KIDS HELPING OTHER KIDS DEVELOP MENTAL RESILIENCE USING A "BOOK OF LIGHT"

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Abstract

Mental health education to promote resilience in children has become paramount with the increase in mental health concerns post-COVID. Resilience can be developed through problem-solving, developing self-esteem, fostering hopefulness, making sense of chaos, creativity, kindness, breaking unhealthy thought patterns, and social connections. We designed a board game called "The Book of Light" to help children externalize and look at their problems from a distance. It involved answering a challenge to help a distressed animal presented as artwork in a deck of cards. A separate deck of cards contained mindfulness and emotional regulation tools, which they had to learn and impart to the animal. The game aimed to teach children to calm themselves, express their emotions, find meaning as they practice learning to be in another child's shoes, make friends, become more open to new experiences, and find a safe space to talk about painful or difficult situations.

This study focused on piloting the game using a Knowledge Translation-Integrated (KTI) participatory action framework to ensure the game was relevant to its users and stakeholders. It was aimed particularly at helping children develop positive coping strategies for difficult life experiences. The authors used a mixed-methods, qualitative-quantitative design to determine the game's ability to potentially improve the meaning-mindset and emotional well-being in children and their families. Surveys were given to children aged 7 to 14 years and their parents/caregivers before and after being introduced to the game to test its credibility, feasibility, acceptability, and sustainability. The adults reported that a majority of the children had experienced traumatic life events, including bullying, the death, loss or critical illness of a family member, or divorce or separation from a parent or caregiver. Analysis showed a statistically significant improvement after only a week's interval in the parents' emotional well-being and meaning-mindset, even if

they had not actively participated in the game. Changes in meaning mindset scores favourably predicted a shift in mental health for both children and adult participants.

Families rated the game as credible in doing what it set out to do (improve well-being) and found it enjoyable. Having a chance to engage in the art component of the game and share their stories appeared to be the highlight for most children. Further research should explore this game's meaning-mindset and mental health longitudinally with a larger sample size and over a more extended period.

Acknowledgements

"Beware of looking back at what you once were, when God wants you to become someone you've never been."

- Oswald Chambers, My Utmost for His Highest

This journey began with taking a chance on a new path heralded by mixed emotions of ongoing grief, trepidation, joy and excitement at the prospect of what was to come. Finally, deciding to transition into counselling as a second career has allowed me to learn much about myself beyond much of what I have written, and this paper symbolizes one of the signposts on that journey. Abba, I am overwhelmed by what You have graced me with. May this work continue to honour You and Your purpose for my life.

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Chapter 1

Literature Review

Chapter 1

Kids Helping Other Kids Develop Mental Resilience Using a "Book of Light"

Mental health concerns and illnesses are estimated to cost the Canadian economy at least $50 billion per year (Mental Health Commission of Canada, 2013). Further, the cumulative cost (including treatment, care and support services) is projected to exceed $2.5 trillion over the next 30 years, with mood and anxiety disorders representing the most prevalent conditions for all ages (Mental Health Commission of Canada, 2013). Sheffler (2020) linked heightened stress reactivity in Adverse Childhood Experiences or ACEs (specifically all forms of childhood abuse and neglect, parental death or separation, bullying by peers, and being taken into care) as an underlying risk factor for mental health concerns. "ACEs" is a collective term traditionally referring to "potentially traumatic exposures that individuals may experience during childhood ages 0 to 18 years" (Ports et al., 2020, p.18). Afifi proposed expanding the definition from child maltreatment and household challenges or dysfunction to include poverty, death in the family, peer victimization and witnessing community violence (Afifi, 2020). Most recently, youth have globally experienced many adverse outcomes due to the COVID-19 pandemic. Indeed, a 2021 meta-analysis involving youth across the globe during COVID showed an increase in clinically significant anxiety and depression (Racine et al., 2021). This increase has been attributed to an interplay of several potential factors triggered by the pandemic - remote learning and social isolation, inadequate healthy adult role models, meagre support systems, economic insecurity, and racial profiling (Racine et al., 2021). These challenges associated with the pandemic appear to have significantly contributed to intense anxiety, depression, and even suicide ideation among youth (Brewer-Smyth, 2022). Given the recent pandemic, ACE, and the increase in mental health

concerns, mental health promotion strategies may be essential to offset the significant financial burden of mental health treatment in Canada.

Not only is the issue of increased mental illness rates a financial concern, but more recent findings highlight the consequential significance of this continued surge in mental health symptoms. The Mental Health Commission of Canada and the Canadian Pediatric Society's joint report (2021) on the effect of COVID-19 on early childhood mental health showed that as many as 40% of parents in Ontario reported either behavioural or emotional challenges in their children. Their report reiterated that, despite a continued rise in emotional-behavioural issues in children, mental health services have been ill-equipped to handle this mounting problem (Mental Health Commission of Canada, 2021).

As of May 2022, the Canadian Institute for Health Information estimated a prevalence of 20% of mental illness among Canadian youth (Canadian Institute of Health Information, 2022), with increasing trends in the use of psychotropic medications, highest for mood and anxiety disorders among female youth aged 5 to 24 years. Further, more than 25% of the hospitalized children and youth admitted for all mental health conditions lived in the poorest neighbourhoods (Canadian Institute of Health Information, 2022). Hébert, Jean-Thorn and Fortin (2022) showed that 26.6% of youth in the province of Quebec exhibited severe psychological distress and 20.3% probable PTSD symptoms in the first wave of COVID-19. In addition, a dose-response relation was observed with a doubling of the prevalence of psychological distress and PTSD with a prior history of five traumas or ACEs. Further, regarding concurrent ACEs, internalizing problems (symptoms of withdrawal, anxiety and depression) and externalizing problems (aggression, rule-breaking, attention problems) in young children (<10 years old) were found to be significantly associated with family conflict and chaos during the pandemic (Lee, Fosco, &Feinberg, 2025).

Unfortunately, many of these situations tend to leave a child little choice or a sense of agency in a situation and potentially become further risk factors for bullying, an ACE, and compounding mental health risks (Johansson, 2023). Such adverse experiences can lead to a plethora of symptoms of depression, anxiety, psychosomatization, loss of self-esteem, and other mental health problems that may extend into adulthood or suicide at worst (Public Safety Canada, 2018).

When exploring risks, the contrary or factors promoting well-being are also necessary. In a study of 813 secondary school students in Canada, Armstrong and Manion (2016) found that personally meaningful engagement in an extracurricular activity significantly moderated the relationships between depressive symptoms, risk behaviours, self-esteem, and social support in the prediction of suicidal ideation. Their findings have compelling implications for emotional and mental initiatives at the primary prevention level while highlighting the subjective quality and immense significance of "meaningful engagement" in young people. A 2022 Canadian Mental Health Association report estimated that every dollar spent on mental health promotion returns $4 to $10 to the economy (Eaton, 2022). Given the current post-pandemic situation, where it is costly to address the rise in mental health concerns, and there is a lack of resources to do so (Mental Health Commission of Canada, 2021), interventions to promote mental health and well-being as soon as feasible become a worthwhile and financially sound initiative.

Social-Emotional Learning and Attachment

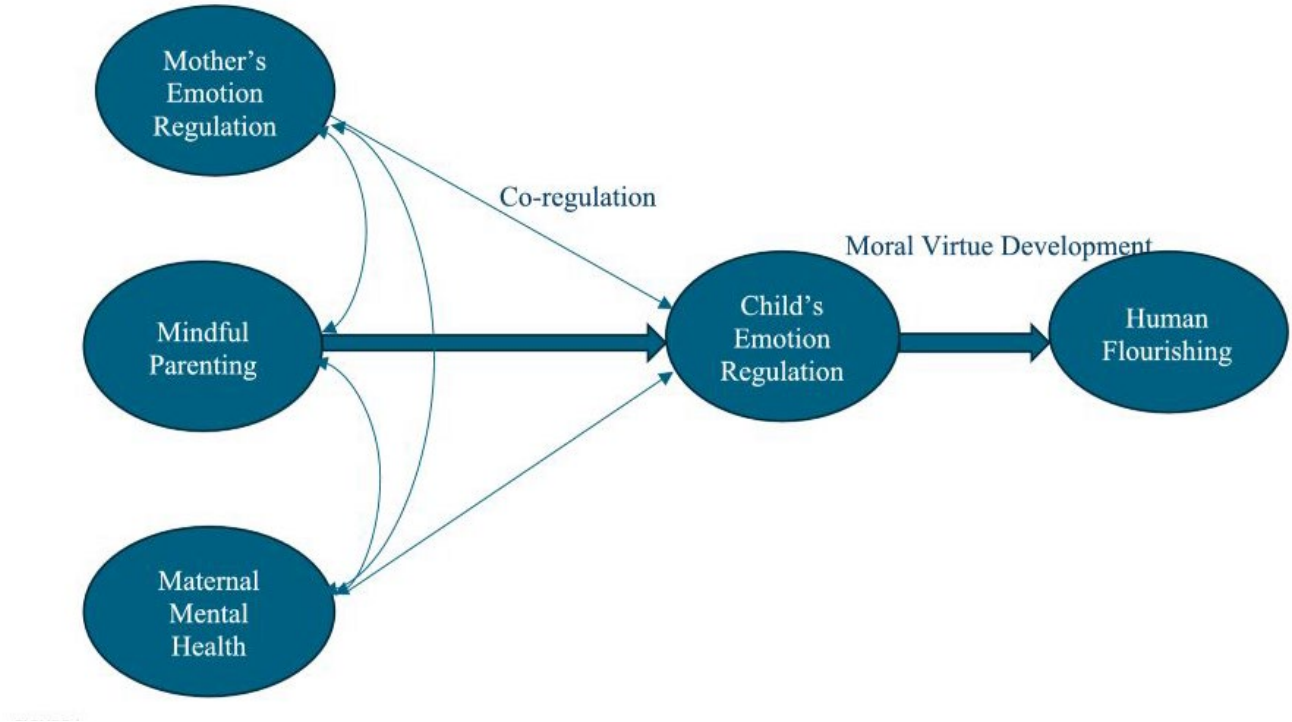
Social-emotional learning is one potential avenue for mental health promotion. The development of social-emotional learning is said to begin with attachment (Thompson, 2014; Shaver and Mikulincer, 2014). According to Bowlby, we are born with an innate "attachment behavioural system" that "seeks proximity to significant others" as a protective and survival mechanism, resulting in "down-regulation of negative affective states, and a secure base" that

allows one to safely explore and learn (Shaver & Mikulincer, 2014, p. 237- 238). Bowlby also believed that in the absence of a reliable, available and supportive attachment figure, secondary attachment strategies arise as coping mechanisms which can swing from one extreme of hyperactivation (clinging, controlling, coercive behaviour) to the opposite extreme of deactivation or "compulsive self-reliance" (2014, p. 238).

Based on developmental neurobiology, Sansone has proposed that emotional co-regulation begins in utero, with a growth spurt of the emotional dominant right hemisphere starting at the 25th gestational week and dominant until the first two years of life (Sansone, 2025; Schore, 2005). He posited that the unborn infant is a "sentient conscious being" capable of relational engagement" with co-regulation beginning with the mother's mindful awareness of her infant's innate capacity to do so and their continued, coordinated and attuned interactions, responsiveness, and affective behaviour essentially forming "interpersonal neurobiology of right-to right brain communications or neurobiology of attachment (Sansone, 2025, p.3). This blueprint of emotional co-regulation appears to be mediated by mindful awareness or mindfulness, with the "interpersonal attunement of secure attachment corresponding to internal attunement in mindful awareness" (2025, p.5). Sansone's proposed blueprint of these relationships between parent, child and human flourishing is illustrated below in Figure 1 below (see Figure 1).

Figure 1

Relationship between mindful parenting, child's emotional regulation and human flourishing, with the mediating role of maternal mental health and emotional regulation (taken from Sansone, 2024, p. 6)



Thompson posits that the socialization of one's emotion regulation likely begins with a child's exposure to the family, beginning with the parent's direct intervention, which buffer and supports a child's emotions as they soothe distress, allay fears, encourages positive emotions when faced with a perceived threat through distraction, helping with problem-solving, altering the perception of a negative experience, or "social referencing," the latter exemplified in the way an infant looks to caregivers for cues on how to respond to something unfamiliar or threatening (Thompson, 2014). Thompson also emphasized the potential impact of the emotional climate of family life on a child's ability to regulate emotions – positive emotions in the family can model

skillful management of emotions. Still, the effect of negative emotions depends on whether they are directed toward the child and if they signal dominance (anger and hostility) or submission (sadness and distress). In addition, the adult's awareness of their own emotions inevitably can potentially impact a child's understanding and acceptance of their own emotions, which can result in either healthy emotional coaching or unhealthy emotion dismissal (Thompson, 2014). Other studies have established a neuroendocrine basis of coregulation (referred to as "neural attunement," i.e., "the coordination of brain-based neural activities between individuals in social interactions") and has been demonstrated to have a hormonal basis related to oxytocin, cortisol and testosterone, and is primarily determined by "shared genetic relatedness, cohabitation, continuous interaction, and the influence of common factors like culture" (Bornstein & Esposito, 2023, p.1) Thus, it would only be fair to surmise that one's emotions, including one's socio-emotional learning and hence one's mental health and well-being are predicated on one's close relationships and proximity to others.

Being in school offers youth an opportunity to learn essential skills in self-regulation, empathy, conflict resolution and teamwork. These skills are foundational to positive relationships as they are susceptible to neglect, exploitation, abuse, substance use and antisocial behaviour; with peer rejection, bullying and risky behaviours escalating with the onset of adolescence (Arslan, 2024). Johansson's review found that "self-oriented personal competencies," i.e., self-awareness and self-management, provided the most robust protection against victimization. In addition, "community and school factors, good academic performance, and 'other-oriented' social competencies" were the most significant protective factors against face-to-face bullying perpetration (Johansson, 2023, p. 20; Zych et al., 2019). A sense of belonging in school, which extends a child's basic need for secure attachment, has been found to

mediate both internalizing and externalizing problems in adolescents (Yildirim et al., 2023). This sense of interconnectedness and belonging, concurrent with an awareness of self and one's potential to live a life of meaning, are tenets shared with spirituality and mindfulness (Lo, 2024). Systematic reviews and meta-analyses have also confirmed the ability of mindfulness-based interventions (MBI) to improve socio-emotional skills, executive functions, depression, anxiety, internalizing and externalizing problems, disruptive behaviour, prosocial skills, stress, physical health, well-being, mood, quality of life, academic achievement, and negative and positive affect (Albertova, 2024). Core components of mindfulness-based programs for children generally aim to foster acceptance, compassion, decentering (i.e., understanding the fleeting nature of thoughts and feelings), focused attention, nonjudgment, self-awareness, somatic awareness and non-reaction, the latter qualified as a restraint in observing without interfering or reacting (Lo, 2024). For ACEs, including the recent pandemic-related challenges that all children experience in some way, socio-emotional learning skills to promote resilience through play, specifically gameplay, may help build resilience (Stone, 2015; Armstrong, 2021; Gardiner, 2024).

Resilience and Play

What is Resilience?

In 1987, Rutter had conceptualized resiliency as resulting from protective mechanisms or processes (instead of an innate attribute), which were "positive or healthy responses to stress or risk situations," - these included self-esteem and self-efficacy, developed through personal relationships, new experiences, and task accomplishment (Hirayama & Hirayama, 2001, p.77). According to Brooks and Goldstein, resilience is described as "the capacity of a child to deal effectively with stress and pressure; cope with everyday challenges; rebound from disappointments, mistakes, trauma and adversity; develop clear and realistic goals; solve

problems; interact comfortably with others; and treat oneself and others with respect and dignity" (Brooks 2015, p.377). Strategies to build resilience in children through group work or collaboration foster (1) problem-solving, (2) curiosity and a broad range of goals and interests, (3) eliciting positive responses and critical support from both adults and peers; (4) an ability to nurture others; (5) finding sense and meaning amidst chaos coupled with interpersonal insight and understanding; (6) a mental and physical ability to distance oneself from conflict or risky situations; (7) a positive outlook to "reframe or redefine" a situation; and (8) healthy self-esteem, personal control and hopefulness (Hirayama & Hirayama, 2001). In his groundbreaking book filled with practical advice for parents, Dr. Ginsburg introduced the metaphor of a "lighthouse parent:" i.e., one who has a balanced parenting style that can keep a watchful lookout to allow a child to make mistakes but quick to intervene when necessary to ensure their child's safety. Ginsburg also organized concepts form leaders in youth development to coin the "7 crucial C's of resilience" in children: (Ginsburg, 2020, p.65)

1. *Competence* – the ability to effectively handle situations through actual experience in choosing the responsible choice when faced with a difficult decision.
2. *Confidence* – a secure belief in one's ability to cope with challenges.
3. *Connection* – proximity to a network of family, friends, school and community that confers a sense of belonging and safety.
4. *Character* – having a strong moral compass to contribute functionally to society as a stable adult.
5. *Contribution* – having a sense of purpose that can improve the world.
6. *Coping* – the ability to effectively handle stress and have stress-reduction skills; and

7. *Control* – the ability to recognize that their actions have real-life consequences in their decision-making

Ginsburg thus presents resilience as a learned mindset that sees challenges or difficulties as opportunities for learning while emphasizing the instrumental role that parents and other adult connections play in a child's long-term emotional and mental well-being, as well as being essential co-regulators in their child's ability to handle their own emotions.

