A digital risk-reframing tool to shift early childhood educators' perceptions of outdoor play: Intervention mapping approach

Fritha Munday MPH, Megan Zeni MEd, Christina Han MA, Tina Cheng, Mariana Brussoni PhD

Objective

To develop an online tool to support early childhood educators (ECEs) to increase access to outdoor unstructured play.

Background

Outdoor play (e.g., climbing, running, hiding), and the inherent risk-taking that comes with it, is crucial for children's social, physical, and intellectual development, emotional well-being, self-confidence, and risk management (Brussoni et al, 2015). However, early childhood education centres restrict outdoor play due to limited understanding of its importance, excessive safety fears and liability concerns. An online risk-reframing tool for parents (Outsideplay.ca) has been shown to be effective in a randomized control trial (Brussoni et al. 2018). This new digital tool is designed to reframe educators' beliefs around barriers to outdoor play and support them to make a small shift in their practice.

Methods

Intervention mapping methods (Bartholomew et al., 2016) were used to carry out a needs assessment, develop a logic model of the problem and model of change, and make recommendations for implementation.

Focus groups were conducted with ECEs, administrators, and licensing officers. Data were analyzed using thematic analysis. Using social cognitive theory, we selected behaviour change techniques to address each determinant and identified ways to implement each strategy in the digital tool.

Results

From five focus groups with 40 participants, we derived key themes:

- outdoor play as a valuable part of childhood,
- tension between risk-taking and preventing injury,
- adults' perception of children's competency and capability.

Relationships between ECEs and colleagues, licensing officers, children, and parents were seen as foundational to successfully supporting outdoor play. Perceived barriers to outdoor play included quality of outdoor space (access, aesthetics, and amount), resources, parents' fears, licensing regulations, and weather conditions.

Recommendations

The tool seeks to influence three behavioural outcomes: (1) improve the outdoor play space, (2) gain skill and confidence to address parents' concerns, and (3) increase perceptions of young children as competent and capable.

These behavioural outcomes were broken down into detailed performance objectives.

Guiding principles were established for the user experience, look, and feel of the tool:

- The educator is the expert
- Children are competent and capable
- Use of video with pedagogical narration
- •Relatable, non-ideal imagery

Next Steps

An interactive prototype tool is being developed for validation, testing, and user feedback. It contains a journey of interactive scenarios where users will encounter relatable challenges, make decisions, and experience tailored aspects of the model of change. ECEs will test the prototype and provide feedback to inform the final tool.

References

Bartholomew Eldredge, L. K., Markham, C. M., Ruiter, R. A. C., Fernández, M. E., Kok, G., & Parcel, G. S. (2016). Planning health promotion programs: An Intervention Mapping approach (4th ed.). San Francisco: Jossey-Bass.

Brussoni M, Ishikawa T, Han C, Pike I, Bundy A, Faulkner G, et al. Go Play Outside! Effects of a risk-reframing tool on mothers' tolerance for, and parenting practices associated with, children's risky play: Study protocol for a randomized controlled trial. Trials. 2018;19: 173. doi:10.1186/s13063-018-2552-4

Brussoni M, Gibbons R, Gray C, Ishikawa T, Sandseter EBH, Bienenstock A, et al. What is the relationship between risky outdoor play and health in children? A systematic review. Int J Environ Res Public Health. 2015;12: 6423–6454. doi:10.3390/ijerph120606423

Michie S, Wood CE, Johnston M, Abraham C, Francis J, Hardeman W. Behaviour change techniques: the development and evaluation of a taxonomic method for reporting and describing behaviour change interventions (a suite of five studies involving consensus methods, randomised controlled trials and analysis of qualitative data). Health Technology Assessment, 2015;19(99). doi:10.3310/hta19990

Acknowledgement

We gratefully acknowledge the support of our funder, the Government of Canada, our collaborating partner, the BC Children's Hospital Digital Lab, and our expert advisors: Melanie Walters, Dr. Deb Thompson, and Darcelle Cottons (UBC Childcare), and Dr. Eva Oberle (UBC School of Population and Public Health). We thank the focus group participants for their insight and time. We thank Kathryn Soo for her assistance with focus group transcription.

Figure 1. Logic model of the problem







