Research Article

Quality of Life and Marital Satisfaction in Parents of Children with Leukemia

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Abstract | The current research study investigated the differences in reported quality of life and perceived marital satisfaction in parents of children with leukemia with that of normal cohort. Case control study design was used. The sample consisted of N=120 parents out of which n=60 were the parents of children with leukemia and n=60 were the parents of normal children, , taken as normal cohort and drawn through non-probability purposive sampling procedure. Both cohorts were matched on the basis of the age and income level of the parents. Quality of Life Scale WHOQOLS and Marital Satisfaction Scale were used to collect the data from Anmol and Sundus Foundation and Fatmeed Foundation, Lahore. The results from independent sample t- test revealed that the quality of life and marital satisfaction of parents of children with leukemia was significantly lower than the parents of normal cohort. Further it was indicated by the correlation analysis that better greater satisfaction was associated with better quality of life. The findings carry significant implications for clinical professionals, health psychologists, community workers and the future researchers.

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Introduction

In Pakistan, the leukemia is a leading type of cancer among developing countries' children from past two decades[(1), (2)]. Acute Myeloid Leukaemiacharacterizes 15%-20% of all leukaemias in developing children that appears more surging in children less than 14 years of age. According to an empirical report, Acute Leukaemiacomprises of 30% of all childhood malignancies[(3), (4)]. Accordingly, there has been significant increase in children diagnosed with cancer in Pakistan.

Leukemia is defined as the cancer of the white blood cells. This is a type of cancer that exerts negative effects on blood-producing tissues including bone marrow and is related with asymmetrical progression of white blood cells (Leukocytes)[(5)]. Marital satisfaction can be explained as a psychological state that indicates the supposed welfare and thriving success of a marriage for a specific individual. The more cost, a married spouse imposes on another partner, the less pleased and satisfied is the spouse with the marriage and consequently with the spouse as well. Becoming a parent and adopting this role or nurturing parents to a sick child for the hard times appears to be one of the crucial factors in determining the marital satisfaction. Transformation of nurturing role of parenting a child

becomes burdensome as there erupts special needs of the child. There have been some empirical researches that reveal that as a spouse turns into the status of parenting, a relative decrease in their satisfaction often occurs perhaps because the demands of the roles increase[6]. Quantitative rather than qualitative changes in the marital relationship are expected in response to the increased and demanding role, the parents have to perform in palliative care of their child. In Pakistan, the literature that has focused on impact of child's disease on spousal relationship, is scarce and it is so far ambiguous whether the decrease in marital satisfaction is associated with the total strains of parenting role or to the specific demands of parenting a child with chronic disease[7].As theoretical rationale, the family systems perspective has been adopted in order to investigate the phenomenon of quality of life of parents of children with leukemia. A systems perspective of the family urges that the importance of examining changes in marital satisfaction across the transition to parenthood[8].

Weisner[9] argued that cancer distresses not only reduce the quality of life of the children but also hampers their parents' life quality. They experience more worries about child' chronic disease complications than men[10] whose role is just confined to that of bread winner and whose role demands make him less prone to emotional attachment with the child in eastern perspective. Super and Harkness[11] also maintained that the mothers of children with leukemia that need hospital care report poorer quality of life than those who had less symptomatic complications and were not hospitalized. Such mothers with hospitalized children had particularly greater vulnerability with regard to mental health intricacies and social functioning issues, and were at a greater risk for depression. Another study on contrasts with respect to changes in children due to their management or treatment from healthy controls shows that the parents of children undertaking leukemia treatment report lower quality of life, in addition to impaired physical functioning than healthy controls[12]. The treatment of leukemia in itself involves much pain and sufferings for the children. Few parents find this difficult to handle, indulge into mood disorders and this may be a strong factor in their perceived quality of life of life[13].

Hence, the present study was executed in order to investigate the differences in the reported quality of life and perceived marital satisfaction of parents of children suffering from Leukemia in comparison to the parents with healthy off-springs.