Brooks & Goldstein elaborated on the mindset of effective educators through the psychologist Julius Segal's powerful concept of a "charismatic adult" – "a person with whom they can identify and from whom they gather strength" - as one who can make a difference for children of unfortunate circumstances, reiterating a teacher's effectiveness being inextricably built on the relationship they have with their students (Brooks and Goldstein, 2015, p.11). The author asserts that strategies that foster resilience in the classroom include understanding how mindsets affect behaviour; equally prioritizing a student's social-emotional development and well-being with academic content; becoming aware of one's lifelong effects on students and their resilience; avoiding dangerous assumptions of a lack of motivation or engagement in their students; and constant reappraisal of one's teaching strategies if they don't seem effective (2008). They also emphasized the merit of empathy for students, parents and teaching colleagues; the value of recognizing, respecting and reinforcing a student's competent areas; as well as encouraging ongoing feedback and input from students - all of which promote a positive sense of attachment and belonging in school (Brooks & Goldstein, 2008; Brooks & Goldstein, 2015). Therefore, overall, particularly concerning ACEs, resilience is best conceptualized as a developmental process and a learned, determined mindset to overcome adversity (2015).

Developing Resilience through Play

One way to foster resilience, or a determined mindset to overcome adversity, is through play (Seymour, 2015). Play has been said to be the language of children and thus also becomes a language that can address emotionally distressing topics in developing children's resilience through "intimacy and interconnectedness" (Armstrong, 2016, p. 166; Malchiodi & Crenshaw, 2015). Play allows children to "categorize" complex and abstract real-life experiences while assimilating coping skills that shape behaviour (Porter et al., 2009; Gardiner, 2024). Schaefer is credited with synthesizing the healing powers of play inherent to group work and enumerates the following mechanisms of change: (Schaefer & Drewes, 2010; Stone, 2015; Drewes et al., 2015)

A. Facilitate Communication

1. Self-expression, which allows for the use of symbolism and emotional distancing;
2. Insights into the unconscious defence mechanisms of projection, displacement and symbolization;
3. Direct and indirect teaching methods using narratives;

B. Foster Emotional Wellness

4. Abreaction or the re-enactment of stress and trauma with emotional release, which confers a sense of power and control over overwhelming or difficult situations;
5. Stress inoculation to diminish anxiety over the unfamiliar;
6. Counterconditioning (or stimulus-substitution) of anxiety-provoking situations through fantasy play;
7. Catharsis or emotional release
8. Positive emotions (i.e., laughter, camaraderie, banter and mood-elevating hormones when one enjoys the game)

C. Enhance Social Relationships

9. Enhancement of attachments and strengthening of emotional bonds
10. A healthier sense of self and agency
11. Empathy through role-play

D. Increase Personal strengths

12. A sense of power and control to alleviate feelings of insecurity and vulnerability
13. Competence and self-control
14. Moral judgement, or the evolution from rules to cooperative and consensual agreement
15. Accelerated psychological development
16. Creative problem-solving
17. Compensating and filtering unexpressed impulses and needs through fantasy play
18. Reality testing through pretend play
19. Behavioural rehearsal in a safe environment, i.e., aggression vs. assertion through puppetry or role-play; and finally
20. Rapport building with clients.

One way that play promotes resilience can occur through board games. Board games offer additional advantages of portability and accessibility when children have no or limited access to mental health services or the benefit of the internet; its ability to be used in children who are in the latency stage (spans from the age of five to the onset of puberty), and the added benefit of not having any known contraindications (Stone, 2015). Oren reminds therapists that much can be learned from simply observing the dynamics of gameplay - a *developmental perspective* which focuses on a child's emotional development and a *projective perspective* – their internal representations, their unspoken or unexpressed struggles and patterns of relating to

others (Oren, 2008). She adds that taking turns at a board game fosters delayed gratification and confers the ability to bear frustration and loss (Oren, 2008). According to Armstrong, psychotherapy students discovered that children aged 6 to 12 years could comfortably discuss their feelings and connect fairytale scenarios and their own lives through the "safety" provided by made-up situations (Armstrong, 2021). In addition, board games were found to facilitate discussions between children, their peers, and families about outcomes that can arise from challenging life experiences, coping strategies for these outcomes, and how to make decisions together (Armstrong, 2021; Gardiner, 2024).

An exploratory study on using a game to find themes of common problems among early and middle schoolers was based on informal consultations with parents who were active volunteers in their children's schools (Galicia-Connolly & Howell, 2023). These parents suggested that a game should de-emphasize competition, as the typical Canadian school environment is currently an immense and overwhelming source of stress for their children. These parents expressed their concerns surrounding problems such as low self-esteem, bullying, gender/identity issues, learning difficulties, dealing with failure or new responsibilities, difficulty making friends, and adjusting to changes in the family, such as sickness, death, or divorce. These scenarios were then used to create a card deck of typical childhood struggles (Galicia-Connolly & Howell, 2023).

Theoretical framework

Empathy is a key socio-emotional skill for strong social relationships (Brooks, 2023; Ginsburg, 2015; Armstrong, 2017; 2019). Empathy, defined as "an other-oriented emotional response elicited by and congruent with the perceived welfare of someone else" (Batson, 2005, p.485), involves a cognitive perception of the other as well as feeling another's personal distress,

suffering, or emotional state which serve as critical processes in one's social interaction. These same authors suggest that altruism arises from the "egoistic motive to relieve one's distress," henceforth referred to as the "empathy-altruism hypothesis" (Batson, 2005, p.488). One theory that emphasizes empathy and perspective-taking is Meaning Mindset Theory or Meaning Mindset therapy (MMT), which is rooted in Third Wave Positive Psychology.

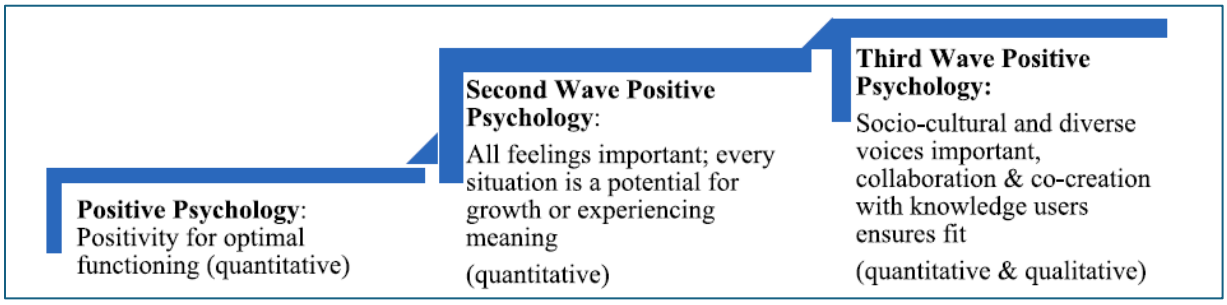
Martin Seligman officially introduced Positive Psychology Theory, a branch of psychology focused on studying positive emotions and flourishing, as he took the helm of the American Psychological Association in 1998 (Linely et al. 2006). Seligman had sought to shift the dominant imbalanced focus from the negative emphasis on pathology to a more integrative, holistic approach to include well-being, wholeness and fulfillment, and defined positive psychology as the "scientific study of optimal human functioning" (2006, p.8). However, critics questioned the undue emphasis on the positive aspect of things – second-wave positive psychology recognized the duality of life and incorporated meaning as requisite to one's flourishing, i.e. how the heights of joy cannot be fully experienced without the depths of grief (Armstrong, 2016; Ivtzan et al., 2016; Wong, 2017). Most recently, third-wave positive psychology broadened second-wave positive psychology by incorporating the social and environmental systems in which one's flourishing is inevitably embedded (Lomas et al., 2021). Lomas et al. used the metaphor of a crescendo of waves that build on the energy of another to describe the evolution of positive psychology (2021). First Wave Positive Psychology, or PP1.0, emphasized positivity as a desirable quality for flourishing and well-being, while Second Wave Positive Psychology or PP2.0, built on the first wave with the added dimension of polarity by including the ability to find meaning in the duality of life founded in Dr. Frankl's logotherapy and existentialism (Frankl 1986; Lomas et al., 2021; Armstrong and Potter, 2022; Armstrong et

al., 2025). Third Wave Positive Psychology built further on this while also addressing the social and cultural contexts in which an individual resides (Lomas et al., 2021). Specifically, building on the previous wave of PP2.0, Third Wave Positive Psychology or PP3.0 subsequently adds a global systemic view that includes history, context, culture, ethics and other collective phenomena to one's flourishing while adding a qualitative methodology to the previous quantitative methods of the two earlier waves, and targets issues of ethics and social justice (Lomas et al., 2021; Armstrong, 2025).

The evolution of positive psychology is succinctly summarized in the figure from Armstrong's article on meaning mindset theory (MMT) shown in Figure 2 below (Armstrong et al., 2025, p.3).

Figure 2.

Evolution of Positive Psychology (taken from Armstrong et al., 2025, p.3)



Note: Illustration of the evolution of positive psychology as a crescendo of waves building on top of the previous concept

With second and third-wave positive psychology having existential roots in Logotherapy, Dr. Frankl's logotherapy or psychotherapy in spiritual terms is relevant in terms of finding healing through meaning and purpose (Southwick et al., 2016). Logotherapy was borne out of

Dr. Frankl's testimony as a Holocaust survivor, which called on the strength of the human spirit to transcend its present circumstances. Logotherapy, or a meaning-based theory of mental health, fosters hope in finding a sense of meaning through the following pathways to meaning: valued experiences imbued with a sense of awe, creativity, and self-transcendence experienced in one's horizontal (interpersonal) and vertical (spiritual) connections or situations, as well as choosing one's attitude (Frankl, 1946/1986; Itzvan et al., 2016; Wong, 2017). A core meaningful experience requires connecting with others, which involves skills to engage or relate with others (Armstrong, Watt, Potter, & Epperson, 2025; Frankl, 1946/1986).

Adults typically gauge meaning as "meaning in life" which is assessed based on a sense of purpose and its significance or contribution to society. Children, in contrast, tend to see meaning more accurately captured as "meaning in everyday life," which encompasses self-esteem, a sense of agency or control, hope for the future, and openness to new experiences (Yael, 2014; Taylor and Ebersole, 1993; St. John, Armstrong & Watt, 2023). Meaning in everyday life corresponds with Frankl's pathways for meaning and becomes relevant for adults and children (Frankl 1946/1986). These components of meaning in everyday life essentially constitute a meritorious skillset (agency, openness, hope and a positive self-concept) which can be taught and learned, also significantly predicted childhood well-being and was inversely related to mental illness and behavioural disorders in children (Armstrong & Manion, 2015; Armstrong, 2016a, 2016b; Armstrong et al., 2022; St. John, Armstrong & Watt, 2023).

Building on a foundation of Logotherapy, the meaning-mindset theory is the framework that uses the concept of meaning-mindset (Armstrong & Potter, 2022; Armstrong et al., 2025) or finding meaning in everyday life, being requisite to one's flourishing. MMT is rooted in the tenets of Frankl's logotherapy and forms the substrate of Armstrong's nationally funded and

meaning-based mental health program for 7 to 10-year-old children called D.R.E.A.M. or Developing Resilience through Emotions, Attitudes and Meaning (Armstrong, 2016a; 2020b; Armstrong et al., 2019a; 2020b; 2025; Watt, 2020; Parrott et al., 2021). D.R.E.A.M., an eight-module program module (see DREAM framework in Table 1 below), was designed to teach socio-emotional literacy, creativity and critical thinking through play and collaboration, has been proven to be credible, acceptable, feasible and sustainable in research studies encompassing children and their families (Armstrong, 2017; Armstrong et al, 2018; Watt, 2020; Potter, 2022;; St. John et al., 2024), including samples with neurodiversity and giftedness (Armstrong, 2018; Champaigne-Klassen, 2024). MMT has demonstrated applicability to studies on Lebanese women (Halabi, 2023), homeless men (Fabes, 2024), Black mothers (Odenigbo, 2023) and adults with ADHD (Ciccarelli, 2024) and has been recently proposed as a unique Canadian transdiagnostic approach to promote mental health and well-being in children (Armstrong et al., 2025), as well as psychotherapy and ombuds practice (Ismaili, 2025).

Table 1

D.R.E.A.M. Framework of Skills (taken from Armstrong et al., 2025, p. 7)

Identification & management of emotions	Stress management, coping & perseverance	Healthy relationships	Self-awareness & sense of identity	Critical & creative thinking
Identifying common feelings	Identifying healthy actions	Responding to other's feelings	Respect for difference	Choice & responsibility
Feeling "signals" to recognize unhelpful thoughts & behaviors	Asking for help	Behaviors that affect self & others	What makes us unique & alike	Making reasoned decisions
Bodily-felt emotions	Healthy & unhealthy use of social media	Non-verbal emotional cues	Cultivating a meaning mindset	Identifying & challenging unhelpful thoughts
Calm-down activities to manage feelings	Managing worries, avoidance, & disappointment	Listening actively	"Me to we" actions	Identifying & solving problems
Relaxation strategies to manage feelings	Importance of, & strategies for, healthy sleep	Perspective-taking	Building gratitude	Fostering grit

Meaning Mindset Theory or MMT, formerly called Rational Emotive Attachment-Based Logotherapy (REAL), is rooted in attachment, logotherapy and Ellis' Rational Emotive

(Behaviour) Therapy (RET), akin to a three-legged stool (Armstrong, 2016). RET focuses on critical thinking and problem-solving skills through the agency over unhealthy thought patterns and behaviours, while attachment-based skills are focused on developing socio-emotional literacy and emotional attunement with others (2016; Armstrong et al., 2025). Recently, MMT's tenets of agency, self-concept, hope and openness to experience have been functionally conceptualized as a transdiagnostic approach through their "**CHANGE**" model that involves the following steps: (Armstrong et al., 2025; Armstrong & Potter, 2022; Potter, 2022; St. John et al., 2023)

1. **C**hallenge unhelpful thoughts: evaluate the probabilities of good and bad outcomes; externalize to gain an objective perspective and seek input from others;
2. **H**ealthy actions: engage in calming activities and formulate small action goals; make a habit of challenging negative thinking and choose to problem-solve instead;
3. **A**cknowledge circumstances: redirecting one's energy and focusing on what can be changed rather than what cannot;
4. **N**eed for belonging and self-compassion: nourishing one's vertical and horizontal relationships through empathy, conflict resolution, and socio-emotional literacy.
5. **G**ratitude: a pragmatic appreciation for the positives (e.g., warm food, nature, someone said hello, etc.).
6. **E**motional language: learning self-appraisal of one's emotions and feelings as valid signals

In times of crisis, such as ACEs, the concept of meaning becomes particularly relevant (Wong, 2017). Particularly in a divided world, an empathy-based intervention founded in MMT would, therefore, be potentially well-suited to serve the mental health needs of young people.

The Knowledge Translation Integrated Approach

A Knowledge Translation Integrated (KTI) approach is the research method of MMT, which has been used in several studies over the past decade to include the voices of those who are to be served by the research (Armstrong et al., 2025; Champaigne-Klassen, 2024; Gardiner, 2024; Armstrong & Potter, 2022; Watt, 2020; Armstrong, 2017). KTI is a PP3.0 participatory mixed-methods approach that requires a collaborative effort between researchers and study participants. KTI invites the latter to become co-creators and contributors to the research as knowledge users and future stakeholders to ensure its relevance and continued use. According to the Canadian Institute of Health Research, *knowledge translation* involves "synthesis, dissemination, exchange and ethically-sound application of knowledge" for the improvement of both the health and healthcare of Canadians. At the same time, the Social Humanities Research Council (SSHRC) defines *knowledge mobilization* as the "reciprocal and complementary flow and uptake of research knowledge between researchers, knowledge brokers and knowledge users" (The Hospital for Sick Children, 2025). In a KTI approach, the themes of credibility, acceptability, feasibility and sustainability are distilled from an amalgamation of the knowledge translation values from the Canadian funding agencies, Patton's Utilization-Focused model (Patton, 2015), the 1994 Joint Committee on Standards for Educational Evaluation and Judd's values-based approach to community-based health promotion programs (Judd et al., 2001; Armstrong, 2009; 2017; Gardiner, 2024; Armstrong et al., 2025). An Integrated Knowledge Translation (iKT) approach, also known as participatory action research or community-based participation research, emphasizes involving knowledge users, i.e., someone who can use research results to "make informed decisions about health policies, programs and/or practices (CIHR, 2012, p.1) Patton's 1984 utilization focused model involves its intended users in the

research, development, evaluation and critique of the program (Patton, 2015). The 1994 Joint Committee on Standards for Education Evaluations established standards for programs by emphasizing accuracy in measurement and reporting, reliability in data results and analysis, and both credibility and transparency in the timely dissemination of results (Gardiner, 2024). Judd, Frankish and Moulton (Judd et al., 2001) advocated for a "*salutogenic orientation*," i.e., a focus on health maintenance and prevention instead of a pathogenic or disease-based approach, that promotes equity, inclusion, viability and empowerment of its future users and stakeholders. (Judd, et al., p.369). Thus, using the KTI methodological approach, the four parameters to evaluate a resource, program, or intervention require the following: ***Credibility***: Do measurements suggest that the resource can accomplish what it set out to do? Do stakeholders perceive that the resource achieves its targeted outcomes? ***Acceptability***: Do stakeholders find the resource appealing and believe the resource is helpful for their needs? ***Feasibility***: Do users and stakeholders see the program as valuable and worthy of their time and effort? ***Sustainability***: Can users and stakeholders independently see themselves continuing to use the resource or what they learned from it, or would it require continued outside support? (Armstrong et al., 2025; 2022; Armstrong, 2017; 2009; Potter, 2022; Gardiner, 2024; Watt, 2020).

