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May 17th, 11:30 AM - 1:30 PM

Exploring the Role of Pain on Physical Activity among Youth with Acute Lymphoblastic Leukemia using the Biopsychosocial Model

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van Asselt, Anna E.; Gilbert, Renee; Tokala, Meghan; Weber, Jacee; Dreyer Gillette, Meredith L.; Gibler, Robert C.; Bates, Carolyn R.; and August, Keith, "Exploring the Role of Pain on Physical Activity among Youth with Acute Lymphoblastic Leukemia using the Biopsychosocial Model" (2024). *Research Days*. 6. https://scholarlyexchange.childrensmercy.org/researchdays/GME_Research_Days_2024/ResearchDay5/6

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Introduction

- Physical activity (PA) engagement during cancer treatment is important for short- and long-term physical function and mental wellbeing.¹
- Children with ALL exhibit very low levels of PA during treatment² with symptoms of pain reported as a major barrier.³
- The pathways by which pain interferes with PA during treatment are not well understood, therefore limiting intervention development.⁴

Primary Aim

To explore the impact of pain on PA in youth with ALL through the lens of the biopsychosocial framework.

Method

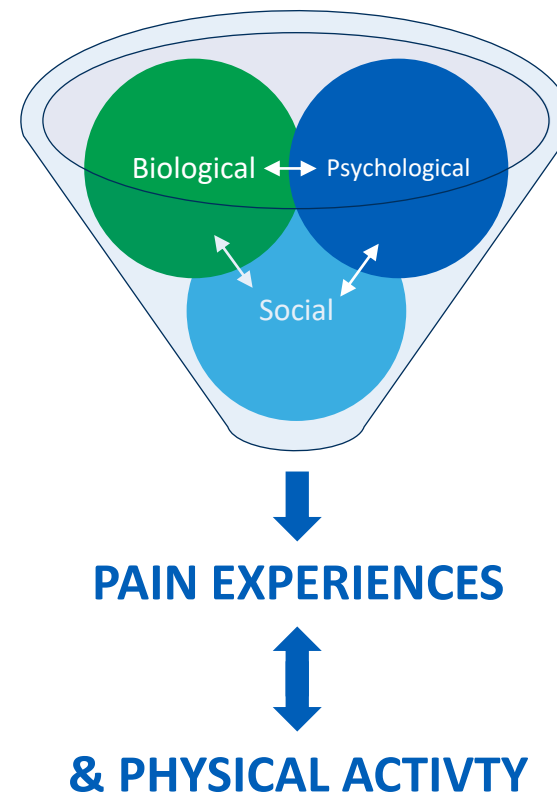
Participants: 17 caregivers of a child diagnosed with ALL within the last 12-months and on active treatment.

- Caregiver role: 94.1% mothers
- Child age: $M = 6.76$ years, $SD = 3.67$ years
- Time since diagnosis: $M = 8.70$ months, $SD = 4.58$ months
- Race: White 41%, Black 12%, Alaskan Native/Native American 6%, Asian 6%, Multi-Racial 29%, Other 6%
- Hispanic/Latino Ethnicity: 17.6% of sample

Semi-structured interviews: Secondary analysis of a 23-question semi-structured interview.⁵

- Questions elicited caregiver perceptions of child health behaviors during ALL treatment.
- Analysis focused specifically on discussion of PA and sedentary time using 6-step framework.⁶

Results



- P B** Caregivers notice that pain and other symptoms impact their child's physical activity. "[Medication] makes his joints achy, it makes his bones hurt...he wasn't motivated...because every time he moved, it came with some pain." Mother of a 15-year-old male
- S B** Caregivers are distressed about seeing their child in pain. "We didn't know what to do. We weren't sure if this was normal for her to lay in bed all day, so we were kind of like in a panic mode thinking it was not normal." Mother of 5-year-old female
- P S B** Fear of interfering with medical equipment is a barrier to engaging in PA. "Being a kid comes with tag...so then the worry comes with her hitting her port or hurting herself." Mother of 8-year-old female
- S B** Adapting PA for children with ALL requires creative problem solving. "When he wasn't feeling like getting up...we had a beach ball that we would knock around the room..." Mother of 6-year-old male
- S B** Advice around PA varied between medical teams. "Number one thing...everybody always says rest is best. If she's tired, then let her rest." Mother of 11-year-old female
"The team really just wants her to play as much as she's able and participate as much as she's able..." Mother of a 3-year-old female

Discussion

- The relationship between pain and PA during ALL treatment is complex and influenced by biological, psychological, and social factors.
- There are various important considerations for future pain management intervention development for children with ALL.
- Helping caregivers gain confidence in implementing essential PA recommendations during ALL treatment is an important area for future clinical research.

References/Funding

This project was funded by the Masonic Cancer Alliance Partners Advisory Board and Children's Miracle Network



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