A Study to Assess the Knowledge and Awareness Regarding Childhood Non-Hodgkin Lymphoma Among Parents of Pediatric Patients

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***Abstract*—Childhood Non-Hodgkin Lymphoma (NHL) is one of the most common pediatric cancers affecting the lymphatic system. Early recognition of symptoms and timely medical intervention can significantly improve treatment outcomes. Parents play a crucial role in identifying warning signs and seeking healthcare services. Therefore, assessing parental knowledge and awareness regarding childhood NHL is important for early diagnosis and management. Objectives- To assess the knowledge and awareness regarding Childhood Non-Hodgkin Lymphoma among parents of pediatric patients. Methodology- A descriptive cross-sectional research design was adopted for the study. Thirty parents of pediatric patients were selected through convenient sampling from Ims & sum hospital, Bharatpur, Bbsr. Data were collected using a structured knowledge questionnaire. Descriptive and inferential statistics were used for data analysis. Results- Among 30 parents, 26.7% had poor knowledge, 50.0% had average knowledge, and 23.3% had good knowledge regarding Childhood Non-Hodgkin Lymphoma. Educational status and previous exposure to cancer-related information showed a significant association with knowledge scores, while age and gender were not significantly associated. Conclusion-The study revealed that most parents possessed only average knowledge regarding Childhood Non-Hodgkin Lymphoma. Educational interventions and awareness programs are recommended to improve parental understanding and facilitate early detection of childhood cancers.**

***Index Terms*—Childhood Non-Hodgkin Lymphoma, Knowledge, Awareness, Parents, Pediatric Patients.**

I. INTRODUCTION

Childhood Non-Hodgkin Lymphoma (NHL) is a malignant disorder of the lymphatic system characterized by uncontrolled proliferation of lymphocytes. It represents approximately 7% of all childhood cancers and is among the most common pediatric malignancies worldwide. Childhood NHL is generally aggressive but highly responsive to treatment when diagnosed early. Common symptoms include enlarged lymph nodes, fever, weight loss, night sweats, abdominal swelling, and fatigue.

Parents are often the first individuals to observe early symptoms in children. Adequate awareness regarding risk factors, warning signs, diagnostic procedures, and treatment options can contribute to prompt healthcare-seeking behavior. However, limited knowledge among parents may result in delayed diagnosis and poorer health outcomes. Therefore, assessment of parental awareness regarding Childhood NHL is essential for developing effective educational interventions.

II. NEED FOR STUDY

Childhood NHL contributes significantly to global pediatric cancer morbidity and mortality. According to recent global burden estimates, more than 20,000 new childhood NHL cases occur annually worldwide. Despite advances in treatment, delayed diagnosis remains a challenge due to lack of awareness among caregivers. Studies have shown that parental knowledge regarding childhood cancers is often inadequate, leading to delays in seeking medical attention. Improving awareness among parents may enhance early detection and improve survival outcomes.

III. OBJECTIVE OF THE STUDY

1. To assess the knowledge and awareness regarding Childhood Non-Hodgkin Lymphoma among parents of pediatric patients.
2. To determine the association between knowledge scores and selected demographic variables.

IV. HYPOTHESES

H1: There is a significant association between knowledge scores regarding Childhood Non-Hodgkin Lymphoma and selected demographic variables among parents of pediatric patients.

V. METHODOLOGY

The present study adopted a quantitative research approach with a descriptive cross-sectional research design to assess the knowledge and awareness regarding Childhood Non-Hodgkin Lymphoma among parents of pediatric patients. The study was conducted in Ims & sum hospital, Bharatpur, Bbsr. The target population comprised parents accompanying pediatric patients during their hospital visits. A total of 30 parents were selected as study participants using a non-probability convenience sampling technique. Parents who were willing to participate, available during the period of data collection, and able to understand the study questionnaire were included in the study.

Data were collected using a structured questionnaire developed by the researcher after an extensive review of relevant literature and expert consultation. The tool consisted of two sections. Section A included demographic variables such as age, gender, educational status, and previous exposure to cancer-related information. Section B comprised multiple-choice questions designed to assess knowledge and awareness regarding Childhood Non-Hodgkin Lymphoma, including its causes, signs and symptoms, risk factors, diagnosis, treatment, and prevention. The content validity of the tool was established through review by experts in pediatric nursing, oncology, and research methodology. Reliability of the tool was determined using an appropriate statistical method prior to data collection.

Formal administrative permission was obtained from the concerned hospital authorities before conducting the study. Informed consent was obtained from each participant after explaining the purpose and nature of the study. Confidentiality and anonymity of the participants were maintained throughout the research process. Data collection was carried out over a specified period through face-to-face administration of the questionnaire. The collected data were organized, coded, and analyzed using descriptive and inferential statistics. Frequency, percentage, mean, and standard deviation were used to describe the demographic characteristics and knowledge levels of the participants, while the Chi-square test was used to determine the association between knowledge scores and selected demographic variables. The findings were presented in tables and graphs for better interpretation.

