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# Physical activity in adolescent cancer survivors: A dyadic study exploring adolescents and their parents

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## Introduction

- Adolescent cancer survivors experience several negative short- and long-term side effects and health outcomes as a result of their past therapy:
  - Comorbidities, chronic conditions, premature mortality, and physical limitations<sup>1</sup>
  - Psychological, emotional, and social impairments<sup>2</sup>
  - Reduced quality of life<sup>3</sup>
- Recent systematic reviews and meta-analyses show that physical activity can help mitigate these negative side effects and health outcomes in *children* and *adults* with cancer<sup>4,5</sup>
  - Less information exists for adolescent cancer populations
- The Canadian Society for Exercise Physiology recommends 60 minutes of moderate to vigorous physical activity daily for youth<sup>6</sup>
  - Less than 30% of cancer survivors 9-18 years of age are meeting these guidelines<sup>7</sup>
- The determinants of physical activity in this population need to be better understood to highlight what factors to target in behavioural interventions

## Parent as agent of Influence

- Parents considerably impact their child's physical activity behaviour<sup>8</sup>
  - Can positively influence behaviour by providing different types of support, namely:
    - Instrumental (e.g., paying fees)
    - Conditional (e.g., engaging in activity)
    - Motivational (e.g., encouragement)
    - Informational (e.g., discussing benefits)<sup>8</sup>
  - Can negatively influence and undermine behaviour by exerting control
- While developmental theories suggest parents influence diminishes from early childhood onwards<sup>9</sup>, this may not be the case for adolescent cancer survivors
  - Adolescents experience increased dependence on their parents during treatment and into survivorship<sup>2</sup>
  - Isolation from peers during treatment puts emphasis on parents as a main source of support<sup>10</sup>

## Knowledge Gaps

- The mechanisms by which parents exert influence over their adolescents' physical activity behaviour are unknown
- Investigation of parental *support* and *control* within single studies are lacking
- Research including parents and adolescents' perspectives is necessary to investigate the distinct perceptions of support/control they are experiencing, as well as determine if there are discrepancies

