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LIFE EXPECTANCY IN CHILDREN WITH CANCER [1]

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Abstract: Introduction: With the diagnosis of childhood cancer, the child is subjected to various treatments that expose them to pain and suffering, changes in family dynamics and social interaction, and often physical and psychological limitations. For children with cancer, the disease is discovered abruptly and they are quickly placed in a new scenario. In addition to the adversities experienced by patients, coping strategies can help in the process of acceptance and the search for a cure. **Objective: To** map the types of evidence of the effectiveness and efficacy of hope in coping with pediatric cancer, through a scoping review. **Method:** The bibliographic search considered scientific production over the last ten years. The collection of articles was carried out critically based on the recommendations of the PRISMA guide and the PICO strategy was used to construct the problem question. To select the articles, descriptors in English and Portuguese were used to combine and screen for studies involving: "children with cancer", "oncological children", "coping", "hope", "hope in children". The following electronic databases were used: PubMed, Scielo and the Portal Periódicos Capes. **Results:** Six articles published between 2012 and 2023 were found. The results of the selected articles showed that life expectancy is used as a coping strategy for childhood cancer. **Conclusions:** There is evidence that hope contributes positively to coping with childhood cancer, reducing anxiety, overcoming the difficulties experienced, improving quality of life and mood. There were few studies evaluating hope as a coping strategy in the view of children with cancer.

Keywords: Child cancer; Coping; Hope.

INTRODUCTION

The onset of cancer occurs through a genetic mutation, which is an alteration in the cell, called a neoplasm. Neoplasms encompass more than one hundred different types of malignant diseases, triggering the disordered growth of cells that can affect adjacent tissues or organs at a distance (Instituto Nacional de Câncer [INCA], 2020).

The types of cancer that appear in children and adolescents are different from those that affect adults, responding well to chemotherapy, have long-term effects, and follow-up for the rest of their lives (AC Camargo Cancer Center, 2021). The growth of cancer progresses at a rate of around 1% per year, identifying an increase inversely proportional to that of mortality, where an annual cure rate of around 85% is estimated. Taking into account the causes of death of children aged 1 to 14. Cancer ranks third in Brazil (Rodrigues & Camargo, 2003).

With the diagnosis of childhood cancer, children and their families go through a period of adaptation to their current reality and, as a result, family dynamics change. The child is given special health care due to the extensive treatment. The child undergoes various tests and hospitalizations, which often cause physical and psychological limitations and disabilities. The procedures expose the child to pain and suffering, leading to withdrawal from school, social and family life and interfering with play (Silva, Cabral, & Christoffel, 2010).

Having a chronic illness means that hospitals, doctors and medication are part of the child's routine. Children generally don't think of illness, limitations or death as restrictions on their lives, but rather talk about their dreams, projects and everyday life outside the institution. However, children who are living with cancer acquire a sense of worth, courage, maturity and responsibility atypical of their age. Living with the disease brings an early maturity that, when they understand cancer, fights to preserve their lives, showing strength and courage, but even though they are hopeful of a cure, they feel fear and anguish (Lima, 2012).

The immediate understanding of those who receive the diagnosis is limited, preventing them from understanding the professionals' explanations and guidelines. Faced with the communication of this news, family members react in different ways, often including expressions of shock, fear, despair, sadness, isolation and pain (Lima, 2012).

However, after the initial impact, family members try to understand what is needed to continue on their paths. In the midst of adversity, hope has taken over, bringing balance to the situation and improving morale when everything seems distressing (Cabeça & Melo, 2020).

Hope is seen as the realization of what is desired in the future and has a positive impact on well-being and positivity. Numerous studies show that hope has a major impact on how patients cope with physical, emotional and spiritual problems (Olver, 2012).

In this way, it can be seen that hope gives the patient the strength to continue the fight against their illness, to cope with routines and treatments. Hope, when at high levels, is considered a tool that provides greater ability to cope with difficulties and better solve problems. Hope is related to positive prospects for the future and has a direct impact on quality of life (Sartore & Grossi, 2008).

Current literature has identified studies on life expectancy in general as a means of coping with the disease (Sartore & Grossi, 2008). And on play as a way of coping with hospitalization for childhood cancer (Motta & Enumo, 2002), but there are gaps in the way children use hope as a coping strategy in the search for a cure.