Current Study: Originality

Inspired by the play nature and socio-emotional literacy aims of the MMT-based D.R.E.A.M. program, and given the relationship between gameplay and mental health promotion, a traditional board game was conceived to equip children with little or no access to counselling services and who may not have internet access due to economic hardship or unavailability. For this game, knowledge users would be any adults or facilitators who would supervise the use of the game, i.e. a parent, teacher, facilitator, pastor, counsellor, therapist, etc.,

while stakeholders would be the children who play the game. The game was conceived out of a desire to equip children to address adjustment difficulties regarding ACES (e.g., pandemic, divorce, death, bullying) and help manage their resulting anxiety (Galicia-Connolly & Howell, 2023). Grounded in MMT and Ginsburg's 7 Crucial C's of Resilience, the game aims to promote a meaningful mindset and mental health in children and their families.

The game challenges a player to help a distressed animal selected from a card deck – the anthropomorphized animal is seeking help for a commonly encountered problem that is associated with anxiety and resulting adjustment disorders among children aged 7 to 14 years, based on informal consultations with parents who volunteered the children's everyday struggles. Another deck contains tools based on DREAM program content that encourage self-calming, emotional expression, and meaning-making to address painful or difficult situations by externalizing them (Armstrong et al., 2019). The player is then prompted to learn tools they can practice and hopefully internalize as their own while preparing to attend to and empathize with the animal's distress or suffering.

The game was designed as a potentially therapeutic endeavour to facilitate altruistic, prosocial behaviour through empathic feelings and perspective-taking to encourage the development of significant interpersonal relationships, which become critical to developing resilience. Masten and Barnes posit that resilience is not inherent but learned (Masten & Barnes, 2018). In accepting the call or challenge to help another through acquiring self-help skills in mindfulness, distress tolerance, and emotional regulation in the hope of strengthening interpersonal connections and forming community, participants were encouraged to "unmask" and risk being honest with one's ongoing mental health struggles within the context of the safety and support of a "charismatic adult" (Brooks and Goldstein, 2008; 2015). In addition, the

parent/guardian/authority figure was ideally entreated with the unspoken and open invitation to aspire to become a "charismatic adult" themselves as they were implicitly confronted with the question of what their potential legacy could become.

Encouraging children to make their own cards to demonstrate their resilience aimed at allowing them to reframe the past and rewrite their narrative through creative art. In this manner, the game aimed to reiterate reclaiming one's agency and direction.

The board game targeted strengthening the development of Ginsburg's "Seven Crucial C's of Resilience: competence, confidence, connection, character, contribution, coping and control" (Cooper, 2018, p.89; Ginsburg, 2015). As a child listens to someone's pain and chooses to extend a hand by first helping the animal to calm down, the empathic choice reinforces the child's sense of character, contribution and confidence in supporting another (connection) – they rehearse perspective-taking and possibly risks self-disclosure which is requisite on one's own vulnerability and self-awareness. Emotional co-regulation also happens in the context of supportive relationships and requires active listening (Bornstein & Esposito, 2023), which can be demonstrated further by a nurturing adult who has the possibility of being a surrogate attachment figure. Hearing others' feelings also helps enrich a child's emotional literacy as one experiences how others cope with difficult situations through "other awareness" within a safe board game environment, nurturing a sense of competence and control.

An example animal image, scenario card, and helping card can be found in Appendix F to illustrate how these cards align with the theoretical framework. Ultimately, the author aimed to promote equity and justice in facilitating children's access to mental health services while fostering the development of potentially critical coping skills and social connections to healthy adult role models and future, like-minded peers.

Current Study: Research Questions & Hypotheses

Using a Knowledge Translation Integrated approach, this initial pilot study phase focused on refining the game's anthropomorphized stack of everyday childhood struggles to best approximate and validate the participants' lived experiences. To fully engage participants in co-creation, the authors encouraged the children to "make their card" to potentially reveal further relevant issues such as racism, possible developmental and intergenerational trauma, internalized unhealthy guilt or shame and concomitant co-morbidities such as neurodivergence, malnutrition, chronic illnesses, or others. Insights obtained from the diverse sample of participants will hopefully help develop and refine the game to make it more culturally sensitive and relevant to future users. Based on the principles of KTI, the author embarked on the following research questions:

Qualitative research questions

1. How does playing the game "Book of Light" enhance mental health and a meaning mindset in children and their parents?
2. How does playing the game "Book of Light" enhance family well-being?
3. How can the game "Book of Light" be adapted or modified to optimize acceptability, credibility, sustainability and feasibility for its users and stakeholders?
    a) Do families perceive the game as *credible***,** i.e., having face and content validity? Can the game mirror and foster the concepts of MMT, i.e., agency over thoughts and behaviours, a positive self-concept, openness to experience and hope for the future through the skills learned in the game?
    b) Do families perceive the game as *acceptable* and child-friendly? Do they enjoy playing the game? Do they have a sense of satisfaction after having played the game together?

c) Do families perceive the game as *sustainable*, i.e., the skills learned can be used in daily life beyond the game? Do families see the game as a worthwhile endeavour of their time and resources? If not, what adaptations and changes must be made to the game so families see it as an invaluable resource?

d) Do families perceive the game as *feasible?* Do families see themselves playing the game on their own? If not, what adaptations or changes can they offer to make playing the game easier and more fun to suit their needs?

Quantitative research questions

Credibility (preliminary pilot): Does the game do what we propose it does—can a difference in mental health and meaning mindset be detected for both parents/legal guardians/caregivers and their children/wards one week after playing the game "The Book of Light?"

Quantitative hypotheses

Given the literature on the significant role of attachment in the bidirectional nature of a parent and child's mental health and well-being (Thompson, 2014; Bornstein & Esposito, 2023; Sansone, 2024) and the ability of play therapy to foster resilience (Hirayama & Hirayama, 2001; Oren, 2008; Schaefer & Drewes, 2010; Stone, 2015; Drewes et al., 2015; Armstrong, 2016a, 2021b; Malchiodi & Crenshaw, 2015; Porter et al., 2009; Gardiner, 2024; Ginsburg, 2020), the author hypothesized that the game as an intervention would foster a significant difference in mental health and meaning mindset in an adult and a child's outlook after learning to use emotional regulation tools through participation in the "Book of Light." Furthermore, given that a change in the meaning mindset predicts mental health (St. John, 2015), and the game aims to enhance the meaning mindset, it was expected that a shift in the meaning mindset would predict

mental health. Ultimately, it is hoped that, particularly for children who experience ACEs, this game may one day be a readily available mental health promotion tool for children and their parents.

Chapter 2

Methodology

Chapter 2

Study Type

This preliminary pilot to initially test and revise the game through stakeholder input involved a mixed-methods, qualitative-quantitative design. Knowledge Translation Integration (KTI) methods were used to secure participatory feedback from a sample of 7 to 14-year-old children (n=19) and their parents or caregivers (n=15) to validate the game's scenario content to a child's narrative and lived experience. This phase of the research also aimed to test the game's ability to be sensitive to the needs of its targeted users or stakeholders. Children were encouraged to integrate artwork of themselves to express where they are – i.e., "making their own card." Each child was given a choice to incorporate their corresponding situation or another child's predicament if they were comfortable doing so.

Measures were administered to all participants to assess meaning mindset (agency, self-concept, hope and openness to experience (Armstrong et al., 2020) and mental health before and a week after playing the game. A one-week time frame was chosen, given that previous research exploring the same outcomes (meaning mindset and mental health) was also conducted in a one-week time frame post-intervention (e.g., Champaign-Klassen, 2024). Within the quantitative and qualitative survey, a Knowledge Translation Integration (KTI) framework was used to elicit feedback on the game's credibility, acceptability, feasibility and sustainability from all the children and their parents or caregivers. The mixed-methods survey was administered using the Survey Monkey platform. Braun and Clarke's prescribed steps of thematic analysis were used to examine the responses of the children and their parents/caregivers and are detailed as follows (Braun and Clarke, 2006; Clarke & Braun, 2013):

1. Becoming acquainted with the data – becoming thoroughly familiar with the data through transcribing and noting initial ideas

2. Producing the initial codes – systematically assigning codes for interesting features of data and subsequently collating the data according to the parameters of the KTI approach, i.e., credibility, acceptability, feasibility and sustainability;

3. Looking for and examining recurring motifs – identifying potential themes and organizing the individual responses according to the examined themes; thoroughly re-examining the data to ensure that the data consistently supported the theme

4. Identifying the themes -responses to a question asking what made the game fun for the children (acceptability) were examined for recurring themes ("it was interesting to find out what other kids felt") and unanimously assigned to the game's ability to foster openness)
5. Composing – assimilating the information and analysis gleaned from the data to include in a report

Two independent coders examined and analyzed data consisting of participant responses organized under categories of credibility, acceptability, feasibility and sustainability integral to the KTI approach to minimize the risk of bias. Subsequently, each category was examined for underlying themes, and the coders/reviewers came together to make a consensus on the agreed categories and themes that each coder felt the data represented.

Participants

Dyads of children and their parents were recruited through advertisements at Saint Paul University, the counselling center, and two churches (Community Life Church and Arlington Woods Free Methodist church). Participants either contacted the researcher directly or were referred by the senior or youth pastor to be part of the study. Parents were entered into a raffle

for a $50 Amazon gift card for participation, and children were given an art set upon completion of the second session. Online consent forms (using Adobe Acrobat agreements) and confidentiality agreements were in English and used to elicit informed consent before commencing any pre-measures or participation in the study. Links to the pre-game surveys hosted on Survey Monkey were sent to the parents for their and their children's completion before the start of the first session. Most post-game surveys were done immediately after the second game session, which was held after a week, but some dyads of parents and their children only completed the post-survey after 3 weeks because of the holiday break. The children had an average completion time of 14 minutes to complete their surveys, while the parents had an average completion time of 8 minutes. Parents took an additional 16 minutes to complete a separate online qualitative interview at the end of the study.

Seven of the 15 parents (47%) observed the game and sat with their children, including one grandmother who helped clarify questions for her two grandchildren diagnosed with cognitive challenges due to a genetic condition. The rest of the parents were not in attendance as they had left their children under the youth pastor's care and did not witness the game firsthand. This set of parents and the youth pastor were sent a copy of the game's directions and the emotional regulation or mindfulness tools their children learned to potentially enable them to reinforce the skills at home with their children. The researcher conducted all the sessions. Because the sessions were conducted around dinnertime, the researcher provided a light dinner for the participants to encourage fellowship. The sessions lasted for 2 to 3 hours and included fellowship time. The game was played for 1 to 1.5 hours, depending on the number of participants. The children were introduced to the story (See appendix E – Game instructions and story for the game) and were encouraged to "acquire" at least two tools from the "Book of Light"

for their “personal tool kit” to be able to help as many animals as possible within the game period. Children were sent home with the question, “If you were an animal, what animal would you be?”

After one week, the researcher recapped and reviewed last week’s tools with the children and allowed them to practice them by having them select more animals to help. Time permitting, the children were encouraged to make pictures of animals that represented themselves and their own stories, which they shared with the rest of the group using their art materials (acrylic paints, canvas, paper pads, and coloured pencils). The author secured parental consent and children’s assent to share the children’s artwork with future game participants, users or stakeholders. Over four months, respondents (November 2024 to February 2025) consisted of three batches of participants with children ranging in age from 7 to 14 years old and their parents, caregivers, or temporary guardians (youth pastor).

A total of 19 children and 15 parents or caregivers (including a youth pastor), comprising 13 families, participated in the research portion of the study. There was one family where both parents and their two daughters participated in the study. All the families enrolled in the study completed the study, but one parent (wife of a couple) did not complete the separate qualitative interview. The majority of the parents were female (n=13 or 87%) and were predominantly White European/Caucasian (n = 9 or 60%) in ethnicity, with ages clustered between 35 to 54 years (n = 11 or 73.33%). Caucasian parents were Dutch-South African, French or English Canadian, or had Indigenous heritage. Most of the parents had at least a year of college or university training (n=13 or 87%), were gainfully employed (n = 8 or 53%), lived in an urban area (n=10 or 67%), and whose annual household income levels were at least 50K (n =10 or 67%). A third of the parents/caregivers (n=5) were immigrants to the country, but only two

reported having their children having difficulties adjusting to a new culture. The parents' frequency distributions for gender, age, ethnicity, education, and income categories are shown below:

Table 2

Demographic variables of adult participants

VARIABLES	%	n
Gender		
Female	13	13
Male	2	2
Age in years		
25-34 y	13	2
35-44 y	33	5
45-54 y	40	6
55-64 y	6.7	1
≥ 65 y	6.7	1
Ethnicity		
Caucasian/White European	60	9
Asian/Pacific-islander	20	3
American Indian	6.7	1
Alaskan	6.7	1
Multi-ethnic	6.7	1
Highest level of Education		
High School	6.7	1
Partial College or university	26.7	4
Standard College or university	46.7	7
Graduate or Professional training	20	3
Household income		
Under $15K	7.1	1
Between $15K and 29K	7.1	1
Between $30K and 49K	21.4	3
Between $50K and 74K	14.2	2
Between $75K and 99K	28.6	4
Between $100K and 150K	21.4	3
Employed		
Yes	67	10
No	33	5
Area of residence		
Urban	67	10
Rural	33	5

The parents reported that the majority of their children had experienced bullying (60%), while others reported the death, loss or critical illness of a family member, divorce or separation from a parent or caregiver, and difficulties adjusting to a new culture. Interestingly, despite all the children having experienced the pandemic, only one parent (an educator) considered COVID-19 as an adverse event for her child. These are shown in Figure 3 and detailed in Table 3 below.

Figure 3

Adult Response Frequencies Regarding Their Children's Adverse Experiences (ACEs)

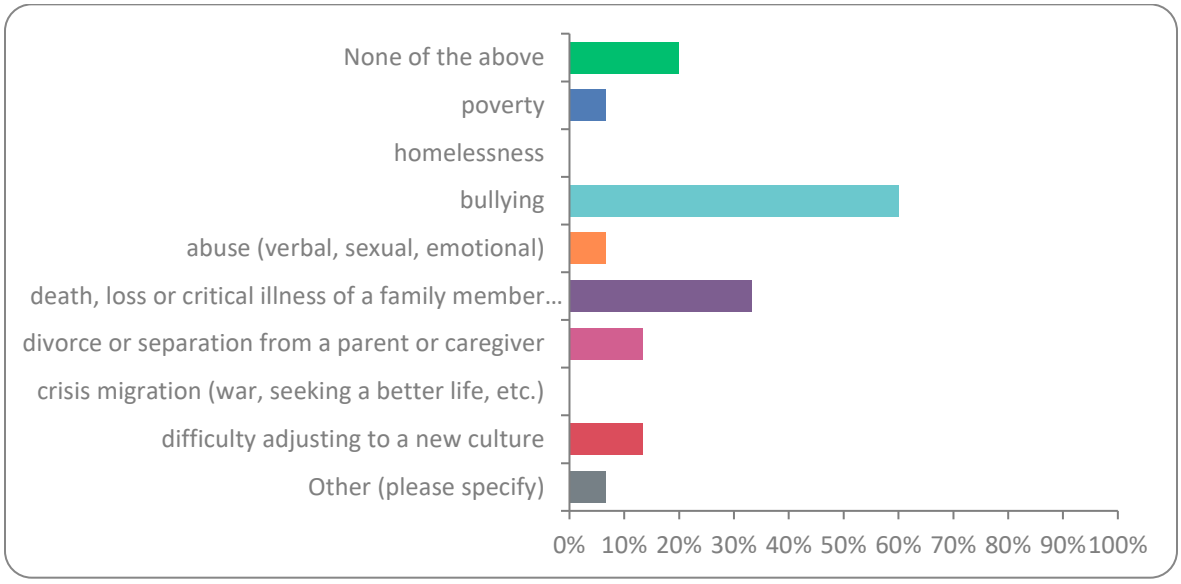


Table 3

Parents' Response Frequencies Regarding Their Children's Adverse Experiences

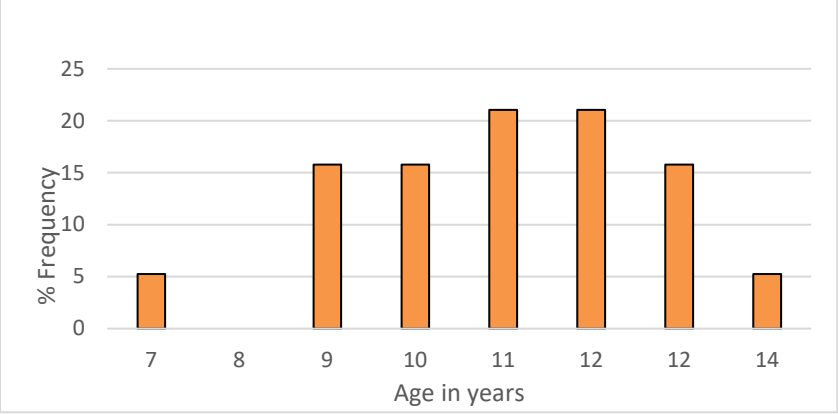
ANSWER CHOICES	n	%
None of the above	3	20.00%
poverty	1	6.67%

homelessness	0	0
bullying	9	60.00%
abuse (verbal, sexual, emotional)	1	6.67%
death, loss or critical illness of a family member or caregiver	5	33.33%
divorce or separation from a parent or caregiver	2	13.33%
crisis migration (war, seeking a better life, etc.)	0	0
difficulty adjusting to a new culture	2	13.33%
Other (please specify)	1	6.67%

A total of 19 children, predominantly female (n=11 or 63%), participated in the study. Their ages ranged from 7 to 14 years, with a mean age of 11. Most children (n=18 or 95%) clustered in the 9 to 13-year age range, half of whom corresponded to the middle school years. The frequency distribution for the children's ages is shown in Figure 4 below.

