ABSTRACT

UTILIZING PLAY TO HELP ADOPTED CHILDREN
FORM HEALTHY ATTACHMENTS

by Coleen Michelle Sallot

Thousands of children are adopted both domestically and internationally every year. Many of these children come from institutional or foster care and suffer from complex trauma, abuse and neglect, which negatively affect their transition and attachment with their adoptive families (Van Der Kolk, 2005). If left untreated, these effects can last into adulthood, impairing a person's ability to form secure relationships throughout their lives (White, 2014). The purpose of this research is to explore the use of virtual play—especially play therapy—to help adopted children in Pennsylvania work through these past traumas so they can form healthy attachments with their adoptive families. As a result, treating complex trauma in these children requires treatment that addresses the whole child: 1) safety, 2) relationships and 3) self-regulation and management (Purvis, 2013). Up until this point, most interventions are behavioral-based and revolve around the caregiver and family, such as attachment parenting and Trust-Based Relational Intervention (TBRI) training (Chobhthaigh, 2019). However, few studies focus on adopted children and their use of play, and no studies have been published that revolve around the use of virtual play to treat adopted children with trauma.

UTILIZING PLAY TO HELP ADOPTED CHILDREN FORM HEALTHY ATTACHMENTS

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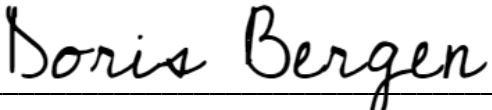

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Dedication

I would like to dedicate this thesis to my children, who have my heart and eternal love.
I am blessed to be your mother, and I am grateful you're in my life.

To my friends, Jill, Jane and Yvonne. Together we have embarked on the adoption journey,
and while it may be a difficult one, your friendship has helped me stay true and strong.

And finally, to my dear friend Jeremy, who showed me a different perspective
of the adoption journey. I wish you well no matter where you might be.

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Chapter 1:

Introduction

The adoption process is a long journey, often spanning several years. For the adoptive parents, its fruition is a joyous occasion, akin to a dream that is finally coming true. However, due to the circumstances by which a child becomes available for adoption, this is actually a frightening and traumatic time. Unfortunately, the path that leads to adoption is one of profound loss. These children have literally lost everything: loss of their parents and family, loss of their home, loss of their friends and community, loss of their innocence, and loss of the life that was supposed to be. Unlike a physical death, the losses adopted children face often are ambiguous, where they may be unknown or confusing due to the physical absence of their birth family (Kim, 2009). To make matters worse, many of these children have also been neglected and abused, significantly impairing their ability to trust and connect with people, especially adults (Hinman, 2016).

As an adoptive parent of two children from Bulgaria and China, I have witnessed the challenges of adoption first-hand. I first visited my son in November 2010 at the orphanage in Pazardjik, a small town surrounded by mountains, about 1 ½ hours from the Bulgarian capital of Sofia. It was a baby orphanage with 88 children under the age of three, yet when I entered it was eerily quiet. I was directed to a visiting room, full of toys and a crib. When I met him for the first time, he literally did not move for two hours. Concerned, I came up with a game, where I put a stuffed animal on my head and caused it to fall in his lap. And finally, his big black eyes looked at me—and he smiled.

At the time, I didn't realize I had stumbled upon a little bit of pixie dust—a little piece of magic—called play. That one little act made him feel safe enough to open his heart to me—even if only for a moment. I found out later that he had been tied to his crib for most of his life. He came home in a completely shut-down state and literally took an entire year to "wake up." I have employed every intervention possible: speech therapy, physical therapy, occupational therapy, emotional support, learning support, private schools, counseling, and medication. And yet it wasn't until his eighth surgery went awry—a full five years after he came home—that he finally looked me in the eye and told me he loved me. At that moment, I realized that without attachment, a child is just a leaf blowing in the wind—never belonging, never anchored, never actually feeling human. It is absolutely essential to their well-being.

THE PROBLEM

Unfortunately, my son is not alone in this regard. After his adoption, I reached out to other parents who had adopted from Bulgaria, and overwhelmingly my story is commonplace. Some had adopted from orphanages where, even at the age of 10, children literally languished in cribs for years, while others told stories of mind-numbing conditions where children slept on a dirt floor with no indoor sanitation. Here in the United States, one family talked about how their boys were chained in a locked closet for much of their lives, while others struggled with the impacts of their children being born addicted due to maternal substance use.

Of the thousands of children who are adopted both domestically and internationally every year, many come from institutional or foster care and may have repeatedly experienced trauma, abuse and neglect, which negatively affect their transition and attachment with their adoptive families (Van Der Kolk, 2005). Children are removed from their homes for a variety of reasons, including abandonment, abuse, neglect, parental incarceration or death (Craft, 2020). It is also not uncommon for a child to have lived in multiple foster homes while in state care (Boys & Girls Aid, 2020).

Regardless of why this has occurred, adopted children experience disrupted attachment due to the transference of attachment from the birth parents and caregivers to the adoptive parents (Hafetz, 2015), creating a sense of ambiguous loss that is confusing and sometimes impossible to rectify (Itzkowitz, 2020). In fact, often described as a primal wound, these experiences may negatively affect attachment for much of their lives (Kittlitz, 2010).

PURPOSE

Using the lens of attachment, the purpose for this research is to help adopted children in Pennsylvania work through these past traumas so they can form healthy attachments with their adoptive families. I chose Pennsylvania due to the support I have available, which includes access to a social worker, training opportunities, networking opportunities with other adoptive parents, and funds to pay for camps, activities and child care. It is conceivable, however, that the results of this study would be applicable to most any family who has adopted.

METHODOLOGY

This study aims to explore the following research question:

> *How might we utilize play to help adopted children in Pennsylvania work through past traumas so that they can form healthy attachments with their adoptive families?*

By better understanding the challenges adopted children and their families face, and investigating the use of play—especially the use of role play in play therapy as well as virtual play—this research project explores new and innovative ideas to harness the make-believe world through virtual role play, storytelling and story-acting. By doing so, these vulnerable children will be able to communicate, express themselves and work through difficult subjects, ultimately allowing them to heal and grow (Taheri, 2015).

A constructivist approach coordinating social science and design research methods were used to address the problem at a deeper level. Specifically, this project focused on the following objectives, which are framed by the design process.

In the research phase of the process, I determined the challenges adoptive parents face with their children and any interventions they have employed to help. From there, I worked to collect their personal thoughts on their play habits and experiences, along with the play habits and experiences of their adopted children. At the same time, I explored the play therapy space to better understand the role of play therapists and the tools they employ in their practice. Studies have shown that when paired with a strong family and stable home environment, play therapy can be especially beneficial for adopted children who have experienced repeated trauma, abuse and neglect (White, 2014).

In the design phase of the process, I used my research to discover new ways of using technology for virtual role play, storytelling and story-acting, and create a design intervention in the form of a proof-of-concept for a therapeutic video game which meets appropriate clinical standards and outcomes.

In the testing phase of the process, the goal was to determine the viability of the game within the therapeutic space. I showed three participants a design presentation describing the concept of the game, as well as a fully-functioning high-fidelity prototype. Two were play therapists and the other was a social worker who worked with adopted children.

SIGNIFICANCE

Up until this point, most interventions are behavioral-based and revolve around the caregiver and family, such as attachment parenting and Trust-Based Relational Intervention (TBRI) training (Chobhthaigh, 2019). There has also been a variety of research studies on adoption and/or foster care, as well as the use of play therapy to help children with trauma. However, few studies focus on adopted children and their use of play, and no studies have been published that revolve around the use of virtual play to treat adopted children with trauma.

DEFINITION OF TERMS

Adoption - the act or process of establishing a legal relationship between a child and a parent other than the child's biological parent, thereby entrusting the designated adult with responsibility for raising the child (Dictionary.com). This includes domestic adoption, where children are adopted at or close to the time of birth; foster care adoption, where they're adopted from the foster care system; and international adoption, where children are adopted internationally and brought to the United States. (Dictionary.com)

Attachment - An emotional bond between an infant or toddler and primary caregiver, a strong bond being vital for the child's normal behavioral and social development; an enduring emotional bond that develops between one adult and another in an intimate relationship. (Dictionary.com)

Executive Functioning - A set of cognitive skills used to control one's thoughts and behavior, including the ability to plan, focus attention, remember instructions, and juggle multiple tasks successfully. (Harvard University, 2020)

Foster Care - The raising or supervision of foster children, as orphans or delinquents, in an institution, group home, or private home, usually arranged through a government or social-service agency that provides remuneration for expenses. (Dictionary.com)

IEP - Individualized Education Program: a document that details a plan for the education of a student with a disability who is eligible for special education. (Dictionary.com)

Play Therapy - a form of psychotherapy used chiefly with children, in which patients act out situations in play that are expressive of their emotional problems, conflicts, etc. (Dictionary.com)

Trauma - the response to a deeply distressing or disturbing event that overwhelms an individual's ability to cope, causes feelings of helplessness, diminishes their sense of self and their ability to feel a full range of emotions and experiences (Integrated Listening Systems, 2020).

LIMITATIONS

Assumptions made regarding this research are that participants have answered all questions honestly and thoroughly and that participants had a sincere interest in participating in the research and did not have any other motives.

