

The Contribution of Neurocognitive Situation, Physical Capacity and Daily Life Activities to Quality of Life after Childhood Acute Lymphoblastic Leukemia

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Abstract

Background There are no extensive studies on the quality of life of (QL) in children who completed ALL treatment and currently living without any disease in Turkey. Our study aimed to analyze both the QL and the effects of physical, neurocognitive capacities on QL of children aged between 7-12 years who received treatment for ALL. **Methods** Pediatric Quality of Life Scale (PedsQL) cancer module 3.0 child and proxy report, for ages 5-7 and 8-12 years, WeeFIM scale, Bruininks-Oseretsky motor competency test short form (BOT-2), Raven progressive test matrices(RPM), reading, writing and mathematics assessment tools and sociodemographic information form were carried out to obtain information from the children and their family. **Results** There was no effect of the months since the remission on pain, anxiety, cognitive problems, perceived physical appearance, and the total QL scores of children and proxy reports ($p > 0.05$). The physical capacities of children were significantly worse than healthy controls and have not reached the level of healthy children even after a long time since remission. There was a significant association between physical capacity and daily independent living status($p<0.001$). Reading, writing and mathematical skills were significantly associated with the duration of remission ($p<0.001$) and the total score of Raven and PedsQL of those with mathematical difficulties were significantly lower than those without any difficulty($p<0.05$).

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Abbreviations

ALL	Acute Lymphoblastic Leukemia
B ALL	B cell Acute Lymphoblastic Leukemia

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QL	Quality of Life
PedsQL	Pediatric Quality of Life Scale
WeeFIM	The Functional Independence Measure (WeeFIM)
BOT-2	Bruininks-Oseretsky Motor Competency Test Short Form
RPM	Raven Progressive Test Matrices
CNS	Central Nervous System
ALL-BFM 2000	Acute Lymphoblastic Leukemia Berlin Frankfurt Münster 2000 Chemotherapy Protocol

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Methods

PedsQL cancer module 3.0 child and proxy report, for ages 5-7 and 8-12 years, WeeFIM scale, BOT-2, RPM, reading, writing and mathematics assessment tools and sociodemographic information form were carried out to obtain information from the children and their family.

Results

There was no effect of the months since the remission on pain, anxiety, cognitive problems, perceived physical appearance, and the total QL scores of children and proxy reports ($p > 0.05$).

The physical capacities of children were significantly worse than healthy controls and have not reached the level of healthy children even after a long time since remission. There was a significant association between physical capacity and daily independent living status ($p < 0.001$).

Reading, writing and mathematical skills were significantly associated with the duration of remission ($p < 0.001$) and the total score of RPM and PedsQL of those with mathematical difficulties were significantly lower than those without any difficulty ($p < 0.05$).

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