

# The BEAM Program

## Building Emotion Awareness & Mental Health



The Hearts and Minds Lab

Exploring the feasibility and initial efficacy of an online psycho-education and social connection platform for mothers throughout the COVID-19 pandemic

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### Introduction

- Context:** There has been a dramatic increase in maternal depression since the beginning of the COVID-19 pandemic (Tomfohr-Madsen et al., 2021)
- Research identifies social isolation, domestic conflict and lack of parenting support as strong contributors toward this increase (Cameron et al., 2020)
- Many mental health service needs remain unmet during the pandemic (Yao et al., 2020), while long-term, persistent maternal mental health problems continue to have lasting effects on child development (Kingston & Tough, 2014)
- Looking through a patient engagement lens, our Patient Advisory Board highlighted the benefit of social connection emerging from community forums and group therapy, which is not possible in the context of traditional therapy
- Objective:** Evaluate the feasibility and efficacy of the BEAM program: an app-based psycho-education & social connection program during the COVID-19 pandemic

### About the App

- Psychoeducational Videos**
  - Mental Health Videos** using Unified Protocol (UP- an evidence-based cognitive behavioural therapy for depression and associated disorders)
  - Parenting Videos** using emotion-focused parenting strategies
- Group Sessions via Zoom**  
Structured weekly group meetings with clinicians to consolidate therapeutic content and promote social support
- Online Forum**  
Monitored by research team, including parent coaches, tech supports and mental health experts, to help encourage and enhance social connection among participants
- Weekly Surveys**  
Including symptom monitoring to track participant progress throughout the program

### Results

#### Strengths: recruitment

- 605 mothers screened throughout Alberta and Manitoba
- 57 enrolled in preschool cohort

