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Title: Enhancing the Emotional Literacy in Elementary-Aged Children:

Mitigating ACE-related Negative Outcomes

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Abstract

Introduction: Long-term, negatives effects on health are linked to adverse childhood experiences (ACEs) (CDC, 2020). Chronic toxic stress caused by ACEs may lead to complex trauma, which in children can manifest as increased anxiety, difficulty self-regulating, limited positive coping skills, and difficulty with social skills and communication (van der Kolk, 2003). These are skills that can impact a child's performance in their occupations of education, play, social participation, rest and sleep, and leisure (AOTA, 2020). An occupational therapy directed Doctoral Capstone Experience (DCE) addressing the negative mental health implications of ACEs for children will add to the body of literature supporting the role of occupational therapists in preventing or preventing and addressing the negative outcomes linked to ACEs.

Theoretical Framework: The occupation-based model (OBM), Ecology of Human Performance (EHP); along with the Psychodynamic frame of reference (FOR), and Daniel Goleman's Theory of Emotional Intelligence guided professional reasoning and program development throughout the DCE.

Methods: The culmination of this 14-week Doctoral Capstone project is an implementable, occupational therapy driven, emotional literacy program for children at a local community center aimed to improve the children's knowledge of their own emotions, how their emotions impact others, and coping mechanisms to aid in self-regulation. There are six total program sessions, with one session completed each week of program implementation.

Results: All three participants showed an increase in total GAS score following program completion. The Youth Directors' satisfaction with program structure, duration, materials ranged from very satisfied to extremely satisfied. The following overall program themes were found: Positive Participant Reactions, Difficulty with Written Tasks and Attention to Task, and Remembering Visual/Kinesthetic Activities.

Conclusions: There is a need to address and mitigate ACE-related negative outcomes in children from marginalized and economically disadvantaged groups. Addressing how ACE's and complex trauma impacts a child's participation in their occupations is within Occupational Therapy's scope of practice.

Keywords: emotional literacy, adverse childhood experiences, toxic stress, complex trauma, occupational therapy, and health and wellness

Enhancing the Emotional Literacy in Elementary Aged Children

Mitigating ACE-related Negative Outcomes

Lasting, negative effects on health, including several physical and psychiatric health conditions, health risk behaviors, and socioeconomic challenges are linked to adverse childhood experiences (ACEs) (CDC, 2020). Potentially traumatic events that individuals incur before the age of 18 are defined as ACEs (Child Welfare Information Gateway, 2019). Traumatic events include but are not limited to various types of abuse, neglect, and household challenges (Felitti et al., 1998). An accumulation of these childhood traumatic events can result in toxic stress (Boparai et al., 2018). Chronic toxic stress may lead to complex trauma, which in children can manifest as increased anxiety, difficulty self-regulating, limited positive coping skills, and difficulty with social skills and communication (van der Kolk, 2003).

Although ACEs occur in all races, socioeconomic statuses (SES), and geographic regions; there is a higher prevalence of ACEs for racial minorities and economically disadvantaged groups (Forkey et al., n.d; Metzler, Merrick, Klevens, Ports, & Ford, 2017; Vásquez, Udo, Corsino, & Shaw, 2019). Marginalized populations and economically disadvantaged groups may lack access to resources needed to prevent adverse childhood experiences and address the negative outcomes of ACEs after they occur. Increasing education and awareness of the prevalence of adverse childhood experiences as well as the associated adult physical and mental health problems in high-risk populations could reduce the number of ACEs in future generations (Fortson et al., 2016). If ACEs cannot be prevented, the use of trauma-informed interventions or early interventions is shown to help mitigate the negative outcomes (Child Welfare Information Gateway, 2019).

Occupational therapists' (OT) role in addressing mental health and childhood trauma is still developing (Fraser, MacKenzie, Versnel, 2019). According to Anderson & Grinder (2017) in their article delineating OT's role in social-emotional learning (SEL); it is not yet clear if OT practitioners have reached their full potential in addressing SEL. However, social, sensory, and emotional skills in children are performance skills that are within the Occupational Therapy scope of practice (AOTA, 2020). Deficits in these performance skills can impact a child's performance in their occupations of education, play, social participation, rest and sleep, and leisure (AOTA, 2020). OT practitioner's role in addressing social-emotional and sensory needs are outlined in the *Occupational Therapy Practice Framework: Domain and Process* (4th ed.; AOTA, 2020). An occupational therapy directed Doctoral Capstone Experience (DCE) addressing the negative mental health implications of ACEs for children will add to the body of literature supporting the role of occupational therapists in preventing or preventing and addressing the negative outcomes linked to ACEs. This paper aims to describe the planning, development, and implementation of a community-based, emotional literacy program to improve the children's knowledge of their own emotions, how their emotions impact others, and coping mechanisms to aid in self-regulation. A synthesis of the current literature highlights the benefit of a community-based, occupational therapy-driven Doctoral Capstone Experience (DCE) addressing the potential negative effects of adverse childhood experiences.