Considering the importance of hope as a coping strategy for childhood cancer and how this circumstance is explored in the fields of Health Psychology, the following question is defined: What types of evidence are there of the effectiveness and efficacy of hope in coping with pediatric cancer?

Thus, the aim of this study is to map the types of evidence of the effectiveness and efficacy of hope in dealing with pediatric cancer.

METHOD

The study was defined as a scoping review, which aims to structure concepts that contribute to the area of knowledge and analyze the application, scope and nature of research, in order to identify the research gaps present (Arksey & O'Malley, 2005).

Based on the recommendations of the PRISMA guide (Tricco et al., 2018), a critical evaluation and mapping of the last ten years was carried out, as described in the Flowchart (Figure 1).

For the scientific searches, descriptors in English and Portuguese were applied to facilitate the combination and screening of studies involving: "cancer children", "coping", "hope", "oncological children", "hope", "hope in children". We used the following electronic databases: PubMed, Pepsi, Scielo, Google Scholar and the Portal Periódicos Capes.

Boolean terms were used to find the descriptors simultaneously "AND.

Studies were selected that met the inclusion criteria: studies in English and Brazilian Portuguese related to children with cancer, coping strategies for childhood cancer, life expectancy in children with cancer, in the stipulated period of the last ten years and available in full. Also included were studies of a theoretical, quantitative, qualitative and experimental nature looking at the same subject.

Studies that did not evaluate life expectancy as a way of coping with childhood cancer were excluded.

The PICO technique (Table 1) was used to devise the search strategies. This is a tool used in scientific evidence-based practice to solve teaching and research problems (Santos, Pimenta & Nobre, 2007). In addition to helping with the literature search, it provides guidance on how to carry out the research question, allowing the researchers to locate the best scientific information in a considered manner.

BEGINNINGS	DESCRIPTION	ANALYSIS
P	Patient	Children with cancer
I	Interest	Hope
Co	Context	Coping strategy

Table 1: Description of the PICO Strategy

Subsequently, articles were selected by reading the titles and discarding those with duplicates. Of the remaining articles, an analysis was carried out based on the reading of the articles and the subsequent exclusion of those that diverged from the focus of this study.

To analyze the data, a thorough reading of the full articles was carried out, from which it was possible to exclude studies that did not answer the guiding question. Therefore, only the articles that met the criteria established for this analysis remained in the corpus.

The Prisma Flowchart for presenting the articles is presented below, followed by Table 2 showing the characterization of the articles selected for this study:

RESULTS AND DISCUSSION

Although put in different ways, it was understood from the articles selected that life expectancy is used as a coping strategy for childhood cancer (Souza et al., 2012; Espinha et al., 2012; Sousa et al., 2014; Amador et al., 2016; Jamsell et al., 2016; Martins et al., 2018). Regarding the date of publication, six articles published between 2012 and 2021 were found.

Two articles (Jalmsell et al., 2016; Amador et al., 2016) sought to analyze how children with cancer wish to be informed of bad news and understand their illness, while (Souza et al, 2012; Espinha et al, 2012; Souza et al, 2014; Martins et al, 2018) investigated hope as a fundamental axis for healing and treatment, also as a form of quality of life and state of mind.

Of the articles selected, four used a qualitative approach (Souza et al., 2012; Sousa et al., 2014: Jalmsell et al., 2016; Martins et al., 2018). Another article was a descriptive study (Amador et al., 2016). And finally, an integrative review (Espinha et al, 2012).

With regard to databases, it was possible to identify that the articles selected used the Portal Periódicos Capes, Pubmed, Scielo, Pepsic and Google Scholar. With regard to qualitative studies, Martins et al. (2018) emphasizes the importance of hope in adapting to childhood cancer and messages that clearly show hope of overcoming the disease. Souza et al. (2012) and Souza et al. (2014) used playful techniques to approach the participating children.