Table 1: *Mean, standard deviation, frequencies, and percentages of demographic variables (N=120).*

Variable	f	Percentages	M(SD)
Father's education			
Literate	94	78.3%	
Illiterate	26	21.7%	
Mother education			
Literate	65	54%	
Illiterate	55	45%	
Gender of the child			
Male	51	42%	
Female	69	57%	
Age of the child			**8.81(3.72)**
3-8years	52	43%	
8-15 years	68	56%	
Joint Nuclear	58	48%	
Nuclear	62	51%	
Monthly income			**22897.5(21692.99)**
Subcategory of diagnosis			
Acute leukemia	49	40%	
Chronic leukemia	11	9%	
Normal cohort	60	50%	

Note. M: *mean;* **SD:** *standard deviation;* **f:** *frequencies;* **%:** *percentages.*

Methods

The case-control research design was adopted in order to explore the phenomenon of quality of life and marital satisfaction among parents of children with leukemia and the normal cohort. Non probability purposive sampling strategy was used to collect the data. The sample comprised of 120 parents (N =120). From which 60 were the parents of normal healthy children and 60 were the parents of children with leukemia. The sample was obtained from Anmol, Sundus Foundation and Fatmeed Foundation of Lahore that are extending their services in leukemia treatment and management. The Parents who had children with the age range of 3-15 years and having diagnosed Leukemia were included in the study. Both outpatient and inpatient were included. Parents of normal children were selected, who have same ages and they belonged to same socioeconomic class as parents of Leukemia children, participated in this research. As

indicated in Table 1.

Following measures were administered to the participants as research tools

A self-constructed demographic questionnaire was administered in addition to research questionnaires. For assessment of quality of life, the WHO Quality of Life Scale [1] was used. The measurement procedure was used since this was easy, short and comprehensive for the clients, the clients were able to complete the questionnaires by themselves, and it took less than 10 minutes on average to complete all of the questionnaires after granting of official permission. It contained 26 items and domains of physical, psychological, social and environmental facets of quality of life. The forward and backward translation procedure was adopted.

Data on marital satisfaction was gathered by Marital Satisfaction Scale [2]. It contains 24 items. It measures degree and nature of satisfaction a spouse and partner have in their relationship.

The authority letters were taken to the heads of the hospitals extending their services in treatment of children with Leukemia. The sample of the study was accessed from different hospital of Lahore. The hospitals that granted permission were enlisted for data collection for this study. After translating the tools, they were pre-tested in pilot study on the representatives of target population (n=10+10). The researcher explained the nature and purpose of the study before taking the written consent from those who met the inclusion criteria and who were willing to participate. They were assured about the confidentiality of their responses. The written consent was obtained. After this, the instruments were administered on the participants. Face to face administration was used for data collection (demographic form, Quality of Life Scale and Marital Satisfaction Scale were completed by the parents by themselves. The response rate of filling the questionnaire was 91%, as most parents were ready to fill the questionnaire. The average time the participants consumed, in order to fill each questionnaire was 20-25 minutes. The demographic characteristics of the parents of children with leukemia were matched with controlled cases, they were matched on age (parents of children with age range of 3-15 years and the child's age), family system (nuclear and joint) and socioeconomic status (upper, middle and lower) etc.

Results and Discussion

Results were analyzed using SPSS version 21.0. Descriptive characteristics of the sample have been shown in Table 1.

Psychometric strength of the scales has been presented in Table 2 that reveals the characteristic properties of the scales, especially their internal consistency, more precisely the Cronbach's alpha reliability.

Table 2: *Mean, standard deviation and cronbach's alpha of scales (N=120).*

Tool name	Items	M (SD)	α
QOLS	26	40.83(6.33)	.59
MSS	24	51.10(3.71)	.60

Note. M: *mean;* **SD:** *standard deviation;* **QOL:** *Quality of Life Scale;* **MSS:** *Marital satisfaction scale;* **α:** *Cronbach's alpha.*

Table 3: *Independent sample t-test for comparing differences in marital satisfaction of parents of normal children and the parents of children with leukemia (n=120).*

Variable	Normal (n=60)		Leukemia (n=60)				95 % CI	
	M	SD	M	SD	t(1, 118)	p	LL	UL
MSS	21.3	10.4	14.2	31.1	-9.34	.002*	-8.22	-5.34

Note. *$p < .05$; **M:** *Mean;* **SD:** *Standard Deviation;* **CI:** *Confidence Interval;* **LL:** *Lower Limit;* **UL:** *Upper;* **MSS:** *Marital Satisfaction.*

In Table 3 the mean values indicate that marital satisfaction of parents of normal children (*M*=21.10; *SD*= 10.4) is better than parents of children with leukemia (*M*=14.31; *SD*= 31.1).The mean values indicate that marital satisfaction of parents of normal children is better than parents of leukemic children. An independent sample t test was conducted to evaluate the difference in the perceived quality of life of parents of children with leukemia and the normal cohort, the hypothesis was supported as there is significant difference in the perceived quality of life of parents of children with leukemia and the normal cohort as indicated in Table 4. Quality of life of parents of children with leukemia on four domains (physical, psychological, social and environmental) is significantly lower than parents of normal cohort. The mean values indicate that the quality of life of parents of normal children is better than parents of children with leukemia.