Literature Review

Effect of ACEs and the Need to Address ACEs

Exposure to frequent or severe traumatic events in childhood can result in chronic activation of the body's stress response; this concept is termed toxic stress (Boparai et al., 2018). Early exposure to adversity has been linked to high levels of inflammation in adulthood (Bucci et al., 2016). Toxic stress increases the level of cortisol and inflammatory markers in the blood and can disrupt the neurological connections in the brain (Bucci et al., 2016). These disruptions can result in complex trauma that adversely impacts every aspect of development (CDC, 2020). Complex trauma can lead to various diseases, functional impairments, higher levels of dysregulation, social problems, the adoption of health risk behaviors, and can ultimately result in early death (CDC, 2020; Kissel et al., 2014; Felitti et al., 1998).

In a survey conducted across 25 states, 61% of adults reported experiencing at least one type of ACE, and 1 in 6 adults reported experiencing four or more types of ACEs (CDC, 2020). The American Academy of Pediatrics (AAP) is urging scientists and practitioners to address early adversity, given the high prevalence of ACEs and negative outcomes linked to an accumulation of ACEs (Boparai et al., 2018). In response, scientists and practitioners have successfully developed interventions that target cortisol outcomes in hopes of regulating a child's response to stress (Boparai et al., 2018). Another approach is the use of trauma-informed interventions or early interventions is shown to help mitigate the negative outcomes (Child Welfare Information Gateway, 2019). There are also efforts to prevent child abuse and neglect. Efforts include approaches to help strengthen economic supports to families, change social norms to

support parents and positive parenting, provide quality care and education early in life, enhance parenting skills to promote healthy child development, and intervene to lessen harms and prevent future risk (CDC, 2020; Fortson et al., 2016).

ACEs in Marginalized populations and Households with Low- Income or in Poverty

Accumulation of adverse experiences can have negative adult mental, physical, and emotional outcomes and can affect more than 60% of adults (Felitti et al., 1998; see also CDC, 2020; Forkey et al., n.d). Adverse childhood experiences occur across races, SES, and geographic regions; however, there is a higher prevalence of ACEs for racial minorities and economically disadvantaged groups (Forkey et al., n.d; Metzler, Merrick, Klevens, Ports, &, Ford, 2017; Vásquez, Udo, Corsino, & Shaw, 2019). Living in under-resourced, racially segregated neighborhoods, frequently moving, and experiencing food insecurity can result in toxic stress (CDC, 2020). Additionally, marginalized groups are more likely to experience traumatic events as a result of sociopolitical or community violence throughout their lives (Koepen et al., 2017).

In comparison to their higher-income peers, children living in low-income households tend to experience a greater number of ACEs (Wade et al., 2014). However, increased access to various types of therapy and wellness programming for populations at-risk of experiencing ACEs may mitigate the negative outcomes linked to adverse childhood experiences (Forkey et al., n.d).

In a study assessing the association between ACEs during childhood and holistic well-being in early adulthood for a low-income urban cohort, individuals who experienced more ACEs were significantly more likely to experience poor outcomes (Giovanelli, Renyolds, Mond, & Suh-Ruu-Ou, 2016). ACEs can have an even greater negative

impact on health and well-being if the body's stress response is not buffered by a strong, supportive relationship from an adult (Kerker, 2015). Parents' who have experienced adverse childhood experiences can demonstrate diminished parenting capacity or unfit responses to their children (AAP, 2014; Steele et al., 2016). The parents' past trauma may result in physiological changes to their stress response system, resulting in maladaptive responses to additional stressors, like the daily challenges of parenting (AAP, 2014; Steele et al., 2016). Problematic parenting behaviors can be perpetuated by the increased chance of social risk factors, mental health issues, and adoption of risky behaviors linked to ACEs (AAP, 2014; Campbell, Walker, & Egede, 2016; Felitti et al., 1998; Steele et al., 2016). A community-based, emotional literacy program to promote the health and wellness of elementary school-aged children may help mitigate the effects of toxic stress on their young adult and adult lives.

Mental Health Promotion to Combat Effects of ACEs

Mental health promotion programs are considered one of the most effective ways to promote health within a school environment (Tominey, O'Bryon, Rivers, Shapses, 2017). Additionally, emotional literacy is the ability to identify, understand, and respond to emotions in oneself and others in a healthy manner (Joseph & Strain, 2003). Children who have a strong understanding of emotional literacy are less likely to engage in fighting, are less impulsive, more focused, have greater academic achievement, and have more positive relationships (Joseph & Strain, 2003). These children are also generally healthier and able to tolerate and address frustration in a healthier manner (Joseph & Strain, 2003). The positive outcomes of a strong understanding of emotional literacy may result in increased resilience in these children.

