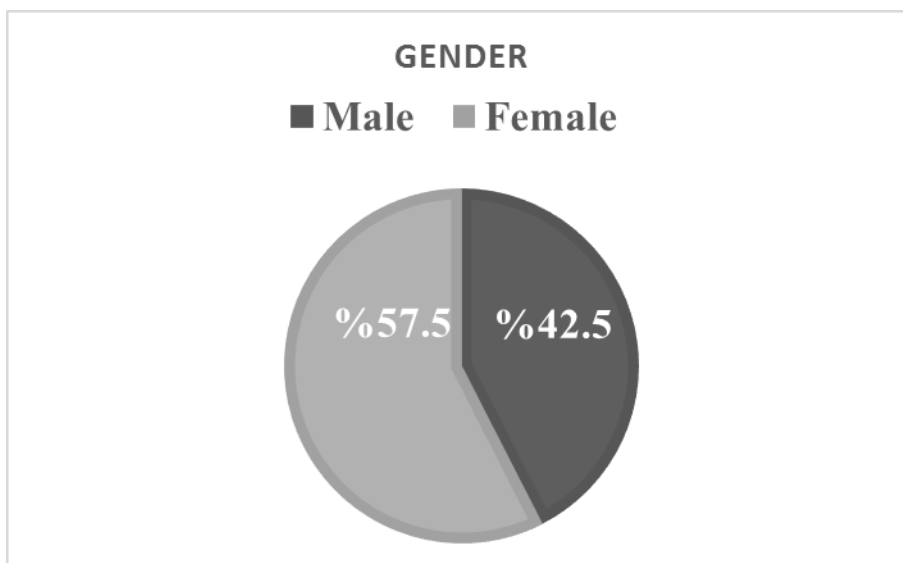
**Results**

Figure 1. Distribution of the study sample by their demographical characteristics of Nurse's Gender

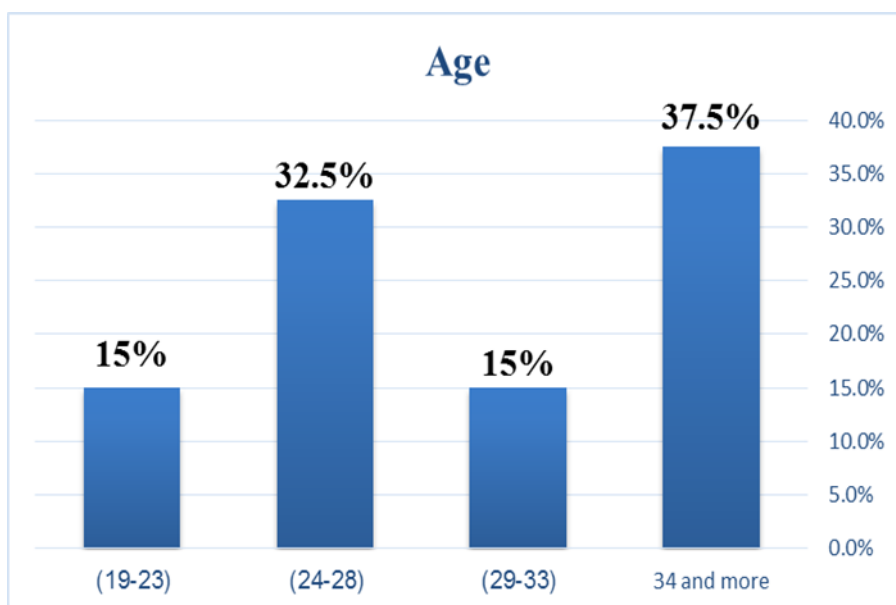


Figure 2. Distribution of the study sample by their demographical characteristics of Nurse's Age