Limitations of the research include the focus on adoptive families specifically receiving services through Bethany Christian Services of Western Pennsylvania; the limited number of interview participants due to time constraints and the length of the study; methodology constraints due to the inability to follow up with survey participants and conduct prototype testing with child participants; and limited prototyping capabilities due to limited time and lack of funding.

In my role as both researcher and participant, I acknowledge my own biases about the adoption process and how that may have played a role in my analysis of the results.

Delimitations of this research include families in Pennsylvania with adopted children between the ages of 5 and 14 and have reached out for help and interventions with their children. This location and demographic were targeted due to the availability and access to participants.

CONCLUSION

Parenting an adopted child—especially children who have experienced repeated trauma, abuse and neglect—is not simple. Even when they find their "forever family," and for all intents and purposes are safe—they are fed, have a roof over their head, and are treated with love and respect—they still do not feel safe, a concept called Felt Safety (Purvis, 2013). Because of their experiences, these children often do not have the developmental building blocks to heal and grow, thus hindering their ongoing attachment with their new family (Karen Purvis Institute of Child Development, 2013).

This project tackles this wicked problem by focusing both on the challenges adoptive families face as well as children's play habits and experiences. From there, this project aims to use that research to discover new ways of using technology for virtual role play, storytelling and story-acting within the play therapy space, allowing adopted children with trauma to create their own small world and negotiate their role within it. In the end, the preeminent goal is to provide both play therapists and the children they serve with the tools adopted children need to heal, grow and accept themselves as loved and loveable within an adopted family.

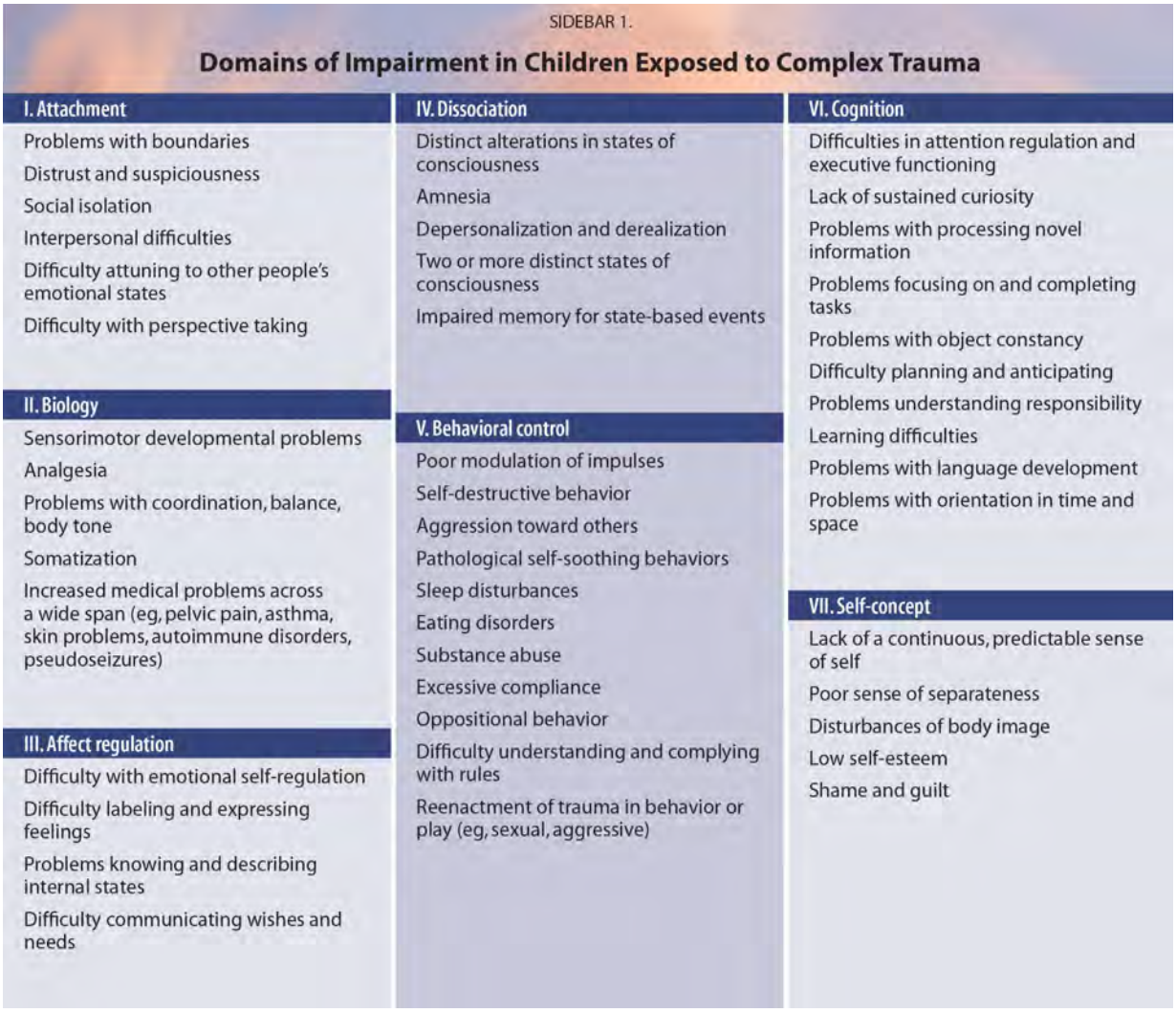
Chapter 2:

Literature Review

Unfortunately, situations like what I experienced with my son are common for adopted children, also called complex developmental trauma. Psychiatrist Van Der Kolk described complex trauma as “the experience of multiple, chronic and prolonged, developmentally adverse traumatic events, most often of an interpersonal nature (eg, sexual or physical abuse, war, community violence) and early-life onset.” (Van Der Kolk, 2005) For example, a child may have been taken away from their birth family due to abuse and neglect and then lived in a series of foster homes before arriving to live with their forever family.

As shown by the chart on the following page, complex trauma can have a debilitating effect on these children, and attachment problems are only one of these issues. Complex trauma can also result in developmental delays, affect self-regulation (the ability to express feelings and communicate wants and needs), result in dissociative behavior, affect behavioral control (the ability to calm oneself down and oppositional behavior), cause cognitive delays, and affect one’s self-concept (Cook, 2005).

According to child trauma expert Dave Ziegler, trauma literally reshapes a child's brain. When trauma occurs, the human brain shifts all its resources toward responding to the perceived threat, thus enabling what is frequently referred to as the fight or flight response. Whereas adults have the ability to shut this off, children find themselves stuck in this behavior pattern (Ziegler, 2008). Unfortunately, this behavior often continues even after adoption, as the child still does not feel safe, a concept known as "Felt Safety" (Smith, 2012). Because of their experiences, young people may not have the developmental building blocks to heal past wounds and grow, thus hindering their ongoing attachment with their adoptive family (Karen Purvis Institute of Child Development, 2013).



SIDEBAR 1.

Domains of Impairment in Children Exposed to Complex Trauma

I. Attachment
- Problems with boundaries
- Distrust and suspiciousness
- Social isolation
- Interpersonal difficulties
- Difficulty attuning to other people's emotional states
- Difficulty with perspective taking

II. Biology
- Sensorimotor developmental problems
- Analgesia
- Problems with coordination, balance, body tone
- Somatization
- Increased medical problems across a wide span (eg, pelvic pain, asthma, skin problems, autoimmune disorders, pseudoseizures)

III. Affect regulation
- Difficulty with emotional self-regulation
- Difficulty labeling and expressing feelings
- Problems knowing and describing internal states
- Difficulty communicating wishes and needs

IV. Dissociation
- Distinct alterations in states of consciousness
- Amnesia
- Depersonalization and derealization
- Two or more distinct states of consciousness
- Impaired memory for state-based events

V. Behavioral control
- Poor modulation of impulses
- Self-destructive behavior
- Aggression toward others
- Pathological self-soothing behaviors
- Sleep disturbances
- Eating disorders
- Substance abuse
- Excessive compliance
- Oppositional behavior
- Difficulty understanding and complying with rules
- Reenactment of trauma in behavior or play (eg, sexual, aggressive)

VI. Cognition
- Difficulties in attention regulation and executive functioning
- Lack of sustained curiosity
- Problems with processing novel information
- Problems focusing on and completing tasks
- Problems with object constancy
- Difficulty planning and anticipating
- Problems understanding responsibility
- Learning difficulties
- Problems with language development
- Problems with orientation in time and space

VII. Self-concept
- Lack of a continuous, predictable sense of self
- Poor sense of separateness
- Disturbances of body image
- Low self-esteem
- Shame and guilt

Figure 2.1 - Domains of impairment in children exposed to complex trauma (National Child Traumatic Stress Network (NCTSN), 2005)

As a result, treating complex trauma in these children requires treatment that addresses the whole child: 1) safety, 2) relationships and 3) self-regulation and management (Purvis, 2013). This paradigm closely follows what Abraham Maslow described in his Hierarchy of Needs, which theorized that in order for humans to achieve self-actualization, they first need to ensure their physiological, security, social and esteem needs are met (Cherry, 2020). Simply put, humans need to feel safe, secure, and loved.

THE EVOLUTIONARY THEORY OF ATTACHMENT

British psychologist John Bowlby is often considered to be the father of the **Evolutionary Theory of Attachment**. He is said to have described attachment as "a lasting psychological connectedness between human beings." (Cherry, 2018). Bowlby first became interested in child development as a volunteer at a school for special needs children. Those experiences prompted him to focus on the impact of family life on a child's emotional and mental well-being (Ackerman, 2018).