As a result, they may be more equipped to build relationships and engage in learning using their acquired emotional literacy to negate the negative effects that ACEs can have on engagement in education and maintaining positive relationships.

There is a lack of literature supporting the role of occupational therapists in developing mental health programs to address the negative outcomes associated with an accumulation of ACEs. Future studies assessing the role of occupational therapy in addressing ACEs are needed. An occupational therapy directed Doctoral Capstone Project (DCE) addressing the negative mental health implications of ACEs for children who may have experienced ACEs will add to the body of literature supporting the role of occupational therapists in preventing or preventing and addressing the negative outcomes linked to ACEs.

Theoretical Framework

The occupation-based models (OBMs), the KAWA Model and Ecology of Human Performance (EHP); along with the Psychodynamic frame of reference (FOR), and Daniel Goleman's Theory of Emotional Intelligence will guide professional reasoning and program development throughout the DCE (see Figure 1).

The KAWA Model

The KAWA model depicts life as a river flow. According to the model, at times, events or experiences in life can impede the flow of or narrow the width of the river (Teoh & Iwama, 2015). These events or experiences are represented as rocks or driftwood within the model. Potential adverse childhood experiences may represent the rocks for marginalized populations. Rocks can disrupt or weaken the river flow, which

thereby impacts a person's engagement in his or her occupations. Driftwood can either block, negative experience, or enhance river flow through an individual's personal assets (Teoh & Iwama, 2015). If a person has positive personal assets, an occupational therapist can utilize them to enhance river flow and serve as motivation for the individual in his or her recovery. Personal assets may come in the form of love from a family member, support from a community member, a trusted friend, and/or positive influences. Each of these factors can build resilience in an individual and potentially lessen the negative effects of ACEs.

Ecology of Human Performance. The EHP model emphasizes a preventative, health-promotional, and rehabilitative approach (Cole & Tufano, 2008). This OBM's preventative focus aligns with the preventative role of occupational therapists with individuals who have experienced ACEs. The preventative and health-promotional foci of the EHP will each guide the purpose of the program for the young children. The aim is to enhance the child's wellness and provide them with positive experiences to help mitigate the effects of toxic stress in their adult lives.

Psychodynamic Frame of Reference. Adverse childhood experiences can also impact mental health and cognition throughout the lifespan (Jones, Nurius, Song, & Fleming, 2018; Karatekin, 2018). The Psychodynamic FOR applies to the potential conflict individuals in this population experience as a result of negative experiences in his or her childhood (Cole & Tufano, 2008). Occupational therapists can use this FOR as a set of guidelines to analyze and explore the impacts of the individual's childhood conflicts on his or her overall well-being and occupational performance.

Daniel Goleman's Theory of Emotional Intelligence. In conjunction with the Psychodynamic FOR, Daniel Goleman's Theory of Emotional Intelligence takes a psychological approach. Daniel Goleman posits that there are five components of emotional intelligence: self-awareness, self-regulation, internal motivation, empathy, and social skills (Goleman, 2005). These five components of emotional intelligence will be used to guide the structure and contents of the emotional literacy program. The model EHP and the Psychodynamic FOR, and Daniel Goleman's Theory of Emotional Intelligence will all guide the approach of the DCE and ensure a holistic view of the population.

Methods

Project Development

Project Design. The culmination of this 14-week Doctoral Capstone project is an implementable, occupational therapy driven, emotional literacy program for children at a local community center aimed to improve the children's knowledge of their own emotions, how their emotions impact others, and coping mechanisms to aid in self-regulation. The needs assessment, program development, and pre-assessment were completed in the first two weeks of the DCE. Program implementation began on week three and continued through week 9. There are six total program sessions, with one session completed each week of program implementation. The sixth session served to review the content from the five previous sessions and answer participant questions. Weeks 10 through 14 were dedicated to programming evaluation and educating the

Before and After Care Program directors and educators on program implementation and sustainability.

Site Profile and Target Population. The target population is elementary-aged children from marginalized populations who may have experienced adverse childhood experiences. For the initial implementation, four children in 2nd grade served as the participants of the six-session program. The four children were chosen based upon age and availability to participate in the program. Flanner House is a site that would benefit from the implementation of an emotional literacy program for their elementary-aged children. Flanner House is a community center that primarily serves the population within the Northwest area of Indianapolis. The demographics of individuals served at Flanner house are 96% African American, 3% Multi-racial, 1% White, with 80% being single women with children (D. White, personal communication, 2021). This area is challenged with a population where 27% of its residents' complete high school and only 18% attend some college (D. White, personal communication, 2021). The Flanner House functions “to support, advocate for and empower individuals, children and families by applying educational, social and economic resources that move members of the community towards stabilization, and self-sufficiency” (Cosby, n.d.). The Flanner House Before and After Care Program is an educational resource for elementary school-aged children, ages 5-12, in the surrounding area. The Before and After Care Program aims to provide a “quality, developmentally appropriate, childcare environment” (Cosby, n.d.).

