

## DEPRESSION AMONG PARENTS OF CHILDREN WITH ACUTE LYMPHOBLASTIC LEUKEMIA

Akhtar Iqbal and Khawer S. Siddiqui

Shaukat Khanum Memorial Cancer Hospital and Research Centre, Lahore. Pakistan

**Background:** The diagnosis of cancer in children can always be devastating to the patients as well as to their parents. Some degree of depression is to be expected among parents caring for a loved one with leukemia. This study was done to determine the frequency of depression in parents of children with acute lymphoblastic leukemia in relation to age, gender, education, occupation, and performance status of their patients. **Methods:** The study was conducted at Shaukat Khanum Memorial Cancer Hospital and Research Centre, Lahore, Pakistan over a period of three months, from May, 2000 to July, 2000. Either parent of 60 consecutive patients of acute lymphoblastic leukemia who achieved their first remission within last one-month were enrolled. Their age, gender, education, occupation, socioeconomic status, and non-medical risk factors of depression were recorded. The Mini Mental State Examination (MMSE) and Structured Clinical Interview according to the Diagnostic and Statistical Manual of Mental Disorders – fourth version (SCID - IV) were used to identify parents with depression. Data regarding sociodemographic variables and non-medical risk factors of depression were recorded on data capture form. Data analysis was done by SPSS – 10. Overall differences were assessed using percentages and chi-square. **Results:** Depression was found to be positive among 56.7% (34) of the parents. It was more common among mothers, less educated parents and among those belonging to lower socioeconomic class. Parents attributed their depression to multiple factors; most common were related to concerns about family's well-being, financial constraints and distressing change in role and responsibilities. **Conclusion:** This study concludes that a majority of attending parents of children with acute lymphoblastic leukemia suffers from depression and it is not associated with any of the variables studied. We need to conduct further studies on a large number of parents in order to make any logical conclusions.

**Key Words:** Depression, Parents, Children, Leukemia, Cancer.

### INTRODUCTION

The diagnosis of childhood leukemia is often more traumatic and stressful. To children suffering from this disease, this may be of little concern, however, to the parents it could be the most disturbing factor towards the family life. From the fear of unknown to the unseen problems, from financial burden arising from the expenses of treatment of their young child to the possible relocation of the family for treatment, all these issues with their relevant worries arise and signify. Anxiety and depression among parents of children suffering from leukemia are not unnatural in their nature because childhood cancer affects the entire family. Many studies have indicated that parents experience changes of a definitive and long-lasting nature in their life style because of cancer in their child<sup>1,2,3</sup>.

Many parents feel an acute sense of loss when their child is diagnosed with leukemia. They describe feeling engulfed by sadness. Grieving for the child is common, even when the prognosis is good. Parents grieve the loss of normalcy, the realization that life will never be the same. They grieve the loss of their dreams and aspirations for their child. They state that helplessness begins to disappear when a sense of reality returns, however, the feeling of fear, panic and anxiety periodically erupt for many parents at varying times throughout their child's treatment<sup>4,5,6</sup>.

Child's functional impairment, behavioral problems and number of child's hospital admissions are the most common disease related factors associated with parent depressive symptomatology<sup>7,8</sup>. Speechly and Hoekstra found that perceived social support and previously experienced life events were the additional risk factors<sup>9,10</sup>. According to Sloper, employment problems are associated with depressive symptoms in fathers especially<sup>11</sup>.

Psychological unrest in parents of children with leukemia has been investigated upon before as well but the socio-demographic variables have rarely been studied alongside the clinical aspects. The main objective of this study was to observe the frequency of depression among parents of children with acute lymphoblastic leukemia in relation to their gender, age, education, occupation and performance status of their patients.

### MATERIALS AND METHODS

Either parent of 60 consecutive patients of acute lymphoblastic leukemia who achieved their first remission within last one-month were interviewed. The Mini Mental State Examination (MMSE) and Structured Clinical Interview according to the Diagnostic and Statistical Manual of Mental Disorders – fourth version (SCID - IV) were used to investigate depression in parents. The parents of children were also interviewed to record the data regarding sociodemographic variables and causes of depression.

The parents with a previous history of psychiatric illness were excluded from this study. It was also made sure that both parents are alive and have complete knowledge of child's disease, treatment process and prognosis of the

disease. All interviews were conducted by a trained clinical psychologist. There were 23 fathers and 37 mothers, the age range of attending parents was 20 – 55 years. Statistical analysis was carried out using the SPSS package. Chi-square test was used to measure the level of significance of any independent association between the qualitative variables. Student's t-test was utilized to compare for the significance of means of quantitative variables. Relative risk ratios and percentages were calculated for various risk factors.