Prior to Bowlby's time, attachment was viewed as a learned behavior, merely the result of a child-caregiver relationship (Ackerman, 2018). Bowlby, however, viewed attachment as something more evolutionary: that children are born with "an innate drive to form attachments with caregivers." (Cherry, 2018) Children then use these attachments to form a "secure base" to explore the world around them (Karyn Purvis Institute of Child Development).

He became particularly interested in understanding the distress children go through when they are separated from their primary caregiver. When he realized that feedings did not reduce their anxiety, he came to the conclusion that a child's early attachments are critical to their success throughout their life (Cherry, 2018).

Attachment Styles

Mary Ainsworth, a student of Bowlby's, took this research to a completely different level utilizing a technique called "Strange Situations." In a supervised, laboratory setting, mother and child are placed in a playroom. A stranger then comes into the room and the mother leaves for three minutes then returns. Afterwards, both the mother and stranger leave, leaving the child completely alone, also for three minutes. Then finally, both the stranger and then the mother return (Bretherton, 1992).

In analyzing children's reactions, Ainsworth realized that different children had different reactions upon their reunion with their mothers. While some were happy and excited to see their mothers, others were angry and refused to be comforted. Some children pretended their mothers didn't exist even though they had been noticeably affected by her absence. And yet others displayed a wide range of confusing and conflicting emotions and behaviors (Bretherton, 1992). This led Ainsworth, with refinements, to categorize these reactions into four distinct styles of attachment, based on a child's life experiences (Cherry, 2018). She then theorized that children use these attachment styles as a model for how they approach, view and react to future relationships (Karyn Purvis Institute of Child Development, 2013).

CAREGIVER BEHAVIOR AND INFANT ATTACHMENT STRATEGIES

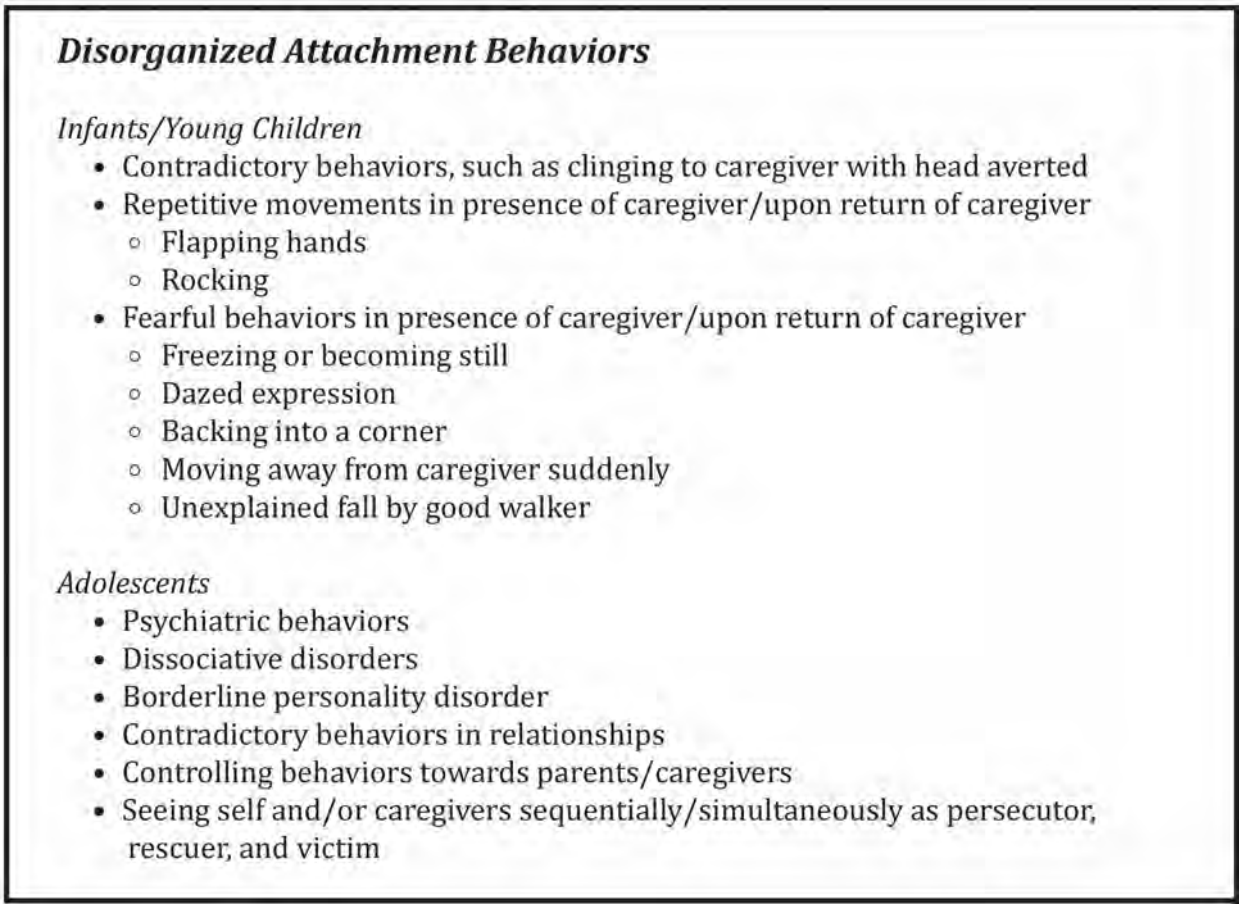
Attachment Style	History with Caregiver	Infant's Strategy when Upset
Secure	Caregiver consistently responds when infant is upset	Cry; infant knows that caregiver will soothe

Anxious-Avoidant	Caregiver does not respond when infant is upset	Infant has learned not to cry to get needs met
Anxious-Ambivalent	Caregiver inconsistently responds when infant is upset	Infant cries (and is difficult to soothe) in an effort to stay in caregiver's direct attention
Disorganized	Caregiver is frightening/ traumatic	Infant has no clear strategy when upset

Figure 2.2 - TBRI Caregiver Training (Karen Purvis Institute of Child Development, 2013)

Adoption And Attachment

Studies on attachment styles and adopted children are particularly relevant. In fact, research has shown that nearly 80 percent of adopted children who have been exposed to repeated trauma, abuse and neglect experience a disorganized attachment (Firestone, 2013).



Disorganized Attachment Behaviors

Infants/Young Children

- Contradictory behaviors, such as clinging to caregiver with head averted
- Repetitive movements in presence of caregiver/upon return of caregiver
  - Flapping hands
  - Rocking
- Fearful behaviors in presence of caregiver/upon return of caregiver
  - Freezing or becoming still
  - Dazed expression
  - Backing into a corner
  - Moving away from caregiver suddenly
  - Unexplained fall by good walker

Adolescents

- Psychiatric behaviors
- Dissociative disorders
- Borderline personality disorder
- Contradictory behaviors in relationships
- Controlling behaviors towards parents/caregivers
- Seeing self and/or caregivers sequentially/simultaneously as persecutor, rescuer, and victim

Figure 2.3 - TBRI Caregiver Training (Karen Purvis Institute of Child Development, 2013)

This process is exactly the opposite of what happens in a securely-attached parent-child relationship. The following diagram reflects a secure attachment between a parent and child (Montgomery, 2013), which Bowlby and Ainsworth believed is based not on meeting actual physical needs but on the caregiving associated with meeting those needs (Cherry, 2018).

Figure 2.4 - Normal attachment cycle (Cherry, 2018)

Children are removed from their homes for a variety of reasons, including physical abuse, sexual abuse, neglect, medical neglect, parental incarceration, abandonment, truancy, death of a parent, voluntary placement, juvenile offenses, or runaways (Craft, 2020). In addition to the loss of the primary caregiver, it is also not uncommon for a child to live in four different foster homes during their first year (Boys & Girls Aid, 2020) and spend at least a year and a half in state care (Children's Rights, 2020).

Regardless of why this has occurred, adopted children experience disrupted attachment due to the transference of attachment from the birth parents and caregivers to the adoptive parents (Hafetz, 2015). Studies have shown this is the case even for children who were adopted as infants (Hinman, 2016). Ambiguous loss is often described as the most devastating, in that it is unknown, confusing, and lacks any type of resolution. It is not uncommon for adopted children to continually ask questions about why their birth mothers "didn't want them" or "what did they do wrong?" They wonder if they have any birth siblings or if their birth mother thinks of them on their birthday (Itzkowitz, 2020). Often described as a primal wound, for some children, these experiences can negatively affect attachment for much of their lives (Kittlitz, 2010).

Attachment-Based Family Interventions

Up until this point, most interventions are behavioral-based and revolve around the caregiver and family. As you can see in the table on the next page, many different options are available. According to this analysis, the EA2 Tele-Intervention Programme, Child-Parent Relationship Therapy (CPRT), and both the onsite and web-based Trust-Based Relational Intervention (TBRI) caregiver training are associated with the highest positive outcomes. All are group-based, incorporate the use of video/live-streaming, and are based upon attachment theory, as well as the most current psychological research. Post-intervention results from these programs showed marked improvements in terms of adopted children's

Table 1. Overview of included studies.