Needs Assessment. The needs assessment was conducted through unstructured, face-to-face interviews, secondary data, and direct observation. A portion of the needs assessment was conducted with Debra White, the Deputy Director of the Flanner House,

through a face-to-face interview. She provided information regarding the demographics of the population who utilizes the Flanner House, key informants to contact within the Flanner House, strengths and resources the Flanner House has to offer, and a general idea of the programs offered in the Before and After Care Program.

Two Occupational Therapy Doctoral Capstone students who are also at the site are addressing the needs of the staff and the children in the Child Development Center. Therefore, Ms. White expressed the need for an occupational therapy-driven program in the Before and After Care Program, the department in the Flanner House whose needs have not yet been addressed. According to Ms. White, the educators and teachers in the program have expressed concern that many of the children display behavioral issues including impulsivity and difficulty with emotional regulation. During an interview with Sheddric Crawford, Youth Director of the Before and After Care program, Mr. Crawford communicated that several children are unable to self-regulate when in an emotionally heightened state. In children, an accumulation of toxic stress can manifest as behavioral issues that may disrupt their ability to maintain relationships and engage in learning (Kerker et al., 2015).

Secondary data including specific population demographics, housing, employment, crime, and health statistics of the surrounding area supplements the information acquired from the interviews with Debra White and Mr. Crawford. One hundred percent to 200% of the families that utilize the Flanner House are below the poverty level, 97% unemployed or underemployed, 92% rent or are technically homeless, 62% utilize public transportation or walk, 69% have a negative net income and net worth, and 88% have a credit score under 600 (D. White, personal communication, 2021).

Direct observations of the children in the Before and After Care Program occurred in two settings, 1) during E-Learning, and 2) during their free time. Using a jottings method, brief sentences describing important events, the children's behaviors, and their conversations were recorded in a table format. These observations were used to supplement both the needs assessment and program efficacy.

After speaking to both Ms. White and Mr. Crawford, reviewing secondary data, and completing direct observations, the program developer determined that the children would benefit from an emotional literacy program to address their mental wellness through increasing their understanding of emotional intelligence and literacy. Through the programming offered within the Before and After Care, the children's physical, life skills, and career education needs are addressed. However, there is a gap in their education regarding health, specifically mental health education regarding emotional literacy.

Program Description

Emotional Literacy Program for Elementary Aged Children. The program developer used each of the five components of Daniel Goldman's theory of emotional intelligence as a basis for each of the five main sessions of the program. Sessions 1-5 discuss self-awareness, self-regulation, internal motivation, empathy, and social skills; respectively. Each session was structured using an adapted version of the Seven-Step Format for Group Leadership outlined by Cole (2005), 1) Introduction, 2) Activity, 3) Sharing, 4) Processing, 5) Generalizing, 6) Application, and 7) Summary. Materials and activities for each session of the program were found through existing literature and resources. Sessions took place in a quiet room at the Flanner House with the program

developer leading the sessions and facilitating discussion. Each session begins with a review of terms, concepts, and activities completed in previous sessions and is completed with questions that foster the participants to process, generalize, and apply the information they have learned in the session.

The first session introduced the terms occupational therapy, emotional literacy, and self-awareness in laymen's terms appropriate for second graders. The activities included a self-awareness worksheet and an activity termed "Big Brain, Little Brain: 'Flipping your Lid'" (Siegel & Bryson, 2012). The purpose of the self-awareness worksheet is to urge the participants to reflect on their strengths and things they may struggle with. The "Flipping your Lid" activity uses the hand and fingers as a model of the brain to describe the flight or fight response that occurs in our brains and the importance of using calming strategies when in these heightened states.

The second session introduced the term self-regulation. The activity introduced concepts from Zones of Regulation, a cognitive-behavioral approach created by Kuypers (2011). The purpose of the Zones of Regulation activity is to introduce the participants to methods they can use to regulate their needs, emotions, and impulses healthily. This session included posters depicting the emotions they may feel in each zone and strategies they can use to calm themselves down, a worksheet encouraging the participants to draw and reflect on their current emotions, and ended with an activity using sensory toys as a calming strategy. The sensory toys included items such as a sensory bin and fidgets.

The third session introduced the term internal motivation. The activity included creating a Growth Mindset Flipbook to improve their understanding of two mindsets, growth and fixed (Tobin, 2017). The purpose of this session is to present the concept that

individuals can continue gaining knowledge and growing if they work hard versus believing that they are incapable of improving.

