



# Use of Occupational Therapy Intervention on Psychosocial Well-Being and its Impact on Quality of Life Among Pediatric Cancer Survivors – A Case Study

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## KEYWORDS

pediatric cancer survivors, occupational therapy, psychosocial well-being, quality of life.

## ABSTRACT:

**Introduction:** Cancer is the greatest cause of death among children and adolescents. Childhood cancer survival rates are higher than ever before, because of advancements in cancer detection and treatment. Children with cancer may experience an adverse effect on the psychological well-being such as decreased self-esteem and increased risk for depression, that can adversely affect their quality of life. Occupational Therapy provides client-cantered intervention to improve the psychosocial well-being and quality of life among pediatric cancer survivors.

**Objectives:** The objectives of the study are to find out the effect of Occupational Therapy intervention in reducing the anxiety and depression and in improving the self-esteem and thereby analysing the impact of quality of life among pediatric cancer survivors.

**Methods:** This single case study was conducted with the permission of the Ethical Committee. The survivors visiting the Department of Paediatric Oncology (Outpatient), Sri Ramachandra Hospital was screened for the selection criteria. The sample was selected based on the selection criteria and the consent to participate in the study. After explaining the study, the doubts were cleared regarding the study and the assent form was obtained. After obtaining the assent form from the parent the sample was selected for the Tailor-made Occupational Therapy Intervention. The pre-test was administered using the outcome measure. The tailor-made Occupational Therapy intervention was planned and administered. After completing the intervention session, the post-test was administered. The result was obtained by comparing the pre-test and post-test scores.

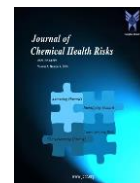
**Results:** The result of this study revealed that Occupational Therapy Psychosocial Intervention showed a significant reduction in the depression, anxiety level and showed improvement in the self-esteem and quality of life among Pediatric Cancer Survivors.

**Conclusions:** The study concludes that Occupational Therapy is useful in improving the Psychosocial Well-Being and Quality of Life among Pediatric Cancer Survivors through tailor-made intervention. We Occupational Therapy provides intervention for Psychosocial Well-Being which improves the Quality of Life among Pediatric Cancer Survivors.

## 1. Introduction

Cancer is a vast category of diseases that can begin in practically any organ or tissue of the body and spread to other organs when abnormal cells grow uncontrollably, invade adjacent regions of the body, and/or move to other

organs. The latter process is known as metastasizing, and it is a leading cause of cancer-related death. Cancer is sometimes known as a neoplasm or a malignant tumour [1]. An estimated 400 000 children and adolescents aged 0 to 19 years develop cancer each year [2].



For children and adolescents, cancer is the greatest cause of mortality [2]. In contrast to adult cancers, the vast majority of children cancers have no identified cause. Many studies have attempted to determine the causes of childhood cancer, however only a small percentage of cancers in children is caused by environmental or lifestyle variables [2]. Chemotherapy, surgery, radiotherapy, and bone marrow transplantation are all used to treat cancer, and they can all have a negative impact on a child's physical and psychological well-being [3]. With advances in cancer screening and medical treatment, the survival rates for childhood cancer are higher than ever before [4]. In the 1960s most children with cancer died. The 5-year survival rate was only 28% (Ries, Harras, Edwards, & Blot, 1996). Now three out of four children diagnosed with a malignancy in childhood will survive the disease and treatment [5].

The term "survivor" first appeared in the 1970s, and its definition has been a source of debate ever since. Some people propose that a survivor is someone who has survived cancer from the time of diagnosis to now [6]. Hong Kong Chinese childhood cancer survivors defined as having completed treatment at least 6 months previously [7]. Cancer therapy performed at a young age can have consequences that may not become apparent for many years [8]. Long-term complications in childhood cancer survivors, such as impairment in growth and development, neurocognitive dysfunction, cardiopulmonary compromise, endocrine dysfunction, renal impairment, gastrointestinal dysfunction, musculoskeletal sequelae, and subsequent malignancies [8].