Figure 4

Frequency Distribution of Children's Ages



Note. There were 19 children with a mean age of 11.05 years, 63% (n=11) of whom were female.

Measures

I.S.A. The Interactive Symptoms Assessment tool (I.S.A.) is an interactive video-based self-report measure for children assessing self-esteem and concerns surrounding mood, anxiety, obsessive-compulsive behaviour, attention deficit/hyperactivity, and conduct, with a Cronbach's internal consistency reliability of 0.83 for the short form (12-item) in children aged 6 to 12 years old (Armstrong et al., 2022). The tool involves children expressing their agreement level for an item coded within a 0 to 10 range using a slider while viewing a video most compatible with their feelings and "child-friendly" wording. The short form was used to ease repeated administration in assessing general well-being and tracking progress over time. Item questions in the tool are shown in the appendix.

The Interactive Symptoms Assessment-Adult (I.S.A.-Adult) scale is a self-report tool (adapted from the originally developed I.S.A.-Child version) that was used to measure the mental health and well-being of adults and was found to have a Cronbach's alpha of 0.83 (Halabi, 2023; Armstrong, 2022). Item questions in the tool are shown in the appendix.

Ch.I.P. /A.I.M.S. The Child Identity and Purpose Questionnaire-Interactive (Ch.I.P.) assessed children's meaning concept by measuring their sense of agency, self-concept, hope for the future, and openness to experience (Armstrong et al., 2020). The ChIP-I (short item) is a 12-item self-report tool that employs a video recording and a button slider instructing a child to move the slider towards the picture of a child they identified with the most (see image below). The tool demonstrates a Cronbach's internal consistency reliability of 0.81 for the short form (12 items). Items in the tool are shown in the appendix.

Similar items are measured on the Adult Identity and Purpose Scale (AIMS), a self-report tool used to assess meaning in daily life for adults, and has demonstrated a Cronbach's alpha of 0.96 (Halabi, 2023; Watt, 2020). Item questions in the tool are shown in the appendix.

Both the Interactive Symptoms Assessment tool (I.S.A.) and the Child Identity and Purpose Questionnaire interactive (Ch.I.P.-I) were administered to the children via online questionnaires using the platform Survey Monkey hosted through the University of Ottawa research website. Parents/legal guardians or caregivers were asked to complete the Adult Identity and Meaning Scale (AIMS) and Adult ISA as a self-report measure of their well-being before and a week after their children participated in the study. Data results were automatically uploaded to the secure platform. A post-test after a week was done to explore potential short-term changes in meaning-mindset and mental health following educational gameplay. Stewart-Brown and Janmohamed found that test-retest reliability scores become stable over one week for measures of child well-being (Stewart-Brown and Janmohamed, 2008).

Statistical analysis

Data screening & cleaning. The Statistical Package for the Social Sciences (SPSS) program, version 29.0, was used to clean the data and generate descriptive statistics comparing the children and their parents. Before statistical analysis, the data was examined for accuracy, outliers, distribution, missing data, and normality assumptions. Univariate frequencies identified scores beyond allowable limits, and missing data were checked using SPSS Frequencies. Missing Data Analysis described patterns of missingness, and the data was found to be missing at random.

Univariate outliers were assessed using histograms, frequency tables, and z-scores. There were no outlying values. Scatterplots and histograms were examined for skewness and kurtosis.

Values of skewness and kurtosis were set to be acceptable between the values of -2.0 and 2.0 to check for the normality of the distribution (George & Mallery, 2016).

Skewness and kurtosis tests revealed that the data was normally distributed with no significant skewness or kurtosis. To reduce Type II errors from a small sample size, the Omnibus alpha was set at .05 and predominantly non-parametric statistics were used, per (Laerd, 2025) guidelines. For non-parametric statistics, to get an initial sense of preliminary potential outcomes, a sample size larger than 15 is considered sufficient (e.g., Bonett & Wright, 2000; Bujang et al., 2016). Specifically, determining an adequate sample size for a non-parametric Spearman's rank correlation or Wilcoxon test depends on the desired precision and confidence in the estimate. Some sources suggest that a minimum of 10 to 15 pairs of data is necessary to perform the tests; others recommend larger sample sizes to ensure stability and accuracy of the correlation coefficient, but a small sample size may be sufficient for preliminary analysis (e.g., Bonett & Wright, 2000; Bujang et al., 2016). Further, while specific guidelines for regression analyses are limited, general recommendations suggest that a minimum of 10 observations for a sole predictor variable are necessary (e.g., GraphPad calculations on sample size). However, some research indicates that this rule may be overly conservative for preliminary research studies (Vittinghoff & McCulloch, 2007). A study by Vittinghoff and McCulloch (2007) suggests that reliable results detecting large effects can sometimes be achieved with fewer than 10 participants per predictor. Therefore, the current sample size is adequate for preliminary pilot data analysis but may lack the power to detect small and medium effects.

Descriptive statistics were calculated. Measures of central tendency and dispersion of the children and their parents/guardians/caregivers' demographics and interactive I.S.A. and Ch.I.P. score results were generated. Scores for the ChIP-I were recoded to indicate higher scores to

correspond to more meaning, while higher scores on the ISA would indicate more mental health symptoms.

Tests for Mean Differences. The Wilcoxon signed-ranks test was chosen instead of the paired t-test because of the non-normal, asymmetric data distribution of the sum scores on ChIP-I and ISA and the small sample size. The Wilcoxon test, the non-parametric equivalent of the paired-samples t-test, was used to compare pairs of pre- and post-intervention measures within the same individuals (i.e., related samples). According to Nahm, "nonparametric methods are 'always valid, but not always efficient,' while parametric methods are 'always efficient, but not always valid'" (Nahm, 2016).

The Wilcoxon test is said to be unaffected by extremes or outliers in the data without any assumptions about the population distribution (Laerd, 2025). Critical assumptions for the Wilcoxon test were satisfied- this involved paired within-subjects observations involving categorical observations with two related groups (two levels of the independent variable were time, i.e. before and after) and ordinal dependent variables (ChIP-I and ISA scores) measured before and after the game.

The Wilcoxon test was used to detect differences in the distributions of the pre-ISA/pre-Ch1P vs. the post-ISA/post-CH1P results to determine if there was a difference in the meaning and emotional well-being of the children before and after the game. As previously noted, the authors formulated the hypothesis there would be an improvement between pre- and post-game scores on both Ch1P-I and ISA - i.e., higher scores on the Ch1P would indicate an improvement in meaning, and lower scores on the ISA would indicate lower mental health symptoms after a week's participation in the game for both parents and children. In contrast, the null hypothesis

would suggest that there would be no significant differences in the test scores with the introduction of the game.

Correlations. Spearman's correlation was chosen to determine the strength and direction of the relationships between meaning and mental health scores before and after the game's introduction. The study's design satisfied both assumptions necessary to use Spearman's correlation test, i.e., two continuous or ordinal variables representing paired observations (du Prel et al., 2016; Laerd Statistics, 2025). Scatterplots were generated to support the monotonic relationship between the variables measured before and after introducing the game.

Linear regression. A linear regression analysis was conducted to determine if a change in meaning predicted a shift in mental health for parents and children. Assumptions were met for a regression analysis. The primary challenge with non-parametric statistics is that there can be a significant reduction in statistical power, making it more difficult to detect a true relationship between variables, where a real effect can be missed due to the limited data points. Thus, in addition to the non-parametric tests above, regression analyses were conducted since the assumption of normality was met, as these parametric statistics are more sensitive to detecting subtle relationships (Politi et al., 2021).

Qualitative Analysis

Answers to open-ended questions were sorted into the KTI parameters of acceptability, credibility, feasibility, and sustainability (Armstrong, 2017; Trochim et al., 2016; Gardiner, 2024) and underlying themes in the responses were then subcategorized into validations, critiques and/or recommendations. The author employed the following definitions with regards to the game - **Credibility**: does the game do what it was designed to do; do measurements suggest that the game's outcomes matched the desired indicators of success, i.e., **Face validity**,

operationally defined as “the stakeholders belief that the game leads to desired outcomes,” (i.e., higher meaning mindset in terms of agency, a positive self-concept, hope and openness to experiences) and **Predictive validity,** operationally defined as **“** the measurements support the desired outcomes achieved by program. **“Acceptability**: the game’s ability to identify and engage key stakeholders (children and their parents or caregivers) as co-creators, integrate the scientific literature and their expressed needs; **Feasibility**: the game is seen as usable by stakeholders from a time and resource perspective, and finally **Sustainable**: the game can be played on its own without having someone external to the stakeholders to do more training (Armstrong, 2017; Trochim, 2016).

Chapter 3

Results

Chapter 3 Results

Credibility

Descriptive Statistics/Measures of Central Tendency

The descriptive statistics for the frequency distributions of the self-reported meaning - mindset scores and mental health symptoms scores for the children (ChIP & ISA) and their parents (AIMS & Adult ISA)) are shown in Tables 3 and 4 below, with both samples showing acceptable degrees of skewness and kurtosis (George &Mallery, 2016).

Table 4

Distribution Characteristics of Children's (n=19) Meaning-mindset (ChIP) and Mental health scores (ISA) before and after the game

Variable	Mean	Standard Deviation	Skewness		Kurtosis	
			Statistic	Standard error	Statistic	Standard error
Meaning-Mindset Pre-test	82.32	21.000	-0.967	0.524	1.381	1.014
Meaning-Mindset Post-test	76.47	24.916	-0.930	0.524	0.364	1.014
Mental health Pre-test	44.21	22.844	0.144	0.524	0.082	1.014
Mental health Post-test	47.90	22.430	0.274	0.524	-1.110	1.014

Note. The frequency distribution of the children's self-reported meaning-mindset (AIMS) and mental health symptoms (ISA) scores showed acceptable skewness and kurtosis (George & Mallory, 2016).

Table 5

Distribution Characteristics of Adults' (n=15) Meaning-mindset (AIMS) and Mental health scores (ISA) before and after the game

Variable	Mean	Standard Deviation	Skewness		Kurtosis	
			Statistic	Standard error	Statistic	Standard error
Meaning-Mindset Pre-test	66.60	27.005	-0.727	0.580	-0.648	1.121
Meaning-Mindset Post-test	85.37	17.662	-1.393	0.597	1.002	1.154
Mental health Pre-test	48.87	19.445	0.287	0.580	-1.628	1.121
Mental health Post-test	31.33	19.740	0.707	0.580	-0.447	1.121

Note: The frequency distribution of the adults' self-reported meaning-mindset (AIMS) and mental health symptoms (ISA) scores showed acceptable skewness and kurtosis (George & Mallory, 2016). Differing standard error values for the AIMS scores are due to a missing variable for the post-test

Non-parametric tests

A. Related Samples Wilcoxon Signed Rank test

1) **Children's Data (n = 19).** The Wilcoxon signed rank test did not yield a statistically significant difference between the children's pre-game and post-game self-reported meaning mindset scores (as determined by ChIP-I), with z = - 0.958, p = 0.338. Thus, the null hypothesis was retained. Similarly, no statistically significant difference was found between the children's pre-game and the one-week post-game self-reported mental

health symptoms (as determined by ISA scores), $z = 0.745$, p = 0.4560, and the null hypothesis was retained. In essence, the children did not report any differences in themselves concerning their meaning-mindset or mental well-being one week after playing the game.

2) **Parents' Data (n = 15).** In contrast to the findings among the children, the Wilcoxon signed rank test showed a statistically significant difference in the median of differences between the adults' pre-game and one-week post-game self-reported meaning mindset scores (AIMS) with $z = -2.983$, p = 0.003. There was also a statistically significant difference between the adults' pre-game and post-game self-reported mental health symptoms (adult ISA) with $z = -3.125$, p = 0.002. In essence, the parents reported an improvement in their meaning-mindset and mental health symptoms after a week's game introduction, even if they had not actively participated or had not gotten a chance to join with their children or wards.

B. Spearman's rank order two-tailed correlation test coefficient

1) **Children's Data (n = 19).** The children's data showed a significant inverse correlation between meaning mindset and mental health symptoms, with rho= -.828, $p < .01$, supporting previous findings in the literature of having a better meaning mindset corresponding to lesser mental health symptoms among the children. These findings are shown are shown in Table 6 below.

2) **Parents' Data (n=15).** The parents' data shown in Table 7 presents similar findings to the children, with a statistically significant inverse correlation between meaning mindset and mental health symptoms before the game

(rho =-.636*, p <.05) and after the game (rho = -.810**, p < .01) indicating that higher meaning mindset or meaning in everyday life was associated with lower reported mental health symptomatology. These values are shown in Table 7 below.

Table 6

Spearman's Rho Correlations Among Children's Self-Reported Meaning-Mindset (MM) and Mental Health Symptoms (MH) Pretest and Post-test Scores

Variables	1	2	3	4
1. MM PRE	-	.706**	-.828**	-0.345
2. MM Post	-	-	-.578**	-0.410
3. MH PRE	-	-	-	.680**
4. MH Post	--	-	-	-

Note. ** p <0.01 (2-tailed)

Table 7

Spearman's Correlations for Parents' Self-Reported Meaning-Mindset (MM) and Mental Health Symptoms (MH) Pretest and Post-test Scores

Variables	1	2	3	4
1. Parent MM PRE	-	.635*	-.636*	-0.291
2.Parent MM Post	-	-	-0.437	-.810**
3. Parent MH PRE	-	-	-	.517*
4. Parent MH Post	-	-	-	-

Note. *$p < .05$ level , ** $p < .01$ (2-tailed)

Linear Regression Analyses

Linear regression analyses were conducted on the difference scores between pre-test and post-test mental health and the meaning mindset of the pre-test and post-test. For children, a change in meaning mindset predicted a change in mental illness symptom scores (R^2=.53, $p <$ .001, ß = -.74, partial eta^2 = -.73). Similarly, for parents or caregivers, a change in meaning mindset predicted a change in mental illness symptom scores (R^2=.61, $p < .001$, ß = -.52, partial eta^2 = -.78).

Quantitative Satisfaction Survey (Credibility, Acceptability, Sustainability, Feasibility)

Credibility

The parents and their children were asked to rate their perception that the game can foster the principles of meaning-mindset theory, i.e., agency, hopefulness, a positive self-concept, and openness to experiences and feelings.

a. **Children's ratings.** Children answered a 9-item satisfaction survey on the Survey Monkey platform to rate the game's acceptability and its credibility on a five-point Likert scale. The children were asked the following questions:

    i. Do you think the game gives kids ideas about how to THINK in a healthier way?
    ii. Do you think the game gives kids ideas about how to ACT in a healthier way?
    iii. Do you think the game helps kids LEARN things that could be good for their self-esteem (liking yourself, feeling worthwhile, believing in yourself and knowing what you want)?
    iv. Did the game give you a bit of HOPE in knowing how to manage difficult situations?
    v. Do you think the game might help kids notice their feelings?
    vi. Do you think the game might help kids learn skills to be able to try or learn new things?

The children's ratings for the game's credibility ranged from 3.9 to 4.5, with an overall mean rating of 4.2. The children gave the lowest rating at 78%, or 3.9 out of 5, for the game's ability to provide hope in managing difficult situations. The highest-rated parameter was the game's ability to foster an openness to new experiences at 4.5 out of 5 or 90%. The rest of the ratings are shown in the frequency table (Table 8) and graph (Figure 5) below.

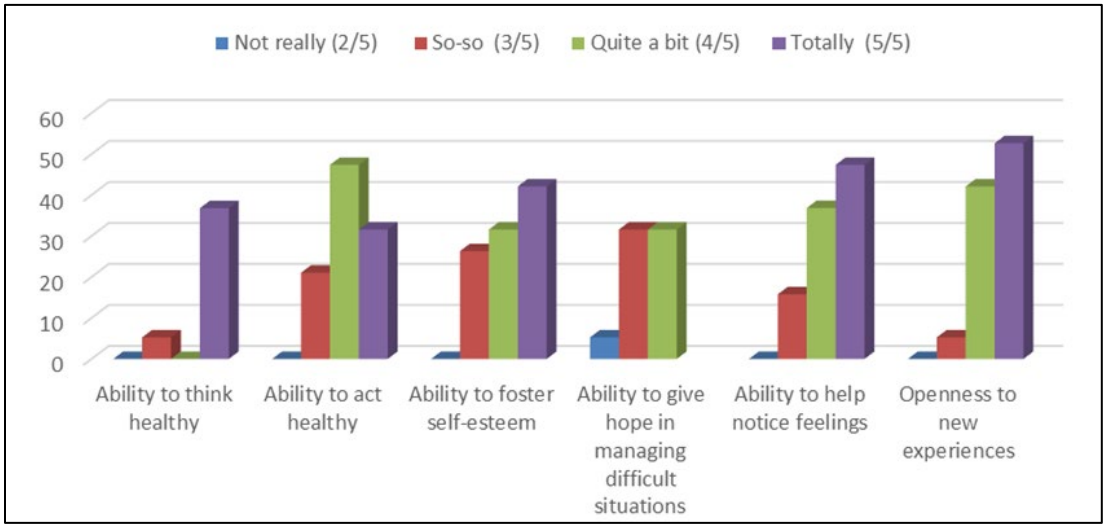
Table 8

Average of Children's Game Ratings of Meaning Mindset Parameters

Parameters	Average Rating
Ability to think healthy	4.3
Ability to act healthy	4.1
Ability to foster self-esteem	4.2
Ability to give hope in managing difficult situations	3.9
Ability to help notice feelings	4.3
Openness to new experiences	4.5
OVERALL	4.2

Figure 5

Children's Individual Ratings of the Game Corresponding to Meaning Mindset



b. **Parents' Ratings.** The adult participants (including the youth pastor) were given a separate 14-item qualitative survey hosted on the Survey Monkey platform after

the conclusion of the second session of the game to assess parameters of credibility, acceptability, feasibility and sustainability. The concepts of MMT were reviewed at the beginning of the interview, and the adults were asked to rate the game to assess its ability to foster the concepts of MMT, i.e., agency, hopefulness, a positive self-concept and openness to new experiences on a 5-point Likert scale (1=No at all, 2= Not really, 3=So-so, 4=Quite a bit, 5=Totally). Fourteen adults out of 15, or 93%, completed the qualitative interview and rated the game's credibility according to its ability to foster meaning-mindset through agency, hopefulness, positive self-concept and openness to experience. Questions asked to assess the game's credibility were as follows:

i. AGENCY is described as the capacity to influence your thoughts and behaviour. On a scale of 1 to 5, how well do you think the game can foster agency?
ii. HOPEFULNESS or hope for the future is described as recognizing possibilities. On a scale of 1 to 5, how well do you think the game can foster hopefulness?
iii. A POSITIVE SELF-CONCEPT is the belief that one can make personal choices. On a scale of 1 to 5, how well do you think the game teaches a positive self-concept?
iv. OPENNESS TO EXPERIENCES AND FEELINGS is described as being able to find pleasure or be awed by experiences, social connections, or nature. On a scale of 1 to 5, how well do you think the game can foster openness to experiences and feelings?