The fourth session introduced the terms empathy and compassion. The activity included viewing an animated video titled “Tye, Try Again”, a resource provided by The Compassion Project (The Compassion Project, 2021). The video together with the included questions assisted the participants in reflection regarding how the characters in the video might feel and what they may need to feel better. Additionally, the fourth session included a written activity provided by The Compassion Project urging the children to reflect on the emotions an individual may feel in a given situation (The Compassion Project, 2021). Together these activities aimed to foster theory of mind.

To promote the development of social skills in the participants, the fifth session included educational concepts and activities explaining what it means to be a good friend and skills used when learning how to share. The activity included viewing a video titled “Sharing and Taking Turns” (MazerellaMediaHD, 2019) with reflection and discussion questions throughout to promote information processing.

The sixth session served to reinforced terms, concepts, and skills acquired in previous sessions and to answer participant questions. The culminating activity was an emotional responses bingo game created by Socially Skilled Kids (n.d.) to actively review the information.

The goal of this program is to promote the health and wellness of elementary school-aged children through sessions aimed to improve their self-awareness, self-regulation, internal motivation, empathy, and social skills. The objectives include accurately defining the components of emotional intelligence to the children and

supplying the teachers and staff with the tools and resources to improve the children's emotional literacy.

Program Implementation

The program implementation began by first collaborating with the director and educators of the Before and After Care Program to determine the best time to disseminate the information to the children. One session was conducted each week beginning on week three of the 14-week Doctoral Capstone Experience. This allowed time for flexibility if the COVID-19 pandemic prevented a session from occurring on a given week.

Additionally, weekly sessions allowed time for program evaluation and to ensure program sustainability. The specific day of each session was dependent upon if the children were present at the Flanner House and if time allowed. The contents of the program will remain with the staff at the Flanner House so they can continue the implementation with the other children on site.

Program Outcome

The Goal Attainment Scale (GAS) in conjunction with a client satisfaction survey were used to determine program implementation efficacy. The GAS is an individualized outcome measure that involves the selection of goals and scaling of selected goals to measure patient-centered outcomes and program efficacy concurrently (Kiresuk & Sherman, 1968). To evaluate program effectiveness, Goal Attainment Scaling measured the participant's acquisition of terms and skills introduced in each program session using a 5-point scale (see Appendix A). The GAS was administered before and after program implementation and completed by the Youth Director on behalf of the 4 participants. Scores from the pre-and post-program implementation will be compared to determine

program efficacy. Client satisfaction with program design, implementation, and effectiveness was assessed using a 7-item, 5-point Likert scale program satisfaction survey, ranging from 1= not at all satisfied to 5 = extremely satisfied (see Appendix B). The clients had the opportunity to provide open-ended feedback on the program at the end of the survey. Participant interviews were also conducted three times during program implementation to gather qualitative data to measure participant responses to program sessions. Participant answers to the following questions were recorded, transcribed, coded, and thematized. Questions were developed to assess the program's effectiveness in helping participants process, generalize, and apply learned information.

- How did you feel while completing this activity?
- What is something new that you learned?
- What did you find most challenging about today's activity?
- How can you use what you have learned?

Questions were reframed with the help of the Youth Director if children did not understand a particular question.

Ethical Considerations

As determined by the Institutional Review Board (IRB) of the University of Indianapolis, implementation of the emotional literacy program was not considered research. However, participants and participant caregivers were informed of program objectives and given an informed consent form. By signing the form, participants and participant's caregivers understood that they could withdraw from the program at any time and that they were participating voluntarily. All data collected was stored in a locked cabinet, with only access by the program developer. All information collected

from surveys, assessments, and interviews were de-identified with a code by the program developer to protect confidentiality and privacy. All information was shredded following program completion.

Results

The desired outcome of this program was an increase in understanding of the skills related to self-awareness, self-regulation, internal motivation, empathy, and compassion by program participants.

Participant Information

Three of four participants participated in all six emotional literacy program sessions over six weeks. Out of the four participants, one was not present for four of the six sessions due to scheduling conflicts. The Goal Attainment Scale outcome measured was administered by the program developer and completed by the Youth Director for three of the four participants. Baseline scores were measured for all four participants, however, achieved scores were only measured for the three participants who were present for all six sessions. Participant interviews were completed with three of four participants to measure program efficacy.

Data Analysis

Total GAS scores were calculated using the following equation:

$$Overall\ GAS = 50 + \frac{10 \sum(w_i x_i)}{\sqrt{(0.7 \sum w_i^2 + 0.3(\sum w_i)^2)}}$$

w_i = the weight assigned to the i th goal

x_i = the numerical value achieved (between -2 and $+2$)

ρ = the expected correlation of the goal scales (normally 0.3)

Goal importance and difficulty were determined by the program developer on a scale of 0-3, with 0 = not at all, 1 = a little, 2 = moderately, and 3 = very. All goals were rated with the importance value of 2. Goals 1-3 were rated with a difficulty of 2 and goals 4-5 were rated with a difficulty of 3 (see Table 1).