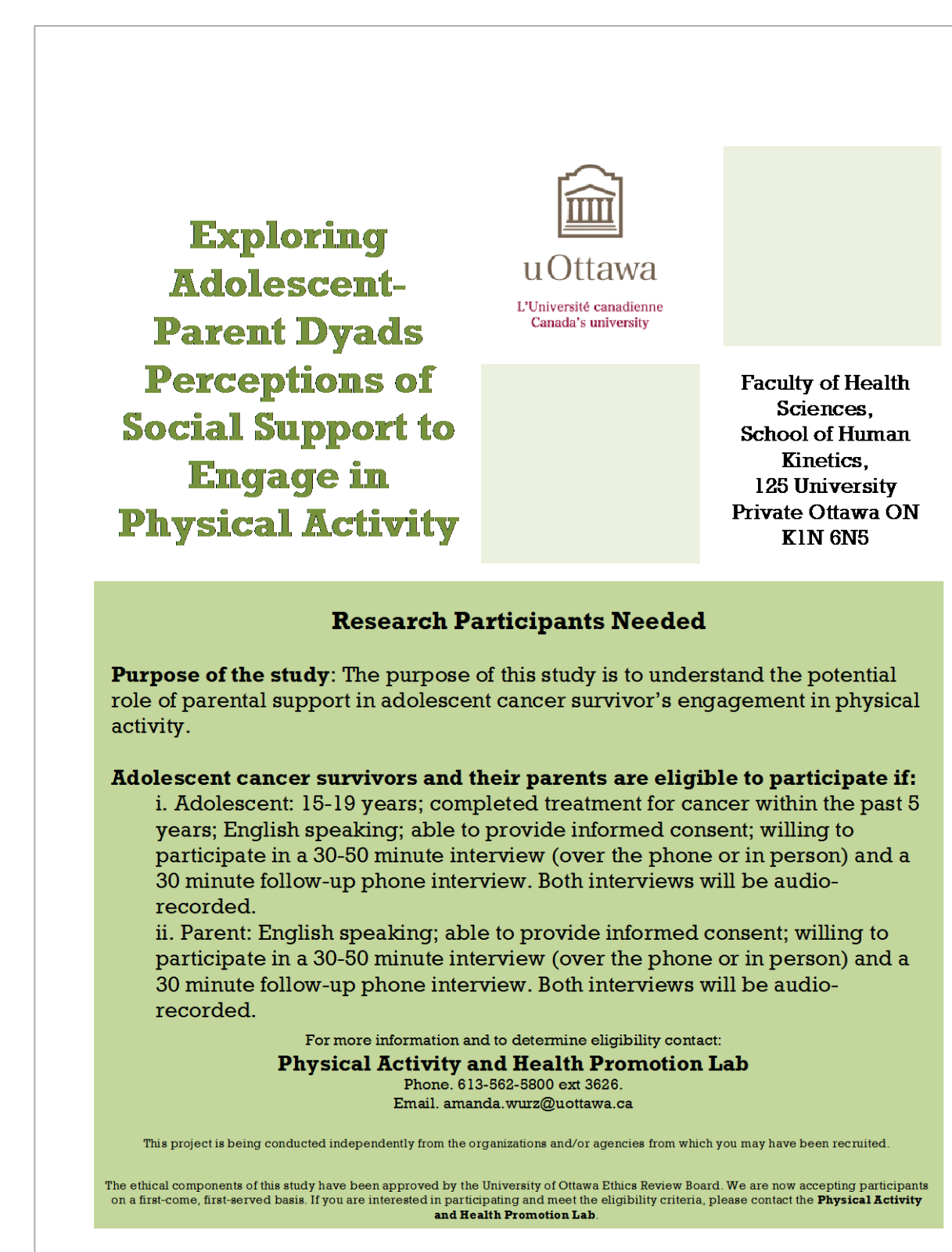
## Purpose

- Explore how parents support and/or undermine their adolescents' physical activity behaviour after the latter have completed treatment for cancer

## Methods

### Recruitment

- 10-15 adolescent-parent dyads will be recruited using promotional material through:
  - Community programs
  - Youth oncology foundations and associations
  - Youth oncology camps
  - Adolescent oncology websites



### Participants

- Adolescent inclusion criteria:
  - 15-19 years old
  - Completed treatment for cancer (< 5 years)
- Parent inclusion criteria:
  - Parent to an adolescent meeting the above inclusion criteria

### Data Collection

- Parent-reported
  - Sociodemographic and cancer questionnaire
- Parent- and adolescent-reported
  - Godin Leisure Time Exercise Questionnaire
- 2 interviews audio-recorded and transcribed verbatim
  - Interview # 1:
    - To gather information concerning perceptions of parental support/control for physical activity
    - 45-minutes in person or on the phone
    - Semi-structured interview
  - Interview # 2:
    - To verify the accuracy of participants' transcripts
    - 15-minutes on the phone

### Data Analysis

- Thematic analysis following the flexible guidelines outlined by Braun and Clarke<sup>11</sup>
  - Become familiar with the data
  - Identify salient features
  - Group similar codes together into subthemes and organize into main themes
  - Perform member checks
    - Internal homogeneity
    - External heterogeneity
  - Generate descriptions for each theme
  - Select representative quotes

## Anticipated Contributions

- This study will be the first to examine adolescent cancer survivors perceptions of parental support and control for physical activity using a dyadic approach
- Upon completion this study has the potential to:
  - Support or rebut prevailing socioecological physical activity theories
  - Gain insight into how parents' influence their offspring's physical activity behaviour in the aftermath of cancer
  - Increase awareness of how parents come to support or hinder their adolescents' physical activity behaviour
- If it is determined that parents exert considerable influence over their adolescent's behaviours, then it may help understand, in part, why adolescent cancer survivors are not meeting physical activity guidelines
- These findings may directly impact intervention strategies focused on enhancing physical activity levels by determining if parental support/control should be targeted in behavioural interventions

## Future Directions

- In an effort to expand research to improve participation rates, and ultimately improve quality of life, it is hoped this study will inform larger scale qualitative and quantitative studies exploring:
  - Associations between support and physical activity
  - Mechanisms by which parents may exert support and control
  - Mediators and moderators that may influence the association between support/control and physical activity behaviours
  - Parental support in relation to other sources of support
  - Unique influence of different types of support and controlling behaviours on adolescents physical activity behaviour

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