## RESULTS

Depression was found to be positive among 56.7% of parents. The age distribution of parents is shown in Table-1. The majority of parents with depression (n = 23) belonged to the age group of 30 – 40 years. It was more common among mothers (64.9%) when compared to fathers (35.1%) of children, which was not statistically significant (Table-2). The educational status (Table-3) shows that twenty five percent (15) of the parents were illiterate, 45% (27) had their education till grade 10 (Ten years of schooling), and remaining were educated above grade 10 (more than 10 years of schooling). Table-4 shows distribution of social class groups. Majority of parents (76.7%) belonged to the lower socioeconomic class (poor class) while 16.7% could be categorized as from lower middle class and 6.7% (4) to the middle class on the basis of their annual income.

**Table-1: Age Distribution of Parents**

( Values are numbers)

Age in Years	Depression	No Depression	Total
20 – 25	00	03	03
25 – 30	04	02	06
30 – 35	13	07	20
35 – 40	10	07	17
40 – 45	05	06	11
45 – 50	02	01	03
Total	34	26	60

Chi Square = 5.965, df = 5, P Value = 0.310

**Table-2: Gender Distribution of Parents**

(Values are numbers)

Gender	Depression	No Depression	Total
Males/ Fathers	10	13	23
Females/Mothers	24	13	37
Total	34	26	60

Chi Square = 2.642, df = 1, P Value = 0.087

**Table-3: Educational Status of Parents**

(Values are numbers)

Education	Depression	No Depression	Total
Illiterate	12	03	15
Till Grade 10	15	12	27
Above Grade 10	07	11	18
Total	34	26	60

**Table-4: Socioeconomic Status of Parents**

(Values are numbers)

Socioeconomic Status	Depression	No Depression	Total
Lower Class/Poor	27	19	46
Lower Middle Class	05	05	10
Middle Class	02	02	04
Total	34	26	60

Chi Square = 0.331, df = 2, P Value = 0.848

**Table-5: Occupation of Attending of Parents**

(Values are numbers)

Occupational Categories	Depression	No Depression	Total
White Collar Jobs	06	03	09
Blue Collar Jobs	09	10	19
Service Personal	18	12	30
Farm Workers	01	01	02
Total	34	26	60

The occupation of attending parents is shown in Table-5. Fifty percent of the attending parents were service personnel and a majority of them was depressed. Approximately 32% (19) were blue collar workers such as machine operators, helpers, laborers, etc., 15% (9) were doing white collar jobs like jobs relating to administration, management, sales and professional specialty occupations, while 3.3% (2) were farm workers.

Figure-1 shows multiple factors causing depression in parents of children suffering from leukemia. 76.4% of attending parents presented with depression attributed their depression to the concerns relating to their family's well being and change in role and responsibilities. 70.6% associated their depression with financial problems they faced after the diagnosis of leukemia in child; 76.4% said that main causes of their depression are traveling, relocation and accommodation problems. Approximately 29% said that difficulty in making arrangements of blood and its products for their child is the cause of depression while 17.6% attributed their depression to other family problems. Financial problems and difficulty arranging blood and its products were found to be related with depression in parents at borderline significance level. However, no significant relationship was found between depression in attending parents and their age, gender, education, occupation, and socioeconomic status.