Quantitative Results

GAS Scores. The baseline total GAS score of all five GAS goals for participants one through four were 23.8, 27.5, 20.0, and 27.5 respectively (see Table 2). Achieved scores for participants one through three were 73.7, 70.0, and 47.5, respectively (see Table 2). The change was calculated by finding the difference between the achieved scores and the baseline scores. All three participants showed an increase in their total GAS score following program completion (see Figure 1). Each of the three participants also showed a positive change in baseline and achieved scores for each goal.

Qualitative Results

Program Satisfaction Survey. The program satisfaction survey was completed by the Youth Director following program completion. Survey items 1, 2, 6, and 7 were rated 5/5, while items 3 – 5 were rated 4/5. The Youth Director was extremely satisfied with the program developer's knowledge of program materials, program materials and resources provided to staff, the structure of individual sessions, and the program overall. The Youth Director was very satisfied with the activities conducted in Sessions 1-6, the duration of the program, and the structure of the program. Mr. Crawford

suggested that “an older group would be more ideal”. He stated that the program, “Worked out well, but there was some immaturity from the youth”.

Participant Interviews. Following completion of participant interviews, answers were transcribed, coded, and thematized. The following overall program themes were found: Positive Participant Reactions, Difficulty with Written Tasks and Attention to Task, and Remembering Visual/Kinesthetic Activities.

Positive Participant Reactions. When participants were asked “How did you feel while completing this activity” in regards to each session activity, participants responded that they felt happy. When asked to explain why they felt happy one child responded, “I liked playing in the beans, it made me feel calm”, in reference to the sensory bin the children were able to explore in session 2 of the program. Another participant expressed that they felt happy during the writing activity because “I know how to write my letters and I know how to write neatly”.

Difficulty with Written Tasks and Attention to Task. While one participant enjoyed the writing activities, the other two participants expressed that the writing portions of the activities were the most challenging. Participants also expressed that they had difficulty attending to the educational concepts portions of the sessions.

Remembering Visual/Kinesthetic Activities. When participants were asked if they learned something new they initially responded by visually and verbally

explaining the brain, hand model from the first session, and the zones of regulation from the second session. When asked how they will use what they have learned, two participants responded by explaining that they would “use the tools in the “toolbox”” if they were in the yellow, red, or blue zones. They further explained that they would take a deep breath, get a drink of water, or talk to an adult if they were feeling angry or frustrated. Another participant explained a scenario when they might see their friend displaying behaviors consistent with the red zone. They relayed that would help their friend by sharing with them or suggesting that they take deep breaths.

Discussion

The purpose of the occupational therapy driven, emotional literacy program at the Flanner House was to combat ACE-related negative outcomes by improving the children’s knowledge of their own emotions, how their emotions impact others, and coping mechanisms to aid in self-regulation. After reviewing the literature, the program developer found that ACE’s are prevalent in all populations, but highly prevalent in marginalized and economically disadvantaged populations (Forkey et al., n.d; Metzler, Merrick, Klevens, Ports, &, Ford, 2017; Vásquez, Udo, Corsino, & Shaw, 2019). The trauma resulting from ACE’s can manifest as behavioral and social-emotional difficulties in children. Difficulties in these areas can impact children’s participation in their occupations such as social participation, education, play, rest and sleep, and leisure. Mental health programs addressing emotional literacy in children have been shown to increase resilience in children. As a result, the children are less likely to engage in

fighting, less impulsive, more focused, have greater academic achievement, and more positive relationships (Joseph & Strain, 2003). The program developer theorized that elementary-aged children within a marginalized population and who live in an economically disadvantaged area within Indianapolis would benefit from an emotional literacy program.

The current capstone experience supported results previously found from the implementation of an emotional literacy program. Participants showed an increased ability to demonstrate an understanding of skills related to self-awareness, self-regulation, internal motivation, empathy, and social skills as indicated by the increase in achieved GAS scores. The ability to recognize and apply these skills can aid in the development of resilience in children. As a result, when they are approached with situations that incite the flight, fight, or freeze response, they can use their acquired self-awareness to utilize learned strategies such as taking deep breaths or drinking water to aid in self-regulation. Moreover, the participants' gains in empathy and social skills will support the development of meaningful relationships with friends and caregivers to further reinforce resilience.

Implications for Occupational Therapy

The positive results of the emotional literacy program provide preliminary support for the role of Occupational Therapy in addressing social-emotional development in elementary-aged children from marginalized populations who may have experienced ACE's. Furthermore, the findings of this capstone experience support the efficacy of an occupational therapy-driven emotional literacy program in a community setting. An Occupational Therapists' unique ability to consider how a persons' mental functions, past

trauma, and current environment impact their occupational performance warrants occupational therapy services to address or prevent ACE-related negative outcomes. Moreover, continued education for occupational therapists on the impacts of adverse childhood events on marginalized populations specifically is warranted.