Author (Year) Country	Population		Design		Intervention	Outcomes
	Participants	Child Characteristics	Control	Follow-up		Child outcome measure
Allen, Timmer, and Urquiza (2014) USA	Pre-adoptive and adoptive parent–child dyads ($N = 85$ dyads)	Age range: 2–8 years ($M = 4.45$ years) Gender: 51% male	Pre-, mid- and post-intervention No control group	No follow-up	PCIT Duration: 14 to 20 weeks Theoretical foundation: social learning, behavioural and attachment theories	CBCL, ECBI
Baker (2012) USA	Adoptive parent–child dyads ($N = 15$ dyads)	Age range: 23–62 months ($M = 42$ months) Gender: 60% male	Pre- and post-intervention Randomly assigned delayed-intervention comparison group	No follow-up	EA2 Tele-Intervention Programme Duration: 6 weeks Theoretical foundation: emotional availability, attachment, systems and transactional theories	CBCL, EA2-CS, AQS
Benjamin (2010) USA	Pre-adoptive and adoptive parents ($N = 60$)	Age range: 5–16 years ($M = 9.28$ years) Gender: 32% male	Pre- and post-intervention Non-randomised two interventions and waitlist control group	No follow-up	(1) BIPM (2) LLP Duration: 7 weeks Theoretical foundation: (1) biopsychosocial-based model, and attachment theory, (2) behavioural-based model	CBCL
Carnes-Holt (2010) USA	Pre-adoptive and adoptive parents ($N = 61$)	Age range: 2–10 years ($M = 5.7$ years) Gender: not reported	Randomised controlled trial: pre- and post-intervention Waitlist control group	No follow-up	CPRT Duration: 10 weeks Theoretical foundation: child-centred play therapy, child development, attachment theories and filial therapy model	CBCL
Colonnesi et al. (2013) The Netherlands	Adoptive families ($N = 20$)	Age range: 2–5 years ($M = 45.6$ months) Gender: 35% male	Pre- and post-intervention No control group	No follow-up	Basic trust: attachment-oriented intervention based on mind-mindedness in adoptive families Duration: approximately 3 months (eight sessions) Theoretical foundation: attachment and mind-mindedness theories	SDQ, AISI, AQS
Henderson, and Sargent (2005) UK	Adoptive parents ($N = 42$)	Age range: 35–140 months ($M = 84$ months) Gender: 47% male	Pre-intervention, post-intervention and follow-up No control group	1 year post-intervention	Modified 'Incredible Years' Basic Parent Programme Duration: 12 weeks Theoretical foundation: behavioural, social learning and attachment theories	SDQ
Juffer, Bakermans-Kranenburg, and van Ijzendoorn (2005) The Netherlands	Adoptive parents ($N = 130$) Follow-up: adoptive parents ($N = 147$)	Age range: 6 months ($M = 6$ months) Gender: 51% male	Non-randomised controlled trial: pre-intervention at 6 months, post-intervention at 12 months Two intervention and control groups	7 years: addition of post-test only control group	(1) Personal book, (2) personal book and video-feedback Duration: (1) 3 months, (2) three sessions of video-feedback Theoretical foundation: attachment theory	SSP Follow-up: CBCL
Opiola (2016) USA	Pre-adoptive and adoptive parents ($N = 49$)	Age range: 2.5–9 years ($M = 5.5$ years) Gender: 51% male	Randomised controlled trial: pre- and post-intervention Treatment-as-usual control group	No follow-up	CPRT Duration: 10 weeks + 2-hour pre-treatment session Theoretical foundation: child-centred play therapy, child development, attachment theories and filial therapy model	CBCL
Purvis et al. (2015) USA	Adoptive parents ($N = 96$)	Age range: 5–12 years ($M = 7.88$ years) Gender: 62.5% male	Pre- and post-intervention (2 weeks before/after) Randomly assigned control group	No follow-up	TBRI Duration: 4 days Theoretical foundation: trauma and attachment theories	SDQ, TSCYC
Razuri et al. (2016) USA	Adoptive parents ($N = 304$)	Age range: 5–12 years ($M = 8.15$ years) Gender: 50% male	Pre-intervention (2 weeks prior) and post-intervention (2 weeks after) Randomly assigned control group	No follow-up	Web-based TBRI Duration: online access to 18 learning modules for 30 days Theoretical foundation: trauma and attachment theories	SDQ, TSCYC
Rushton, Monck, Leese, McCrone, and Sharac (2010) UK	Adoptive parents ($N = 37$)	Age range: not reported (M = not reported) Gender: 46% male	Randomised controlled trial: pre-intervention, post-intervention and follow-up Two intervention and 'service as usual' control group	6 months post-intervention	(1) Cognitive Behavioural Programme, (2) Educational Programme Duration: approximately 12 weeks (10 sessions) Theoretical foundation: (1) cognitive behavioural theory, (2) not specified	SDQ, EFQ
Selwyn, del Tufo, and Frazer (2009) UK	Adoptive families ($N = 35$)	Age range: not reported ($M = 7.9$ years) Gender: not reported	Non-randomised controlled trial: pre-intervention, post-intervention and follow-up Non-randomised controlled group	5 months post-intervention	'It's a Piece of Cake?' Programme Duration: six modules (lasting approximately 5 hours each) Theoretical foundation: attachment theory	SDQ, EFR
Selwyn, Golding, Alper, Gurney-Smith, and Hewitt (2016) UK	Adoptive families ($N = 29$)	Age range: 18 months–17 years ($M = 3.57$ years) Gender: 51% male	Pre- and post-intervention No control group	No follow-up	Nurturing Attachments Group Work Programme Duration: 18 sessions weekly during term-time Theoretical foundation: DDP, neuroscience, child development, trauma and attachment theories	SDQ, AC-sf, CPRS-sf

Figure 2.5 - List of attachment-based behavioral interventions for adoptive families (Chobhthaigh, 2019)

emotional and behavioral functioning (Chobhthaigh, 2019). As for myself, during the summer of 2020, I participated in a web-based TBRI caregiver training program, which uses attachment as the foundation for parenting children from hard places (Karen Purvis Institute of Child Development, 2013). I found it insightful and helpful in how I view and interact with my own children.

In other, more longitudinal studies, researcher Jill Hodges examined the impact of attachment-based interventions on adopted children and their own attachment styles. Two years after coming home, studies showed most children had made good progress in attaching to their new family, and that avoidant/ambivalent attitudes and behaviors had decreased. At the same time, however, she noticed that indicators of attachment disorganization were largely unchanged, especially for children who were older at the time of their placement (Tang, 2018). These effects continued even years afterward, leading Hodges to believe that in spite of these children forming deep attachments with their families, they still carried lasting scars from their early traumas (Hodges, 1989).

Karen Purvis, the creator of TRBI, is a long-time advocate for what she calls helping children from hard places "find their voice." (Purvis, 2013) Other researchers call this "mentalization." (Weinberg, 2006). As infants, these children discovered that crying did them nothing. If they were dirty, hungry, sick, or frightened, they would cry and no one would come. And so, after a time, they stopped crying; they stopped voicing their wants and needs (Purvis, 2013).

Being adopted into a family does not change these behaviors. My son has been home for nine years now, and he still has extreme difficulty voicing his wants and needs. In essence, he learned early on that adults were not to be trusted and that he had to survive "on his own." This has resulted in poor behaviors and other strategies to get what he needs—lying, cheating, manipulation, and making demands—instead of simply asking. This includes speaking up for what he's lost (Purvis, 2013).

THE IMPORTANCE OF PLAY

Days after I picked up my daughter at the local Chinese government office, I went with her to visit the orphanage where she had spent the first three years of her life. Just as I had seen with my son, it was an eerie experience: instead of the sounds of the 800 children who made their home here, it was so quiet you could literally hear a pin drop. I had pictures of her on a colorful playground in the middle of the compound, yet it was clear she had never used any of it and did not know what it was for. In the end, she had never known the invigorating experience called play.

According to researchers Suomi and Harlow, childlike play is critical to a child's well-being and how they view and interact with the world around them (Suomi, 1971). Russian psychiatrist Lev Vygotsky defined the importance of play this way: "In play a child is always above his average age, above his daily behavior; in play it is as though he were a head taller than himself. As in the focus of a magnifying glass, play contains all developmental tendencies in a condensed form; in play it is as though the child were trying to jump above the level of his normal behavior." (Bodrova, 2015) Heralded as the father of play theory, Vygotsky believed that play—especially in social settings—was essential to helping children stretch their skills and grow (Cherry, 2019).

While adults frequently refer to play as recreation, to a child it is the lifeblood of who they are (Ziegler, 2009). Using their creativity and imagination, children can feel larger than life by pretending they're on a pirate ship looking for buried treasure or they're superheroes stopping an out-of-control train. By having their stuffed lamb by their side, they can gain the confidence to master difficult situations and to try new things. By playing tag and hide-and-seek with their friends, they learn how to work together as a group, to share and negotiate, and how to stand up for themselves. Most of all, child-driven play puts the child in the driver's seat, where they have the opportunity to explore and figure out this thing we call life (Ginsburg, 2007).

Play has also been shown to have unique healing properties for children from hard places—even in the midst of dismal situations. In 1999, a group of social workers partnered with a Romanian orphanage to create a playroom for their most vulnerable children. It was a horrifying scene, where children were tied to their beds, severely undernourished, and filthy from a lack of care. They appeared to be years younger, with poor gross and fine motor skills. They were emotionless with bizarre behaviors, showed little to no meaningful social interaction skills, and had no sense of language, individuality or cognitive development (Brown, 2014).

