

THE ROLE OF PSYCHOLOGICAL SUPPORT FOR ADOLESCENTS WITH CANCER**DOI:** <http://doi.org/10.26758/11.1.2>

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Abstract

Objectives. The aim of the study was to identify specific elements of stress for adolescents surviving cancer, and the working hypothesis was that there are statistically significant correlations between the items of the three scales used in the study.

Material and methods. Between January and February 2020, 45 adolescents participated (13-18 years), 26 girls and 19 boys, in a survey in which three tests were used: Child Depression Inventory - CDI 10 items, Scale of irrationality for children and adolescents-CASI with 28 items in four subscales (Intolerance to frustration given by rules, Global self-assessment, Absolutist requirement for justice, Intolerance to frustration given to work) and post-traumatic developmental scale-SRGS with 15 items.

Results. Statistically significant associations were identified between certain items from the scales used in the study and the result very highly statistically significant is given by associating item "*I realized it was better to have more trust in me*" with item "*I learned to defend my personal rights*" ($p < 0.05$, χ^2 test). The interaction between the dependent variable "*I learned to defend my personal rights*" with the independent variables "*It's awful to be wrongfully blamed by the teacher*" and "*There are things that bother me*" through the regression model and the result was statistically significant ($p < 0.05$, F test).

Conclusions. The associations and the results obtained indicate the need for effective communication with adolescents with cancer to identify psycho-emotional needs and stress management.

Keywords: cancer, depression, anxiety, adolescence, stress.

Introduction

In the treatment of anxiety, depression, fear, pain of children/adolescents with cancer, paediatric medical traumatic stress, cognitive behavioural various therapy techniques are applied: pre-exposure, positive reinforcement, relaxation and breathing exercises, modelling, systematic desensitization, guided imaging. One of the most common psychiatric symptoms in the acute phase of cancer diagnosis and treatment is anxiety. Most of this anxiety is situational and does not meet the diagnostic criteria for a specific syndrome. Specific types of anxiety include separation

anxiety, defined as inadequate and excessive separation anxiety from home or from those to whom the child is attached. Younger children, children who have not been away from home overnight or children with pre-existing anxiety disorders will certainly develop symptoms of separation anxiety (Kreitler, Weyl Ben-Arush, & Martin, 2012, p. 23).

Acute Stress Disorder (ASD) is a physiological and emotional response to an event involving the child or to a death or injury threatening event of intense fear, horror or helplessness. Like post-traumatic stress disorder (PTSD), ASD includes physical symptoms, memory avoidance, and intrusive thoughts of the event that was traumatic. ASD differs from PTSD in three ways: (1) it is limited in time (not less than 2 days, not more than 4 weeks); (2) it is acute (within 4 weeks of the traumatic event); and (3) it involves dissociative amnesia, numbness, depersonalization, derealisation or feeling dizzy/dizziness. In children /adolescents agitation and disorganized behaviour ASD can manifest itself through agitation and disorganized behaviour, particularly as a response to a perceived threat. Children and adolescents with pre-existing anxiety disorders are at higher risk for both ASD and PTSD. Given the overlap of the symptoms, the ASD may be confused with depression, anxiety or delirium (American Psychiatric Association, 2016, p. 280).

Delirium is a fluctuating neuropsychiatric disorder due to encephalopathy. This type of brain disorder often reflects an electrolyte imbalance, drug toxicity or organ failure and it is a poor prognosis sign with hospitalized patients. The symptoms of apathy, anxiety, disorientation, hallucinations, and delusions appear to be similar in adults and in children with delirium. Wake-up disorder-sleep, impaired attention, irritability, agitation, emotional lability and confusion are more commonly seen in children / adolescents , while impaired memory, depressed mood, speech disorder, delusions and paranoia are more commonly seen in adults. Although delirium in adults is a significant concern, literature on delirium in children is still quite limited. A study published in 2010 examined the literature of the period 1980 - March 2009 and found data on 217 paediatric patients with delirium defined and 136 with "probably delirium". Among children / adolescents with delirium, 7% had cancer (Kreitler et al., 2012, p. 43).

