

Psychometric and Psycho-social Profile of Children and Adolescent Survivors of Pediatric Cancer

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Introduction and Objectives: The aim of this study was to compare the psychometric and psychosocial profile of children and adolescents, survivors of pediatric cancer, to that of healthy controls.

Methods: Children and adolescents, survivors of pediatric cancer, aged 7-17 years, who attended the Hematology-Oncology Unit of the First Department of Pediatrics, and healthy controls who visited the Center for Adolescent Medicine and UNESCO Chair on Adolescent Health Care of the First Department of Pediatrics, from September 2016 until June 2017, were eligible for study entry. Participants were evaluated with the Self-Reporting Children's Depression Inventory (CDI) and the Wechsler Intelligence Scale for Children (WISC-III). The validated LAMDA software for screening for learning difficulties was administered on a laptop in all study participants.

Results and Conclusion: A total of 60 children and adolescents, 30 survivors of pediatric cancer (survivor group) and 30 age-matched ($P = .933$) controls (control group) participated in the study. The survivor group demonstrated increased self-assessment of interpersonal problems (mean \pm SD 3.6 ± 1.0) compared to the control group (mean \pm SD 2.9 ± 1.1) and this difference was statistically significant ($P = .015$).

Evaluation with the WISC-III showed elevated levels of general and practical intelligence of the control group compared to the survivor group and these differences were statistically significant (Table 1). In particular, statistically significant differences were found in coding, image scheduling and number memory between the two groups, with the control group demonstrating higher levels than the survivor group.

Regarding the LAMDA test (Table 2), the survivor group had significantly lower scores than the control group in supplementation of images (processing speed), verbal proportions (accuracy) and range of letters (accuracy).

Children and adolescents with a history of pediatric cancer require psychometric, cognitive and psychosocial assessment at the end of treatment to detect any deficits and ensure timely intervention. Larger studies are needed to fully elucidate young cancer survivors' psychometric, cognitive and psychosocial profile.

Declarations of interest: none

References

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Table 1. Differences in WISC-III between the two study groups

	Pediatric cancer survivors	Control group	P
Verbal intelligence	49.0 \pm 11.9	53.2 \pm 9.9	.166
Practical intelligence	48.9 \pm 9.7	54.9 \pm 8.0	.016
General Intelligence	97.9 \pm 18.1	108.1 \pm 15.8	.031
Symbols	9.7 \pm 3.3	11.5 \pm 3.9	.078
Number Memory	8.7 \pm 2.9	10.9 \pm 2.7	.005
Coding	9.5 \pm 3.4	13.0 \pm 7.0	.022
Similarities	10.7 \pm 3.8	11.7 \pm 2.5	.289
Image scheduling	8.6 \pm 2.3	10.4 \pm 2.4	.009

Table 2. Differences in LAMDA test between the two study groups

	Pediatric cancer survivors	Control group	P
Supplementation of images (accuracy)	2.6 \pm 1.0	3.1 \pm 1.0	.091
Supplementation of images (processing speed)	2.8 \pm 1.3	3.4 \pm 0.9	.034
Verbal proportions (accuracy)	2.8 \pm 1.1	3.4 \pm 0.8	.011
Verbal proportions (processing speed)	2.6 \pm 1.2	3.1 \pm 1.0	.081
Range of letters (accuracy)	2.8 \pm 1.0	3.3 \pm 1.0	.036