Table 4: *Independent sample t-test for comparing differences in quality of life of parents of normal children and children with leukemia (n=120).*

Variable	Normal (n=60)		Leukemia (n=60)				95 % CI	
	M	SD	M	SD	t(1, 118)	p	LL	UL
Physical	11.28	3.17	10.60	3.05	-1.27	.04*	-1.74	.38
Psychological	8.98	2.21	8.91	2.19	-1.16	.01*	-1.26	.32
Social	4.56	1.56	4.55	1.26	1.09	.02*	-.22	.79
Environmental	13.16	2.93	11.91	2.32	2.50	.05*	.24	2.23

Note.*p < .05;* ***M:*** *Mean;* ***SD:*** *Standard Deviation;* **CI:** *Confidence Interval;* ***LL:*** *Lower Limit;* ***UL:*** *Upper.*

Table 5: *Independent sample t-test for comparing differences in quality of life and marital satisfaction of father and mother of children with leukemia (n=60).*

Variable	Father		Mother				95 % CI	
	M	SD	M	SD	t(1, 58)	p	LL	UL
Physical	10.98	2.87	10.09	3.05	-.15	.63	-1.15	.99
Psychological	8.73	2.20	8.55	2.22	-.08	.90	.83	.77
Social	4.38	1.56	4.43	1.26	-.19	.24	-.56	.46
Environmental	12.93	3.16	12.15	2.32	1.54	.09	-.22	1.78
MSS	15.83	4.52	19.58	5.23	-4.20	.04*	-5.23	.99

Note.*p < .05;* ***M:*** *Mean;* ***SD:*** *Standard Deviation;* **CI:** *Confidence Interval;* ***LL:*** *Lower Limit;* ***UL:*** *Upper;* **MSS:** *Marital Satisfaction.*

Table 6: *Independent sample t-test for comparing differences in quality of life of parents of male and female children with leukemia (n=60).*

Variable	Father		Mother				95 % CI	
	M	SD	M	SD	t(1, 58)	p	LL	UL
Physical	10.86	2.91	11.00	3.00	-.25	.81	-1.22	.94
Psychological	8.47	2.14	8.95	2.23	-1.19	.77	-1.29	.31
Social	4.29	1.36	4.49	1.49	-.75	.83	-.71	.32
Environmental	12.17	2.51	12.81	2.97	-1.23	.19	-1.65	.38

Note.*p < .05;* **M:** *Mean;* **SD:** *Standard Deviation;* **CI:** *Confidence Interval;* **LL:** *Lower Limit;* **UL:** *Upper.*

Quality of life of mothers and fathers of children with leukemia on four domains (physical, psychological, social and environmental) as depicted in Table 5 is not significantly different. Mean values indicate that the physical, psychological and environmental quality of life of fathers is not significantly better than mothers, while the social quality of life of mothers was slightly better than fathers but not significant. An independent sample t test was performed to examine the differences in the perceived marital satisfaction of mothers and fathers of children with leukemia which revealed that there is significant difference in the perceived marital satisfaction of mothers and fathers of children with leukemia, showed in Table 6.

The targeted goal of current research was to explore the differences in reported quality of life and marital satisfaction of parents of children with leukemia from normal cohorts. Psycho-education and counseling programs for the families of children with leukemia are inevitable but their need has least been realized from any indigenous empirical study. The current research was conducted to explore some of the dynamics of family systems such as marital satisfaction and quality of life and how that gets affected by child's disease patterns. Parenting is an exigent task and parenting a normal children and executing the role of parents is equally burdensome. Thus the goal here is to unveil the tolls of disease as that exerts its impact on the parents' marital satisfaction and their perceived quality of life.