It is difficult to determine whether a child / adolescent with cancer is depressed or not. Common symptoms of depression, such as changes in sleep or appetite, can be attributed to illness or treatment. Boredom and energy conservation can be confused with anhedonia. They can experience the fatigue related to chemotherapy, may have symptoms of energy decline, lack of interest in activities they enjoyed before illness and social withdrawal. Despite these problems, recent studies have found that in the case of chemotherapy, it is possible to distinguish between fatigue and depression and to be able to continue with an appropriate intervention. There is also evidence that self-reporting measures can be used to identify children who need interventions for anxiety, depression, post-traumatic stress, both for themselves and for their parents and siblings (Kreitler et al., 2012, p. 49).

Structured monitoring is needed throughout the history of cancer and not just during active treatment. A child-centered care philosophy would guide the child to achieve a state of health and welfare (Darcy, Enskär, & Björk, 2019, p. 2).

Paediatric cancer has many challenges for the life of the child and his family. Among the studies investigating risk and protection factors, social support has emerged as an important construct. However, not much is known about how family members support each other in this particular context. This process was explored in a qualitative study in which interviews were conducted separately with mothers, fathers and siblings. Data analysis revealed three themes: being together-families identified the need to be together physically; finding support in communication - the complexity of sharing emotions; working together as a team-the families described work together. The study broadens the understanding of the interpersonal process of providing family support when dealing with paediatric cancer, and clinicians should be sensitive to the various communication needs related to cancer within the family (for example, the need to speak or not to

speak); to incorporate this type of knowledge into their care giving practice (Schoors, Mol, Verhofstadt, Goubert, & Parys, 2019, p. 6).

Given the above-mentioned circumstances, this study aims to identify specific elements of stress for adolescents surviving cancer.

Material and methods

Between January and February 2020, a survey used three tests as follows: the Child Depression Inventory test, the short version-CDI with 10 items (Kovacs, 2012, p. 79), the Irrationality Scale for children and adolescents-CASI with 28 items in four subscales (Intolerance to frustration given by rules, Global self-assessment, Absolutist requirement for justice, Intolerance to frustration given to work) (Bernard & Cronan, 2007, p. 4), Post-traumatic development scale -SRGS with 15 items (Park, Cohen, & Murch, 2007, p. 5). The study also included an open-ended question in which respondents were asked to write the words they wanted to hear and the words they did not want to hear from adults.

The study involved 45 adolescents, 13-18 years, 26 girls and 19 boys, of whom 11 were about one year after diagnosis, 8 about two years after diagnosis, 12 about three years after diagnosis, 14 about four years after diagnosis.

The working hypothesis was that there are statistically significant correlations between the items of the depression scale, the irrationality scale for children and adolescents and the post-traumatic development scale for adolescents (13-18 years old) cancer survivors.

For the statistical analysis of the results obtained from the two tests, the statistical program Epi Info was used, a statistical software developed by the Centers for Disease Control and Prevention (CDC) in Atlanta, Georgia (USA) and licensed as a public domain (Epi Info™, 2019, para. 1).

The association between the response categories was analyzed using the chi-squared test, a contingency table between the items in the scales. Linear regression was also used to identify which variables are, in particular, significant predictors of the resulting variable and to explain the relationship between a dependent variable and one or more independent variables. Regression analysis has helped to put out how much the dependency variable changes with a change in one or more independent variables.

Results

The items on the post-traumatic scale with the highest score were: *"I realized that it is good to have more confidence in myself and I learned to defend my personal rights"*.

From the irrationality scale for children and adolescents the items with the highest score were: *"It is awful to be wrongfully blamed by the teacher/A teacher who wrongfully blames a student is totally bad /Teachers should be correct all the time /I need to be rested and relaxed before I start working hard"*.

The subscale absolutist requirement for righteousness had a higher score, the subscales overall assessment of oneself and intolerance to the frustration caused by the rules scored on average and the subscale intolerance to frustration of the work scored low.

A statistically significant association was found between the item *"I realized that it is good to have more confidence in myself"* from the post-traumatic development scale with *"I learned to defend my personal rights"* ($p = 0.0001$, chi-squared = 23.06, $df = 4$) (table 1).

Table 1

Association of items from the post-traumatic development scale

Items/Answer variants	Disagreement		To some extent agree		Strongly agree	
	n	%	n	%	n	%
I learned to defend myself personal rights ^a	3	6.67	7	15.56	35	77.7
I realized it was good to have more confidence in myself ^a	3	6.67	7	15.56	35	77.7

Note. N = 45 participants aged between 13 and 18 years

^areflect the number and percentage of participants for each response variant

A statistically significant association was found between the item *"It is awful to be wrongfully blamed by the teacher"* on the irrationality scale for children and adolescents with the item *"Teachers should be correct at all times"* (p=0.0179, chi-squared=24.40, df=12) (table 2).

