

# Quality of Life for Child under Chemotherapy at Al Basra Specialized Hospital for Children

Hussein F. Kamil, Msc\* Sounds Baqer Dawood, PhD\*\* Adil Ali Hussein, PhD\*\*\*

## ABSTRACT

**Introduction:** Many treatment-related adverse effects affect children. The drug's features determine the treatment-related side effect. These side effects can have a variety of physical and psychological consequences for cancer patients, lowering their quality of life.

**Objective:** the present study aimed to determine the Quality of Life for children under Chemotherapy.

**Method:** A descriptive cross-sectional study design carried out in Basrah, Iraq Specialized Hospital for Children the present study was conducted on the Childs who treat under chemotherapy. A Non – probability (purposive) sample of (100) child selected. All the patients diagnosed as Cancer. The Study Instrument is a questionnaire that was created and designed after extensive reviews of the available literature and related studies. Consisting of [34] questions. The study tool consists of three parts. The first part includes the demographic characteristics of the participants of the study sample, while the second part includes the physical aspect of the children undergoing chemotherapy, and the third part includes the psychosocial aspect.

**Results:** present study shows majority of child's age were (10 yrs.), (51 %) of study sample was (Male), most of parents was primary education, majority of study sample was (insufficient) economic status, majority of fathers was of (free work), and mother was housewives. The quality of life child moderate meaning that it was acceptable but we need to develop.

**Conclusion:** The current study indicated that chemotherapy has a mild effect on a child's quality of life and that the demographic variables do not appear to have significant link with quality of life.

**Keywords:** Quality of life, Child, Chemotherapy

## INTRODUCTION

Each year, an estimated 400 000 children and adolescents aged 1 to 19 years get cancer, with leukaemias, brain malignancies, lymphomas, solid tumors, neuroblastoma, and Wilms tumors being the most prevalent forms<sup>1,2</sup>.

Nearly nine out of ten of these children live in low- and middle-income countries, where treatment is usually inaccessible or too expensive. Accordingly, and compared to 80% or more in high-income ones, only around 30% of children with cancer in low- and middle-income nations survive; children and adolescents, the cancer treatment process specifically chemotherapy, remains a frightening and dangerous experience. In addition, the hospitalization experience has a psychosocial impact on pediatric cancer patients. The complexities of psychological stress encountered by juvenile cancer patients might exceed their coping mechanisms, resulting in poor quality of life, anxiety, mood swings, depression, and exhaustion<sup>3-6</sup>.

Surviving children have significant quality of life impairments during and after treatment, including psychological, social, and physical limitations that occur up to ten years after treatment. Identifying potentially modifiable factors associated with quality of care, both in and out of survivors' lives, is important because targeting them in interventions can improve outcomes in this population in the long term<sup>7</sup>.

Furthermore, it is harmful to patients and the healthcare system, resulting in extended hospitalization, greater charges for nurses and physicians, and decreased patient quality of life and productivity, which are particularly essential in children owing to their families' participation are critical to controlling<sup>8</sup>.

Currently, measuring quality of life in pediatric cancer patients seen as a crucial tool for assessing the well-being of children and their families. Identifying children and families with an expected lower Quality of life and guiding health providers with tailored measures to enhance it is especially supported by analyzing several quality of life aspects<sup>9</sup>.

---

\* Assistant Lecturer. MSc. C  
College of Nursing  
University of Basrah  
Basrah, Iraq.  
\*\* Assistant Professor  
\*\*\* Lecturer  
College of Nursing  
University of Basrah  
Basrah, Iraq.  
Email: adil.hussein@uobasrah.edu.iq

Previous studies suggest varying findings for variables that may influence the quality of life of pediatric cancer patients, such as poor prognosis, treatment status, symptom recurrence, and type of cancer<sup>4</sup>.

This study is designed to assess the quality of life for children under chemotherapy.