Limitations and Recommendations

Post reflection of the program presented the program developer with potential limitations that may have impacted program efficacy. First, program contents including educational concepts and activities may not have been the “just right challenge” for the participants. As a result, participants may have lacked a full understanding of program contents. It is suggested then, that future program developers emphasize developing age-appropriate content for the participants.

Second, participant interviews were conducted three times throughout program implementation. As a result, two weeks may have passed before participants were asked questions regarding a specific session. It is recommended that future program developers aim to ask questions regarding each session within the few days following the session to receive more accurate and detailed responses to provide more robust qualitative data.

Third, the program developer was unable to work with staff directly to promote program sustainability due to COVID-19 restrictions during the last weeks of the DCE. It is suggested that future program developers incorporate additional sessions to educate staff on the program’s purpose, as well as, sustainability of the program.

Conclusion

There is a need to address and mitigate ACE-related negative outcomes in children from marginalized and economically disadvantaged groups. Addressing how

ACE's and complex trauma impacts a child's participation in their occupations is within Occupational Therapy's scope of practice. It is our duty as practitioners to continue educating ourselves on the effects of ACE's on marginalized populations. With this education and increased understanding, we can prevent and address ACEs through community-based, emotional literacy programs; community education; and parental education.

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Table 1

GAS Goals Importance, Difficulty, and Weight

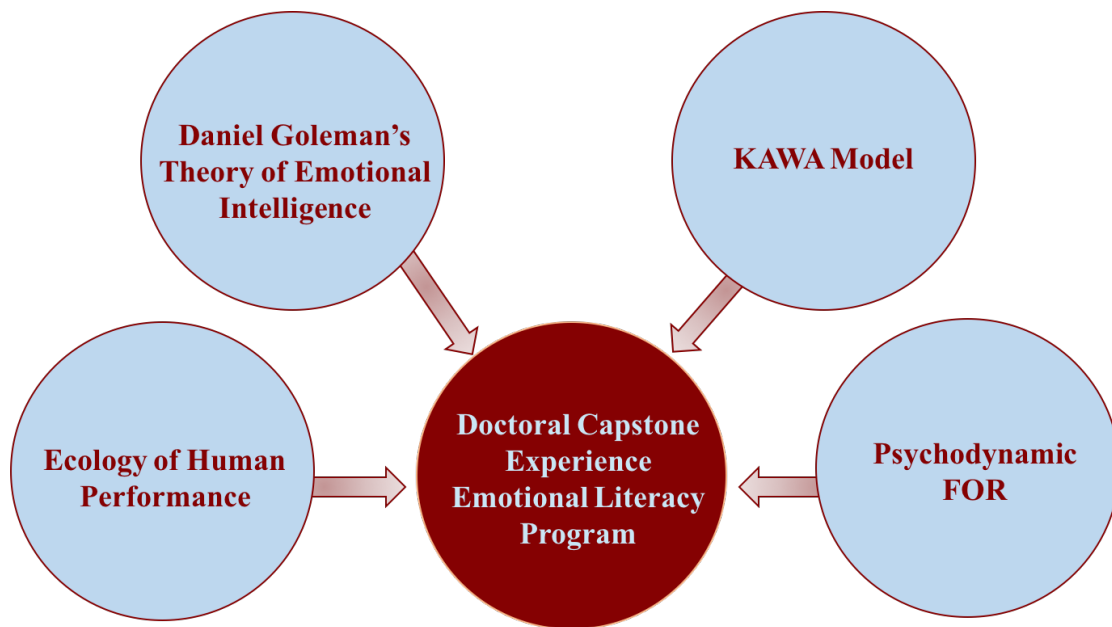
Goals	Importance	Difficulty	Weight (w_i)
1	2	2	4
2	2	2	4
3	2	2	4
4	2	3	9
5	2	3	9

Table 2

Participant Baseline vs. Achieved Total GAS Scores for Goals 1-5

Participant	Baseline	Achieved	Change
1	23.8	73.7	49.9
2	27.5	70.0	42.4
3	20.0	47.5	27.5
4	27.5	—	—

