



## A STUDY ON THE PEDIATRIC LEUKEMIC PATIENTS IN SOCIAL FUNCTIONING AND INDEPENDENT SAMPLE TEST

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### **Abstract:**

A studying patients with leukemia admitted in other hospitals at the same time was not possible. Based on the limitations of this study, including the small number of subjects, applying the study only in one hospital, and in only one section, and the problems of generalize ability, it is recommended for further similar studies to be conducted in other hospitals with larger sample size. Also, to improve the quality of data analysis, it is suggested that in future, researches with similar methodology using multivariate tests also must be considered. Anxiety, irritability, worries, depression, and aggression were also sometimes a barrier to communicate with the patients and for them to complete the questionnaire. It should be noted that the approximate time to enter the study for this number of subjects (n = 49) was 3 months. Another limitation was the limited environment of the study; due to this limitation, studying patients with leukemia admitted in other hospitals at the same time was not possible.

**Keywords:** leukemia, Anxiety, irritability, worries, depression, aggression etc.

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## INTRODUCTION:

Leukemia is a condition in which the bone marrow makes too many white blood cells. The blood cells are not fully formed and so don't work properly to fight against infection. The cells build up in the blood. Dr. Sidney Farber discovered the first effective leukemia treatment in the 1940s. (11) Leukemia as cancer was not known until 1845. It was diagnosed by Dr. John Hughes Bennett to a patient of his in Edinburgh, Scotland. Bennett called the disease Leucocythaemia. Around the 19th Century European doctors had started to observe abnormal levels of white blood cells in patients. Lacking a common name for it, they called the disease "weisses blut", meaning white blood. Some popular names that were associated with discovery were Rudolph Vurchow

## METHODOLOGY:

### Study Site:

The study was conducted from the Department of Oncology, Manipal Hospitals, Guntur, Andhra Pradesh.

### Study Design:

The study was a non-interventional retrospective observational study.

### Study Period:

The study was conducted over a period of three months from November 2018 to January 2019.

### Inclusion criteria:

#### Patients who are undergoing the chemotherapy.

- Newly diagnosed with leukemia by pathology report.
- Parents who are willing and able to provide, signed informed consent.

### Exclusion criteria:

- Concomitant major psychiatric disorders or cognitive dysfunctions that would interfere with a self-reported evaluation.
- Parents who are not willing to provide, signed informed consent.

## Results:

**Table 1:** Distribution of patients having trouble with getting along with other children

	No. of patients	Percentages
Never	0	0%
Almost Never	36	73.5%
Sometimes	9	18.4%
Often	4	8.2%
Almost Always	0	0%

- Patients below age of 8 years and above age of 12 years.

### Sample Size:

A total of 49 pediatric patients from the Oncology Department were taken in the study.

### Source of data:

The Patient's demographic details, clinical findings, laboratory and therapeutic data were collected from following source.

- Patient's case notes/direct interviewing of patient.
- Treatment chart/Medication chart.
- Lab data reports.
- Patient discharge cards.

## METHODS:

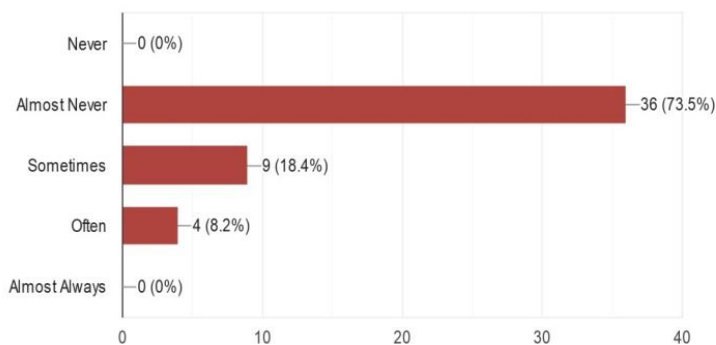
The study was carried out using a standard validated questionnaire called (PedsQL) which of 4.0 version. It comprises of different parameters that are used to estimate quality of life in cancer patients. It major comprises of 23 questions which depicts physical functioning, emotional functioning, social functioning, school functioning. The questionnaire are directly made to be filled by interviewing patient's parent. The scores are given as per the guidelines given.

All the data is manually collected in PedsQL forms and next entered in the Google Forms electronically for the output of the data in graphical form. All this data is exported into the Google sheets where the data is in form of the excel format. From this the whole data is imported into the SPSS software. The data was statistically analysed by using SPSS (Statistical Package for Social Sciences) with version 24.0 (SPSS Inc, Bangalore). All the continuous variables of normal distribution were presented in the form of mean with standard deviation. The *Independent sample t test* and *One way Anova* were performed.

