



Can the quality of life of oncopediatric patients interfere with their response to treatment? A concise systematic review

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Introduction

Advances in research and improvements in treatment increased the survival rate of pediatric cancer patients, compared to 1970, it was noted that the 5-year survival rate increased by 26%, that is, about 84% of children survive 5 years or more [1]. The instability caused in children and teenagers' lives when diagnosed with cancer is expressive [2]. Symptoms such as fatigue, loss of strength, pain, loss of appetite, among others, begin to appear, limitations caused by the disease become increasingly present. What was once the beginning of their independent life, now becomes the opposite: as the disease progresses, the child/teenager becomes more and more dependent, and, therefore, their autonomy decreases. As a result, there is a greater tendency for feelings such as vulnerability, frustration, anger, and fear of death [3,4].

Therefore, care for these patients should aim at carrying out activities capable of developing social skills such as friendship, cooperation, conflict resolution, empathy, and self-affirmation, which are of great importance in the adaptation of a child who survives cancer. Thus, it is possible to infer that improving the QoL of pediatric cancer patients goes far beyond medications and an office room [5].

This study aimed to Identify the relationship between the quality of life of oncopediatric patients influences their treatment and survival.

Methods

This is a systematic literature review based on the following scientific questions: 1 - *Is there a relationship between the quality of life and survival of pediatric cancer patients and their response to treatment?* 2 -

How does a better quality of life interfere in the response to cancer treatment? 3 - *What are the benefits of studying the quality of life of pediatric cancer patients?* Articles selected for the study had to meet the following eligibility criteria: (1) be published in a national and international journal; (2) in the period from 2016 to 2021; (3) and be fully available and free of charge. Articles that did not answer the scientific questions proposed by the study were excluded.

A bibliographic search was carried out in the electronic databases BVS/LILACS, Scielo and PubMed in the period of July 2021. The search strategy included the following terms: "quality life cancer pediatric survival" and "quality life cancer pediatric treatment". The first step during the selection was removing duplicates. Then, abstracts from eligible studies were selected in order to carry out the full texts screening. The selected articles underwent peer review and disagreements between the evaluators were analyzed by the study supervisor. After screening the full texts, members of the research team extracted data from the selected studies using a data extraction form, which included information on the study characteristics (title, year and country of publication), methods (study design) and the scientific questions were answered through the articles content.

Results and Discussion

A total of n=2538 articles were found, with n=2452 from the PubMed platform, n=22 from Scielo and n=64 from Lilacs. Articles that met the inclusion criteria, it was found n = 411 in total, from these only n = 6 were from Scielo, n=27 from Lilacs and n=378 from PubMed. From these articles, n = 11 (PubMed n=6; Scielo n=2 and Lilacs n=3) were used in this review. The other 400

the simple search for a cure - that is, in the search for their wellness and QoL [2].

Among non-pharmacological measures that have proven effective for improving QoL, we have the conciliation of exercises with educational or psychological measures, which enhances the positive effects of physical activities, implying a better adaptation to the new life and, consequently, an improvement in the symptoms of the child and teenager diagnosed with cancer [5]. Furthermore, the bibliography also points to the use of music therapy, which establishes an individual or group relationship of patients with sound; music and bodily-sound-musical instruments to recover and rehabilitate the individual for society, in addition to being effective for anxiety, pain and discomfort resulting from this context of performing excessive procedures [4].

Benefits of studying and promoting the quality of life for pediatric cancer patients

Analysis of the published literature already shows that studying QoL of oncopediatric patient allows creating strategies for prevention and early intervention of the harmful effects that the disease brings to the lives of children and teenagers. The damage caused by cancer causes both emotional and social vulnerability.

First, one of the benefits of studying QoL is related to greater support for pediatric cancer patients. According to the bibliography, family support for the child can occur in different ways, being very important for their well-being. This support can be done through conversations, hugs and through effective communication, having an easing effect on feelings of fear and anxiety, as well as on moments of pain. Good communication can help improving the patient's QoL, once receiving real information about what is happening in their body at that moment, the acceptance of death can become more natural [9].

In this context, it can be observed that different approaches to treatment, reflection on the oncopediatric patients' QoL, can not only provide the necessary medical support as well as social welfare and emotional in a dynamic model that changes the focus of the disease and it empowers the patient, based on the patient's needs at any time [10]. Therefore, this approach promotes an integrated care, including conditions to socialize and add the routine of cancer treatment to the life and school habits of children and teenagers [10-12]. **Table 1** illustrates the analysis of articles on the benefits of QoL in the treatment of pediatric cancer patients.