Despite the fact that cancer survival rates are greater than they have ever been, paediatric cancer survivors are at risk of negative physical and psychosocial effects from their treatment, which can have a significant negative impact on their psychosocial well-being [9]. Self-esteem is defined as a person's subjective assessment of their own value, which is based on their views or self-evaluation of their own ability and efficacy [10]. Anxiety is a subjective emotional reaction that is best quantified using self-report assessments [11]. Approximately two-thirds of childhood cancer survivors have at least one late effect, and one-fourth have a severe or life-threatening late effect, despite the fact that psychosocial disorders in survivors and family members are frequently underestimated and may be more widespread [2]. Cancer

and its treatment have been described as highly stressful and life-threatening situations for children [12]. Survivors described anxiety that interfered with school re-entry [2]. Adolescents showed concerns about telling people about their condition because they were unsure of how others would react [2]. Cancer recurrence and second malignancies become a constant fear for survivors because there is no 100% assurance that the cancer will not return [9].

Cancer and its treatments may have a negative impact on not only the physical but also the mental well-being of childhood cancer survivors [13]. Other research has revealed that survivors had worse self-esteem, as well as higher levels of depression and anxiety, than healthy children [14]. Feelings of depression in paediatric cancer survivors might lower self-esteem and potentially increase the risk of suicide ideation [15].

Furthermore, chemotherapy, radiation, and surgical treatments have been shown to have long-term negative impacts on the psychological well-being of children with cancer, including lower self-esteem and an increased risk of depression, which can negatively impact their quality of life [16]. The present study identified a connection between self-esteem and depression, anxiety, and quality of life among paediatric cancer survivors. Therefore, helping children to develop positive self-esteem can be a way of promoting their psychosocial being and empowering them to lead a healthier life [7].

Clients may receive Occupational Therapy treatments if their capacity to participate in meaningful occupation has been disrupted, or as part of an early intervention or health promotion programme. Occupational therapy's goal is to support a client's health and engagement in life by engaging them in occupation. Work, play, relaxation, rest, sleep, and activities of everyday living are all included in the client's occupation engagement. It can occur in a variety of situations, including the family, the workplace, the community, hospitals, rehabilitation facilities, and schools. Psychological and social aspects of mental health are addressed through interventions that aim to improve or restore well-being [17].

## 2. Objectives

The objectives of the study are to find out the effect of Occupational Therapy intervention in reducing the anxiety and depression and in improving the self-esteem



and thereby analysing the impact of quality of life among pediatric cancer survivors.

### 3. Methods

This single case study involved assessing the psychosocial well-being quality of life among pediatric cancer survivors and to determine the use of Occupational Therapy intervention. This study was approved by Institutional Ethics Committee, Sri Ramachandra Institute of Higher Education and Research (Category – I Deemed to be University). The subject was recruited from Sri Ramachandra Hospital's Department of Pediatric Oncology (outpatient). The study used Purposive sampling method. The survivors visiting the Department of Paediatric Oncology (Outpatient), Sri Ramachandra Hospital are screened using the Centre for Epidemiological studies Depression Scale for Children (CES-DC), Rosenberg Self-Esteem Scale (RSES) and Generalized Anxiety Disorder – 7 Scale (GAD-7). The sample was selected based on the selection criteria and their willingness to participate in the study. The pre-test was administered using the Centre for Epidemiological studies Depression Scale for Children (CES-DC), Rosenberg Self-Esteem Scale (RSES), Generalized Anxiety Disorder – 7 Scale (GAD-7) and PedsQl 3.0 Cancer Module. The Occupational Therapy intervention was planned and executed over a one-month period, with 12 sessions (3 sessions per week). Following the intervention session, the post-test was performed using the outcome measure tool. The data analysis was conducted by comparing the pre-test and post-test score.

#### Inclusion Criteria:

The cancer survivors with the minimum of 6 months to 5 years after completion of the entire course of hospital treatment with the score of 16 and above in The Centre for Epidemiological studies Depression Scale for Children; 15 and below in Rosenberg Self-Esteem Scale and 5 and above in Generalized Anxiety Disorder – 7 Scale. The survivors with age group 12 to 18 years from both the gender. The survivors who can able to communicate and understand Tamil and English.

#### Exclusion Criteria:

The children who are critically ill, have a second malignance and were diagnosed with other conditions.