(who coined the name "weisses blut"), Alfred Velkpeau, and Paul Ehrlich. In 1872 Ernst Neumann observed the leukemia infected the bone marrow too.

### Getting along with other children

49 responses



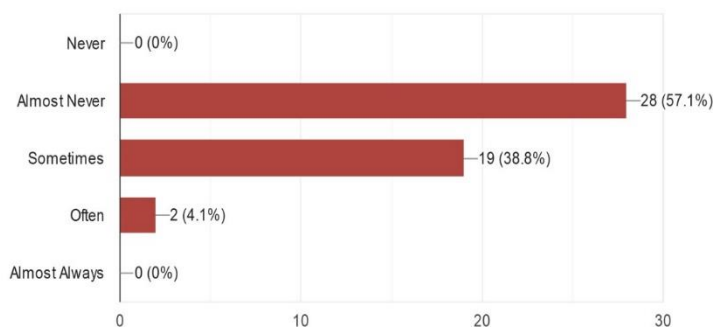
**Figure 1:** Distribution of patients having trouble with getting along with other children

**Table 2:** Distribution of patients for whom other kids not wanting to be his or her friend

	No. of patients	Percentages
Never	0	0%
Almost Never	28	57.1%
Sometimes	19	38.8%
Often	2	4.1%
Almost Always	0	0%

### Other kids not wanting to be his or her friend

49 responses



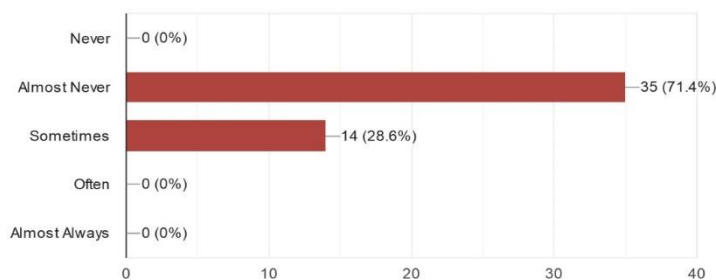
**Figure 2:** Distribution of patients for whom other kids not wanting to be his or her friend

**Table 3:** Distribution of patients getting teased by other children

	No. of patients	Percentages
Never	0	0%
Almost Never	35	71.4%
Sometimes	14	28.6%
Often	0	0%
Almost Always	0	0%

### Getting teased by other children

49 responses



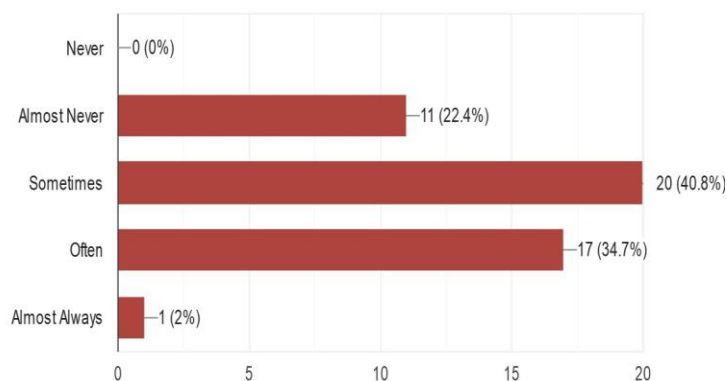
**Figure 3:** Distribution of patients getting teased by other children

**Table 4:** Distribution of patients not able to do things that other children

	No. of Patients	Percentages
Never	0	0%
Almost Never	11	22.4%
Sometimes	20	40.8%
Often	17	34.7%
Almost Always	1	2%

Not able to do things that other children his or her age can do

49 responses



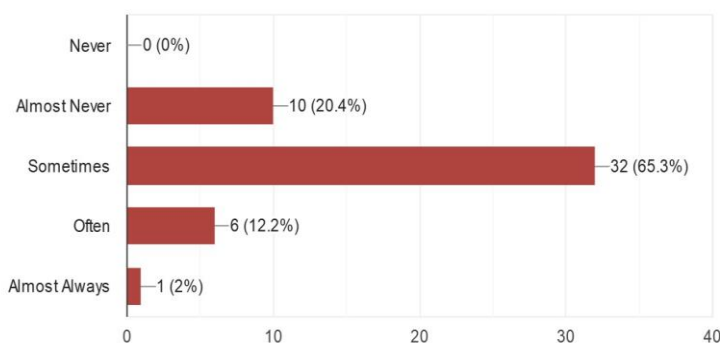
**Figure 4:** Distribution of patients not able to do things that other children his or her age can do

**Table 5:** Distribution of patients keeping up when playing with other children

	No. of patients	Percentages
Never	0	0%
Almost Never	10	20.4%
Sometimes	32	65.3%
Often	6	12.2%
Almost Always	1	2%

