

Introduction

- Sleep disturbances are common among survivors of pediatric cancer due to treatment side effects, mental distress, pain, and changes in daily routines¹.
- Among survivors, poor sleep quality is associated with reduced physical, psychosocial, and cancer-related quality of life².
- Parents also report disrupted sleep from stress, caregiving responsibilities, and emotional strain³.
- Longer sleep duration is linked to better diet quality, lower body mass index (BMI)⁴, and increased activity⁵ in survivors.
- Bi-directional associations may exist between sleep quality, diet quality and physical activity in survivors and their parents¹.



Hypotheses

- **H1:** Parent and child food and activity quality will be associated with better sleep quality.
- **H2:** Parent and child sleep quality will be associated with better food and activity quality.

Methods

Participants:

Baseline data of 125 mother-child dyads drawn from a randomized control trial of a behavioral intervention for pediatric cancer survivors and their families were examined. Mothers ($M_{age} = 43.57$) and their children ($M_{age} = 11.05$; 54% female), most diagnosed with acute lymphoblastic leukemia (ALL; 68%).

Measures

Demographic Questionnaire: Age, income, parental education level, marital status, race, ethnicity, sex, and cancer diagnosis.

Physical Activity/ Nutrition⁶: 20-item survey recording both child and parent physical activity and nutrition.

Patient Sleep Quality Inventory⁷: 19-item survey across different topics (e.g., subjective sleep quality, sleep latency, sleep duration, etc.). A global score across all items was computed with possible scores ranging from 0 to 21, with higher scores suggesting poorer sleep quality.

Analysis Plan⁸:

Two actor-partner interdependence models (APIM) estimated the bidirectional associations between the mother-child dyad's sleep quality, composite nutrition quality, and physical activity uptake. APIM models were estimated using multi-level modeling for distinguishable dyads with a pairwise data structure using Kenny's (2015) online web application. Pooled actor and partner effects across parents and children are reported.

Results

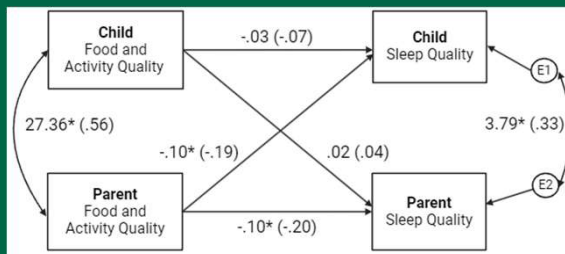


Figure 1. Results of APIM Dyadic Analysis Examining Effects of Food and Activity Quality on Sleep Quality

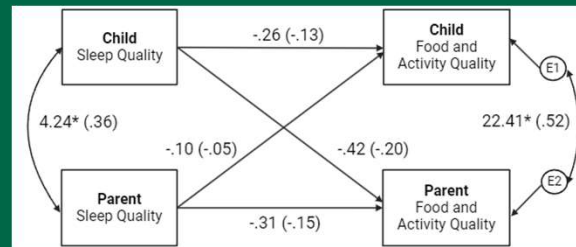


Figure 2. Results of APIM Dyadic Analysis Examining the Effects of Sleep Quality on Food and Activity Quality

* $p < .05$

Discussion

- This study examined bi-directional associations between parent and child food and activity quality and sleep quality.
- Consistent with predictions, parent food and activity quality predicted better parent and child sleep quality.
- Contrary to predictions, child food and activity quality was not associated with child or parent sleep quality and dyad sleep quality did not vary as a function of dyad food and activity quality.



Limitations and Future Directions

- Cross-sectional, correlational analysis
- Although analysis only supported one directional correlation, cross-lagged associations and auto-correlations are required to evaluate temporal relationships.
- Sample was predominantly ALL diagnosis, limiting generalizability.

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Copy/References available upon request.

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