#### Indication of interest in this format

- 605 screeners successfully completed in just over two months

#### Successful screening protocol

- Mothers willingly and easily filled out screeners with few complications

#### Limitations: retention

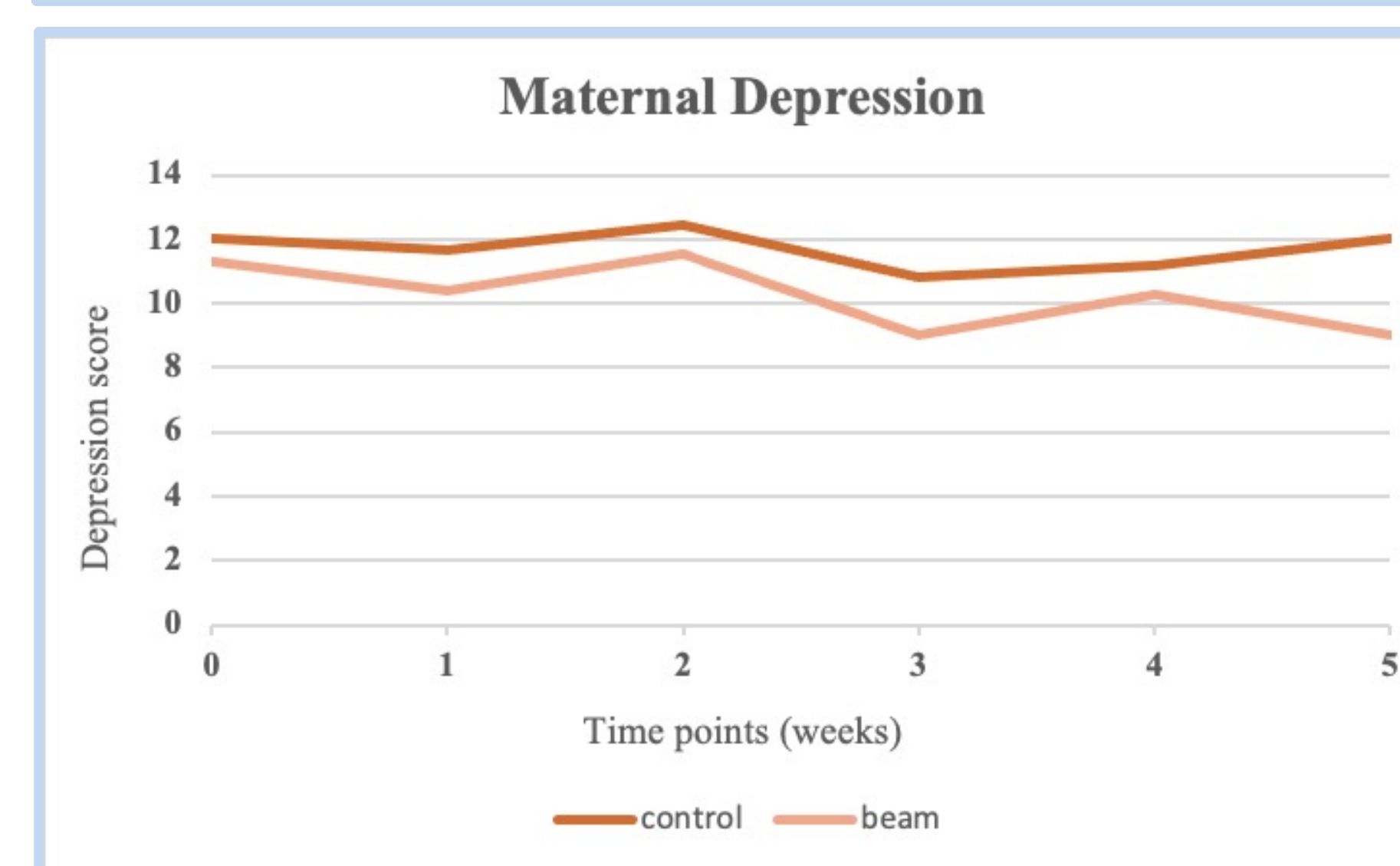
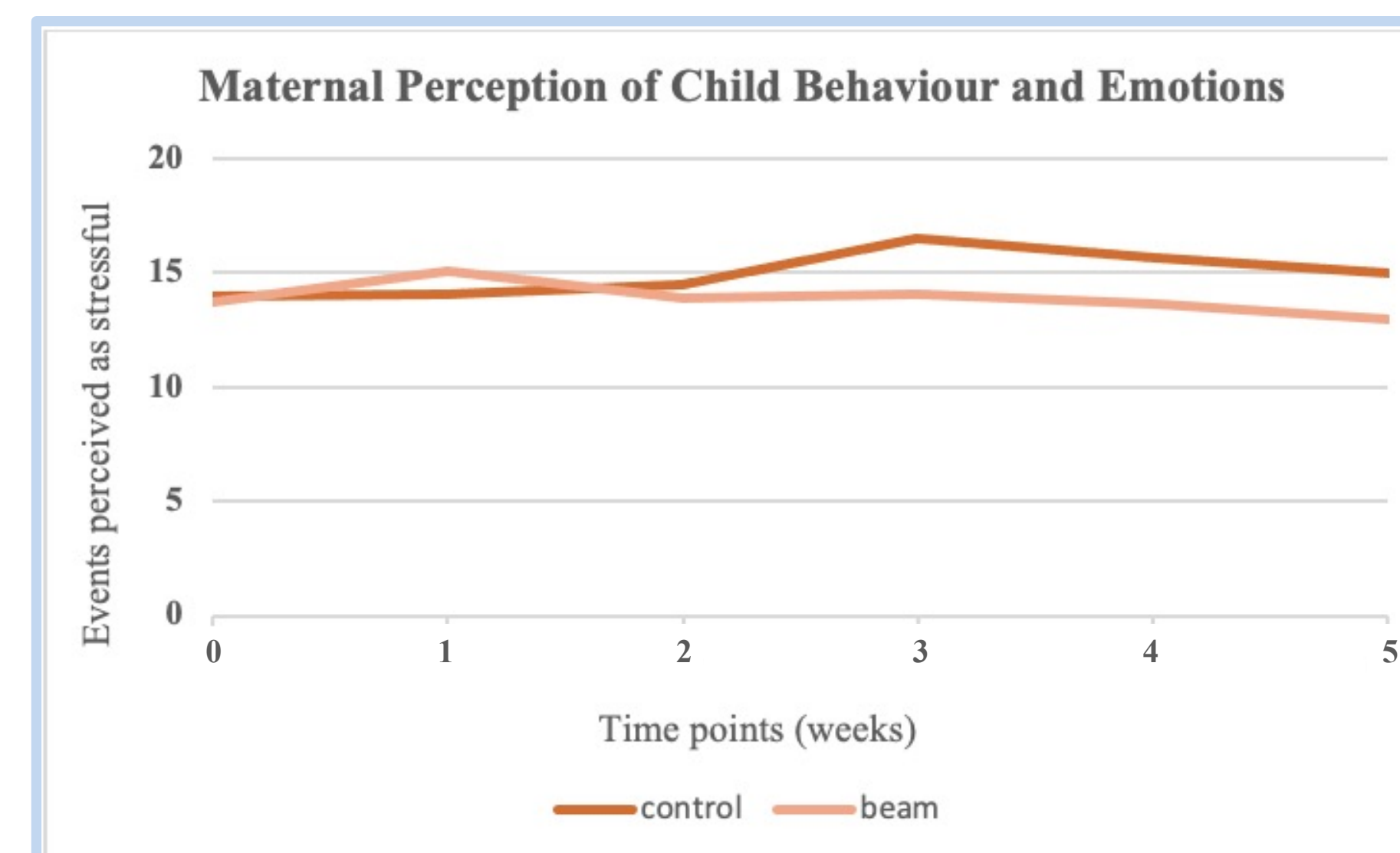
- Excessive contact points from the research team and multistep process for app enrollment increased dropout rates
- Lower engagement than anticipated in forum & group sessions
- Average attendance rate in zoom meetings  $\approx 20\%$