Table 2

Associating items from the irrationality scale for children and adolescents

Items/Answer variants	Strongly against		Against		Uncertain		I agree		Strongly agree	
	n	%	n	%	n	%	n	%	n	%
It is awful to be blamed unjustly by the teacher ^a	2	4.44	2	4.44	1	2.22	22	48.9	18	40
Teachers should be correct all the time	0	0	2	4.44	5	11.11	2.3	51.11	15	33.34

Note. N = 45 participants aged between 13 and 18 years

^a reflect the number and percentage of participants for each response variant

A statistically significant association was identified between the item *"I'm not sure if things go well"* inventory of depression Child Depression Inventory with the item *"There are things that bother me"* (p = 0.0076, chi-squared = 13.89, df = 4) (table 3).

Table 3

Associating items from the depression inventory

Items / Answer variants	Always		Often		Occasionally	
	n	%	n	%	n	%
There are things that bother me ^a	27	60	5	28.89	5	11.11
I'm not sure if things go well ^a	22	48.89	22	48.89	1	2.22

Note: N = 45 participants aged between 13 and 18 years

^a reflect the number and percentage of participants for each response variant

Also the regression model has been analyzed the interaction between the dependent variable *"I learned to defend my personal rights"* with the independent variable *"It is awful to be wrongfully blamed by the teacher"* (table 4) and *"There are things that bother me"* (table 5), and the result obtained was statistically significant ($p < 0.05$, F-test).

The connection between the variables independently of it and the dependent variable was synthesized by the equations of the straight lines of regression as follows: For any value of the variables *"It is awful to be wrongfully blamed by the teacher"* and *"There are things that bother me"* a value of the variable can be predicted *"I learned to defend my personal rights"*; thus for the average level of the variable *"It is awful to be wrongfully blamed by the teacher"* of 9.5345 the value of 3.0611 was obtained. For the variable *"I learned to defend my personal rights"*, and for the average level of the variable *"There are things that bother me"* about 4.1782; the value of 0.787 was obtained for the variable *"I learned to defend my personal rights"*.

Table 4

Linear regression- I learned to defend my personal rights

effect	Estimated coefficients	SE	95% CI		p
			LL	UL	
Fixed effects					
Intercept	0.668	0.347	0.032	1.368	0.06
Random effects					
It is awful to be wrongfully blamed by the teacher	0.251	0.081	0.087	0.414	0.03

Note. N = 45, SE = standard deviation of the coefficient distribution, CI = confidence interval, LL = lower limit, UL = upper limit

The correlation coefficient indicated that 18% of the variability *"I learned to defend my personal rights"* can be explained by the variable *"It is awful to be wrongfully blamed by the teacher"* and that 9% of the variability *"I learned to defend my personal rights"* can be explained through the variable *"There are things that bother me"* (table 5).

Table 5

Linear regression- I learned to defend my personal rights

effect	Estimated coefficients	SE	95% CI		p
			LL	UL	
Fixed effects					
Intercept	1. 839	0. 105	1. 626	2 . 052	0.00
Random effects					
There are things that bother me	-0. 252	0. 123	-0. 50	-0. 000	0.04

Note. N = 45, SE = standard deviation of the coefficient distribution, CI = confidence interval, LL = lower limit, UL = upper limit

Looking at the words that teenagers diagnosed with cancer want to hear from adults, the following stood out: *you will succeed /I support you / I am with you / I am proud of you / I love you/ thank you/I will be with you/you are right/ well done*. Also the words respondents do not want to hear from adults were: *it is not possible/ You will not succeed/ does it still hurt? are you sick?/ wait / that's it / nothing is going well / it could be even worse / you don't know anything / you're not good at anything / you have no ambition / that it will be fine when things are getting worse and worse*.

Discussions

Childhood cancer is a disease that has an impact on the lives of the whole family. Supporting families to cope with these stressful experiences should be a priority during treatment. However, psychological support is sometimes inadequate in hospitals. Families also reported that the support they receive decreases when the child/adolescent completes treatment, a time when family members have few resources to cope with new stressors, adjusting to normal life (Marusak, 2018, para. 4). The fact that patients in the study identified a correlation between self-confidence and personal rights denotes the fact that in the efforts to cure cancer psychological support as standard of care for the whole family, both during and after the treatment, should be supported.

