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Core Areas of Exercise Implementation in Pediatric Oncology: The Three-Stage Network ActiveOncoKids Wheel Model

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Background
The Network ActiveOncoKids (NAOK) is a working group of the German Society for Pediatric Oncology and Hematology. The NAOK's core work involves implementing safe and effective exercise interventions and increasing physical activity in children and adolescents with and beyond cancer. The NAOK wheel model was developed as a suitable instrument for implementing exercise interventions in clinical settings and concept-guided counseling regarding long-term integration into sports structures for follow-up care.
Methods
The model is based on three interconnected, synergistically acting components. (1. Component) Free, nationwide counseling of patients in cooperation with partners from rehabilitation clinics, oncological centers, and organized (para-)sports, (2. Component) institutional implementation of sustainable care structures in oncological centers and clinics, and (3. Component) professional qualification and networking via working groups and multicenter studies.
Results
Individual counseling includes measures to increase sports participation and physical activity (current cohort: N=263; 43% female; largest age group 11-15 years, 35% brain tumors, 24% leukemias/lymphomas, 17% bone tumors; 69% in follow-up care). The structural, needs-oriented support for implementation of exercise at pediatric oncology centers considers personnel, organizational, and financial resources, quality-assuring measures and certification (total: N=40 clinics; since 06/2019: N=27 newly implemented; currently: N=20 certified NAOK sites). A guideline-based training concept (blended learning) has qualified therapists specifically in the field of pediatric exercise oncology (currently N=21). Additionally, a study registry for adverse events occurring during supervised exercise interventions aims at developing evidence-based recommendations to minimize potential risks during such programs.
Conclusion
The NAOK wheel model represents a centrally coordinated, quality-assured framework model for sustainable implementation of exercise interventions in pediatric oncology. Through multidimensional approaches, both access to extraclinical movement offers (school/club/leisure) and guideline-conform implementation of supervised exercise interventions are ensured. Central coordination is a crucial success factor for promoting synergies, bundling successful care models, and developing evidence-based concepts for peripheral care.

Keywords

Pediatric oncology, exercise, implementation, exercise safety

Conflict of Interest & Ethical Approval

yes

Abstract submitters declaration

yes

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