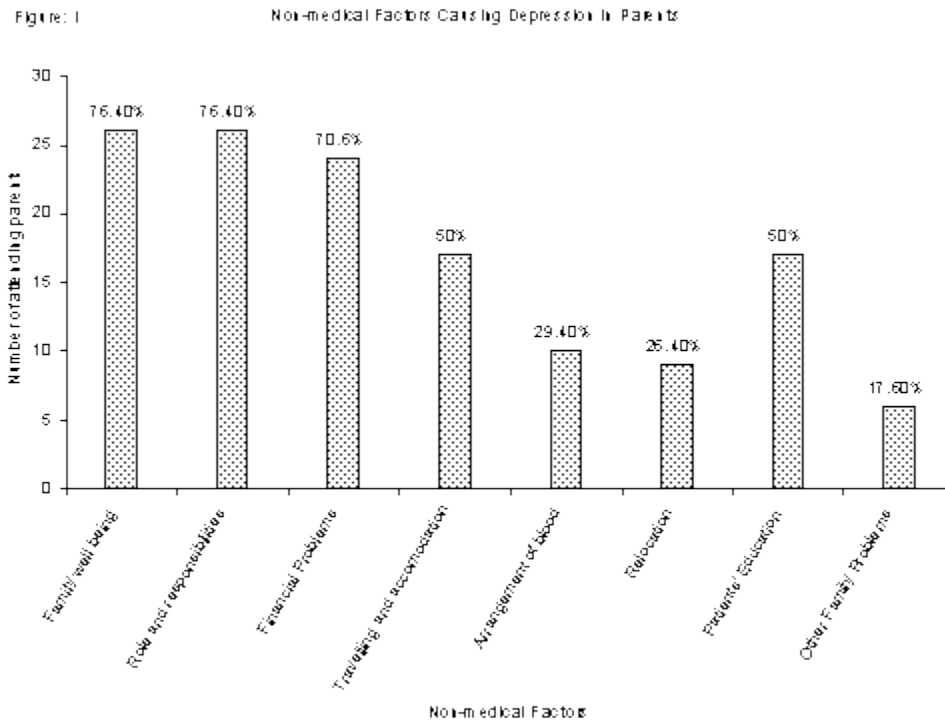
## DISCUSSION

In healthcare settings, the psychological distress of a cancer patient remains the main focus of attention and the impact of patient's illness on his family is usually ignored. Childhood leukemia may not be a major source of depression for children suffering from it but is definitely a source of depression for parents of such children as we have observed the presence of depression in 56.7% of parents of children with acute lymphoblastic leukemia. Our results supports the studies of Magni<sup>12</sup> and Sharan<sup>13</sup>.

The analysis of sociodemographic of these parents shows that depression is more common in parents belonging to the age group of 30 – 40 years and mothers suffer more as compared to fathers of children. Females in our society have more household responsibilities, face domestic conflicts and enjoy fewer privileges, less rights, less social and economic freedom, due to which they are more prone to develop depression as a stress reaction to childhood leukemia. They usually do not enjoy adequate social support from others and according to Speechly, perceived social support has a significant inverse relationship with psychological distress in parents especially in mothers<sup>9</sup>. Previously experienced life events, frequency of assertive behaviors, child's behavioral problems and functional impairment could be the additional risk factors<sup>5</sup>. Whereas in fathers depression usually results from financial problems, economic crisis and unemployment problems<sup>6</sup>.

The majority of parents in our study were not much educated, as we have seen that 25% were illiterate and 45% have their education till grade 10. The depression was observed among 80% of illiterate parents, 55% in those educated till grade 10 and 39% in parents having more than 10 years of schooling. This decrease in percentage reveals that rate of depression decreases as parents' education increases. Many researchers have already established the role of formal education in the development of psychiatric disorders<sup>14</sup>. It is generally thought that education provides coping

mechanisms in more than one way. It raises self-efficacy, makes us feel less perhaps in difficult situations and gives a greater sense of control over environment.



The distribution of social class groups shows that majority of parents (76.7%) belonged to poor socio economic status. These people, due to less resources and larger family size face a lot of problems relating to economic circumstances, change in role and responsibilities and accommodation away from home.

The parents diagnosed with depression reported multiple causal factors behind their depression. The concerns relating to family's well-being, change in role and responsibilities, relocation, travelling, difficulty arranging blood and its products, and financial difficulties they are facing after the diagnosis of leukemia in child were the most common factors among them. Some of these concerns emerge just because of the low education level in parents like accommodation, change in role and responsibilities and making blood arrangements are just a matter of exploring resources and available options in this big city. For an educated person it is very easy to explore how he can make blood arrangements, how he can share responsibilities with his/her partner, how he/she can involve other people in sharing their responsibilities. Secondly, the financial status of parents is of course playing very important role in causing depression in parents. Bearing treatment expenses, living away from home, providing patient good nutrition, and buying other facilities for the child are out of the reach of a poor family. From the overall analysis of results, we may conclude that illiteracy and financial constraints are the route causes of depression among parents of children, but this study needs to be followed up by a large number of subjects and more sophisticated statistical analysis in order to reach some logical conclusions.

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**Address for Correspondence**

**Akhtar Iqbal**

Senior Clinical Psychologist

642 - Nishtar Block, Allama Iqbal Town, Lahore, Pakistan.

[iakhtar@brain.net.pk](mailto:iakhtar@brain.net.pk)