#### Feasibility

- Cross-screening between multiple programs used for enrollment made the process more susceptible to human and technical error
- App development issues lead to a four-week delay in the launch, resulting in several dropouts and likely diminished participant motivation to engage in the program
- Difficulties in finding a secure network for the forum where confidential participant information has potential to be shared

#### Initial Efficacy

- Trends of improvement in family wellness shown in Weekly Symptom Tracking below:



### Discussion

- Given the high interest demonstrated by online recruitment efforts, it is evident that this approach is appealing and sought out by mothers in need of mental health support
- Weekly symptom tracking data indicates promising trends towards family wellness
- Further analyses must be conducted before making further assumptions
- Post-program quantitative surveys & qualitative focus groups taking place within the next month will help refine future iterations of the program

### Future Iterations

- Largely structured based on feedback received by Parent Coaches and participants in this round of BEAM
  - Reducing the content load on a weekly basis (reduce pressure & review more in-group)
  - Reframe assignments as opportunities to practice/reflections
  - Promote the telehealth meetings, making them a core component/highlight of the program
  - Reduce structure of forums - let them be more naturalistic and support peer connection
- Initial RCT - Launch Jan 31st
- Future community partnerships to promote connection and reduce social isolation

### Acknowledgements

- The BEAM App operates through a service user agreement with Tactica Interactive Inc. and the University of Manitoba
- The program is led by the Co-Primary Investigators Dr. Leslie Roos and Dr. Lianne Tomfohr-Madsen
- Research grants have made this iteration of the project possible from Research Manitoba and Children's Hospital Research Institute of Manitoba
- The pilot round and development of future iterations would not be possible without the contributions and expertise demonstrated by the entire BEAM team
- Personal contribution to the BEAM program funded by the University of Manitoba Undergraduate Research Award
- Learning objectives to further my research skills across recruitment procedures, data management and clinical content management components of this program

### Methods

- Recruitment approach:**
  - Online recruitment by contacting family wellness programs and daycares throughout Manitoba
  - Social media sharing (primarily Instagram) from UManitoba and UCalgary lab accounts
  - Mommy-influencers in both Calgary and Manitoba invited to share program information on Instagram
- Procedure:**
  - Pilot clinical trial registered at <https://clinicaltrials.gov/>
  - Ethics protocol reviewed by UManitoba and UCalgary ethics boards given the collaboration of both research teams
- Randomization:** Following initial enrollment, mothers with children aged 18-36 months were randomized into an intervention group and a control group using the [www.randomlists.com/team-generator](http://www.randomlists.com/team-generator) online tool to avoid selection biases
- Measures:** Weekly surveys were administered to track participant mental health and parental perception of their child's behaviours and emotions.
  - Mental Health:** PHQ-9 ( $\alpha = 0.85$ )
  - Parental Perception of Child:** PDR ( $\alpha = 0.87$ )

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