

ABSTRACT

Rationale: The traumatic experience of having cancer places children at significant risk for a range of short and long-term social, emotional, and behavioral difficulties. The chronic strains of childhood cancer, such as treatment-related pain, visible side effects such as hair loss, weight gain or loss, physical disfigurement, and repeated absences from school and peers, negatively impact children's social and psychological adjustment. Data suggest that childhood cancer related psychological symptoms are under reported, and that routine symptoms screening improves QOL.

Aim: to measure psychological symptom prevalence among children with cancer, and the degree of distress caused by such symptoms.

METHODS

Behavior Assessment Scales for Children (BASC-2): proxy Parent-Rating Scales (PRS) and Self-Report Scales (SRS) were used for psychological symptoms assessment. BASC-2 clinical and validity scale T Scores were recorded and Student T-tests calculated, Pearson's Chi-square for comparing treatment groups with significance $p \leq 0.05$. All clinically stable cancer patients ages 2-18 were offered participation in the survey. Questionnaires were handed over during routine clinic visits or chemotherapy hospital admission.

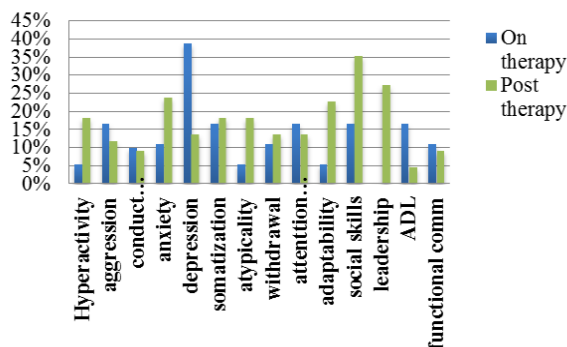
RESULTS

Forty childhood cancer patients/parents pairs offered participation, 92.5% completed and returned the surveys (total 37 assessable patients), 17 were on therapy and 20 off therapy. Males 25/37, females 12/37. 28/37 <13 years, 9/37 ≥13 years. Solid tumors 16/37, and hematologic malignancy 21/37. 82% reported at least 1 symptom, and 47% reported >3 symptoms.

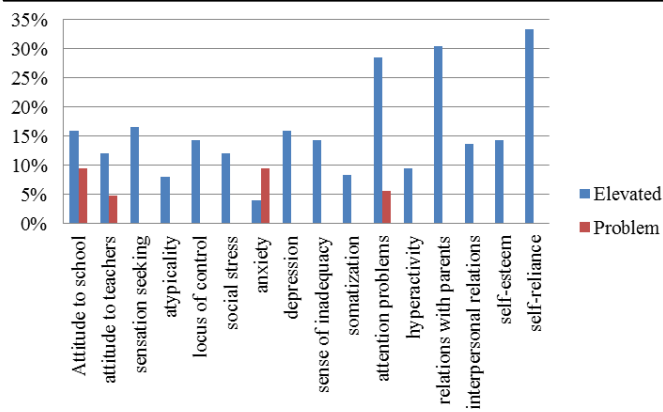
47% of patients scored in the clinically significant range for at least one psychological problems with 19% showing ≥3 problems. Anxiety and Atypicality, were 11.76%, followed by somatization scale 11%, attention 9%, hyperactivity, aggression, withdrawal 8%, depression 6%, and conduct problem 2%. In SRS: school attitude problem was 10%, and Attention problem 5.5%, anxiety 9.5%, attitude to teachers 4.7%. Parents (proxy report) tended to report higher frequency of clinical problems compared to children's report (self-report), Most frequent problems on Parent proxy-report were: Atypicality 17%, Withdrawal and Attention 11%, Hyperactivity, Anxiety, Somatization 9% with significantly higher reports of somatization ($P=0.003$), anxiety and depression when compared to patient self-report ($P=0.006$). While off therapy group had statistically significant higher percentage of externalizing symptoms (hyperactivity, conduct, aggression) compared to on therapy group ($p=0.008$), there was no statistical significant difference ($P=0.5$) between the 2 groups in the area of internalizing symptoms (anxiety, depression, withdrawal).

Symptoms were reported more frequently among children with leukemia compared to those with solid tumors yet the difference did not reach statistical significance ($P>0.5$).

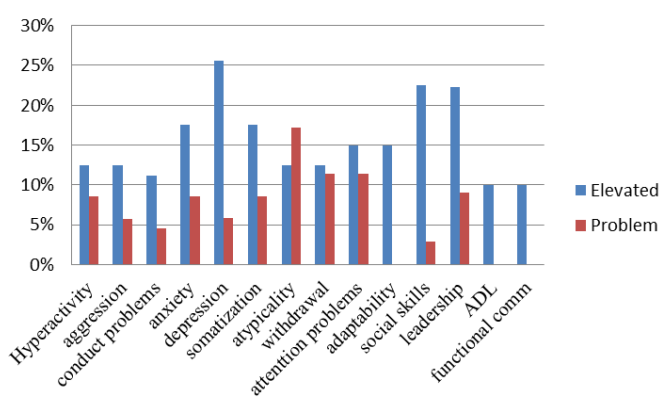
Elevations On Treatment vs Off Treatment Parent Report



Elevated vs Clinically Significant Scores Self-report



Elevated vs Clinically Significant Scores Parent-report



CONCLUSIONS

This study showed high prevalence of psychological problems among children with cancer with more internalizing symptoms while on therapy and externalizing symptoms in survivors. Pediatric oncology programs need to employ a psycho-social distress screening tools to detect patients at risk for having such problems and how to address them. BASC-2 can be conveniently administered in the clinical setting to help screen and identify patients in need of intervention.

REFERENCES

- Butler, R. W. , & Mulhern, R. K. (2005). Neurocognitive interventions for children and adolescents surviving cancer. *Journal of Pediatric Psychology*, 30(1), 65–78
- Earle EA, Eiser C. (2007). Children's behavior following diagnosis of acute lymphoblastic leukemia: A qualitative longitudinal study. *Clinical Child Psychology Psychiatry*, 12(2), 281–293.
- Kersun LS, Rourke MT, Mickley M, Kazak AE. (2009). Screening for depression and anxiety in adolescent cancer patients. *J Pediatric Hematology/Oncology*, 31(11):835–839.
- Li HC, Chung OK, Chiu SY. (2010). The impact of cancer on children's physical, emotional, and psychosocial well-being. *Cancer Nurs*. 33(1), 47-54.