



THE STRESS LEVEL OF PARENTS WITH CHILDREN UNDERGOING CHEMOTHERAPY FOR CANCER

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ABSTRACT

Childhood cancer is a non-communicable disease that affects children under 18 years of age, characterized by abnormal cell growth that spreads to surrounding tissues. Chemotherapy is one of the treatments for children with cancer. Chemotherapy works by killing cancer cells using anticancer drugs, which can cause physical, psychological, and social side effects for both patients and their families. Parents are one of the most important components in a family for a child, especially those with cancer. Chemotherapy in children with cancer often requires a long period of treatment, which can lead to psychological problems for parents, such as stress. Stress experienced by parents of children with cancer should be identified early to minimize further risks. Objective to describe the stress levels of parents with children undergoing chemotherapy. Method: This study used a quantitative design with a descriptive approach. A total of 35 respondents were included using total sampling. The study was conducted in the Tulip 6 ward of Dr. Moewardi General Hospital. The instrument used in this research was the PSS-10 questionnaire. Data were analyzed using univariate analysis. The findings showed that the majority of parents who accompanied their children during chemotherapy experienced moderate stress levels, with 24 respondents (68.6%). Parents accompanying children with cancer undergoing chemotherapy experienced a moderate level of stress.

Keywords: child with cancer; parents; stress level

INTRODUCTION

Cancer is one of the chronic diseases that cause death in children (Pusmaika et al., 2020). Cancer is a type of disease caused by the abnormal growth of body tissue cells that spread to nearby parts of the body (Nurhidayah et al., 2023). Childhood cancer cases in the United States reached 9,910 in 2023 (American Cancer Society, 2023). In Indonesia, the prevalence of cancer among children aged 1–14 years reached 197,718 (Indonesia Health Survey, 2023). Childhood cancer in Indonesia has increased by 40% from 2008 to 2022 (Ministry of Health of the Republic of Indonesia, 2024).

Cancer is a disease that can be treated with several types of therapy, one of which is chemotherapy. Chemotherapy is a type of treatment that uses anti-cancer drugs that work by killing cancer cells (Siebel & Anggraeni, 2022). Chemotherapy is administered repeatedly in six cycles, with an interval of 21 days between each cycle. The side effects of chemotherapy include physical, psychological, and social problems (Laoli & Ismowati, 2022). The physical conditions experienced by children undergoing chemotherapy may include hair thinning or baldness, nausea, vomiting, weight loss, sleep disturbances, pain, and loss of appetite (Maxi & Eva, 2023).

Chemotherapy in children with cancer requires a long and painful process, which can affect the condition of parents (Nurusshohwah & Indrawati, 2022). Parents who accompany their children during chemotherapy are vulnerable to physical, social, and psychological health problems because they need to devote significant energy, time, and sacrifices (Hermawati & Wulanningrum, 2022). Parents accompanying their children through chemotherapy often

experience problems such as sleep disturbances, fatigue, changes in appetite, and changes in sexual needs (Pusmaika et al., 2020). Emotional symptoms experienced by parents, such as depression, feelings of guilt, anger, and anxiety, become psychological disorders that result in severe and prolonged stress (Nurhidayah et al., 2022).

The study conducted by Wiksuarini et al. (2023) showed that the stress level among families with cancer was predominantly severe. Research by Wati & Qoyyimah (2022) revealed that mothers with children suffering from cancer mostly experienced severe stress. Meanwhile, the study by Nurhidayah et al. (2022) reported that the proportion of parents experiencing high stress levels reached 17.6%, while those in the very high category amounted to 5.8%. Parents who accompany their children undergoing cancer chemotherapy often experience stress, which directly manifests in sleep disturbances, fatigue, hypertension, depression, anxiety, mood instability, and respiratory problems (Pusmaika et al., 2022). The stress experienced by parents also affects children with cancer, leading to treatment non-adherence, increased anxiety, behavioral issues, and mood disturbances in the child (Wati & Qoyyimah, 2022).

The preliminary study conducted at Dr. Moewardi General Hospital revealed that parents felt sad and easily fatigued because their young children had to undergo such a long treatment process. Parents also stated that they sometimes found it difficult to control their emotions and were easily angered while accompanying their children. Based on this background, the objective of this study is to describe the stress levels of parents of children with cancer during chemotherapy.

METHOD

This study is a quantitative research with a descriptive approach. It describes the stress levels of parents of children with cancer during chemotherapy at Dr. Moewardi General Hospital, involving 35 respondents. The sampling technique used in this study was total sampling. The inclusion criteria were parents of children with cancer aged 1–18 years who were willing to participate as respondents, while the exclusion criteria were parents whose children experienced decreased consciousness during the study period or whose children were transferred to the PICU. The instrument used in this study was the Perceived Stress Scale–10 (PSS-10), which has been tested with a validity of 0.99 and a reliability of 0.909 (Putri, 2024). This study has obtained Ethical Clearance with the number 804/IV/HREC/2025. Univariate analysis using SPSS was employed in this research to describe stress levels.