The adults gave similarly high ratings for the game's credibility, like the children, with scores ranging from 4.21 to 4.5, with an overall mean score rating of 4.3 or 86.45%. For the adults, the game scored lowest on its ability to foster agency and highest on its ability to foster a positive self-concept. Details of the frequency ratings and their graphic representation are shown in Table 9 and Figure 6 below:

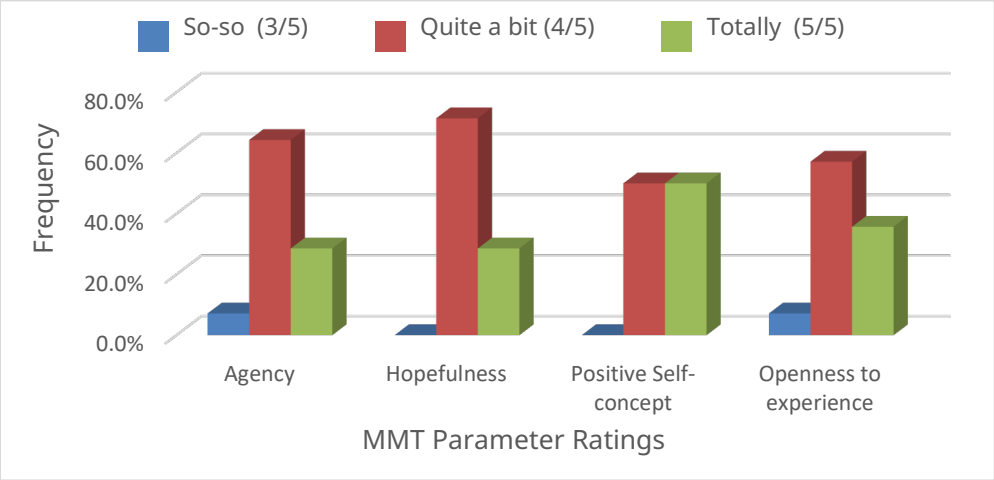
Table 9

Adults' Overall Mean Ratings for the Game's Meaning Mindset Parameters

Parameters	Average rating
Agency	4.21
Hopefulness	4.29
Positive self-concept	4.50
Openness to Experience	4.29
OVERALL RATING	4.3

Figure 6

Adults' Ratings of the Game's Parameters of Meaning Mindset



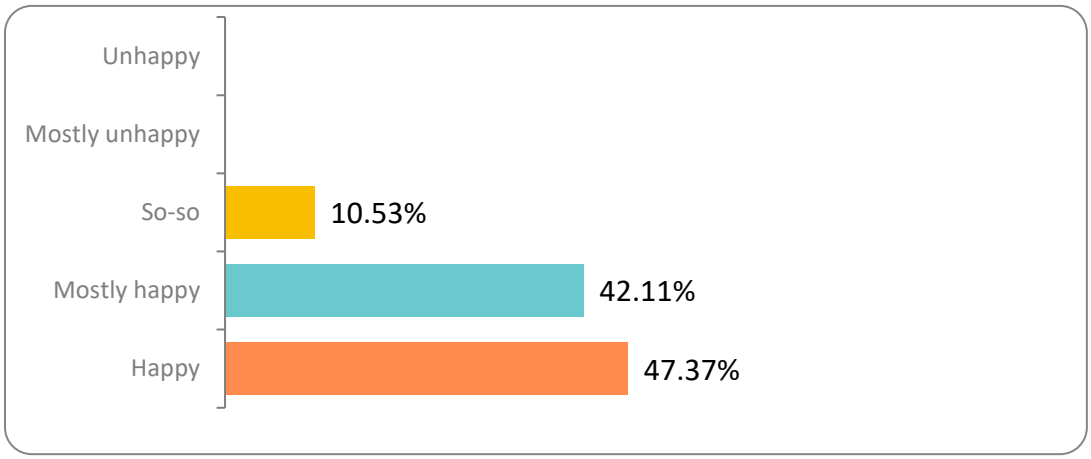
Note. Chart demonstrating that the adult participants' ratings (ranging from 4.21 to 5 out of a 5-point Likert scale) of the game's meaning mindset parameters in its ability to foster agency, hopefulness, a positive self-concept and openness to new experiences.

Acceptability

Children were asked to rank the game on a Likert scale presented as a choice of 1-5 stars (1=Unhappy, 2=Mostly unhappy, 3=So-so, 4=Mostly happy, and 5 = Happy) to evaluate the game's acceptability in response to the question, "How happy were you with the board game, "Book of Light?" Seventeen of the 19 children or 89.48% expressed a favourable response and a continued interest to play the game in the future ("mostly happy" at 42.11% and "happy" at 47.37%) while the remaining two children seemed ambivalent about the game ("So-so" at 10.53%). The frequency distribution of their responses is shown in Figure 7.

Figure 7

Frequency distribution of the children's responses to game satisfaction



Note. The chart shows the distribution of responses on a five-point Likert scale when asked, "How happy were you with the board game?" Most of the children expressed moderate to high satisfaction in playing the game.

Qualitative Results

Credibility

In response to the question, "**Please explain how the game fosters openness to experiences and feelings**," themes centred on safety to explore feelings and foster self-awareness and openness to others. The adults' validating responses regarding the game consisted of the following themes:

- Provided a safe place to play and explore one's thoughts and feelings and increase one's awareness, as exemplified by the following statements:
    - *"Getting the child to talk about the issues and express and describe feelings builds awareness and vocabulary they might not be using. They are vocalizing around other children as well."*
    - *"It puts the child in the shoes of others and allows them to feel what others might feel in a situation. It shows them that these feelings are okay, but then teaches them how to work through those feelings using tools."*
- Encouraged the sharing of feelings between the children
    - *"The game allows the child to not focus on themselves but instead to focus on how others might feel in any given situation."*
    - *"Gives a chance to be with other kids and talk about feelings."*

A vital critique/feedback was that the game needed simpler explanations for kids with learning or intellectual disabilities. A parent recommended not rushing through the game to get the best experience.

In response to the question, "**In what ways do you think the game might enhance mental health**?" themes primarily centred on emotional literacy, fostered awareness, and emotional connections through art and shared narratives. Validating responses commented on the game's ability to:

- Externalize feelings and develop a better vocabulary for their emotions
    - *"Children often have a hard time explaining or communicating how they feel. The game helps them articulate those feelings."*
    - *"Talking about the feelings of the animals helps the kids not feel on the spot, and helping the animal is a great way to learn."*
- Fostered awareness, openness and community
    - *"When we dwell on ourselves, we can make whatever is bothering us into a bigger problem than it might really be. Looking at others and their needs can balance our mental health. We are people who need community, and it is shown that when we meet others' needs, it strengthens the community. The truth is that when tragedy strikes a family, in many cases, neighbours, organizations, and churches will gather around the affected family to assist in any way they can."*
- Provided a creative way to express feelings
    - *"Expression through art and dialogue"*

- *"Taught how to describe one's emotional situation with a story and an animal symbol, which approaches the kids more efficiently."*

Parent suggestions included extending the sharing time among themselves so that they could make friends, and another activity to increase recall of the tools, i.e., *"include a round-up quiz or Kahoot at the end."*

Acceptability

In response to the question, **"What did you like in the board game?"** themes centred on fun and/or relaxation fostered awareness, openness, safety to explore feelings, and the use of art and animals to express themselves. Validating responses regarding the game consisted of the following:

- Promoted fun and relaxation
  - *"Lots of people can play, and it is chill."*
  - *"Good and fun."*
  - *"Everything"*
- Used art and animals
  - *"The Art!"; "I liked the art because it was fun."*
  - *"I liked helping the animals because I love animals!"*
- Fostered awareness, openness and safety to explore feelings
  - *"I liked the tools that you can use to calm yourself down or make you happy, like the balloon trick and the happy place*
  - *"I liked that you can imagine yourself in a place and work out your feelings, which calms you down*

- *"I think the game is good because many things are happening today, and sometimes your feelings get overlooked. This game teaches you to take a breath and get your mindset in the right place."*
- *"The way to be able to tell others your feelings."*
- *"I liked the game because it was interesting to see how kids feel about themselves. It was relatable."*
- *"That horse is me! That's me!!!"* (child's response to the horse galloping out of the classroom in frustration)
- *"Now that's me… "*(children sheepishly pointing to themselves as a response to the puppy struggling with math and reading)

In response to the question, "**What would you change about the game to make it better?**" - themes centred on relevance and inclusivity. No critiques were noted. Recommendations included:

- Making adjustments to encourage more participation of both the younger and older kids
  - "*I would maybe add more tools and make a scoring system to encourage little kids to participate in the game to help them out.*"
  - *"To make it better, maybe one can adjust it so it's also for early teenagers because they need it just as much as kids."*
- Adding more challenges
  - "*It was kinda for smaller children aged 8-9, so maybe adding some more friendship-based stuff and things like that.*"

Validations included:

- "I wouldn't change anything about the game because it works to calm people down, and it's just perfect."; "It was perfect!"
- "Nothing. It was a lot of fun."; "Nothing."

In response to the question, "**What did you like or dislike about the game?**" themes centred on the game's strengths, with no critiques articulated. **Validations** centred around the use of anthropomorphism ("*I loved the use of animals, which helped accentuate empathy. Loved the drawings. The practice of practical skills. Nothing that I disliked."*), the use of art (*"loved that she could express herself with art"*), and the way the game provided an insight into the emotional temperature of the family (*"We can see how our family feels during the games… which is a way to get to know each other better").*

Feasibility

In response to the question**, "In what ways do you think the skills taught in the game are helpful in your everyday life?",** themes that emerged were fostered agency, openness and other-centeredness, self-awareness and emotional literacy. **Validating responses** centred around the following themes:

- The game emphasized empathy, openness, kindness and respect for others
    - *"We are in constant contact with people. We may not know what exactly a person is going through, but if they are acting differently (distracted, agitated, withdrawn), we can approach and ask what is wrong or what we can do to help."*
    - *"Shows us we need to be more open to others' feelings."*
    - *"By making sure to make an effort to keep a safe and non-judgmental place to share what is on our minds."*

- Encourages periodic self-check-in and assessment, boosts self-confidence
    - "*Taking time to reflect on what is happening at the end of the day…how we feel about the day; what can we do better the next day, etc."*
- Teaches emotional regulation
    - *"Helps those shy to express their feelings in another way."*
    - *"Practical emotional regulation skills that can be used for diverse situations – school, sports, friendships, etc."*
    - *"My kid learned how to cope with a nervous situation while playing the game."*
    - *"Children today are really struggling with their emotional regulation and mental health. This game allows kids to learn and practice the skills needed to manage their emotions and feelings in difficult situations."*
- Emphasized choice or self-agency
    - *"Making decisions about your mindset and how to approach the people in your life is possible, i.e., choose contentment and kindness."*

In response to the question, **"In what ways do you think this game is a helpful resource for families?**", themes primarily centred on fostering openness, awareness and a sense of competency. **Validating** responses included the following:

- Promoted openness, family sharing and dialogue
    - *"My children came home and shared what they learned, and it opened the conversation at the dinner table."*

- *"The experience allowed us to discuss how to handle emotional or uncomfortable situations later, which wasn't frequently addressed in my family."*
- *"Will create a time and opportunity for parents to engage with their children. Will allow kids to open up to their parents and discuss their emotions and challenges; develop the skills and tools needed as a family to work through challenging situations."*
- *"It gets families talking. It also builds awareness in parents, giving them the tools to teach their children and use themselves.*

- Contributes to self-confidence and is easy to use
  - *"Seems easy enough to do without the presence of a trained professional."*
  - *"Families can talk about the techniques used and do them at home."*
  - *"Games are easier to teach these types of lessons than a talk or lecture. If played in a group, you can spread the message like 'herd immunity.' Group activities also make things more 'acceptable.'*

Sustainability

In response to the question, "What would make incorporating it into your family routine or fun time easier?", themes revolved around **suggestions for improvement,** including:

- Encouraged continued conversations, self-reflection and journaling
  - *"I encouraged my children to continue to draw out their feelings and experience with God in the drawing books they received. Let it be their devotional drawing book."*

    - *"I would do it in the form of role-playing by impersonating the video characters with my children."*
- Game add-ons
    - *"Have an animal deck with 'Scruples' type of question to suggest and act out what the animal should say or do in the thought situation they are in; could be multiple choice too, with funny answers."*

Themes in the Children's Artwork

The children were given a choice of art sets (acrylic paint or coloured pencils and a canvas or art pad) during the second session. After rehearsing tools they had learned the previous week (the second set of participants had a two-week interval because of the December holiday break), children were encouraged to draw or paint an animal that represented themselves during the remainder of the session (time permitting) or at home. The children were also encouraged to practice applying their newly acquired "game skills" to real life. Some children came up with stories about their animals, but all the children were eager to share their art. The children verbally assented to having their artwork become part of a new deck of cards to be shared with other kids, and the parents verbally consented to have their kids' art included in this paper. All the parents appreciated the opportunity to have the artwork serve as conversation starters on difficult topics for their children, a creative outlet, and a chance to gain insight into their children's thinking. Themes that resonated throughout the children's art included stories of resilience and emotional triumph (i.e., being bullied but finding a new "pack" of friends to be with, becoming aware that it's okay not to always be happy, changing one's perspective that

being little isn't always a disadvantage and becoming more aware of their feelings; and being brave enough to share them with others). The children's artwork is shown in Appendix L.

Chapter 4

Discussion of Results

Chapter 4 Discussion

The burden of mental health concerns arising from unprecedented and challenging situations brought about by the pandemic continues to escalate despite the return to pre-pandemic conditions (Mental Health Commission of Canada, 2021; Racine et al.,2021). The increasing rates of crisis migration to seek a better life and the rising costs of living, coupled with job and food insecurity, plague a significant sector of Canadian society (Community Food Centres Canada, 2024). Gerlach and McFadden state that in Canada, children at most significant risk of health inequities generally belong to one of five groups (Gerlach & McFadden, 2022):

1) a single-parent household headed by a woman;
2) children being raised by Child Protective Services;
3) children with disabilities;
4) refugee children; and finally,
5) children who experience racialization, social stigma, and/or social marginalization.

Inspired by Armstrong's studies on Meaning Mindset Theory and the D.R.E.A.M. (Developing Resilience through Emotions, Attitudes and Meaning) program (Armstrong, 2015a, 2016b, 2019c, 2020c; Parrott et al., 2021; Watt, 2020), the author designed a board game incorporating anthropomorphized creatures within a fantasy type of narrative that would give a child the opportunity to become a hero as they take up a challenge to help an animal in distress. The goal of the game was to help a child develop skills of empathy and altruism while learning to develop skills known to build mental resilience.

The five core social-emotional learning competencies are self-awareness, self-management, responsible decision-making, social awareness, and relationship skills (Positive Action Staff, 2024). Children between 7 and 11 years are in Piaget's Concrete operational stage, where they

start to think beyond themselves, develop empathy, and discover that others may not necessarily feel or think as they do (Milligan et al., n.d.; Oren, 2008). Although aggressive and passive patterns of behaviour can be well-established by eight years of age (Johansson, 2023), strengthening the so-called Ginsburg's seven crucial skills of resilience (competence, confidence, connection, character, contribution, coping, and control) through a board game can helpfully safeguard children at risk of developing mental health problems (Cooper & Hicks, 2018). In addition to creating a sense of agency or control, a board game also allows opportunities to form resilience and "altruistic identification" emerging in group work through (1)shared narratives, (2)finding identities in ethnicity, religion or spirituality, (3)addressing racism; (4)ensuring safety; (5) "noticing and interpreting;" and finally, (6)taking an active stance, the latter being critical to combat bullying (Hirayama & Hirayama, 2021).