The study by Souza et al. (2012) aimed to understand the feelings experienced by children with cancer during therapeutic play sessions. It was a qualitative study with 5 children aged between 3 and 12. Therapeutic play is one of the modalities of symbolic play. It is a structured instrument that allows children to relieve anxiety generated by experiences that are unusual for their age, and should be used whenever the child has difficulty understanding or dealing with a difficult situation. When children are ill,

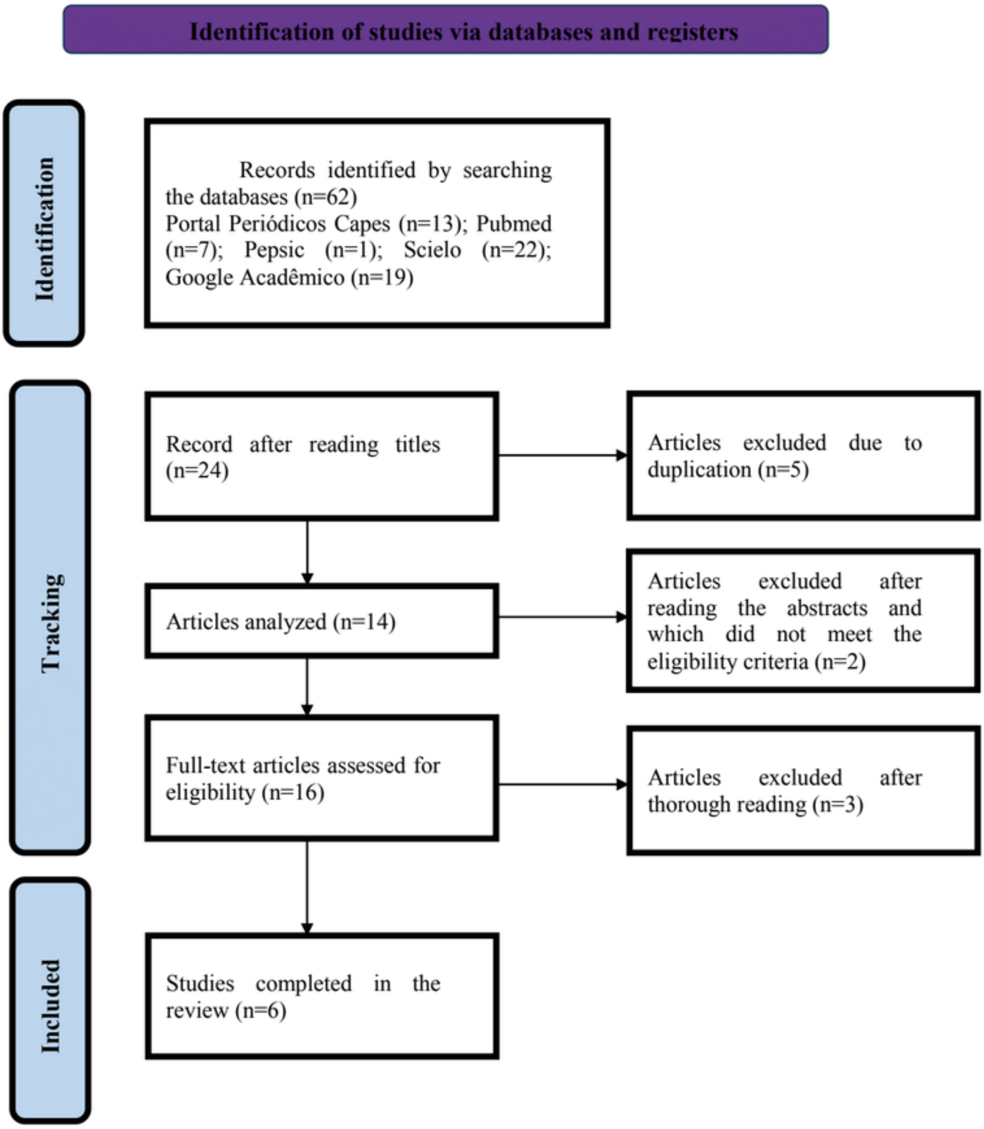

Figure 1

Source: Prepared by the authors, 2023. Based on Tricco et al. (2018).

Identification	Objective	Method/Sample/ Instruments	Main results	Conclusion
Martins et al, 2018	Examining the effects of hope on children's quality of life and	Self-reported questionnaire with children and	Hope was positively associated with a reduction in anxiety, revealing stronger associations for patients undergoing treatment	The importance of hope as a decisive resource in adapting to pediatric cancer
Sousa et al, 2014	Understanding the meaning of experiencing illness for children with cancer	Drawing a story with children aged 6 to 12	For a child with cancer, the disease is discovered in a very different way suddenly and is soon inserted into a new context	The child has symptoms that generate discomfort and anxiety. When At the same time, there is hope of a cure with treatment
Jalmsell et al, 2016	How children with cancer want to receive bad news about their illness	Audio-recorded interviews with children and adolescents aged between 7 and 17.	Children want to be informed in the most positive as possible, allowing us to maintain hope and receive bad news at the same time as his parents	Children with cancer want to be fully informed about their illness.