After removing these barriers—albeit temporarily—social workers set out to create a space where the children would feel free to explore and engage in true childlike play. Their approach revolved around the holistic view that "children develop while they are playing." The results were stunning. Within four weeks, they were interacting and initiating contact with their peers and were seen engaging in pretend play with their toys. Within three months, they had gained weight and fine motor skills. And within nine months, their use of language was so advanced that the social workers needed assistance from their Romanian caretakers to understand them (Brown, 2014).

USING PLAY TO HELP CHILDREN WITH COMPLEX TRAUMA

When children have been exposed to trauma, even when they aren't in such a dismal situation as the Romanian children, their ability to engage in true, childlike play is severely diminished. Having their brains stuck in a state of traumatic stress makes it impossible for them to engage in the imaginative and expressive healing power of play (Ziegler, 2009).

To help, social workers often use a counseling technique called play therapy to help children incapable of verbalizing and expressing themselves to communicate and work through difficult subjects using objects and toys (Taheri, 2015). According to researcher Garry Landreth, "in the play therapy experience, toys are like the child's words, and play is the child's language." (Bray, 2018)

Play therapists are specially trained and licensed by the Association for Play Therapy (A4PT, 2020). On its face, a play therapist's office looks much like a preschool classroom, with a colorful decorum and an array of objects, toys, dolls, puppets, art supplies, sensory objects such as sand and water, games, and other supplies.

The ways in which play therapy is conducted can vary according to the needs of the child. Therapy can be directed or non-directed by a professional, or they can include the caregiver (White, 2014). In most

sessions, especially at the beginning, play therapists provide a warm, gentle structure and function mostly as observers, letting the child be in charge of how things go. This is important, especially since many children from hard places have never experienced the true meaning of play. According to play therapist Nancy Cochran, "when children are given the chance to go on a journey of self-discovery, they come in and they find a unique voice within that room. Once they find their individual voice, they become more accepting of self. Not only that, but they embrace self." (Bray, 2018)

Over time, play therapy sessions become a safe space, a place where they feel they are in control and, in the end, feel comfortable to "say" those things they can't or won't say anywhere else. This is the first step toward true healing (Bray, 2018). Called the Negative Reaction phase, some children actually get worse during this time and become resistant to therapy (A4PT, 2020). This is why it is absolutely crucial that play therapy be rooted in attachment, with a strong family component, consistent structure, and a stable environment (Cranny, 2016).

After the Negative Reaction phase, the child enters the Growing phase, which is the most important and possibly the longest part of the process. During this time, they learn more about themselves and how to process what they've been through. Together with their play therapist and their adoptive parents, they learn how to resolve those feelings so they can live a more fulfilling life (A4PT, 2020).

Several studies have shown that play therapy can be a beneficial tool for these children, even for children diagnosed with reactive attachment disorder (RAD)—a serious mental health condition that manifests in severe emotional and social disturbances and impairs their ability to form secure relationships throughout their lives. When paired with a strong family and stable home environment, therapists noted that all the children showed marked improvement, both at school and at home (White, 2014).

MOVING PLAY THERAPY INTO THE DIGITAL REALM

In today's world of social distancing and virtual visits, using hands-on play is more difficult to conduct. This has required play therapists to rapidly explore how to make the shift from a hands-on environment to the digital world (Stone, 2020).

For now, it seems they have been borrowing ideas from a close cousin: computer-based cognitive behavioral therapy (CCBT). CCBT uses gaming and interactive techniques to help specific groups of people work through behavioral problems and disorders, with marked success. For example, studies featuring adolescents diagnosed with depression or generalized anxiety disorder showed marked improvement in their symptoms after using CCBT (Ebert, 2015). In another instance, experiments that combined the use of a mobile gaming application with traditional therapy for children with anxiety disorders showed similar results (Pramana, 2018).

Having worked for many years as a designer for Magellan Health, a behavioral health company, I have personally worked on CCBT programs for depression, anxiety, stress management, and other mental health topics. However, these types of techniques are based on existing paradigms, which in my personal opinion makes them inadequate for today's virtual world. CCBT and other ideas like it come

from the old way of thinking—an attempt to take face-to-face therapy and move it into the online environment. Just as school teachers are learning that virtual teaching requires a different paradigm to enable children to learn, the same applies to play therapy.

In a space where children are accustomed to life on a screen, it is reasonable to wonder how we can shift play therapy into the virtual realm using more advanced technologies. Rather than using a behavioral health lens, it may be worth borrowing concepts from the educational sector.

Play-Based Learning

The idea of using play to facilitate learning is not a new concept. In fact, when you think about it, play therapists often emulate these principles in their own environments. Many classrooms use play to teach an array of topics and are organized around learning centers: they have dedicated spaces for math, blocks, science, art, dramatic play, sensory activities, and they even have a book nook (Arrow, 2019). Activities are very hands-on: children use blocks to build with and solve math problems, they use drawings and acting to tell stories, and they use a variety of materials to create science experiments (Arrow, 2019).

With the shift to online and hybrid learning, teachers have had to innovate to rethink how they teach. For the families I know, this typically consists of a combination of video conferences, assignments and online educational tools, such as Edgenuity, RazKids, PebbleGo, and Clever. In observing my own children, it's clear they don't like any of it, with the exception of Scholastic's BookFlix, where they can read books. Interestingly enough, their most favorite educational tool is Minecraft. They literally spend hours building things, solving puzzles, and working with their friends to tend to their worlds. When you think about it, it is the perfect digital space for play (Webster, 2020). Other favorites include games like Robolox and Fortnight and online learning platforms, such as ABCYa, Adventure Academy, ABCmouse, Toy Theater, and Scholastic Kids (Scully, 2020).

Another idea gaining traction is the virtual makerspace. Makerspaces are based on Seymour Papert's theories of constructivism and constructionism. They work off the premise that children learn best by observing and experiencing the world around them, where the act of play isn't simply the end result (i.e., learning center) but the method by which learning takes place (Makerspace for Education, 2020).

In Saint Louis, my children and I were able to experience a makerspace first-hand at the Magic House's MADE. In the Making space, my son created custom artwork on a laser printer, and my daughter experimented with knitting and sewing projects. In the Artists studio, they drew and painted pictures and created pottery on a pottery wheel. In the Designers lab, my son experimented with rockets and created a 3D figure using a 3D printer. And in the Entrepreneurs Marketplace, they built houses using thousands of lego pieces (Oldham, 2019).

With some thought, this idea can be reengineered to work In a virtual environment. Designed around the physical makerspace formula, teachers create digital centers around specific topics, such as art, construction activities, computer coding, engineering, design, music, reading, robotics and math.

Students can pick what activity they'd like to complete and some even have a group component (Huebner, 2020).

Critical Elements of Play-Based Activities

Play therapists tend to borrow heavily from the concept of play-based learning. For example, children may use sensory activities, such as bubbles, playdough, sand and water tables, to help them calm down. They may use a toy telephone, doll, or a puppet to role-play. Expressive arts, such as drawing, painting, music or dance, may help children to tell a story. Therapists may also use games, such as "Simon Says," Twister, or Candy Land, to talk about difficult subjects (Selva, 2017).

Creating a digital space that will retain the true spirit of play will require the integration of five critical elements (Vogel, 2017):

1. **Self-chosen.** Children need to have the freedom to choose from a variety of sensory, constructive, dramatic, gaming and functional activities, each of which has a therapeutic goal. This allows children to feel like they're in control yet in a way that benefits them.
2. **Enjoyable.** The activities that are available need to ensure that play is enjoyable, immersive and fun.
3. **Unstructured.** Play has no set rules or timelines. The child is in control of what happens, and how and when it happens.
4. **Process-oriented.** Contrary to traditional gaming, there is no end goal. There are no winners or losers. The play itself is what's important.
5. **Make-believe.** In the spirit of Vygotsky, play often includes story telling or pretend play. Activities need to allow children to create characters, to role-play, and to create stories, as well as to express themselves through art or music.

The goal is to create a safe space that will encourage children to explore while working through tough issues. Therapists can function as an observer and ask questions when necessary, but the child is in control as they move through the play therapy process.

In addition, virtual spaces need to allow children to progress at whatever developmental stage they are at, which is crucial considering many will struggle with developmental delays and act younger than their biological age (Purvis, 2013). According to developmental psychologist Jean Piaget, children undergo four different stages in their cognitive development (Cherry, 2020):

1. **Sensorimotor Stage** *(Birth to 2)* - Infants and toddlers mostly gain knowledge through sensory experiences and by manipulating objects.
2. **Preoperational Stage** *(2-7)* - Children are primarily concrete thinkers and tend to learn best through pretend play. Their language skills grow by leaps and bounds in this stage.
3. **Concrete Operational Stage** *(7-11)* - While still concrete and literal, children's thinking becomes more logical. They are more willing to explore how others think and feel, while at the same time recognizing their thoughts and emotions are unique to them.
4. **Formal Operational Stage** *(12 and up)* - Thinking abstractly is the hallmark of this stage.

Keeping these developmental differences in mind will help avoid situations where children will become frustrated or upset. The same would apply to any physical disabilities that would impact their ability to partake in the play therapy experience.