## METHODS

A descriptive-analytic study design was carried out at Al-Basrah Specialized Hospital for Children from May 9th, 2021 to June 10th, 2021. A purposive sample of 100 children 6-12 years of age diagnosed with any type of malignancy before (1) year or more and undergoing chemotherapy. Study instrument constructed for the study after review of the related literature. It consists of three parts, the first part includes the demographic characteristics of the participants “age, gender, housing environment, occupation of father and mother, and educational level of father and mother”. The second part covers the physical aspect “(3) items related to the pain and restlessness, (4) items related to daily activities, (5) items related to fatigue, (3) items related to rest and sleep”. The third part includes the psychosocial aspect “(4) items related to positive feeling, (5) items related to negative feeling, (5) items related to self-esteem, (5) items related to thinking, memory

and concentrate, ion”. It takes 15-20 minutes to complete answering the questionnaire. Validity has been determined through a panel of five experts who have the necessary experience that qualify them to examine the content of the questionnaire. In addition, internal consistency was established (Cronbach  $\alpha = 0.79$ ). The data were analyzed through the use of Statistical Package of Social Sciences (SPSS) version (26), with the use of frequency, percent, arithmetic mean, standard deviation, and mean of the score (MS) “an MS less than (1.66) was considered low and MS equal to (1.67-2.33) was considered as moderate, while MS greater than (2.34) was considered high”. Inferential statistics include the use of the Chi-Square test<sup>10-19</sup>.

## RESULTS

**Demographic Data:** The study comprised 100 kids who had been diagnosed with cancer and were receiving chemotherapy. The youngsters were 9.2 1.15 years old on average. Table 1 lists the demographic details of pediatric and adolescent patients.

## DISCUSSION

The World Health Organization (WHO) defines quality of life as “perceiving one's place in life, goals, expectations, norms and interests within the context of the culture and values in which one lives”, and

**Table 1:** Demographic characteristics of the sample

Percentage	Frequency	Group	Variables
51.0	51	Male	Gender
49.0	49	Female	
100.0	100	Total	
16.0	16	Six years	Age
13.0	13	7 years	
15.0	15	8 years	
14.0	14	9 years	
17.0	17	10 years	
11.0	11	11 years	
14.0	14	12 years	Housing Environment
55.0	55	Rural	
45.0	45	Urban	
10.0	10	The educational	The educational level of Father
6.0	6	Read and write	
32.0	32	Primary	
15.0	15	Secondary	
7.0	7	Middle school	
10.0	10	Diploma	
20.0	20	Bachelor	
16.0	16	,No read and write	
12.0	12	Read and write	
40.0	40	Primary	
11.0	11	Secondary	
8.0	8	Middle school	
3.0	3	Diploma	
10.0	10	Bachelor	Occupation of Father
53.0	53	Free works	
43.0	43	Employee	
4.0	4	Retired	Occupation of Mother
10.0	10	Free works	
9.0	9	Employee	
81.0	81	Housewife	

**Physical Aspect:** The four domains show a moderate quality of life with an average MS= 1.96 (first domain=2.36, second domain=1.99, third domain=1.67, and fourth domain=1.84). Other statistics illustrated in table (2).

**Table 2:** Assessment of physical aspect of quality of life in children undergoing chemotherapy

Variables		Frequency	Percent	MS	QOF
<b>Pain and Discomfort</b>					
I feel pain and discomfort while carrying out any activity	Never	17	17.0	2.26*	M**
	Sometimes	40	40.0		
	Always	43	43.0		
I feel pain in bones and joints	Never	12	12.0	2.00	M
	Sometimes	76	76.0		
	Always	12	felt		
I fell discomfort because of pain	Sometimes	18	18.0	2.82	H
	Always	82	82.0		
<b>Daily Living Activity</b>					
I am disturbed because I can't practice my hobbies	Never	54	54.0	1.78	M
	Sometimes	14	14.0		
	Always	32	32.0		
I need help when I walk more than one block	Never	55	55.0	1.51	L
	Sometimes	39	39.0		
	Always	6	6.0		
I need help while taking a shower	Never	13	13.0	2.23	M
	Sometimes	51	51.0		
	Always	36	36.0		
My disease prevents me from participating in sports activity or exercise	Never	12	12.0	2.45	H
	Sometimes	31	31.0		
	Always	57	57.0		
<b>Fatigue</b>					
I feel tired when carrying out simple activities	Never	48	48.0	1.84	M
	Sometimes	20	20.0		
	Always	32	32.0		
I feel tired when standing fa or a short time	Never	58	58.0	1.51	L
	Sometimes	33	33.0		
	Always	9	9.0		
I feel tired to spend time with my friends	Never	50	50.0	1.59	L
	Sometimes	41	41.0		
	Always	9	9.0		
I feel physically weak (not strong)	Never	39	39.0	1.76	M
	Sometimes	46	46.0		
	Always	15	15.0		
I feel tired to do things that I like to do	Never	53	53.0	1.65	L
	Sometimes	29	29.0		
	Always	18	18.0		
<b>Sleep and Rest</b>					
I have trouble sleeping	Never	40	40.0	1.83	M
	Sometimes	37	37.0		
	Always	23	23.0		
I have decreased sleeping	Never	27	27.0	2.08	M
	Sometimes	38	38.0		
	Always	35	35.0		
I have bad dreams	Never	43	43.0	1.62	L
	Sometimes	52	52.0		
	Always	5	5.0		

