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Contribution ID: 217

Type: 1 - Scientific Poster

Quality of Life and Functional Capacity in Brazilian Pediatric Cancer Patients: A Correlational and Mediation Analyses

Wednesday 22 July 2026 12:25 (20 minutes)

Introduction: Quality of life (QoL) is a central outcome in pediatric oncology, and both patient- and caregivers reported perspectives contribute to understanding overall well-being. However, it remains unclear whether children's functional status influences the relationship between caregiver perceptions and self-reported QoL. This study examined the association between caregiver proxy-reports and children's own QoL ratings and explored whether hand grip strength (HGS) and functional capacity (Timed Up and Go test - TUG) mediate this relationship. **Methods:** A cross-sectional study was conducted with pediatric patients (4-15 years old) undergoing outpatient cancer treatment Joana de Gusmão Children's Hospital, Florianópolis, Brazil. Sociodemographic, clinical and anthropometric data were collected, followed by functional assessments (HGS and TUG). QoL was measured using the PedsQL 4.0 questionnaire completed independently by children and their caregivers. Pearson correlations and mediation analyses using linear regression ($p < 0.05$) were performed to explore direct and indirect associations. **Results:** Thirty-seven children and adolescents participated in the study, representing a heterogeneous clinical profile regarding diagnosis, treatment status and physical condition. A moderate, statistically significant correlation was observed between caregiver-reported QoL and children's self-reported QoL ($r = 0.48$; $p = 0.002$), indicating meaningful convergence between perspectives. Mediation models demonstrated a significant direct effect of caregiver-reported QoL on child QoL ($\beta = 0.35$; $p = 0.0047$). However, neither HGS nor TUG contributed to significant indirect effects, suggesting that functional capacity did not mediate the relationship. **Discussion:** The alignment between caregiver and child perceptions of QoL appears to be independent of functional capacity. These results suggest that caregivers may capture aspects of children's lived experiences that are not necessarily reflected in objective functional measurements. **Conclusion:** Caregiver assessments are positively and directly associated with children's QoL, with no evidence of mediation by functional performance. Incorporating both perspectives into routine clinical evaluation may strengthen patient-centered care in pediatric oncology.

Keywords

Childhood Cancer; Quality of Life; Muscle Strength; Mediation analysis.

Conflict of Interest & Ethical Approval

yes

Abstract submitters declaration

yes

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Session Classification: Poster Session