Digital Play-Based Platforms

Keeping these criteria in mind, the digital realm holds a lot of promise for children from hard places. When I watch my own children, I find myself surprised by how easily they pick things up, especially anything to do with touch or voice. Tablets allow them to use games and mobile applications without worrying about their fine-motor dexterity. Plus, they can easily link their devices so they can play together. As for Alexa, she's simply another household friend they can call out to for advice.

That said, examining popular play-based platforms might provide some good ideas on moving play therapy forward into the digital space.

Virtual Makerspaces

As mentioned before, the play therapy space is a sensory-rich environment with a wide variety of materials and activities for children to choose from. In order to conserve this paradigm, using a virtual makerspace may help. The example on the following page shows how schools have implemented virtual makerspaces in the real world.

Play therapists can cater the experience to each child based on their cognitive abilities and needs. This would allow children to freely explore while the play therapist observes via video and makes notes.

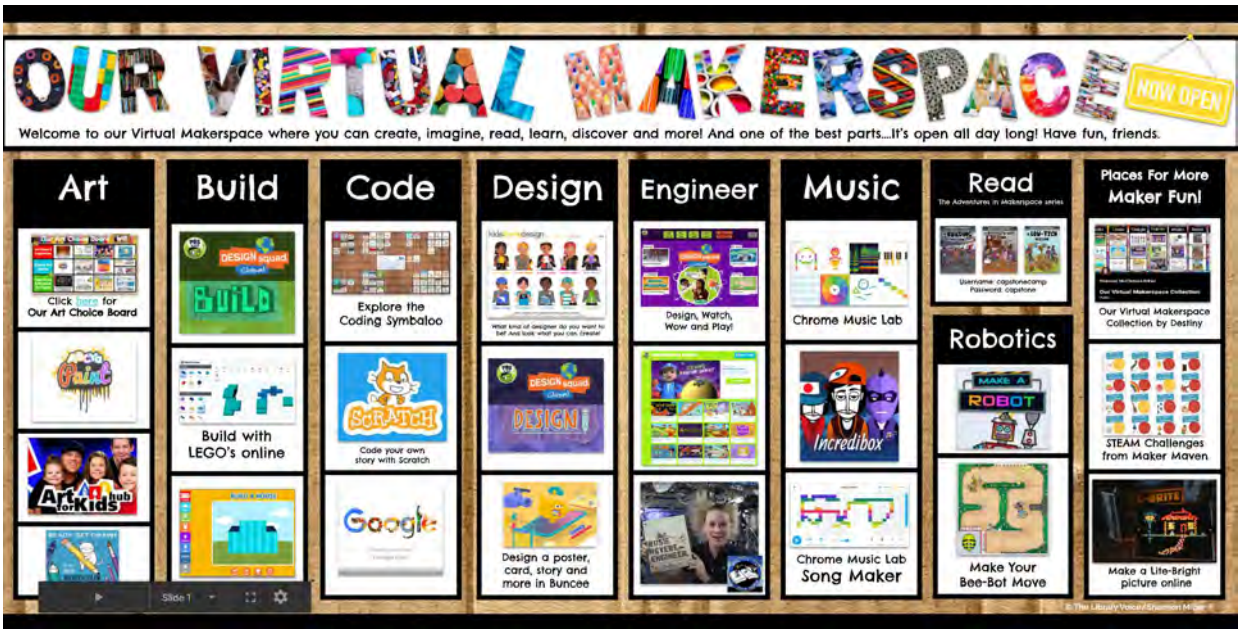


Figure 2.6 - Van Meter Community School Virtual Makerspace, Van Meter, Iowa

Gaming

Using gaming to similarly create a “makerspace” environment also has promise. Children have already been exposed to Minecraft, so translating this to the play therapy environment would not be very difficult. Roblox is another gaming option which is simple and fun yet lets children easily create and code their own games.

Figure 2.7 - Minecraft

Figure 2.8 - Roblox

Interactive Storytelling

In the true spirit of Vygotsky, creating a forum that allows children to tell their stories would be invaluable. A nice example of this is Night Zoo Keeper, which allows children to draw their own characters, who then take a journey with them through a series of storybook adventures. Children can choose a ready-made story or create their own.

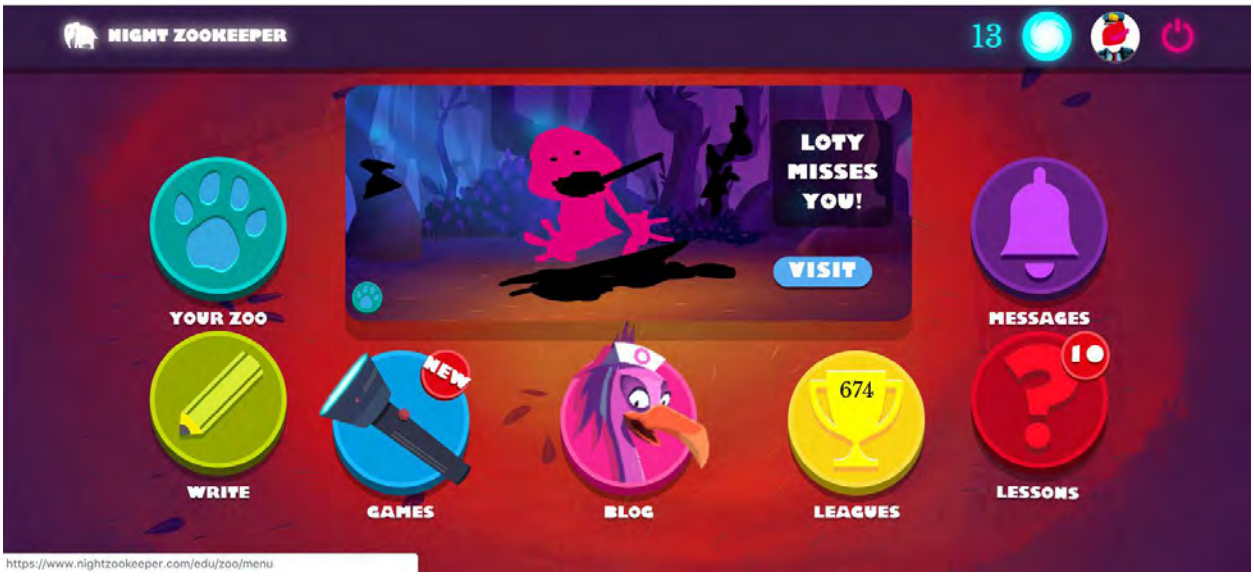


Figure 2.9 - Night ZooKeeper

Expressive Arts

There are a variety of online tools that allow children to share their stories with art and music. Children can paint with ABCYa, create virtual sand art, doodle on Toy Theater, and create their own masterpieces on Google's Music Lab.

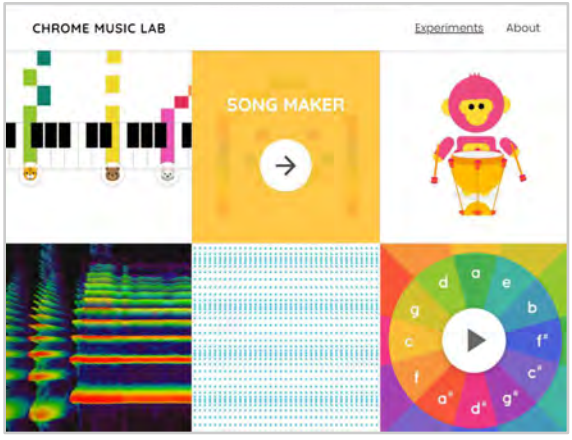


Figure 2.10 - Google Music Lab

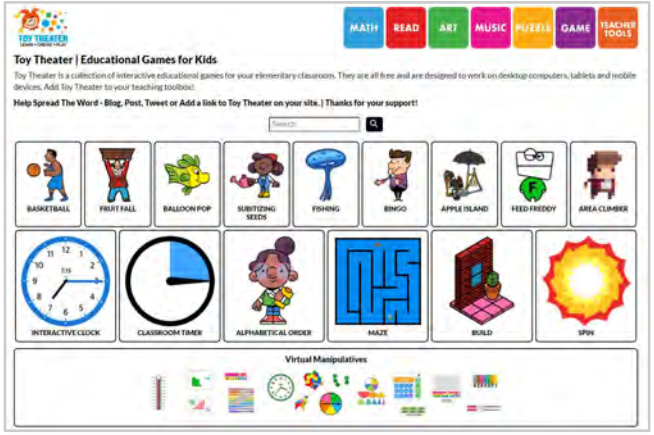


Figure 2.11 - Toy Theater

CONCLUSION

This review embarked on a comprehensive exploration of attachment and the problems adopted children face—often a result of complex trauma—in terms of forming deep, healthy attachments with their adoptive families. If left untreated, attachment problems can last into adulthood, impairing a person's ability to form secure relationships throughout their lives (White, 2014). But using play—especially play therapy—can help children work through these past traumas so they can heal and live a fulfilling life.

In today's world of social distancing and virtual visits, traditional play therapy needs to reinvent itself into the digital space. Instead of using older paradigms, such as computer-based cognitive behavioral therapy, play therapists may be better served by borrowing ideas from the education realm, such as virtual makerspaces, games like Minecraft and Roblox, interactive storytelling platforms such as Night ZooKeeper, and expressive creative platforms such as Toy Theater and Google's Music Lab. It may also be beneficial to explore new and innovative ideas specific to play therapy.