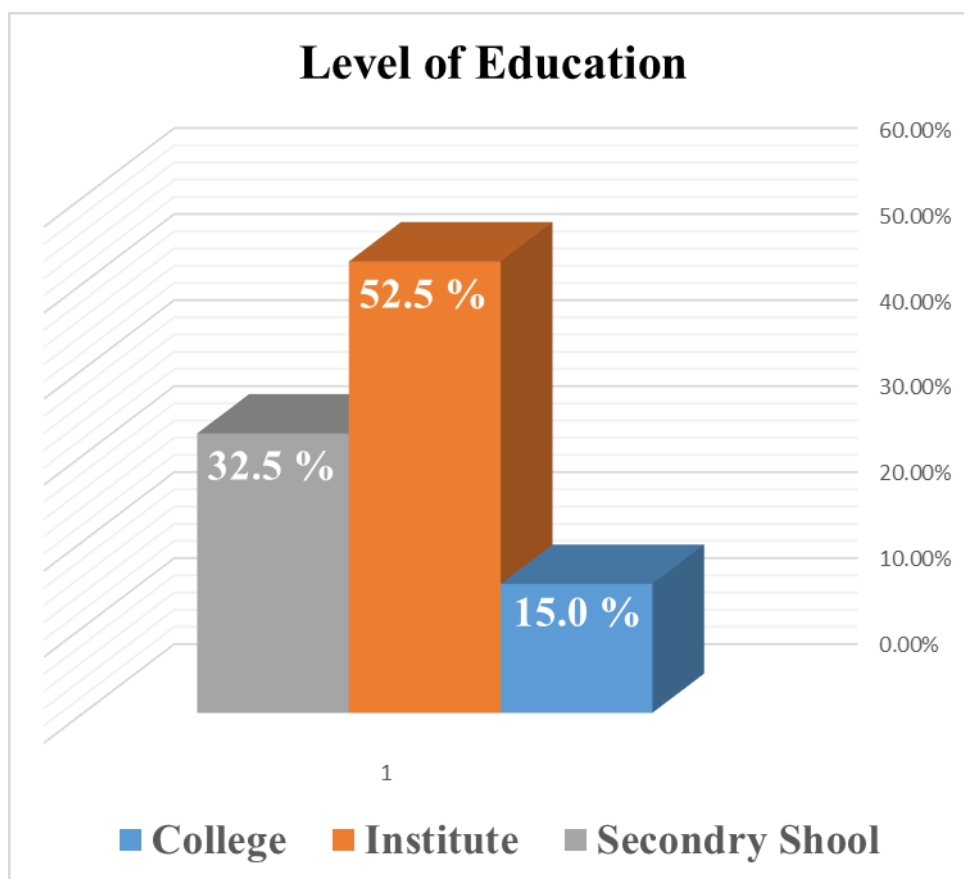


Figure 3. Distribution of the study sample by their demographical characteristics of Nurse's Level of Education.

Table 1  
Shows the Nurses' knowledge toward Nutrition Statuses for Children with Leukemi

No.	Items	Yes	No	MS	Assess
		F (%)	F (%)		
1	What is Leukemia	4(40.0)	6 (60.0)	1.40	Poor
2	What is nutrition	4(40.0)	6 (60.0)	1.40	Poor
3	What is the importance of food for a patient with leukemia	5(50.0)	5 (50.0)	1.50	Poor
4	What are the causes of malnutrition in a patient with leukemia	5(50.0)	5(50.0)	1.50	Poor
5	What are the food groups	4(40.0)	6 (60.0)	1.40	Poor
6	What are the foods should be eaten by a child suffering from leukemia	3(30.0)	7(70.0)	1.30	Poor
7	What are the foods should a child with leukemia avoid	6 (60.0)	4 (40.0)	1.60	Good
8	What advice do you give to parents	5(50.0)	5(50.0)	1.50	Poor
	Total	10(100.0)		1.45	Poor

F: Frequency, %: Percentage

MS= Mean of Scores, Poor= (Mean of Scores  $\leq$  1.5), Good= (Mean of Scores =  $>$ 1.5)

### **Dissociation of the study**

Figure (1) indicates that the highest percentage (57.5 %) is female, the lowest percentage (42.5 %) is male, also this result agreed with the findings how that the highest percentage is female (65%)<sup>6</sup>. This result shows that being a nurse more likely for female because this job it is based on female gender and then the male interred this field in 1900s and this finding agreed with the survey in United States whose shows that 3.5 million employed nurses in 2011, about 3.2 million of whom were female and 330,000 male<sup>7</sup>. Figure (2) Shows distribution of sample according to nurse's age, it indicates that more than (37.5 %) of ages is (34 and more). This result It disagreed with result more than half of them were in the 20-30 years-old age group (53.3%)<sup>8</sup>. Figure (3) Shows distribution of samples according to nurse's level of education, it indicates that the highest percentage is for the institute (52.5 %) and the lowest percentage (15 %) is college graduates this result is supported by The American Association of Colleges of Nursing, the national voice for baccalaureate and graduate nursing programs, believes that education has a significant impact on the knowledge and competencies of the nurse clinician, as it does for all health care providers<sup>9</sup>. And the Table of the Nurses' knowledge toward Nutrition Statuses for Children with Leukemia showed, questioner related to the nurse's knowledge about the nutrition in children with leukemia prepared by the researcher, to reflected the importance of the program and according to its results that shows sample level of knowledge was weak, this result of the present study disagree, under the title of a study to examine if caretakers of children with leukemia who frequent oncology institutions are aware of the requirement for neutropenia home care. The researchers discovered that carers had a decent understanding of eating patterns and that the majority of them have a respectable degree of experience this difference may be due to a variation of the population culture of the societies from one country to another<sup>10</sup>

### **Conclusion**

According to the findings of the present study, the total knowledge of the nurses was poor related to nutrition status for the children with leukemia. And the great majority of the nurses were unconcerned with the nutritional health of the children with leukemia. And the socio-demographic characteristics of nurse's have effect on their knowledge toward nutrition status for the children with leukemia with the exception of the socio-economic status and level of education of the nurse's that has direct effect on nurse's knowledge. Wheal the nurse's expertise has a direct impact on their views on the nutritional statues of leukemia patients.

### **Recommendations**

Nurses with child leukemia might participate in an education program to enhance their knowledge and attitudes. In partnership with the Ministry of Health and cancer treatment institutions, we are working to provide mandatory training for

nurses who are caring for children with leukemia and encourage nurses to understand about dietary laws, if not for financial reasons, but for moral reasons.

### **Ethical consideration**

According to St. Louis (2018), one of the primary considerations in any research involving humans as subjects is ensuring that their rights are respected. The procedures' safety, informed consent, secrecy, and lack of excessive pressure to engage are among them. Before verbally agreeing to participate in the study, the participants were fully informed about the current inquiry and its goals. In addition, the confidentiality of the information acquired from caregivers was taken into consideration. As a result, after examining the research program protocol, the ethical committee at the nursing college approved the study

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