Credibility

The author had hypothesized that the game would lead to increased "positive identity constructs" (Armstrong, 2016, p.78), namely meaning mindset: personal agency, a sense of worth, openness to novel experiences and optimism, as well as decreased concerns surrounding mood, anxiety, or conduct issues. With regards to credibility, the game exhibited both face validity (the stakeholders believe that the game led to its desired outcomes of fostering the principles of agency, hope, a positive self-concept and openness to new experiences) based on the game's high ratings by both the parents/caregivers and the children's identifying with the animals' struggles with school (making friends, being bullied or isolated). The game also showed predictive validity, as both parental meaning mindset and mental health reportedly improved from pre-test to post-test. Further, meaning-mindset was inversely associated with mental illness symptoms. Based on the finding that the children did not notice a significant change in

themselves a week after playing the game for the second session, further research with a larger sample and over a more extended time would be warranted to explore the possibility of detecting change after an extended period (3 to 6 months) with a bigger sample size or more repetitions of gameplay. A notable improvement after one week in the adults' self-reported meaning and mindset and mental health symptoms may indicate an anticipated beneficial effect of the game on their children's emotional and mental well-being, even if the results were not yet detectable in their self-reports. Based on the literature on co-regulation (Bornstein & Esposito, 2023), wherein improved child well-being also tends to enhance parental well-being, it is also possible that the parents may have observed an improvement in their children's meaning and mental health symptoms even if the children had not yet detected it in themselves. Further research exploring parental or caregiver perception of their child's well-being before and after gameplay may also be helpful. For both parents and children, a positive change in meaning mindset predicted a positive change in mental health.

Except for one child who appeared to struggle initially because of the language barrier, the children in this sample did not appear shy or reticent to share their struggles after hearing the animals' stories of struggle and complex life challenges. They also mentioned feeling comfortable and safe enough to do so. Some children shared that they could relate to stories of feeling isolated, lonely, bullied, or afraid to talk about their feelings. Children also appeared to be able to relate and identify with the game's scenarios of animal struggles. For example, children connected with a picture of a galloping horse, which was used to exhibit the anxiety and low frustration threshold typically found in attention-deficit disorder with or without hyperactivity (ADD/ADHD) and appeared to be reassured that they were not alone in their struggles. Another example was when a child sheepishly smiled and nodded as she pointed to

herself when a card of a puppy struggling with math and reading was shown. The opportunity to do artwork as a creative expression allowed for meaningful conversations around bullying or managing overwhelming feelings and emotions during the game session and at home.

Acceptability

Regarding acceptability, most of the study participants appeared satisfied with the game and made a few suggestions to accommodate special groups like younger kids, teenagers or children with mental health challenges. The adult facilitator can easily modify the game by adapting the language of emotional literacy accordingly. The request to make modifications to accommodate special groups was a response from a boy who had experienced bullying and appeared to have arisen from altruism arising from a shared narrative that may have been prompted by participation in the game (Hirayama & Hirayama, 2001). Unfortunately, deeper or lengthier discussions could not be held because of time constraints, but most participants found the game acceptable and child-friendly.

Sustainability

Regarding sustainability, ideas and suggestions for improvement included incorporating role play and "Scruples-type" questions with silly answers as options to draw attention to long-term healthy thoughts and actions. Most of the responses from families expressed a sincere appreciation for the practical and valuable skills that were easy to use and pass on to others.

Feasibility

Regarding feasibility, parents reported that they liked the game and opened opportunities for difficult conversations while emphasizing positive virtues, agency and encouraging periodic check-ins with their kids while learning mindfulness tools and emotional regulation skills. Although no participant comments were elicited regarding problem-solving skills, the game may

benefit from including additional skills on healthy negotiation and conflict resolution, which the older children will appreciate. This feature may help improve the game's ability to give hope since being able to brainstorm and establish small achievable goals provides some hope and optimism (Armstrong & Epperson, 2024). The game used the author's personal artwork, which appeared discouraging to some children when asked to make their cards. The author/facilitator managed this by reassuring the kids that their creative expression was more paramount than the art and pointed out the folly of unduly comparing ourselves to others. A possible adaptation is to have the children cut out pictures of animals from magazines that they could paste onto a card to make a story. This modification can be helpful in areas where art supplies might be limited. Another adaptation to the game would be to have the children choose an animal they would like to personify as a starting point for sharing and fellowship.

If warranted by further research, in addition to being a cost-effective, practical, and easily accessible tool to foster mental health and resilience in both children and adults, the game can also serve as a tool for adults to nurture significant connections to their children or help rekindle or repair attachment injuries in children who do not own the privilege of having a reliable and available parent or caregiver. The game also has the potential to serve as a base or starting point for filial play therapy or as a teacher or guidance counsellor's tool for group work to foster social connections and camaraderie in school. In children who may not have the benefit of a steady, predictable primary caregiver, the game can also help foster relationships with other adults who can function as an alloparent to help repair or reform ruptured attachment bonds. Furthermore, opportunities for children to do their artwork encourage self-acceptance of where they are and help reduce the stigma often associated with mental health challenges. Adapting the artwork and animal stories to the culture and narrative experience of the child in another cultural context by

using a Knowledge Translation Integration framework will help make the game more relevant, credible, and reliable (Amsden & Van Wynsberghe, 2005; Armstrong & Manion, 2015). The game's tool deck can also be expanded to include more discussions on recognizing and acknowledging unhelpful thoughts, problem-solving, and conflict-resolution skills. For example, having the adult facilitator incorporate the "EAR (empathy, attention and respect)" approach can enrich the game's ability to foster emotional literacy and maturity (Armstrong & Epperson, 2024).

In addition to increasing the frequency of sessions involved in playing the game, other future areas of research can include adapting the game's discussions or fellowship group for both children and adults to foster open and honest conversations about personal struggles – this holds possibilities for studying the game's application to newcomers and immigrant groups, low-income families, youth groups or camp, veterans and residents of retirement homes where loneliness and other mental health issues related to isolation will likely be stigmatized or avoided, and/or mental health services are not feasible or affordable. Other worthy considerations will be using the game to open or deepen conversations in counselling sessions and adapting it to an online version to determine its credibility, acceptability, feasibility and sustainability in remote or inaccessible areas. The game can also be adapted to introduce simplified mindfulness concepts and emotional regulation tools for children younger than 6 years old, i.e., kindergarten and primary school – it would be interesting to determine the game's credibility and feasibility in mitigating externalizing behaviours in a younger population.

Other possible future directions could aim to adapt the game for use and testing in other cultures abroad, especially among poor or marginalized groups, and translate it into their native language using animals local to the culture and heritage. The author would also like to explore

the use of the game among children with disabilities, in protective custody, or possibly even among Indigenous children of Canada, in partnership and consultations with their community elders.

Limitations of the Study

This current study initially aimed to determine if the game's scenarios approximated children's lived experiences and had credibility, acceptability, feasibility and sustainability features. The small sample size, however, limited generalizability, and the measurement of smaller effects was limited, as only large effects were detectable with a small sample. The sample is likely not an adequate representation of children who have experienced adverse events. There may be underreporting (only one parent reported COVID-19 as an adverse event), and the majority of the sample was female and consisted of a mixed Caucasian (South African, French and English Canadian and Indigenous) heritage, and had relatively significant education and financial resources. Thus, it would be worthwhile to determine the game's credibility, acceptability, feasibility and sustainability in larger focus groups with other adverse experiences such as extreme poverty, hunger, crisis immigration, war or disaster, abuse or incarceration.

Another significant limitation of the study is its inability to accurately determine the duration and stability of the newly acquired skills of self-calming and emotional regulation, since the observation was limited to a week. Accurate skills retention can be fostered by giving all participants electronic copies of the mindfulness tools, including those who are in passive attendance at the game. Although in this study, the author was the only one who conducted sessions and tried to duplicate the sessions' content among the group for consistency, potential variations in the supervising adult's ability to coach a child into practicing the tool for mastery and future applications are likely sources of possible bias.

Ethical issues arising from using mindfulness-based strategies in children without explaining the historical and Buddhist origins of the practice have been raised (Lo, 2024). This sample of participants had no adverse reaction to using the mindfulness tools. However, Lo cautions against making claims for the benefits of mindfulness-based practices that exceed current evidence and suggests that instructors or facilitators be versed in evidence-based studies and be able to communicate them in lay language (Lo, 2024).

Conclusion

The author has designed a child's board game embedded in a narrative to provide a cost-effective and easily accessible means of delivering tools for mental resilience called "The Book of Light" and showed that the board game can effectively teach a child and the family self-regulation and self-coping skills while developing skills of self-agency, initiative, empathy, emotional awareness, and altruism. A KTI framework analysis showed that the game demonstrated credibility with good face and predictive validity (parental meaning and mental health reportedly changed from pre-test to post-test). It appeared acceptable, feasible and sustainable to its users and future stakeholders. The author hopes that the game can serve as a conduit for creating fair and equitable access to mental health services for children while serving as a developmentally and culturally sensitive tool.

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Appendix

A. Child Identity and Purpose Questionnaire-Interactive (Armstrong et al., 2020)

Table 1
Ch.I.P.-I Items

Ch.I.P.-I
1. When things aren't going well for CHIP, he thinks he can come up with ways to fix the problem/when things aren't going well for Ceira, she thinks she can't come up with ways to solve the problem
2. Ceira believes she can make choices about things in her life/Chip thinks he can't make choices about things in his life
3. When Chip has a difficult feeling like sadness, fear, or anger, he finds it easy to think about things to feel a bit better/When Ceira has a difficult feeling like sadness, fear, or anger, she finds it hard to think about something to feel a bit better[a(agency)]
4. When Ceira has a difficult feeling like sadness, fear, or anger, she talks to someone or plays with someone/When Chip has a difficult feeling like sadness, fear, or anger, he doesn't talk to someone or play with someone[a(agency)]
5. When Chip has a difficult feeling like sadness, fear, or anger, he chooses to relax, have fun, or create something/When Ceira has a difficult feeling like sadness, fear, or anger, she chooses not to do much of anything[a(agency)]
6. Chip is happy to be Chip/Ceira wishes that she were a different person[a(self-concept)]
7. Chip thinks that he is important to other people/Ceira thinks that he is not important to other people[a(self-concept)]
8. Ceira thinks that she has done many things to be proud of/Chip thinks that he has not done many things to be proud of[a(self-concept)]
9. Ceira thinks that she can do things as well as other kids/Chip doesn't think that he can do things as well as other kids
10. When things are going badly, Ceira thinks that things will get better/When things are going badly, Chip thinks that things will never get better
11. Ceira knows that good things will happen in her life as she grows up/Chip doesn't know if good things will happen in his life as he grows up[a(hope)]
12. Chip believes that his life is important/Ceira believes that her life doesn't matter[a(hope)]
13. Chip likes to make believe or come up with new ideas/Ceira likes to see, hear smell, taste or see things right in front of her, rather than coming up with new ideas
14. Ceira knows that she can find ways to get something that is important to her/Chip doesn't know if he can find ways to get things that are important to him[a(hope)]
15. Ceira is interested in watching her feelings as well as other people's feelings/Chip is more interested in what he can see, feel, hear, taste, and touch, rather than feelings[a(openness)]
16. Chip likes to try new things and learn new things/Ceira likes to stick with things that she knows[a(openness)]
17. Ceira often participates in a very fun activity with other children and one or more adult leaders/Chip does not often participate in a very fun activity with other children and one or more adult leaders[a(openness)]

Note. Ch.I.P.-I = Child Identity and Purpose Questionnaire–Interactive.
[a] Items that were used for the Ch.I.P.-I Short-Form. Parentheses reflect the measure subcategory to which the item belongs (Agency, Hope, Self-Esteem, and Openness).

B. Adult Identity and Meaning Scale (A.I.M.S.) (Armstrong, 2022)

Please move the slider to indicate your level of agreement

1. When I experience difficult feelings like sadness, fear, or anger, I am able to change my attitude toward the situation so I feel a bit better / When I experience difficult feelings like sadness, fear, or anger, I am not able to change my attitude toward the situation
2. When I have a difficult feeling like sadness, fear, or anger, I have a meaningful person in my life who I like to talk to / When I have a difficult feeling like sadness, fear, or anger, I don't tend to talk to anyone
3. When I have a difficult feeling like sadness, fear, or anger, I often choose to relax, have fun, or create something to feel a bit better / When I have a difficult feeling like sadness, fear, or anger, I often choose not to do much of anything
4. I am happy to be me / I wish that I was a different person
5. I think that I am valued by other people / I don't think that I am valued by other people
6. I think that I do many things to be proud of / I don't think that I do many things to be proud of
7. I know that good things will happen in my life / I do not expect good things to happen in my life
8. I know that I can find ways to get something that is important to me / I don't know if I can find ways to get things that are important to me
9. I am interested in noticing my own feelings as well as other people's feelings / I am more interested in what I can see, feel, hear, and touch rather than noticing feelings
10. I like to try new things and learn new things / I prefer to stick with things that I know
11. I participate in regular, meaningful leisure activities / I don't participate in regular, meaningful leisure activities

C. Interactive Symptoms Assessment (Armstrong et al., 2022) – transformed into a sliding scale on Survey Monkey.

1) Isa felt good about the friends in her life this week./ Eibe did feel good about the friends in his life this week.
2) Eibe felt that he did many things well this week./Isa felt that she didn't do anything well this week.
3) Eibe is feeling happy. Over the past week, he has been feeling happy most of the time./Isa is feeling sad. Over the past week, she has been feeling sad most of the time.
4) This week, Isa wanted to do many fun things./Eibe did not feel like doing much this week.
5) Isa didn't lie to anyone this week./Eibe told many lies this week.
6) Isa was cheerful this week./Eibe was grouchy this week.
7) Isa did not have arguments or fights with her family or friends this week. /Eibe often had arguments with his family and friends this week.
8) Eibe was not worried this week./Isa was feeling worried a lot this week.
9) This week, Eibe didn't have to do things over and over again until they were perfect or felt right./This week, Isa had to do things over and over again until they were perfect or until they felt right.
10) Eibe was never worried about dirt, germs, or getting sick this week. Isa was worried about dirt, germs or getting sick this week.
11) Eibe was nice to everyone this week./Isa said mean things to someone this week.
12) Isa found it easy to sit in class this week./Eibe had a hard time sitting still in class this week.
13) Eibe looked in the mirror this week and felt good about what he saw. /Isa looked in the mirror and did not feel good about what she saw.

D. Interactive Symptoms Assessment Parent Form (Halabi, 2023; Armstrong et al., 2022)

I.S.A. Parent Form
1) I felt cared about by the friends in my life this week / I didn't feel cared about by the friends in my life this week**
2) I felt I did many things well this week / I felt I didn't do anything well this week**
3) Over the past week, I've been feeling happy most of the time / Over the past week, I've been feeling sad most of the time**
4) This week, I wanted to do many things that I enjoy doing / I did not feel like doing much at all this week**
5) I was honest to everyone this week / I told lies or withheld important information this week**
6) I was cheerful this week / I was irritable this week**
7) I did not have arguments or fights with family or friends this week / I often had arguments with family or friends this week**
8) I was not worried or fearful this week / I was feeling worried or fearful a lot this week**
9) I didn't worry about dirt, germs or something bad happening to myself or someone I love this week / I worried about dirt, germs, or something bad happening to myself or someone I love this week**
10) I was nice to everyone this week / I said hurtful things to some people this week**
11) I found it easy to concentrate and focus this week / I found it hard to concentrate and focus this week**
12) I looked in the mirror this week and felt good about what I saw / I looked in the mirror and did not feel good about what I saw**

** 10-point sliding scale

E. Game Instructions and Embedded Story in the game “Book of Light”

THE BOOK OF LIGHT GAME

LETTER TO USERS:

Dear parent, teacher, or caregiver,

Thank you for being willing to pilot our board game, "Book of Light."

The game's goal is to affirm and empower children and adolescents to identify situations that cause undue stress. According to Prof. Sonia Lupien's N.U.T.S. acronym for stress (Dickerson & Kemeny, 2004; Lupien et al., 2013), stress universally occurs when experiences are novel, unpredictable, a threat to one's ego or when we feel that we have little or no sense of control over our situation. Our body's fight or flight reflex is an inherent and protective response to fear. Anxiety shuts down our ability to think clearly and rationally because of how our brains instinctively work to protect us (Perry and Winfrey, 2021).

This board game was conceived to equip children and young adults, who otherwise may have limited or no access to counseling services, with coping tools to help manage their anxiety. This game allows them to clarify their thoughts and feelings in learning to accept what cannot be changed and encourages finding novel ways of reframing a situation to find a suitable solution (i.e., cognitive reframing).

We would be grateful if you could send us your comments on how the game can be improved. Please send your comments to the author at egali086@uottawa.ca – we welcome your feedback and look forward to partnering with you in equipping your child/student/charge with mindfulness and calming skills to build their resilience towards life's everyday challenges.

RULES OF THE GAME

This game targets an audience of elementary and middle school children and needs adult supervision to encourage reflection on the activity.

Each player begins as an "apprentice" by learning two tools to deal with anxiety or a deflated mood. He/she is then presented with a card of an animal that presents with a specific challenge or predicament. They get to keep the card of that animal as a token for helping lighten the burden of this animal. The card serves to remind the player of the increasing brightness of his light after having helped another.

EMBEDDED STORY

*Please change the pronoun of the "child of Eve" character as necessary

Part 1: BACKGROUND STORY

Once upon a time, in a beautiful and magical land of our dreams, there was a kingdom where animals could talk in a language we humans could understand. The animals were ruled by a kind and loving King, Esalen, who gifted each animal with a unique talent and purpose. To the rabbit, he gave the gift of being fast but quiet; to the raven, he gave wings to fly and sharp eyes to see; to the giraffe, he gave the gift of a long neck so he could watch and eat above the trees; to the fox, he gave the gift of being cunning, and so on. But darkness had fallen over some of his subjects, which had imprisoned their hearts and minds. This darkness was called FEAR, and often, it caused some animals to forget what they were created to do, causing them to become tired (weary) and sad (discouraged) – they became heartsick.