The next step is to better understand the connection between adoption, trauma and play. Is there a difference in how adopted children play? What does their play look like? Is there a relationship between a parent's view of play and the play environment they create for their children? And what impact does this have on therapeutic play and play therapy?

Chapter 3:

Methodology

This research project explored new and innovative ideas to harness the make-believe world through virtual role play, storytelling and story-acting, allowing adopted children with trauma to create their own small world and negotiate their role within it. By doing so, these vulnerable children will be able to communicate, express themselves and work through difficult subjects, ultimately allowing them to heal and grow (Taheri, 2015).

RESEARCH DESIGN

A constructivist approach coordinating social science and design research methods was used to address the problem at a deeper level. The research focused on inspecting the challenges adoptive parents face with their children and any interventions they have employed to help. From there, personal thoughts were collected on their play habits and experiences, along with the play habits and experiences of their adopted children.

Setting and Sample

This project specifically focused on families in Pennsylvania with adopted children between the ages of 5 and 14 and have reached out for help and interventions with their children.

In Pennsylvania, adoptive families can sign up for a program called the Pennsylvania Statewide Adoption and Permanency Network (SWAN), where they are partnered with a case manager and receive support and respite services (SWAN, 2021). For this project, I was able to partner with Bethany Christian Services of Western Pennsylvania to send out surveys to adoptive families who currently utilize their services. This included families who participate in Trust-Based Relational Intervention (TBRI) training as well as local adoption support groups for both parents and children.

The operation of the project included the following steps:

Phase 1 - Research

Primary research focused on analyzing, diagnosing and mapping out factors that affect the experience and transition of adopted children into their adoptive families, as well as detail the challenges these children have in engaging in true, child-like play. The goal was to illuminate previously invisible parts and relationships within the system and will also suggest the pivotal role of play therapists in this process.

Web-based surveys were distributed to adoptive families who have participated in adoption training or support groups. Adoptive families who wished to participate in further research were scheduled for either online or in-person interviews (Appendix). Quantitative questionnaires focused on demographic data and the unique challenges faced by adoptive families, while qualitative interviews focused on children's opportunities and abilities to engage in pretend and imaginative play, self-directed play, and play with others, as well as their use of comfort objects, favorite activities and toys, and methods to de-stress and calm down.

Interviews were also conducted with play therapists to better understand their process and the tools they employ in their practice. Questions focused on their personal experiences and methodology, as well as the challenges they have faced in accommodating a digital curriculum.

Human research training was required in order to conduct research. This included training on conducting research with children. Prior to beginning research, research materials were submitted to the Institutional Review Board (IRB) for approval.

Phase 2 - Design

In the design phase, research findings were translated and categorized into design opportunities. Using a co-design process, I worked hand-in-hand with a play therapist to analyze the research and understand the play therapy environment. Together, we brainstormed ideas and explored new and innovative ideas to harness the make-believe world through virtual role play, storytelling and story-acting. From there, I created a proof-of-concept in the form of a therapeutic video game which meets appropriate clinical standards and outcomes.

Phase 3 - Testing

In the testing phase, the goal was to determine the viability of the game within the therapeutic space. I showed three participants a design presentation describing the concept of the game, as well as a fully-functioning high-fidelity prototype. Two were play therapists and the other was a social worker who worked with adopted children. All interview instruments and questions are available in the Appendix. Testing results were analyzed for feasibility and to pinpoint next steps.

ONLINE SURVEY

A key part of the research consisted of sending out web-based surveys to people in the target groups to gather demographic data, evaluate the challenges adoptive parents face with their children, and recruit participants for interviews.

The survey was active from December 3, 2020 through January 14, 2021, and was built in SurveyMonkey to ensure responses were secure and anonymous. Participants were required to agree and consent prior to continuing. The survey consisted of 20 questions grouped into four categories.

Survey Question Categories

Information about you	Information about your child	Diagnoses and interventions	Use of play
Number of children	Child's gender	Child special needs and diagnoses	Child's relationship with comfort object
Number of adopted children	How long child has been home	Child behaviors and attitudes	Child's engagement in play
When they adopted their first child	Age at the time of adoption	Child services and interventions	Activities child is interested in
Age range of when they first adopted	Type of adoption	Parent education and support	Activities that help child calm down
Support network	Contributing factors to child's adoption		

Survey questions were reviewed by specialists in play-based learning and social work to make sure they were accurate and encompassed appropriate content.

Afterwards, participants were able to add comments or provide their information to participate in an interview. Personal information was provided on a second survey, separate from the questionnaire, in

order to maintain confidentiality. Survey instruments and questions can be viewed in the Appendix, or online.

SEMI-STRUCTURED INTERVIEWS

Six interviews were conducted with adoptive parents between December 22, 2020 and January 14, 2021. Interviews gathered qualitative data to collect the personal thoughts of adoptive parents on their play habits and experiences, along with the play habits and experiences of their adopted children. All interview instruments and questions can be found in the Appendix. Participants were recruited as part of the survey and then scheduled for in-person virtual interviews via Zoom. All interviews were recorded, transcribed and coded using Saldaña's Coding Manual for Qualitative Researchers (Saldaña, 2015).

Interview Question Themes

Parent play habits and experiences	**Child play habits and experiences**
Perception of play	Use of comfort objects
Parent play experiences	Ability to engage in play
Parent play styles	Child play styles (at time of adoption and current)
Parent-child play bonding experiences	Play activities (for fun, bonding, calming)
Play environment	Play with others vs independent/self-directed
Parental challenges	Child challenges

Questions focused on children's opportunities and abilities to engage in pretend and imaginative play, self-directed play, and play with others, as well as their use of comfort objects, favorite activities and toys, and methods to de-stress and calm down.

Prior to conducting parent interviews, three interviews were also conducted with play therapists to better understand the play therapy process, the impact of play therapy on children affected by trauma, and the tools they employ in their practice. Interview instruments and questions can be found in the Appendix. Questions focused on their personal experiences and methodology, as well as the challenges they have faced in accommodating a digital curriculum. Some of these insights, particularly around the use of play personalities, bonding activities, and the differences in how the manner of play can vary based on fun vs. stressful situations, were reflected in questions to parents.

Chapter 4:

Results & Findings

The research phase of this project consisted of two parts: first, evaluating the challenges adoptive families face with their children, and second, evaluating the effect of those challenges on children's' ability to play.

One thing I have noticed with my own children is that they don't seem to be able to play. My older, biological son is highly imaginative and comes up with all sorts of stories, but this seems difficult for his adopted brother and sister. They love Minecraft but according to experts such as Len Vygotsky, that's not technically classified as play (Cherry, 2019). As a result, the main goal of this research was to explore how we as parents and their therapists can use play to help our children work through their past traumas so they can settle in and enjoy us, their adoptive family.

FAMILY DEMOGRAPHICS

There were 46 participants in the study, six of whom participated in a semi-structured interview. Parents were assumed to focus on one child per survey. The majority of participants were from western Pennsylvania and had reached out to Bethany Christian Services of Western Pennsylvania for assistance with their children. Most had two or more children, with between one and three children being adopted.

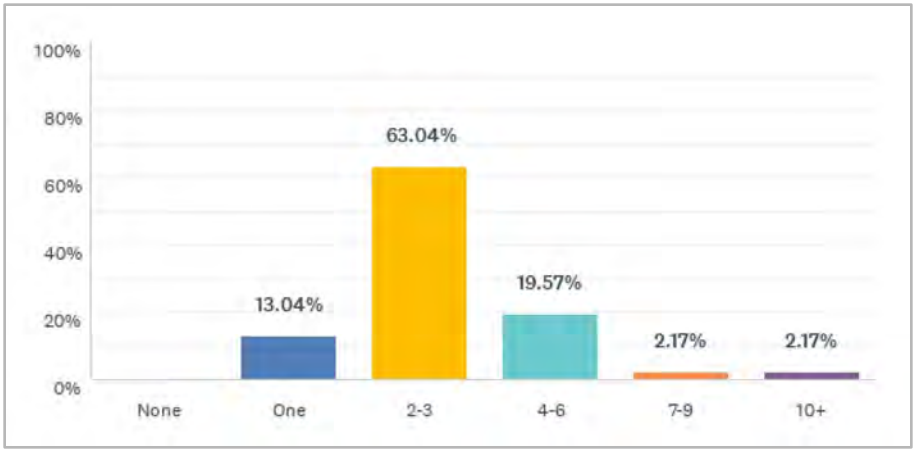


Figure 4.1 - Total number of children

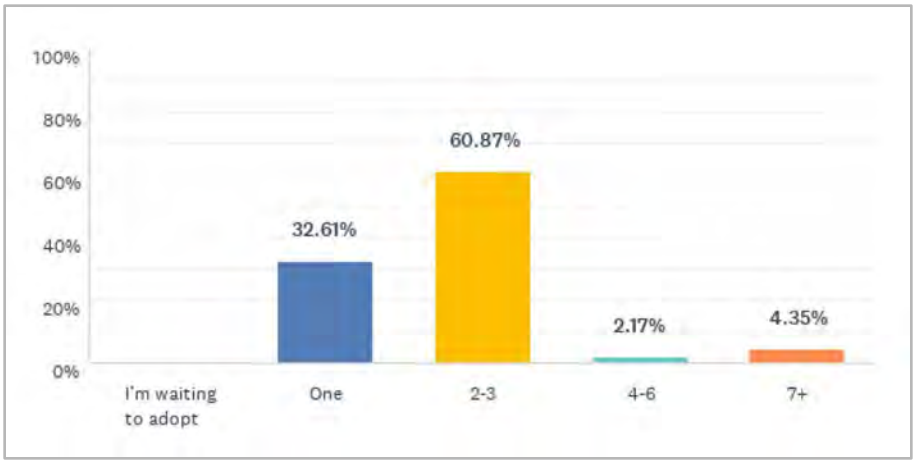


Figure 4.2 - Total number of adopted children

Nearly 85 percent (n=46) of families had adopted their first child over five years ago, and over 75 percent were 44 years old or under at the time of adoption.