\* MS less than (1.66) was considered as “low” and MS ranged (1.67-2.33) was considered as “moderate”, while MS greater than (2.33) was considered as “high”.

\*\* H=High, M=Moderate, and L=Low.

**Psychosocial Aspect:** The four domains show a moderate quality of life with an average MS= 1.87 (first domain=2.23, second domain=1.95, third domain=1.67, and fourth domain=1.63). Other statistics illustrated in table (3).

**Table 3:** Assessment of psychosocial aspect of quality of life in children undergoing chemotherapy

Variables		Frequency	Percent	MS	QOF
<b>Positive Feeling</b>					
My disease is curable	Never	3	3.0	2.50*	H**
	Sometimes	44	44.0		
	Always	53	53.0		
My disease does not restrict my role in life	Never	26	26.0	2.03	M
	Sometimes	45	45.0		
	Always	29	29.0		
I have a role in life like other children	Never	21	21.0	2.08	M
	Sometimes	50	50.0		
	Always	29	29.0		
Because of my disease, I felt what other children suffer	Never	15	15.0	2.33	M
	Sometimes	37	37.0		
	Always	48	48.0		
<b>Negative Feeling</b>					
I lost my role in my family	Never	93	93.0	1.10	L
	Sometimes	4	4.0		
	Always	3	3.0		
I feel worry	Never	36	36.0	1.87	M
	Sometimes	41	41.0		
	Always	23	23.0		
I feel sad	Never	7	7.0	2.35	H
	Sometimes	51	51.0		
	Always	42	42.0		
I feel afraid or scared	Never	21	21.0	2.29	M
	Sometimes	29	29.0		
	Always	50	50.0		
I feel angry	Never	18	18.0	2.17	M
	Sometimes	47	47.0		
	Always	35	35.0		
<b>Self-Esteem</b>					
I feel inactive in my society	Never	70	70.0	1.33	L
	Sometimes	27	27.0		
	Always	3	3.0		
I feel that I have no chance in competing with my friends	Never	43	43.0	1.66	L
	Sometimes	48	48.0		
	Always	9	9.0		
I fell difficulty in taking decisions related to my life	Never	18	18.0	2.23	M
	Sometimes	41	41.0		
	Always	41	41.0		
I feel bad I cannot do things that others in my age can do	Never	19	19.0	2.01	M
	Sometimes	61	61.0		
	Always	20	20.0		
People feel pity for me	Never	93	93.0	1.13	L
	Sometimes	1	1.0		
	Always	6	6.0		
<b>Thinking, Memory, and Concentration</b>					
I think about the time of chemotherapy	Never	52	52.0	1.84	M
	Sometimes	12	12.0		
	Always	36	36.0		
I think about how this disease affects me	Never	87	87.0	1.17	L
	Sometimes	9	9.0		
	Always	4	4.0		
I think about the treatment and complications of my disease	Never	24	24.0	2.31	M
	Sometimes	21	21.0		
	Always	55	55.0		

I think about my future	Never	48	48.0	1.76	M
	Sometimes	28	28.0		
	Always	24	24.0		
I forget some things	Never	91	91.0	1.10	L
	Sometimes	8	8.0		
	Always	1	1.0		

\* MS less than (1.66) was considered as “low” and MS ranged (1.67-2.33) was considered as “moderate”, while MS greater than (2.33) was considered as “high”.