The cures for this darkness were all found in the Book of Light, but it would take someone who would not only master the tools but who also had a brave and kind heart (compassion and empathy) and was steady in purpose (persevering) to help free these animals from being heartsick.

The King decided that he would need someone special to share the light to dispel this darkness, but he needed the brightest animal that was ever created – a child of Eve. And so he sent his angels to help him search the earth for someone worthy and up to the challenge of removing the hold of this darkness that had seized many of his beloved subjects. The child of Eve needed to learn the ways of the Book of Light to power his own light. But he needed to help free the animals from their burden to keep his light going.

And so Esalen poses his challenge.

(Read Esalen's card to start the game)

"I am Esalan, King and Lord of this world. I seek a child of Eve to help my people. Will you accept this challenge?

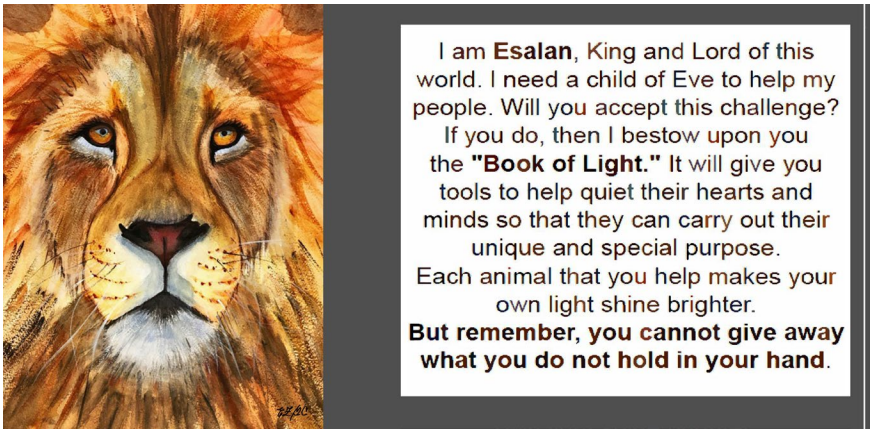
If you do, then I bestow upon you (adult places a hand on child's forehead to bless him) the "Book of Light." In this Book of Light are the tools to help quiet their hearts and minds so they can think clearly to carry out their unique and designated purpose.

You rekindle the light within each animal you help, and your own light shines brighter as you do. But remember, you cannot give away what you do not hold in your hand."

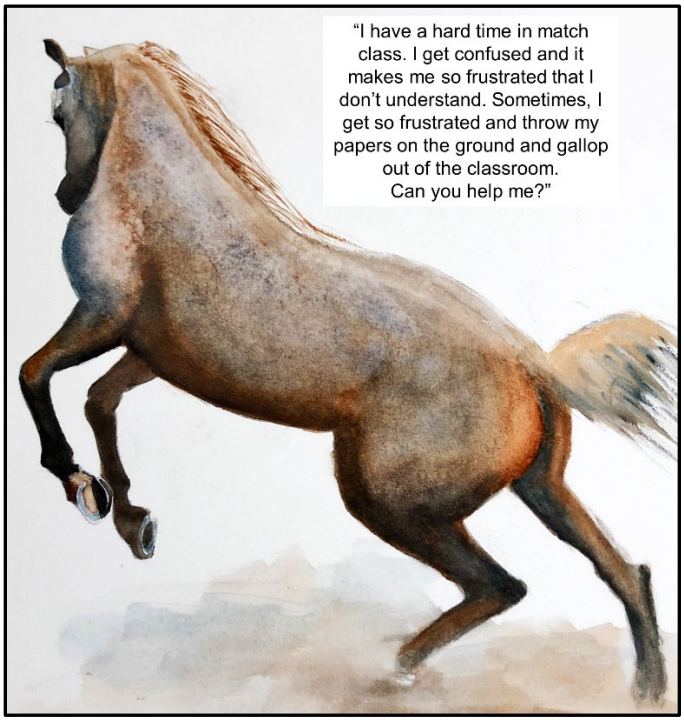
Part II: ACCEPTING AND LEARNING FROM THE BOOK OF LIGHT

Each player picks up a card from the "Tools in Book of Light" deck, which contains psychological and scientifically proven tools to calm anxiety in children. These tools will either be a mindfulness exercise or an activity that the player can choose – each player is encouraged to learn two tools before facing his first challenge.

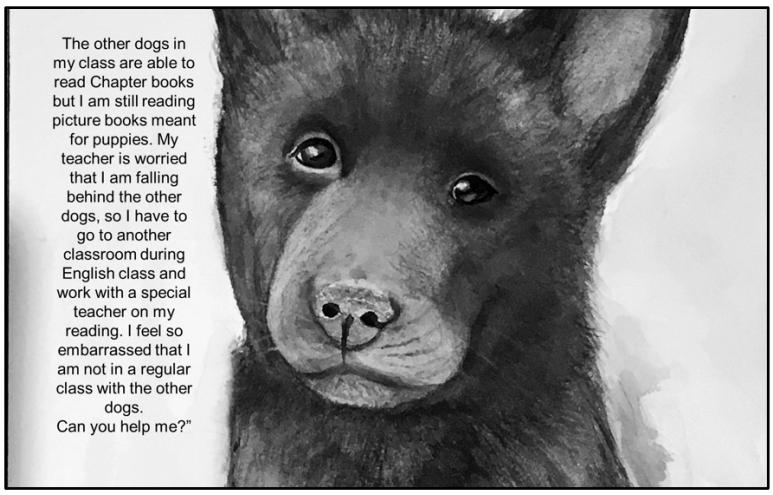
F. Sample Cards (Esalen's card, a horse and a puppy needing help, and tools) from the game, "Book of Light" (Artworks are the author's original paintings from online lessons)



Front and back of Esalen's card

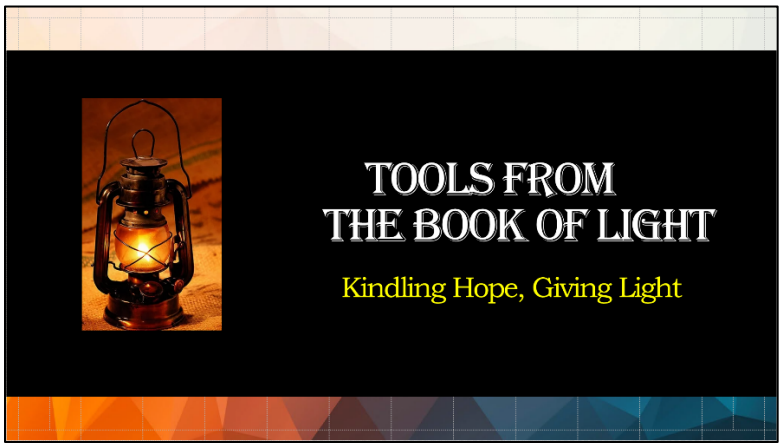


Front and back of the horse card



Front and back of puppy card

Sample tool cards (front and back)



GUIDED MEDITATION

Close your eyes and relax. Imagine that you are in your favorite place, a forest, by the stream, in a garden, by the beach, etc. Without saying anything, look around - what do you see? What do you smell? What do you hear? What do your hands and feet feel? What do you taste in your mouth? Stay in this place for few seconds and breathe in (1-2-3-4) and breathe out (1-2-3-4). Repeat and then open your eyes.

RELEASE YOUR THOUGHTS

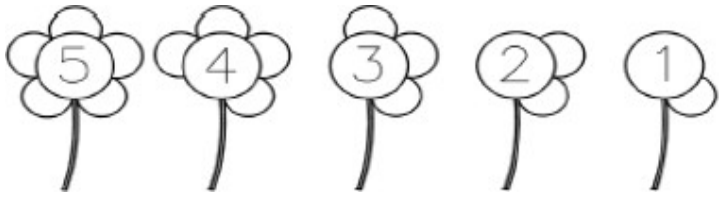
Breathe in deeply through your nose (1-2-3-4). Breathe out deeply through your mouth (1-2-3-4). Think of a bad thought or worry and imagine it is a red balloon. No let go of this balloon and watch it float away. Watch the balloon float higher and become smaller until it disappears into the sky. Continue breathing and open your eyes when you can't see it anymore.

G. Book of Light Child Satisfaction Survey (Armstrong, 2018; Gardiner, 2024) –

(transformed into a Likert sliding scale on Survey Monkey)

1) How happy were you today with the board game **Book of Light**? (Playability, what did you learn, and how fun was it?) Circle the flower that best represents your response.

5= Happy
4= Mostly happy
3= So-so
2= Somewhat unhappy
1= Unhappy



What did you like? Do you have ideas on how to make the game better?

_____
_____
_____
_____
_____

2) Do you think today's game gives kids ideas about how to **think** in a healthier way? Circle the flower that best represents your response.

5= Totally
4= Quite a bit
3= So-so
2=Not really
1= Not at all

3) Do you think today's game gives kids ideas about how to **act** in a healthier way? Circle the flower that best represents your response.

5= Totally
4= Quite a bit
3= So-so
2=Not really
1= Not at all

6) Do you think today's game might help kids notice their feelings?

5= Totally
4= Quite a bit
3= So-so
2=Not really
1= Not at all

7) Do you think today's game might help kids learn skills to be able to try or learn new things?

5= Totally
4= Quite a bit
3= So-so
2=Not really
1= Not at all

4) Do you think today's game helps kids learn things that could be good for their self-esteem (liking yourself, feeling worthwhile, believing in yourself and knowing what you do well)? Circle the flower that best represents your response.

5= Totally
4= Quite a bit
3= So-so
2=Not really
1= Not at all

5) Did today's game give you a bit of hope in knowing how to manage difficult situations?

5= Totally
4= Quite a bit
3= So-so
2=Not really
1= Not at all

8) With the game, did you have fun with your family? Circle the flower that best represents your response.

5= Totally
4= Quite a bit
3= So-so
2=Not really
1= Not at all

9) Do you think that today's game helped you and your family talk about important things? Circle the flower that best represents your response.

5= Totally
4= Quite a bit
3= So-so
2=Not really
1= Not at all

H. Parent Satisfaction Survey (Monkey Script and Qualitative Interview Questions)

Meaning Mindset Therapy, or MMT, is a theoretical framework that emerged from Frankl's logotherapy, which is finding hope and/or meaning in one's valued interpersonal and spiritual connections or experiences. Armstrong and colleagues functionally conceptualize this framework through the acronym "**CHANGE**," which involves the following steps:

1. **C**hallenge unhelpful thoughts
2. **H**ealthy actions (calming activities and formulating small action goals)
3. **A**cknowledge circumstances (redirecting focus on what can be changed)
4. **N**eed for belonging and self-compassion
5. **G**ratitude
6. **E**motional language (developing emotional literacy)

The game, "Book of Light," was designed to help foster empathy in children as they put themselves in another child's shoes by learning emotional regulation tools that they can practice and hopefully internalize as their own, as they externalize and confront painful or difficult life situations. We hope that by facilitating the development of altruistic, prosocial behaviour, a child and his/her/their parent/guardian can strengthen their emotional bond while acquiring skills that nurture mental resilience.

1. AGENCY is described as the capacity to influence your own thoughts and behaviour. On a scale of 1 to 5. How well do you think the game can foster agency?
2. HOPEFULNESS or hope for the future is described as recognizing possibilities. On a scale of 1 to 5, how well do you think the game can foster hopefulness?
3. A POSITIVE SELF-CONCEPT is the belief that one can make personal choices. On a scale of 1 to 5, how well do you think the game teaches a positive self-concept?
4. OPENNESS TO EXPERIENCES AND FEELINGS is described as being able to find pleasure or be awed by experiences, social connections, or nature. On a scale of 1 to 5, how well do you think the game can foster openness to experiences and feelings?

5. Please explain how the game fosters openness to experiences and feelings. If not, would you have any suggestions on how we can revise the game?
6. Do you think the game taught you or your child the abovementioned skills?
7. In what ways do you think the game might enhance mental health? Is there anything that it could do better?
8. In what ways do you think the skills taught in the game are helpful in your everyday life?
9. Is there anything that you'd like to change in the game so that it would be more helpful in the long term?
10. In what ways do you think this game is a helpful resource for families?
11. What would make incorporating it into your family routine or fun time easier?
12. Was playing the game an enjoyable experience for you and your child or ward?
13. What did you like or dislike about the game?

I. Recruitment Email/Letter sent to Organizations

UNIVERSITÉ SAINT-PAUL UNIVERSITY

SAMPLE Recruitment Email or Letter

Pastor xxxxxxxxxx
Pastoral Care
Arlington Woods Free Methodist Church
225 McClellan Road

Dear Pastor xxxxxx,

Meaning Mindset Therapy, or MMT, is a theoretical framework that emerged from Frankl's logotherapy, which is finding hope and/or meaning in one's valued interpersonal and spiritual connections or experiences. Armstrong and colleagues functionally conceptualize this framework through the acronym "**CHANGE**," which involves the following steps:

7. **C**hallenge unhelpful thoughts
8. **H**ealthy actions (calming activities and formulating small action goals)
9. **A**cknowledge circumstances (redirecting focus on what can be changed)
10. **N**eed for belonging and self-compassion
11. **G**ratitude
12. **E**motional language (developing emotional literacy)

The game, "Book of Light," was designed to help foster empathy in children as they put themselves in another child's shoes by learning emotional regulation tools that they can practice and hopefully internalize as their own, as they externalize and confront painful or difficult life situations. We hope that by facilitating the development of altruistic, prosocial behaviour, a child and his/her/their parent/guardian can strengthen their emotional bond while acquiring skills that nurture mental resilience.

My name is Elaine Z. Galicia-Connolly, and I am currently a master's student in Counselling and Spirituality at Saint Paul University. Under the supervision of Dr. Laura Armstrong, a clinical psychologist, we aim to refine the game to ensure that it approximates a child's lived experience. We are currently looking for children 7 – 14 years of age to test our game,

and with their parent/caregiver's consent, we would like to gain feedback from their child/ward's participation in the game.

If this is something that would be of interest to your organization, I have attached a copy of our recruitment poster or flyer. We would sincerely appreciate it if you could help us advertise the study. Participation involves a 5-10 minute online or paper survey asking the dyads of a parent/caregiver and their child/ward before and after participating in the game (45-60 minutes). After a week, a short interview will be conducted with both the parent and child to see any observed changes in a child's or parent's outlook toward mental health and emotional well-being. Each child will receive a set of art materials (art pad + coloured pencils or watercolour set) will be given to each child and their parent will be entered into a lottery for a $50 Amazon gift card as a token of our gratitude for their participation in the study.

We genuinely appreciate the chance to partner with you in this endeavour and look forward to hearing your favourable reply.

Sincerely,

Elaine Z. Galicia-Connolly
Saint Paul University

J. Recruitment Poster

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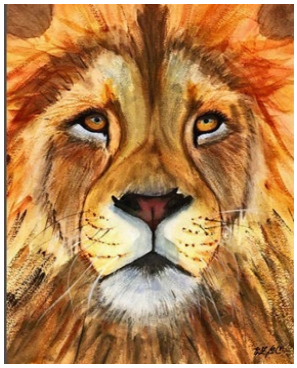


Family Participants Needed to Help Kids Develop Mental Resilience Using a Book of Light

Elaine Galicia-Connolly (Masters student in Counseling and Spirituality), under the supervision of Dr. Laura Armstrong (Ph.D., Clinical Psychologist), is interested in refining a game to foster mental health resilience in children aged **7 – 14 years old** who have had adverse childhood experiences such as crisis migration, homelessness, poverty, divorce/separation/death of a parent, or school bullying.

What is involved? A dyad consisting of a parent/guardian and their child/ward will be each asked to take a survey before and after the child participates in a game which involves learning two mindfulness or emotional regulation tools (card deck labelled "Tools of Light") to be able to help an animal in distress (card deck of animals). The survey will allow the researchers to evaluate the game's ability to teach essential coping tools for mental health to meet the needs of children who otherwise may not have access to mental health care.

When will the study take place? November 2024 to February 2025

Where will the study take place? Arlington Woods Free Methodist Church

How long will it take? Participation in the study will take two to four sessions, each lasting 45 - 60 minutes of your family's time.

Interested?

Please get in touch with Elaine Galicia-Connolly at 6132361393 localxxxx xxxxxxxx@uottawa.ca

UNIVERSITÉ
SAINT·PAUL
UNIVERSITY

CERTIFICAT D'ÉTHIQUE
ETHICS CERTIFICATE

SPU-Ethics Certificate Number: 1360.21/24

Elaine Galicia-Connolly
Student number: xxxxxxxxx

'' Kids Helping Other Kids Develop Mental Resilience Using a "Book of Light"

Master's Thesis

Thesis project funded by Canada Graduate Scholarship-Master (CGS-M) - Canadian Institute of Health Research (CIHR)

October 24, 2024

Université Saint Paul University
223, Main Ottawa (Ontario) Canada K1S 1C4
Tel 613 236-1393 Fax 613 782-3005
ustpaul.ca

UNIVERSITÉ SAINT-PAUL UNIVERSITY

24-10-2024
dd-mm-yyyy

Comité d'éthique de la recherche (CER) | Research Ethics Board (REB)
Bureau de la recherche et de la déontologie (BRD) | Office of Research and Ethics (ORE)

CERTIFICAT D'ÉTHIQUE | ETHICS CERTIFICATE

SPU-REB Number: 1360.21/24

Last name	Name	Affiliation	Role
Galicia-Connolly	**Elaine**	**Faculty of Human Sciences**	**M.A. Student**
Armstrong	Laura	Faculty of Human Sciences	Thesis Director

Type of project Master's Thesis - Student ID# xxxxxxxxx
Canada Graduate Scholarship-Master (CGS-M) project - Canadian Institute of Health Research (CIHR)

Title Kids Helping Other Kids Develop Mental Resilience Using a "Book of Light".