VI. ANALYSIS AND INTERPRETATION

Table 1: Distribution of Parents According to Age (N=30)

Age Group (Years)	Frequency	Percentage
20–30	10	33.3%
31–40	12	40.0%
Above 40	8	26.7%

The data presented in Table 1 show that among the 30 parents, 12 (40.0%) belonged to the age group of 31–40 years, 10 (33.3%) were in the age group of 20–30 years, and 8 (26.7%) were above 40 years of age. This indicates that the majority of the respondents were in the age group of 31–40 years.

Table 2: Distribution According to Gender

Gender	Frequency	Percentage
Male	14	46.7%
Female	16	53.3%

Table 2 reveals that out of 30 respondents, 16 (53.3%) were females and 14 (46.7%) were males. The findings indicate that female participants constituted a slightly higher proportion of the study sample compared to males.

Table 3: Distribution According to Educational Status

Education	Frequency	Percentage
Primary	6	20.0%
Secondary	12	40.0%
Graduate	8	26.7%
Postgraduate	4	13.3%

The data in Table 3 indicate that 12 (40.0%) parents had secondary education, 8 (26.7%) were graduates, 6 (20.0%) had primary education, and 4 (13.3%) had postgraduate education. The majority of the respondents had completed secondary education.

Table 4: Previous Exposure to Cancer-related Information

Exposure	Frequency	Percentage
Yes	11	36.7%
No	19	63.3%

Table 4 shows that 19 (63.3%) parents had no previous exposure to cancer-related information, whereas 11 (36.7%) reported having prior exposure to such information. The findings suggest that most participants lacked previous information regarding cancer and its related conditions.

Table 5: Knowledge Level Regarding Childhood NHL

Knowledge Level	Frequency	Percentage
Poor (0–10)	8	26.7%
Average (11–20)	15	50.0%
Good (21–30)	7	23.3%

The data presented in Table 5 reveal that 15 (50.0%) parents had average knowledge regarding Childhood Non-Hodgkin Lymphoma, 8 (26.7%) had poor knowledge, and only 7 (23.3%) had good knowledge. The findings indicate that the majority of parents possessed only average knowledge and awareness regarding Childhood Non-Hodgkin Lymphoma.

Table 6: Association Between Knowledge Level and Demographic Variables

Variable	χ^2 Value	Table Value	Significance
Age	2.15	5.99	NS
Gender	1.02	3.84	NS
Educational Status	8.76	7.81	Significant
Previous Exposure	6.54	3.84	Significant

Table 6 demonstrates the association between knowledge levels and selected demographic variables. The calculated

Chi-square value for age ($\chi^2 = 2.15$) was less than the table value (5.99), indicating no significant association between age and knowledge level. Similarly, gender ($\chi^2 = 1.02$) was not significantly associated with knowledge level as the calculated value was lower than the table value (3.84). In contrast, educational status ($\chi^2 = 8.76$) showed a significant association with knowledge level because the calculated value exceeded the table value (7.81). Likewise, previous exposure to cancer-related information ($\chi^2 = 6.54$) was significantly associated with knowledge level as the calculated value was higher than the table value (3.84). Therefore, the study findings indicate that educational status and previous exposure to cancer-related information significantly influenced parents' knowledge and awareness regarding Childhood Non-Hodgkin Lymphoma, whereas age and gender had no significant influence.

VII. RESULTS

The present study was conducted among 30 parents of pediatric patients to assess their knowledge and awareness regarding Childhood Non-Hodgkin Lymphoma. Analysis of demographic data revealed that the majority of respondents (40.0%) belonged to the age group of 31–40 years, while 53.3% were females. Regarding educational status, 40.0% had completed secondary education, and 63.3% reported having no previous exposure to cancer-related information. Assessment of knowledge and

awareness showed that 15 (50.0%) parents had average knowledge, 8 (26.7%) had poor knowledge, and only 7 (23.3%) demonstrated good knowledge regarding Childhood Non-Hodgkin Lymphoma. These findings indicate that most parents possessed only a moderate level of understanding about the disease, its symptoms, risk factors, diagnosis, and treatment. The association analysis revealed that educational status and previous exposure to cancer-related information were significantly associated with knowledge levels. Parents with higher educational qualifications and prior exposure to cancer information had better knowledge scores. However, age and gender showed no statistically significant association with knowledge and awareness levels regarding Childhood Non-Hodgkin Lymphoma.

VIII. CONCLUSION

The study concluded that the majority of parents of pediatric patients had average knowledge and awareness regarding Childhood Non-Hodgkin Lymphoma, while a considerable proportion demonstrated poor knowledge. The findings highlight the need for effective educational interventions to improve awareness among parents regarding the early signs, symptoms, risk factors, diagnosis, and treatment of Childhood Non-Hodgkin Lymphoma. Improved parental awareness can contribute to early recognition of symptoms, timely healthcare-seeking behavior, and better treatment outcomes for affected children. Educational status and previous exposure to cancer-related information were identified as important factors influencing parental knowledge levels. Therefore, healthcare professionals, particularly nurses, should play an active role in providing health education and awareness programs for parents in hospital and community settings.

IX. LIMITATIONS

- The study was limited to a sample size of 30 parents, which may restrict the generalizability of the findings.
- The study was conducted in Ims & sum hospital, Bharatpur, Bbsr; therefore, the results may not represent all parents of pediatric patients.

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