Keeping up when playing with other children

49 responses



**Figure 5:** Distribution of patients keeping up when playing with other children

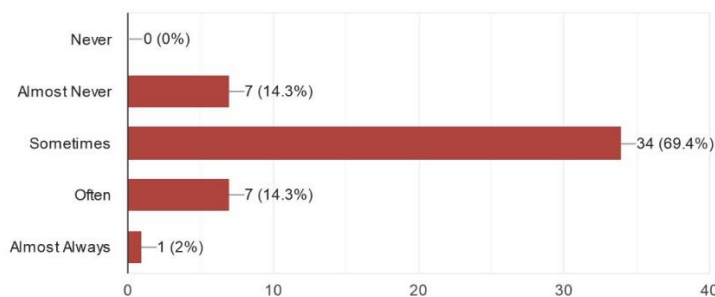
## SCHOOL FUNCTIONING

**Table 6:** Distribution of patients having problem with paying attention in class

	No. of patients	Percentages
Never	0	0%
Almost Never	36	73.5%
Sometimes	9	18.4%
Often	4	8.2%
Almost Always	0	0%

**Paying attention in class**

49 responses



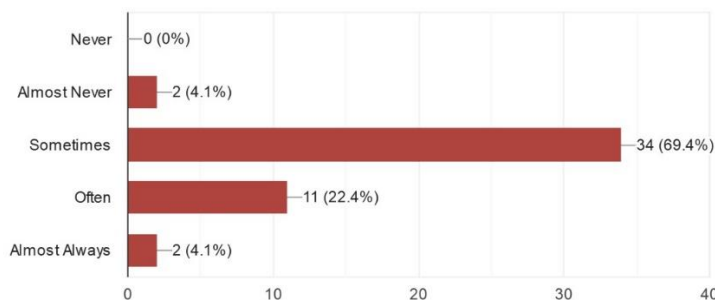
**Figure 6:** Distribution of patients having problem with paying attention in class

**Table 7:** Distribution of patients forgetting things

	No. of Patients	Percentages
Never	0	0%
Almost Never	2	4.1%
Sometimes	34	69.4%
Often	11	22.4%
Almost Always	2	4.1%

**Forgetting things**

49 responses



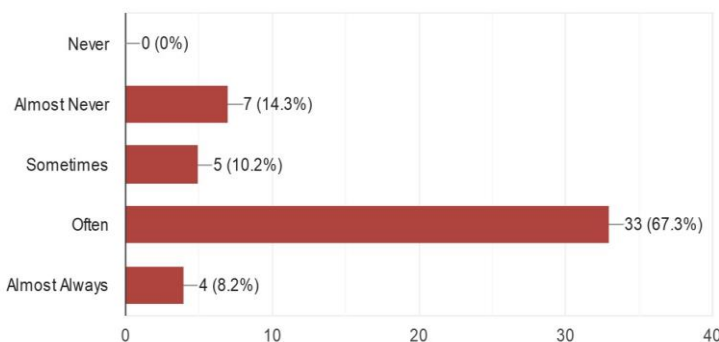
**Figure 7:** Distribution of patients forgetting things

**Table 8:** Distribution of patients keeping up with school work

	No. of Patients	Percentages
Never	0	0%
Almost Never	7	14.3%
Sometimes	5	10.2%
Often	33	67.3%
Almost Always	4	8.2%

**Keeping up with school work**

49 responses



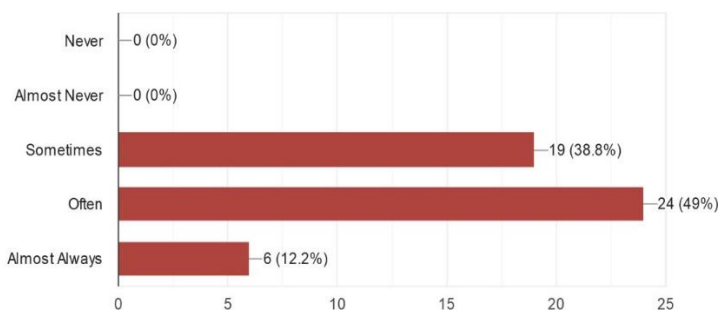
**Figure 8:** Distribution of patients keeping up with school work

**Table 9:** Distribution of patients missing school because of not feeling well

	No. of patients	Percentages
Never	0	0%
Almost Never	0	0%
Sometimes	19	38.8%
Often	24	49%
Almost Always	6	12.2%