Approval date dd-mm-yyyy	Expiry Date dd-mm-yyyy	Decision (*)
24-10-2024	**23-10-2025**	**1 (Approved)**

(*) **Approved**:

The Saint Paul University Research Ethics Board (SPU-REB) approved the project.

Recruitment and data collection may begin as outlined in the application. Please use **SPU-REB Protocol 1360.21/24.**

The ethics approval applies for one year. However, any modification to Research Project must be approved by the REB before the changes can be implemented.

The SPU-REB must be notified of all changes or unanticipated circumstances (Unanticipated issues / adverse events report) that have a serious impact on the conduct of the research, that relate to the risk to participants and their safety.

An Annual Report for ongoing projects must be submitted.

The researcher must provide a Final Report for projects that have been approved by the Research Ethics Board (REB) in order to close all REB-approved files.

- In accordance with the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans – TCPS 2 and other applicable laws and regulations, the Saint Paul University Research Ethics Board (REB) has examined and approved the application for an ethics certificate for this project for the period indicated and subject to the conditions listed above.

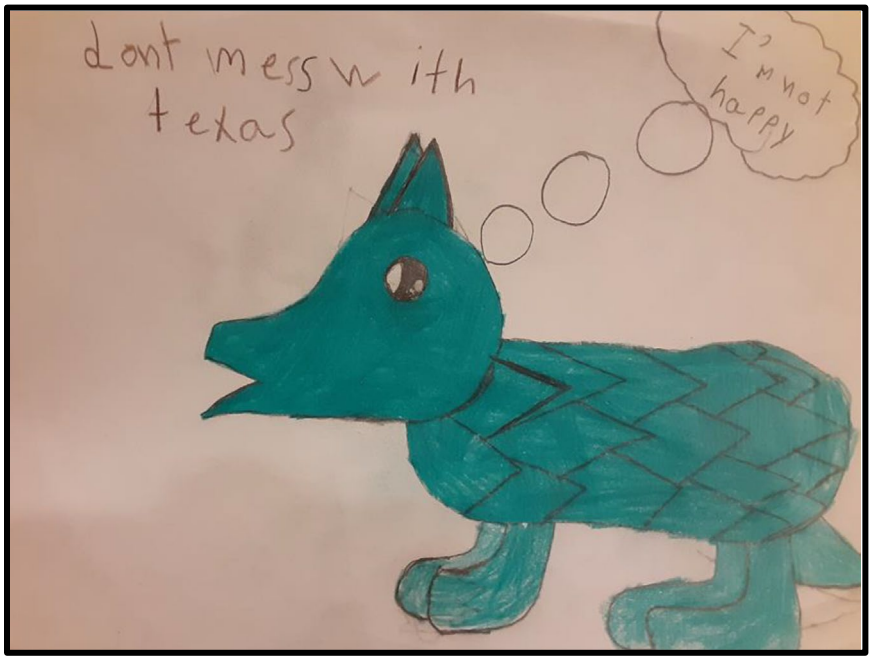
- Ethics approval is valid for the period indicated above and is subject to the conditions listed in the section entitled "Special Conditions or Comments". The "Renewal/Project Closure" form must be completed four weeks before the above-referenced expiry date to request a renewal of this ethics approval or closure of the file.

- Any changes made to the project must be approved by the REB before being implemented, except when necessary to remove participants from immediate endangerment or when the modification(s) only pertain to administrative or logistical components of the project. Investigators must also promptly alert the REB of any changes that increase the risk to participant(s), any changes that considerably affect the conduct of the project, all

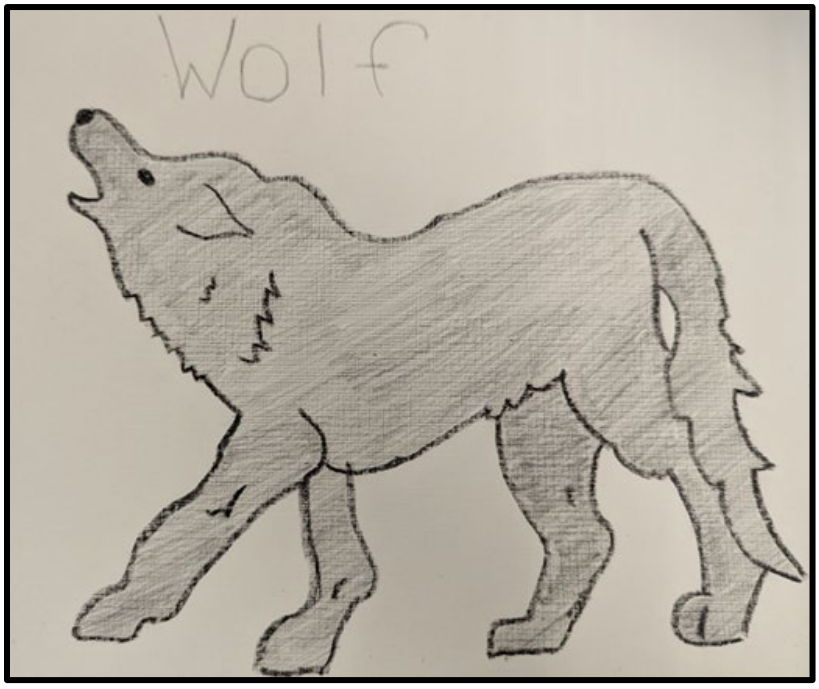
unanticipated and harmful events that occur, and new information that may negatively affect the conduct of the project or the safety of the participant(s).

Louis Perron, Ph.D.
Chair
Research Ethics Board (REB)

L. Children's Art

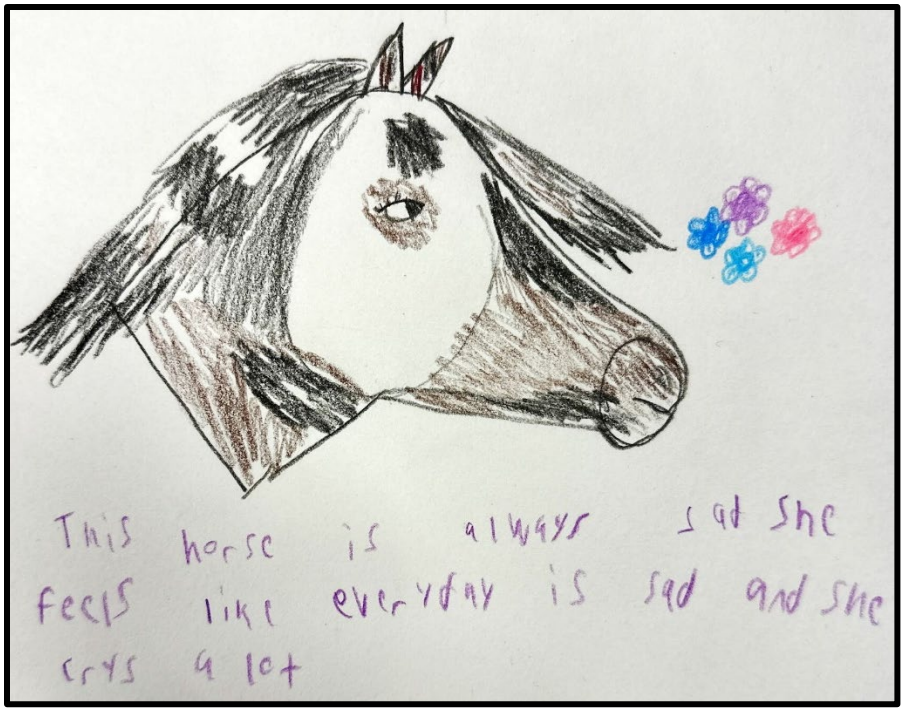


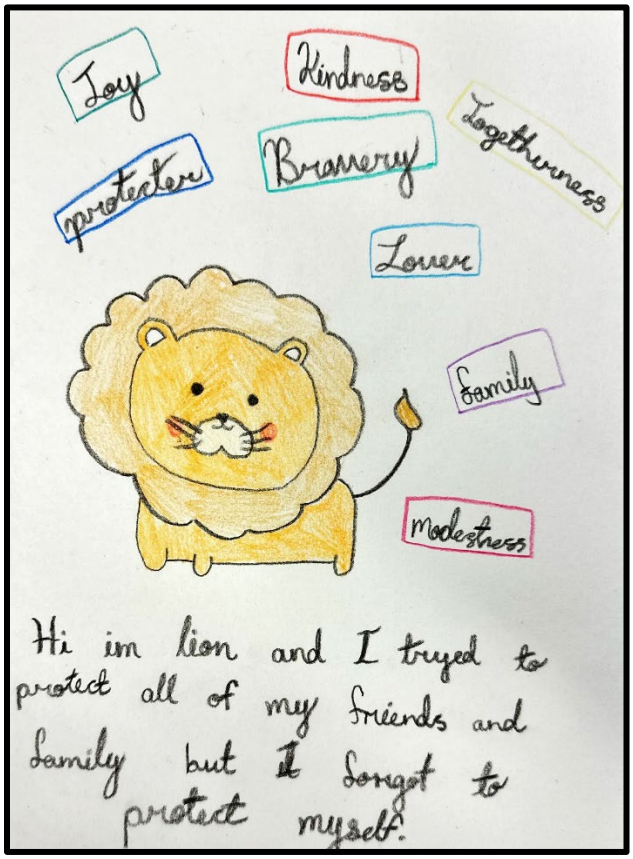

Horse

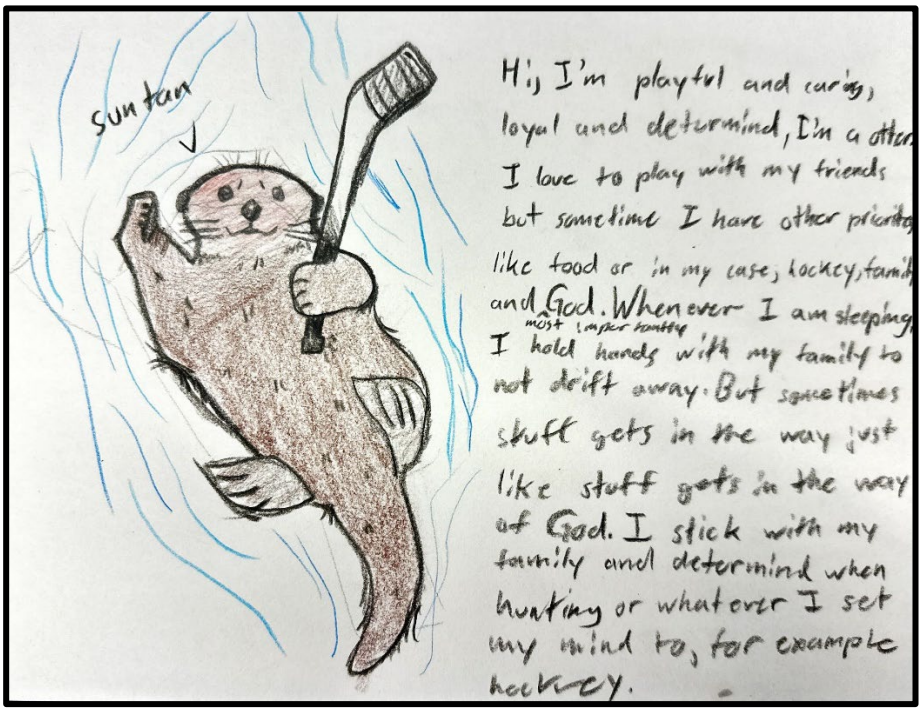

Wolf

Axolotl

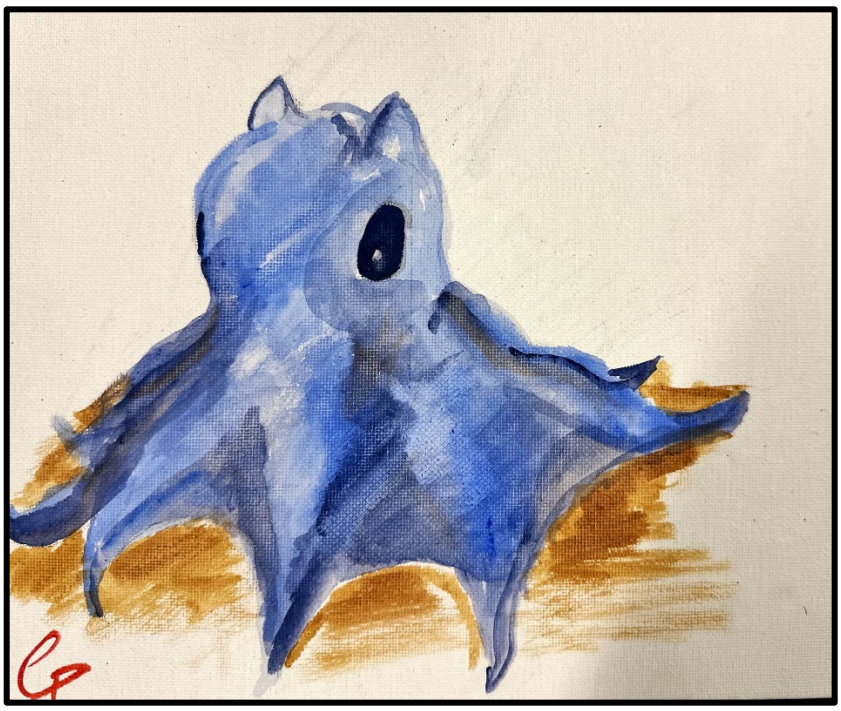

This horse is worried
of having fears and
sadness. She loves to talk
to her friends to make her
Feel better.
Her name
is Sofie


This horse is always sad she
feels like everyday is sad and she
cry's a lot

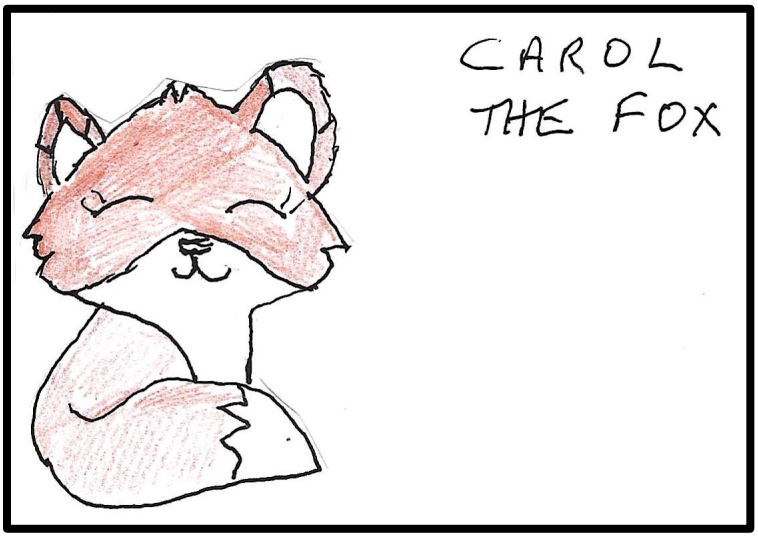

Joy
Kindness
protecter
Braverey
Togethurness
Lover
family
Modestness
Hi im lion and I tryed to protect all of my friends and family but I forgot to protect myself.

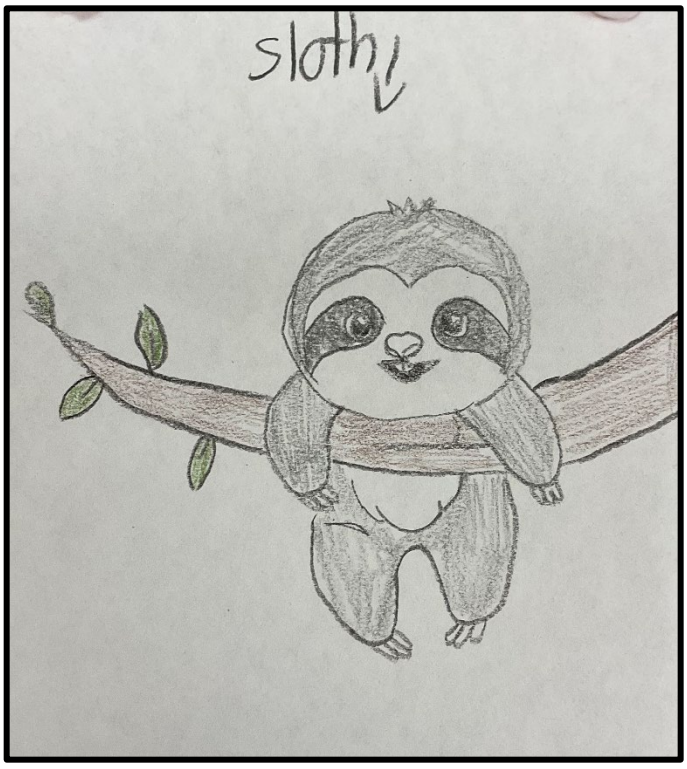

Sun tan
Hi, I'm playful and caring, loyal and determined, I'm a otter. I love to play with my friends but sometime I have other priority like food or in my case, hockey, family and God. Whenever I am sleeping I hold hands with my family to not drift away. But sometimes stuff gets in the way just like stuff gets in the way of God. I stick with my family and determind when hunting or whatever I set my mind to, for example hockey.


I'm sad because my friends are making me choose between them.



Dumbo octopus




sloth