### 4. Results

The study was intended to find out the effect of Occupational Therapy intervention to improve the psychosocial well-being and quality of life for pediatric cancer survivors. Table-1 shows the changes in Generalized Anxiety Disorder Scale (GAD-7) scoring during the pre and post intervention phases, which shows a significant reduction of anxiety level from 8 to 4. Anxiety is reduced from moderate to mild. Table-2 Shows the changes in Centre for Epidemiological Studies Depression Scale for Children (CES-DC) scoring during the pre and post intervention phases, which shows a significant reduction in the depression level from 19 to 10. Table-.3 shows the changes in Rosenberg Self-Esteem Scale (RSES) scoring during the pre and post intervention phases, which shows a significant improvement in the self-esteem level from 15 to 23. Table-4 Shows the changes in the PedsQl 3.0 Cancer Module scoring during the pre and post intervention phases, which shows a significant improvement in the Quality of Life from 33.33 to 37.96. The result of this study revealed that Occupational Therapy Psychosocial Intervention showed a significant reduction in the depression, anxiety level and showed improvement in the self-esteem and quality of life among Pediatric Cancer Survivors.

**Table – 1:** Comparison of Pre-test and Post-test score of Generalized Anxiety Disorder Scale (GAD-7):

Generalized Anxiety Scale	Pre-Test	Post-Test
	8	4

**Table – 2:** Comparison of Pre-test and Post-test score of Centre for Epidemiological Studies Depression Scale for Children (CES-DC):

Centre for Epidemiological Studies Depression Scale for Children (CES-DC)	Pre-Test	Post-Test
	19	10

**Table-3:** Comparison of Pre-test and Post-test score of Rosenberg Self-Esteem Scale (RSES):

Rosenberg Self-Esteem Scale (RSES)	Pre-Test	Post-Test
	15	23

**Table-4:** Comparison of Pre-test and Post-test score of PedsQI 3.0 Cancer Module:

PedsQI 3.0 Cancer Module	Pre-Test	Post-Test
	33.33	37.96

## 5. Discussion

The discussion of the study is based on the findings obtained from the statistical analysis. Childhood cancer diagnosis and treatment have been regarded as exceedingly distressing and sometimes potentially fatal situations for children. The aim of this study is to find out the use of Occupational Therapy Psychosocial Intervention among Pediatric Cancer Survivors to improve their Psychosocial Well-Being and Quality of Life.

The impact of cancer on psychosocial well-being is very common problem among pediatric cancer survivors which causes a disruption in their quality of life. A review of literature reveals that, so far, no study has been found regarding Occupational Therapy intervention on psychosocial well-being in pediatric cancer survivors.

In particular the side effects of treatment on the psychosocial well-being of survivors remain relatively underexplored [9]. In fact, helping children ease the psychological burden of cancer treatment is recognized as one of the most vital responsibilities [18]. The key finding of the study is that Occupational Therapy intervention brings improvement in the psychosocial well-being and quality of life.

The result of this study showed that there was a significant improvement in the psychosocial well-being and quality of life among pediatric cancer survivors after

implementing Occupational Therapy intervention for 4 weeks.

Most youngsters have minimal possibilities to engage in leisure activities due to their low body resistance and susceptibility to infection. The lack of opportunity to play often leads to the development of dependent behavioural patterns, learned helplessness, and depression [19]. It is important to evaluate the physical, emotional, and psychological requirements of children with cancer, as well as to evaluate appropriate interventions that can reduce physical discomfort, emotional distress, and anxiety in these children while they are in the hospital. It's very essential to develop recreational and psychosocial interventions to assist children in resuming normal development and making their cancer journey less challenging [20].

Greater involvement in recreational activities can improve children's coping skills, decrease their stress, and eventually link to better psychosocial adjustment to their illness [20]. Findings from this study indicate that there is a significant reduction in the depression and anxiety level and improvement in the self-esteem level after giving the Occupational Therapy Intervention.

The result of this study revealed that Occupational Therapy Psychosocial Intervention showed a significant reduction in the depression, anxiety level and showed improvement in the self-esteem and quality of life among Pediatric Cancer Survivors.

The limitation of the study was it doesn't address the physical well-being of survivors and was conducted for a shorter period of time has a single case study design. The purposive sampling method can cause selection bias which can have an impact on the result of the study.

The recommendation of the study includes, it can be done in experimental design for a longer period with a large population. Future studies can focus on physical well-being of the survivors.

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