Table 1. The benefits of quality of life in the treatment of oncopediatric patients and type of study.

Article	QoL benefits in the treatment	Study type
Peikert, 2018	Quality of life presents a positive response to cancer treatment, demonstrating a positive impact on social and psychosocial skill. Related to the need to validate previous findings and develop future comprehensive interventions in order to optimize health services for surviving patients.	Systematic review
Molnár, 2019	The quality of life of the oncopediatric patient is of a huge importance for the treatment, and the post-cancer period is influenced by the time the treatment was finished. Highlights the importance of creating training programs for teachers who work with young cancer survivors, allowing school reintegration and psychosocial development.	Case-control study
Baytan, 2016	Health-related quality of life (HRQoL) covers several domains, as a consequence, behavioral and emotional problems are reported, which may be a predictor for the low survival of this patient. The proportion of a better quality of life can positively inferred in the response to treatment, as it will provide the child with a better adaptation to this new phase of his/her life that he/she is facing.	Case-control study
Xavier, 2020	The benefits of studying the QoL of oncopediatric patients are the need to provide more support to qualify the care of these patients. The improvement in QoL positively interferes in the response to treatment, as it significantly reduces general suffering, and provides improvement in aspects related to health, hope and positive affect.	Integrative review
Brites et al 2020	The beneficial effects of music therapy on the patient's quality of life have been demonstrated in recent years through several studies. Music therapy improves the quality of life, recovers and rehabilitates the patient for society.	Quantitative, observational, descriptive, cross-sectional study
Levine et al 2017	The quality of life of oncopediatric patients shows substantial improvements in comparison to their suffering, as better the family preparation and planning advanced care. By improving the patient's QoL, it is possible to provide support covering medical, social, emotional and spiritual wellness in a dynamic model that shifts focus based on the patient's needs.	Case-control study

Gomes et al, 2017	The quality of life of pediatric oncopediatric patients related to the school environment is harmful to the child, thus showing a difficulty in learning. With the improvement of the patient's QoL, the availability and use of fundamental tools to understand the school dynamics experienced by children diagnosed with cancer can support research, which is translated into public policies that address professional training.	Case-control study
Sodergren et al 2017	The impact of the cancer diagnosis and its subsequent treatment brings an emotional dependence, lack of emotional control, in addition to being restricted to some activities, it may present difficulty in concentration and the feeling of loneliness. The benefits of quality of life in treatment are that they change the impacts of diagnosis and treatment on changing the reality of these individuals and their perspective for the future.	Literature review
Coughtrey et al, 2018	Cancer impacts the quality of life in the field of communication skills, therefore, a lack of quality of life can negatively affect treatment adherence and symptom management. Psychosocial interventions are effective for reducing anxiety and depression, increasing quality of life	Systematic review
Oliveira et al, 2017	Fatigue is a physical, cognitive, and affective factor that hinders children in their treatment and affects their QoL by impairing daily activities, motivation and interest in actions that provide pleasure. Fatigue acts in aspects such as communication, socialization, and the practice of pleasurable activities, demonstrating the need to deal with this symptom to improve QoL.	Cross-sectional, quantitative and descriptive study, applied the PedsQL questionnaire in 37 children and adolescents.
Guimarães, et al, 2016	The performance of the multidisciplinary team in the palliative phase is essential for the success of this type of care, and its study is necessary, linked to the QoL in the education of health professionals. Associate measures to control signals and symptoms to playful activities to promote physical and mental wellness improves of QoL of children when there is no chance of cure.	Exploratory research with a qualitative approach.

Conclusion

The good QoL of oncopediatric patients is essential for their response to treatment and improved survival. When children and teenagers discover the diagnosis of cancer, they undergo drastic changes that affect their emotional state and their response to treatment. It is essential to the social and emotional well-being of the patient to minimize the harmful effects of cancer diagnosis. Further studies on the QoL of these patients are needed, as they can contribute to the development of strategies and tools capable of providing the creation of an environment that can minimize their social and physical limitations and try to balance their expectations as a child or teenager versus the imposed by cancer treatment.

Keywords: Quality of life. Oncopediatric. Treatment. Survival.

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Data sharing statement

No additional data are available.

Conflict of interest

The authors declare no conflict of interest.

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