Missing school because of not feeling well

49 responses



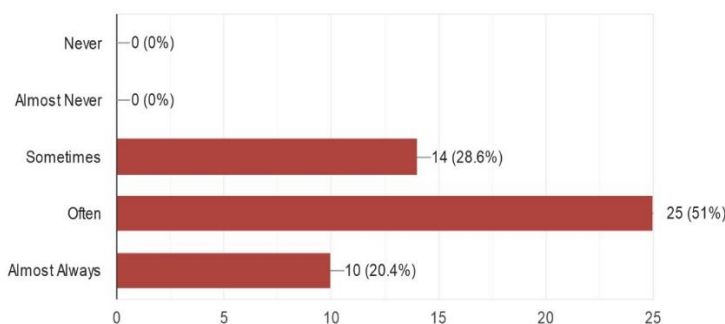
**Figure 9:** Distribution of patients missing school because of not feeling well

**Table 10:** Distribution of patients missing school to go to doctor or hospital

	No. of patients	Percentages
Never	0	0%
Almost Never	0	0%
Sometimes	14	28.6%
Often	25	51%
Almost Always	10	20.4%

Missing school to go to the doctor or hospital

49 responses



**Figure 10:** Distribution of patients missing school to go to doctor or hospital

## INDEPENDENT SAMPLE T TEST

**Table 11:** Physical Functioning problems in patients

PHYSICAL FUNCTIONING	
Contents	Significance (2 tailed)
Walking more than a block	0.957
Running	0.310
Participating in sports or activity	0.359
Lifting something heavy	0.887
Taking a bath or shower by him or herself	0.791
Doing chores around the house	0.328
Having hurts or aches	0.628
Having low energy level	0.814

**Table 12:** Emotional Functioning problems in patients

EMOTIONAL FUNCTIONING	
Contents	Significance (2 tailed)
Feeling afraid or scared	0.435
Feeling sad of blue	0.803
Feeling angry	0.171
Trouble sleeping	0.591
Worrying about what will happen to him or her	0.822

**Table 13:** Social Functioning problems in patients

SOCIAL FUNCTIONING	
Contents	Significance (2 tailed)
Getting along with other children	0.748
Other kids not wanting to be his or her friend	0.675
Getting teased by other children	0.209
Not able to do things that other children his or her age can do	0.386
Keeping up when playing with other Children	0.614

**Table 14:** School Functioning problems in patients

SCHOOL FUNCTIONING	
Contents	Significance (2 tailed)
Paying attention in class	0.13
Forgetting things	0.84
Keeping up with school work	0.399
Missing school because of not feeling well	0.3
Missing school to go to doctor or hospital	0.353

**DISCUSSION:**

According to the results of the present study, Physical Functioning ( $P > 0.05$ ), Emotional Functioning ( $P > 0.05$ ), Social Functioning ( $P > 0.05$ ), School functioning ( $P > 0.05$ ). The significance (2 tailed) values Emotional Functioning implicate that most of the patients have angry. The significance (2 tailed) values Social Functioning implicate that most of the patients getting teased by other children. The significance (2 tailed) values School Functioning implicate that most of the patients have problems with paying attention in classes, keeping up with school work, missing school because of not feeling well, missing school to go to doctor or hospital.

Regarding the facets that influenced the Physical domain the most, the following was found in order of higher to lower: energy and fatigue, daily activities, pain and discomfort and mobility. It is proposed that these four facets are very well related between them. It is highlighted that fatigue, sleeplessness, loss of appetite is a prevalent symptom in advanced cancer disease, occurring in 75% to 95% of patients, though not everyone is capable of expressing, spontaneously, what they truly feel about the damage that fatigue, sleeplessness and loss of appetite caused in their lives. This has to do with a complex and

debilitating symptoms because it compromises the activities of daily life and causes damages to life quality.

The Psychological domain had influence predominantly of the facets: negative thoughts, low self-esteem, positive-thoughts, depression, anxiety whereas in literature the spirituality/ personal beliefs facet was the most influent. Other authors point out that the suffering coming from the tumor, other symptoms related to the disease, waste caused by the treatment and the emotional charge involving the diagnosis. In the study, QOL assessment vs physical, psychological, and social well-being are compared.

**Conclusion:**

Anxiety, irritability, worries, depression, and aggression were also sometimes a barrier to communicate with the patients and for them to complete the questionnaire. It should be noted that the approximate time to enter the study for this number of subjects ( $n = 49$ ) was 3 months. Another limitation was the limited environment of the study; due to this limitation, studying patients with leukemia admitted in other hospitals at the same time was not possible. Based on the limitations of this study, including the small number of subjects, applying the study only in one hospital, and in only one section, and the

problems of generalizability, it is recommended for further similar studies to be conducted in other hospitals with larger sample size. Also, to improve the quality of data analysis, it is suggested that in future, researches with similar methodology using multivariate tests also must be considered.

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