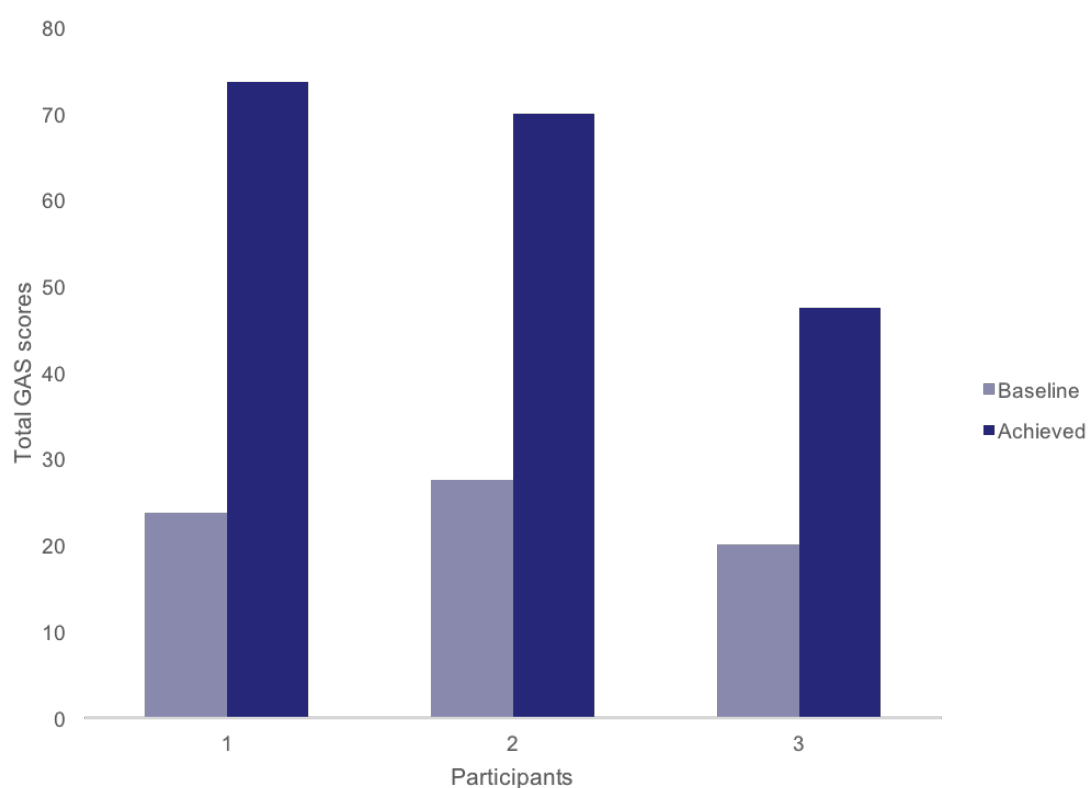
Figure 1.

Professional Reasoning Diagram

Note. The occupation – based models (OBMs), Kawa Model and Ecology of Human Performance (EHP); along with the Psychodynamic frame of reference (FOR), and Daniel Goleman's Theory of Emotional Intelligence will guide professional reasoning and program development throughout the DCE.

Figure 2.

Participant Baseline and Achieved Total GAS Scores



Note. Participant Baseline and Achieved Goal Attainment Scale Scores. The x-axis includes participants 1-3. The y-axis displays total GAS scores. The light blue bars represent scores prior to program completion and the dark blue bars represent scores post program implementation.

Appendix A

Level of Attainment	Goal 1	Goal 2	Goal 3	Goal 4	Goal 5
-2 Much less than expected	The child does not recognize the term self-awareness.	The child does not recognize the term self-regulation.	The child does not recognize the term internal motivation.	The child does not recognize the term empathy.	The child does not recognize the term social skills.
-1 Somewhat less than expected	The child can recognize the term self-awareness and attempt to define it.	The child can recognize the term self-regulation and attempt to define it.	The child can recognize the term internal motivation and attempt to define it.	The child can recognize the term empathy and attempt to define it.	The child can recognize the term social skills and attempt to define it.
0 Expected level of outcome	The child can accurately describe what it means to be self-aware.	The child can accurately describe the term self-regulation.	The child can accurately define and describe the term internal motivation.	The child can accurately define and describe the term empathy.	The child can accurately define and describe the term social skills.
+1 Somewhat more than expected	The child can describe and provide personal examples of self-awareness.	The child can describe and provide personal examples of self-regulation.	The child can describe and provide personal examples of internal motivation.	The child can describe and provide personal examples of empathy.	The child can describe and provide personal examples of social skills.
+2 Much more than expected	The child can demonstrate self-awareness in interactions with classmates and staff.	The child can demonstrate self-regulation in interactions with classmates and staff.	The child can demonstrate internal motivation in interactions with classmates and staff.	The child can demonstrate empathy in interactions with classmates and staff.	The child can demonstrate social skills in interactions with classmates and staff.

Appendix B

Please rate below on a scale of 1-5 (1 being not satisfied – 5 being very satisfied) your satisfaction with the following:

1. Instructors knowledge of program materials

1 2 3 4 5

2. Provided program materials and resources

1 2 3 4 5

3. Activities conducted in Sessions 1-6

1 2 3 4 5

4. Duration of Program (6 weeks)

1 2 3 4 5

5. Structure of program

1 2 3 4 5

6. Structure of individual sessions

1 2 3 4 5

7. Overall program satisfaction

1 2 3 4 5

8. Do you have any suggestions /comments that will help improve the program?