\*\* H=High, M=Moderate, and L=Low.

**Factors Affecting Quality of Life:** None of the addressed demographic variables shows a statistically significant relationship with QUALITY OF LIFE as shown in table (3).

**Table 4:** Relationship between quality of life and demographic variables

		s
0.478	1.476	Gender
0.730	630	Age
0.314	2.316	Housing Environment
0.786	7.992	Education level of father
0.316	13.762	Education level of mother
0.988	.925	Job of father
0.381	4.188	Job of mother

\* Relationship is statistically significant at P value <= 0.05

emotional stress ultimately affects patients' quality of life, as does changes in their cognitive abilities<sup>20-22</sup>.

Concerning the physical aspect, the result shows that it is moderately affected by chemotherapy, where fatigue was the least affected factor and pain and discomfort have the most effect. Most of the literature contradicts our study findings by illustrating that fatigue is one the of most effecting factors<sup>23,24</sup>.

On the other hand, Psychosocial aspect is affected and mostly self-esteem, memory, and concentration. However, positive feeling and attitudes helps to decrease the effect of chemotherapy on quality of life. This is because that in Iraqi culture, the parents usually try to be supportive and sympathetic in an attempt to limit the influence of cancer diagnosis and its treatment (chemotherapy). So, the psychosocial aspect is usually slightly affected<sup>25,26</sup>.

Demographic variable les that been included in the study does not appear to have any significant relationship with quality of life that agreed by many studies<sup>27</sup>.

## CONCLUSION

The present study concluded the quality of life of child under chemotherapy slightly affected and the demographic variable les that been included in the study does not appear to have any significant relationship with quality of life that agreed by many studies.

**Authorship Contribution:** All authors share equal effort contribution towards (1) substantial contributions to conception and design, acquisition, analysis and interpretation of data; (2) drafting the article and revising it critically for important intellectual content; and (3) final approval of the manuscript version to be published. Yes.

**Potential Conflict of Interest:** None

**Competing Interest:** None

**Acknowledgments:** The researchers would like to extend their sincere gratitude to all of the kids who participated in the study. The present study was authorized by the University of Basrah, College of Nursing, ethics committee (556.87).

**Acceptance Date:** 10 November 2022

## REFERENCES

1. Steliarova-Foucher E, Colombet M, Ries LA, et al. International incidence of childhood cancer, 2001–10: a population-based registry study. *Lancet Oncol* 2017;18(6):719-31.
2. World Health Organization. CureAll framework: WHO global initiative for childhood cancer: increasing access, advancing quality, saving lives. 2021.
3. World Health Organization. WHO report on cancer: setting priorities, investing wisely and providing care for all. 2020.
4. Alshehri AM, Alzahrani AA, Almutlaq AH, et al. Quality of Sleep in Allergic Children and their Parents. *Bahrain Med Bull* 2022;44(1).
5. Tuinmann G, Preissler P, Böhmer H, et al. The effects of music therapy in patients with high-dose chemotherapy and stem cell support: a randomized pilot study. *Psycho-oncol* 2017;26(3):377-84.
6. Ibrahim RM, Idrees NH, Younis NM. Epidemiology of Leukemia among Children in Nineveh Province (2018-2020). *Rawal Med J* 2022;48(1).
7. Fortmann J, Fisher A, Hough R, et al. Sleep quality, fatigue, and quality of life among teenage and young adult cancer survivors. *J Adol Young Adult Oncol* 2018;7(4):465-71.
8. Alshehri AM, Alhelali SN, Alzahrani AA, et al. Risk Factors of Otitis Media in Children, Asser region: A Case-Control Study. *Bahrain Med Bull* 2021;43(3).
9. Vlachioti E, Matziou V, Perdikaris P, et al. Assessment of quality of life of children and adolescents with cancer during their treatment. *Jap J Clin Oncol* 2016;46(5):453-61.
10. Rahman HAS, Al-Ghurairi, Younis NM, et al. Prevalence of weight gain among students of Mosul University, Iraq during quarantine 2020. *Rawal Med J* 2022;47(3).
11. Abbas AS, Younis NM. Efficacy of Pender's Health Promotion-based Model on Intervention for Enhancing University of Mosul Hypertensive Employees' Eating Behaviors: A randomized Controlled Trial. *Revis Bionatura* 2022;7(3):35.
12. Ahmed MM, Younis NM, Abdulsalam RR. Assessment of Changes in Sleep Habits in Elementary Students During COVID\_19 Lockdown. In *J Med Tox Leg Med* 2022;25(1-2):107-11.
13. Mukhlif HH, Younis NM. Evaluation of the association between internet addiction and fatigue among undergraduate students at universities in Mosul city, Iraq: A cross-sectional study. *Rawal Med J* 2022;47(4).