Amador et al, 2016	Understanding the	Descriptive study with a qualitative approach, children diagnosed with cancer aged between 8 and 12.	The meaning of information for the child is information that makes her feel relieved and keeps her hoping for a cure	the child wants to be recognized in the search for information about their disease and understand the treatment, transformations in your body and your life
Souza et al, 2012	Understanding the feelings experienced by children with cancer, manifested during Therapeutic Play sessions	Data was collected through systematic and participatory observation, combined with an interview mediated by Therapeutic Play, with children aged between 3 and 12.	Fear of death, pain, sadness at the limitations imposed by the disease	feelings of hope and happiness in the face of treatment, optimism about returning to normal activities and overcoming difficulties experienced
Espinha et al, 2012.	To analyze the spiritual dimension of children and adolescents with cancer.	Integrative literature review.	Spirituality is maintained at various stages of the disease, and the way it is expressed can vary according to age.	They rely on spirituality and life expectancy. There is still a lack of studies in this age group.

Table 2. Description of the articles

they find it difficult to understand what is happening to them, both in terms of the illness and the procedures they are undergoing. One of the ways to help children understand what is happening to them is therapeutic play. The play was a dramatization made with puppets and questions, with the aim of stimulating the child to verbalize about their experience with cancer, with each child expressing feelings at different times during the play.

The authors pointed out that the disease is an undesirable and unexpected event, and there may be behavioral changes, such as isolation, not being able to go to school, among other restrictions in order to avoid possible infections due to the lowering of the immune system. When children know and understand the disease, they accept treatment and interventions more easily and are better prepared. It is extremely important to explain the procedures to the children before carrying them out, in order to reduce their anxiety about the unknown. The diagnosis of the disease generates emotional trauma, giving rise to negative and positive feelings, fear of death, pain, sadness at the limitations. Therefore, a good prognosis and the outcome of a cure awaken hope, happiness and optimism in resuming activities (Souza et al., 2012). Hope for a cure and acceptance are important for coping with treatment. And from the difficult present, the future is desired and dreamed of by the child, and hope is important for overcoming physical and emotional stress. Despite the limitations and difficulties encountered as a result of the disease, the child's ego is strengthened and their hope is alive (Souza et al., 2012).

Souza and colleagues (2014) used drawing stories with children aged between 6 and 12, where it was possible to relate hope in a positive way to reducing anxiety, optimism to return to daily activities and overcoming the difficulties experienced, with hope of a cure when the disease is treated. It consisted of drawing a specific picture on the theme: "a child with cancer". The children drew pictures and when they had finished, they told an associated story, using it as an illustration of their experience. The children told how they perceived the process of discovering the disease. For children with cancer, the disease is discovered suddenly and they are soon inserted into a new context and often have their routine changed. The child presents signs and symptoms that generate discomfort and anxiety, but at the same time, they hope for a cure with treatment.

Jalmsell and colleagues (2016) used individual interviews recorded and analyzed with systematic text condensation with 10 children aged between 7 and 17, in order to explore how children with cancer want to be informed about bad news about their illness. How they want to be informed when there are no more treatment options. Bad news was defined as information about a relapse of the disease or that treatment is no longer working or that there are no more possible treatments. All the children in this study, , wanted to be informed with truthful information and also wanted to hear bad news about their illness at the same time as their parents. They all showed that they wanted to be informed in a positive way, so that they could maintain hope and understand the disease.

Finally, the last qualitative study selected was by Martins et al. (2018), which looked at 211 children and adolescents diagnosed with cancer, divided into two groups according to the stage of treatment, 97 patients in treatment and 114 out of treatment. Self-reported questionnaires were used to measure hope, anxiety and perceptions of health-related quality of life. Life expectancy was positively related to quality of life directly and indirectly as a means of reducing anxiety, with patients undergoing treatment showing stronger associations. The results highlight the importance of hope as a fundamental resource in the adaptation to pediatric cancer and one that can be strategically targeted in psycho-oncological interventions.