The main hypothesis of the study revealed that there are significant differences in perceived quality of life of parents of children with leukemia and the normal cohort. This helps in inferring that quality of life parents of normal children was better than the parents of children with leukemia; thus indicating the toll and extra burden that the disease of the child incurs on parents. These results are aligned with the findings of Super and Harkness[12] who reported that the mothers of hospitalized children with leukemia had poorer quality of life specifically in the domains of mental health and social functioning and harbored higher risks of depression. There are diverse factors that may have been contributing to this difference such as parents of children with leukemia remained in continuous stress for the treatment and management of their child. They required more time, energy, resources to cope with the disease of the child. The socioeconomic status may also be the pertinent factor affecting them adversely as they have dual burden of the disease of the child and of the limitation of material and non-material resources. Another one such study was conducted by Farhat, et al, [14]laid out in Kara-

chi, found poorer quality of life of parents of children with cancer than the parents of normal healthy children.Hassan and Ikrarn[15] likewise showed that parents of children with leukemia have unhealthy coping strategies. Their findings also reveal that there exist significant differences in reported marital satisfaction of parents of leukemic children and normal cohort. Weisner[10] demonstrated that parent's marital satisfaction and parental stress link in multiple ways. Marital satisfaction is construed as positive development and healthy lifestyles, if anyone of the family especially children have ill health then the interpersonal relation of the parents is affected as the attention of both the partners is deviated from each other to the effected child and this lack of attention is the major factor in marital dissatisfaction.

Spousal gender differences in quality of life and marital satisfaction of parents of children with leukemia were insignificant. These results are inconsistent with the findings of Rollins and Feldman[16] who evaluated that mothers were more emotional and had marital dissatisfaction than fathers still mothers had better coping styles. Another research finding also substantiated quality of life of mothers of children with leukemia as adversely affected as fathers of children with leukemia. The present study also divulges that there were no significant differences in the quality of life and marital satisfaction of parents of male children from parents of female children. Certain studies support the hypothesis of the present study, according to 25.

Gersonand Torres[17] reported patterns of higher distress and lower quality of life among mothers of male children with leukemia. Men carry dynamic status within family as they are bread winners for the family. Parents mostly express greater concern for male children and if its affected by some calamity, parents become more distressed. Yeh[18] in one such study found that spousal satisfaction was related to child's state. These results concur with the findings which found that marital satisfaction of mother and father was affected differently though it also correlated in many ways. There was positive association between quality of life and marital satisfaction as reflected by results. Twenge, Campbell and Foster[19] found that quality of life depends on many factors which in turn effect marital satisfaction. He explored major domains such as physical, psychological and social spheres that got linked with marital satisfaction and in turn affected quality of life. The couples who are more satisfied in their interpersonal relations have high quality of life.

This study had some limitations including that the design of the study is cross-sectional which avoids from drawing causal inferences. From studies with such designs we can only conclude if the variables are related to each other or not. To determine the cause and effect relationships, especially the direction of associations, longitudinal and experimental designs are recommended. The data for the following study was taken from urban areas in this respect the rural areas are totally ignored so it is suggested that the sample should be equally distributed. There is a possibility that participant's self-presentational concerns could have influenced their responses, so it is suggested that the aim and purpose of the study should be fully describe to the participants. The study focused on only subjective aspects of well-being while ignoring other important aspects of psychological well-being. The resources deficiency limited the sample as it was drawn only from hospital of Lahore therefore the sample was small in diversity, and this factor may also limit the generalization of the results. The conditions under which the questionnaire was administered were not ideal because distractions were not controlled which might have affected the responses.

Conclusion

The study is pivotal in the respect that it substantiates the interlinking between marital distress and perceived quality of life in parents of children with leukemia. The findings further contribute that coping strategies stand better with mothers than fathers. The findings shed light on neglected dimensions of research on leukemia. This carries pivotal implications for mental health settings to cater psychosocial help to parents of children with leukemia who tend to have poorer quality of life and are not satisfied in there interpersonal relations due to their child's disease. Professionals can help parents determine their own assets, to find what works for them. Mental health professionals can change their beliefs by incorporating religious philosophy into psychotherapeutic management.

Author's Contribution

Afsheen Masood: Conceived and executed the research; data collection, analysis and manuscript writ-

ing and revision
Rubab Musarrat: Data collection
Shama Mazahir: Data collection and analysis
Adeela Ashraf: Data analysis

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