14. Aljebory MKA, Lefta RM, Younis NM. Impact of Psychosocial Aspect Parameters on Psoriasis Patients' Quality of Life at Outpatient Clinic in Al-Dewania City. *Rawal Med J* 2022;47(4).
15. Ali HA, Al-Waly LAM, Mukhlif HH, et al. Types of Congenital Anomalies among Children at Bint Al-Huda Teaching Hospital in Al-Nasiriyah City, South of Iraq. *Bahrain Med Bull* 2022;44(1):792-4.
16. Younis NM, Mahmoud M, Ahmed A, et al. University Students' Attitude Towards E-Learning. *Bahrain Med Bull* 2021;43(2):460-2.
17. Muwfaq YN, Ahmed MM, Abdulsalam RR. Assessing Quality of Life in Palliative Care. *Bahrain Med Bull* 2021;43(3):594-6.
18. Ahmed MM, Younis NM, Dhahir NM, et al. Acceptance of Covid-19 vaccine among nursing students of Mosul University, Iraq. *Rawal Med J* 2022;47(2):254-8.
19. Younis NM. Efficacy of Health Beliefs Model-Based Intervention in Changing Substance Use Beliefs among Mosul University Students: A Randomized Controlled Trial. *Revis Bionatura* 2022;7(2):35.
20. Ahmed MM, Younis NM, Hussein AA. Violence towards nurse's staff at teaching hospitals in Mosul City. *Indian J Forensic Med Toxicol* 2020;14(3):2598-603.
21. Moreira DP, Simino GPR, Reis IA, et al. Quality of life of patients with cancer undergoing chemotherapy in hospitals in Belo Horizonte, Minas Gerais State, Brazil: does individual characteristics matter? *Cadernos de Saúde Pública* 2021;37(8):e00002220.
22. Ahmed MM, Younis NM, Hussein AA. Prevalence of Tobacco use among Health Care Workers at Primary Health Care Centers in Mosul City. *Pak J Med Health Sci* 2021;15(1):421-4.
23. Younis NM, Ahmed MM, Dhahir NM. Prevalence of Covoravirus among Healthcare Workers. *Int J Med Toxicol Legal Med* 2021;24(1-2):267-9.
24. Naji AB, Ahmed MM, Younis NM. Adherence the Preventive Measure Against for COVID-19 among Teachers at University of Mosul. In *J Med Tox Leg Med* 2021;24(3-4):273-7.
25. Alshammari FR, Alamri H, Almalaq A, et al. Exploring the Attitudes of Fathers/Teachers Towards the Oral Health of School Children Aged 6 to 7 Years in Ha'il City: Qualitative Study. *Bahrain Med Bull* 2021;43(2).
26. Younis NM, Ahmed MM, Hussein AA. Nurses' knowledge, attitude and practice towards preparedness of disaster management in emergency of mosul teaching hospitals. *Med Legal Update* 2020;20(3):775-9.
27. Wang J, Jacobs S, Dewalt DA, et al. A longitudinal study of PROMIS pediatric symptom clusters in children undergoing chemotherapy. *J Pain Sym Manag* 2018;55(2):359-67.