With regard to the descriptive study by Amador et al. (2016), who interviewed nine children diagnosed with cancer between the ages of 8 and 12, the children showed that they wanted information about the disease in order to understand the changes in their bodies and lives and to understand the treatment. When children are properly informed about the procedures and repercussions of their treatment, they show better acceptance of events, as they are able to control their feelings to some extent. Traumatic events, such as hair loss, turn out to be something the child expected once they had been informed that this would happen during their treatment.

Children attribute meanings to the information they are told when their right to information is met, and they believe that the professionals want to help them cope with the disease. Despite their fear, it is the information that makes them feel relieved and keeps them hoping for a cure. The child wants to be recognized as a subject with rights, who seeks information about their health condition in order to understand the treatment and the changes to their body and life. The authors conclude that intervention with children with pediatric cancer should be more supportive, aimed at resolving their concerns, controlling their pain, discomfort and anxiety (Amador et al, 2016).

Finally, we selected an integrative literature review (Espinha et al, 2012) which searched the Lilacs, Scielo, Psyinfo and Medline databases from 1990 to 2011. The authors analyzed 21 studies on the spiritual dimension of children and adolescents with cancer. They observed that when children are diagnosed with cancer and undergo treatment for their illness, it has a major impact on their quality of life. However, the encouragement to maintain hope and spiritual connections can bring benefits to those who make use of internal energies to achieve a cure. As with hope, spiritual vision also affects the way individuals extract meaning from traumatic events, and is seen as an effective mechanism used in the face of suffering. In the imminent presence of death, they search for vital feelings and rely on a renewed sense of hope. Hope is related to spiritual well-being and does not allow illness to have a lasting impact.

The articles selected (Souza et al., 2012; Espinha et al., 2012; Sousa et al., 2014; Amador et al., 2016; Jamsell et al., 2016; Martins et al., 2018) provided evidence that hope as a coping strategy is fundamental for the cure and completion of treatment, for quality of life and mood. And how children with cancer prefer to receive news about their illness.

Martins et al. (2018) points to hope as a factor for better adaptation to childhood cancer and messages about the hope of overcoming the disease. This result coincides with Borges et al (2016) who presents hope and emotional support as a driver of the communication process between the family and the child, as messages of hope of overcoming the disease, distancing the child from ideas of their future and death.

Souza et al (2012) and Sousa et al (2014) relate hope in a positive way to reducing anxiety, confidence to return to daily activities and overcoming the difficulties experienced, with hope of a cure in the face of treatment for the disease. (Havenstrin et al 2020) also speaks of the importance of hope and confidence in curing the disease, recreational activities and clear information to reduce the anxiety and stress of hospitalization.

Espinha et al (2012) observed that children and adolescents with cancer rely on spirituality and hope as coping strategies during the treatment of the disease, providing the search for meaning and purpose in life. Another study by Robert et al (2019) highlighted divergent ways of integrating spirituality into daily life, indicating practices of well-being and personal reflection, through yoga and mindfulness. Thus, spirituality was associated with building and developing hope, in order to be an evidently useful coping resource in which religious practices were pertinent in helping to strengthen hope for healing and reducing stress, through prayers.

CONCLUSION

This research aimed to map the types of evidence on the effectiveness and efficacy of hope in dealing with pediatric cancer.

Based on the articles selected for this study, it can be concluded that there is evidence that hope contributes positively to coping with pediatric cancer, reducing anxiety, overcoming the difficulties experienced, improving quality of life and mood.

Considering that hope is important for coping with the disease, it is suggested that the practice of intervention with children with cancer should consider the importance of social and emotional support, aimed at easing their worries, controlling pain, discomfort and anxiety and providing information about the clinical picture, so that they can understand the changes in their body, in their life and understand the treatment. Prioritizing messages that emphasize the hope of overcoming the disease, offering space for children to express themselves, favors adherence to treatment and good management of the case.

During the searches and selection of articles, it was possible to identify a limited amount of research related to the subject analyzed in the last ten years, and no research was carried out between 2022 and 2023, therefore the need to develop studies that evaluate hope as a coping strategy in the view of children with cancer, thus reflecting as gaps that limited the present study. On this basis, new qualitative research is suggested that encompasses children's experiences and their perspectives on hope as a way of coping with their restricted health condition.

This study hopes to contribute to the recognition of life expectancy as a way of coping with childhood cancer, helping health professionals to effectively manage the treatment of the disease. This research aims to provide a conception of hope in childhood cancer and propose further studies on the subject. The subject of interest was clarified and the content can be addressed in future research in the area of health, hospital and child psychology.

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