RESULT

Table 1, the majority of parents were aged 36–45 years, with a total of 14 respondents (40.0%). Most of the parents were female, with 24 respondents (68.6%). The majority of parents had a senior high school level of education or its equivalent, with 15 respondents (42.9%). The most common type of cancer in children was ALL, with 28 respondents (80.0%). Most parents reported that the duration of treatment was less than one year, with 27 respondents (77.1%).

Table 1.
Distribution of Respondents' Characteristics of Parents of Children with Cancer During Chemotherapy (n=30)

Respondent Characteristics	f	%
Age (years)		
17-25	2	5,7
26-35	13	37,0
36-45	14	40,0
46-55	6	17,0
Gender		
Male	11	31,4
Female	24	68,6
Education		
Elementary school	1	2,9
Junior high school	9	25,7
Senior high school	15	42,9
Bachelor's degree	10	28,6
Type of Cancer		
Acute Lymphoblastic Leukemia	28	80,0
Osteosarcoma	4	11,4
Bone Cancer	3	8,6
Duration of Treatment		
<1 year	27	77,1
>1 year	8	22,9

Table 2.
Distribution of Stress Levels Among Parents of Children with Cancer During Chemotherapy (n=35)

Stress Levels	f	%
Mild	6	17,1
Moderate	24	68,6
Severe	5	14,3

Based on the research findings, the stress level of parents accompanying their children with cancer during chemotherapy was mostly at a moderate level, with 24 respondents (68.6%).

DISCUSSION

Based on the results of the study, the majority of parents were in the late adulthood age group (35–45 years). This stage of late adulthood is considered a very mature age for making decisions, thinking logically, and being able to control emotions (Wiksuarini et al., 2023). As individuals grow older, their psychological maturity tends to improve, meaning that the more psychologically mature a person is, the better their ability to adapt to various problems (Prestasianita et al., 2022). With increasing age, individuals generally develop a broader perspective, enabling them to face challenges by reflecting on their own life experiences as well as the experiences of others (Hermawati & Wulanningrum, 2022).

Based on the research findings, the majority of parents accompanying children with cancer during chemotherapy were female, totaling 24 respondents (68.6%). Women tend to have better psychological well-being compared to men, which can influence their ability to provide support for their children (Utami & Puspita, 2020). Women are generally more likely to provide informal care for family members with limitations or declining health due to social expectations of women as caregivers (Putri et al., 2025). Women play an important role as caregivers, particularly mothers, who possess patience and innate instincts in caring for sick family members (Saptaningtyas, 2017).

Based on the results of the study, the majority of respondents' education level was senior high school or equivalent, with a total of 15 respondents (42.9%). Stress levels are influenced by several factors, one of which is education. A lower level of education is associated with higher stress levels, while a higher level of education is linked to lower stress levels (Wiksuarini et al., 2023). Education plays an important role in determining an individual's knowledge, abilities, and skills in understanding health information provided by healthcare professionals, which in turn affects patient care (Putri et al., 2025). A higher level of education provides parents with broader insights regarding their child, which influences their parenting behavior (Nurhidayah, 2023).

Based on the results of the study, the most common type of cancer in children was acute lymphoblastic leukemia, found in 28 respondents (80.0%). Leukemia is the most prevalent type of cancer in children, with 2,963 cases reported (P2PTM Ministry of Health RI, 2024). Acute lymphoblastic leukemia is the most frequently encountered hematologic malignancy in children, accounting for 25–35% of all childhood cancers (Safitri, 2022). Leukemia is a malignant disease of the hematopoietic tissue characterized by the replacement of normal bone marrow elements with abnormal or neoplastic blood cells (Pramaneta et al., 2022).

The results of the study showed that the majority of children with cancer had been undergoing treatment for less than one year, with 27 respondents (77.1%). Children with cancer generally require long-term care, which involves undergoing chemotherapy, taking medication, maintaining a proper diet, ensuring adequate rest, and more (Nurhidayah et al., 2023). Continuous chemotherapy treatment in children with cancer can cause various side effects, including physical problems such as increased susceptibility to infections, bleeding, weakness, fatigue, hair loss, mucositis, and decreased appetite (Nurhidayah et al., 2022). The longer cancer treatment continues, the easier it becomes for patients and their families to adapt to the stressors and demands of care (Rumetaningsih, 2022). Likewise, the longer a person suffers from cancer, the more accustomed they become to the treatment process and its side effects (Hafiza et al., 2023).

Based on the results of the study, it was found that there were 6 respondents with mild stress levels, two of whom had a history of low educational attainment. Individuals with lower levels of education tend to experience higher levels of stress due to differences in knowledge and attitudes in caring for a child undergoing chemotherapy (Nurhidayah, 2023). The duration of treatment also influences parents' stress levels. The longer a child suffers from cancer, the greater the parents' awareness of the importance of providing support, which helps redirect their stress into expressions of love and moral support for their child (Wati, 2020).

CONCLUSION

Parents accompanying children with cancer undergoing chemotherapy experienced a moderate level of stress.

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