Also the correlation obtained in the study between self-confidence and various things that bother highlighted/ emphasized an uncovered need for psychological support among families of children/adolescents treated for cancer. For example, parents of children/adolescents with cancer face existential, physical, psychological and social struggles. They describe an unstable situation after diagnosis and have focused on protecting the child during treatment. After completing the curative treatment, they face challenges in daily life, as it was before the diagnosis, namely to deal with their own emotional scars and fears related to child cancer (Carlsson, Kukkola, Ljungman, Hove´n, & von Essen, 2019, p. 6).

Moreover, the existence of family dynamics and the natural difference in authority between children and caregivers can complicate the treatment decision-making process. Clinicians need to continually assess the extent to which children are given their own "voice" in the family system, the degree to which children are aware and want to support their caregiver's preferences, and any discrepancies in the amount and type of information provided to both parties since all the factors can significantly influence the outcome of the decision level (Abrams, Muriel, & Wiener, 2016, p. 9).

The present study was done before the Covid-19 pandemic and highlights elements of stress, another study during the emergency of the Covid-19 pandemic on a diverse population of Romania indicates statistically significant associations between *terrified, destroyed* emotions and the statement *"I have thoughts which I try to avoid"*, between *happy* emotion and utterance *"I try to keep myself busy just to keep thoughts from taking over my mind"*, between *satisfied* emotion and utterance *"I often do various things to distract myself from the thought"*, both studies in fact highlighting landmarks for psychologists and not only for efficiency in the psycho-emotional analysis of patients in crisis situations in the intervention stage (Sîrbu, Niță, & Șchiopu, 2020, p. 16).

Soothing approaches, individual and group therapy and how to communicate about the medical activities in which they are involved are important for managing stress in adolescents (Yildizi & Oğuz, 2020, p.81) and living with cancer and the possibility of recurrence requires well-being and psychological resilience to cope with treatment, the effects of disease and uncertainty about the future (Booth, et al., 2018, p. 6).

The individual, family and social vulnerability of adolescents, as well as the individual and family coping skills, are factors related to the mental health of adolescents in times of crisis. Adolescents are often vulnerable, require increased care from caregivers, adaptations to the health system, future research on adolescent psychiatric disorders during pandemics, as such a global situation could be prolonged or repeated (Guessoum et al., 2020, p. 291).

A 2019 study identified three important topics related to the disease experience of adolescents with cancer, namely: "Loss of what I know-that makes me different", "Communication and exchange of information-the need to know" and "The importance of friends, colleagues and relationships" (Drew, Kable & Van der Riet, 2019, p. 492). The results of the 2019 study and those in this article highlight that accessing this information will allow health care providers to provide more appropriate care when these adolescents feel most vulnerable.

Adolescents with cancer experience a continuous and dynamic process of growth and maturity between the intrapersonal, interpersonal and environmental dimensions, and the goal of their health care is to achieve internal integration, positive changes in their environment, a harmonious and balanced existence with the outside world (Eunji & Sharron, 2020, p. 172).

There is a clear need for further research on rehabilitation interventions and care models for children / adolescents with cancer. Incorporating rehabilitation into paediatric cancer care requires an interdisciplinary effort and depends on greater involvement of all health care providers and healthcare professionals, as well as familiarity with the tools and resources that can be used to improve the quality of life in this population (Tanner et al., 2020, p. 14).

Conclusions

Participants in the current research greatly appreciated that the injustice and blame on the part of teachers is particularly disturbing, which indicates that adolescents with cancer have a great need for understanding, adequate communication to avoid stigma and psychological suffering. For them lack of self-confidence, the different things that disturb and the vulnerable situations have indicated the need for support for adaptive operation, and to reduce the effects of chronic stress self-effectiveness and psychological well-being can be developed through specific actions and personalized care. The statistically significant associations in the present study and the results obtained at the three scales used in the survey provide benchmarks for effective communication with adolescents with cancer, possibly also for identifying psycho-emotional needs and stress management.

The results of this study highlighted some important elements of psychological interventions for adolescents with cancer that lead to lower levels of psychological well-being, mood,

liveliness, self-esteem and motor and physical functioning, such as increased anxiety and problematic behaviours.

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