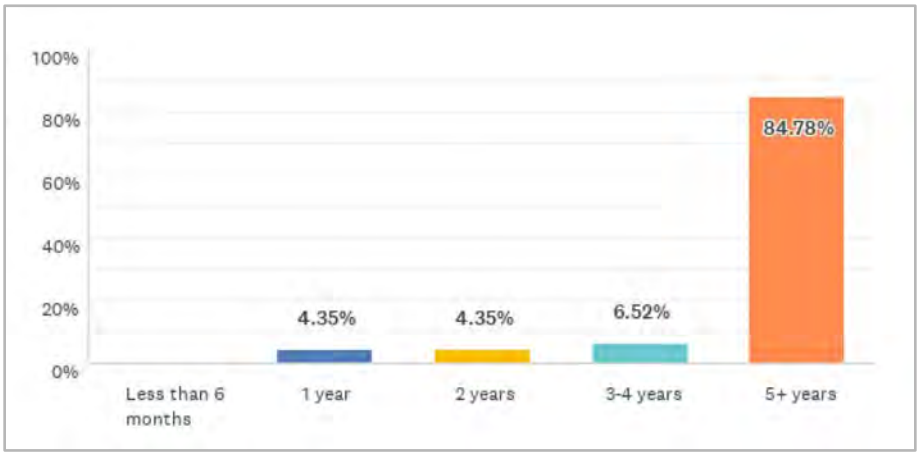


Figure 4.3 - Length of time since family's first adoption

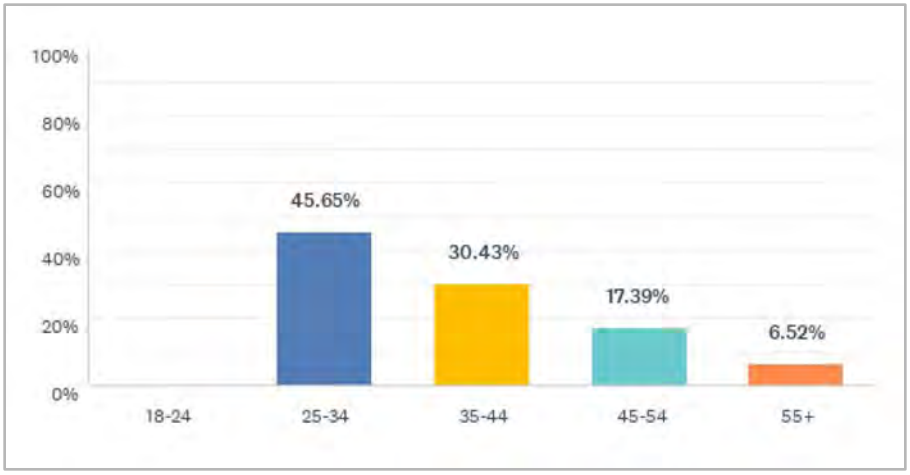


Figure 4.4 - Parental age range at time of first adoption

Nearly 85 percent (n=46) of adoptive families are married. They also receive support from their parents, friends, church and siblings.

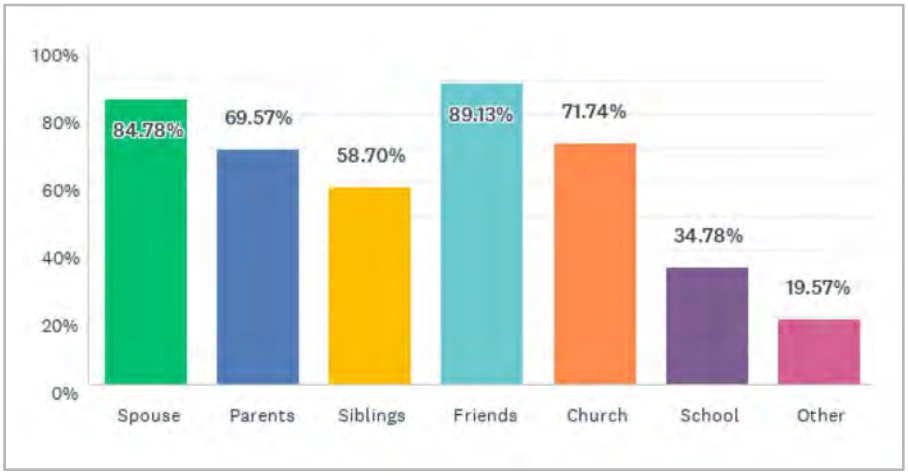


Figure 4.5 - Parental support system

CHILD DEMOGRAPHICS

Adoptive children come from a variety of backgrounds and situations. Over 37 percent of respondents indicated their children were adopted from foster care, 28 percent were adopted as babies through domestic adoption, and 26 percent were adopted internationally.

Sixty-two percent were female, and 90 percent had been home for more than five years. Nearly 42 percent of children were adopted before the age of one, 20 percent were between the ages of one and three, 16 percent were between the ages of four and six, and 20 percent were over the age of six at the time of adoption.

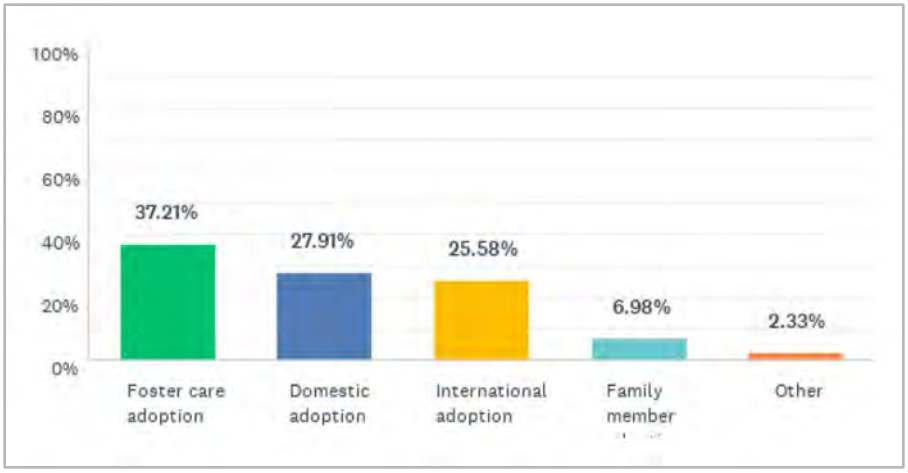


Figure 4.6 - Type of adoption

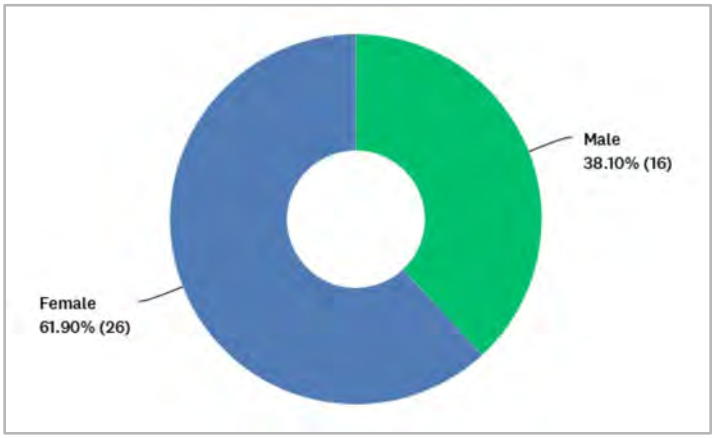


Figure 4.8 - Child gender

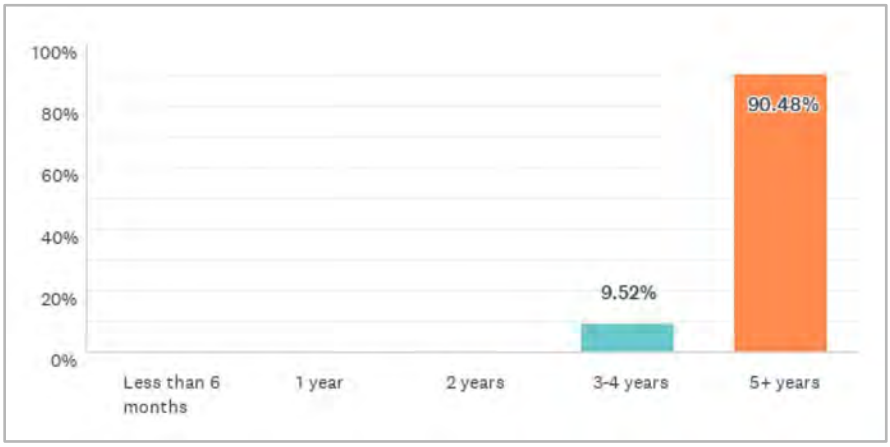


Figure 4.9 - Average length of time home

Figure 4.10 - Average age at time of adoption

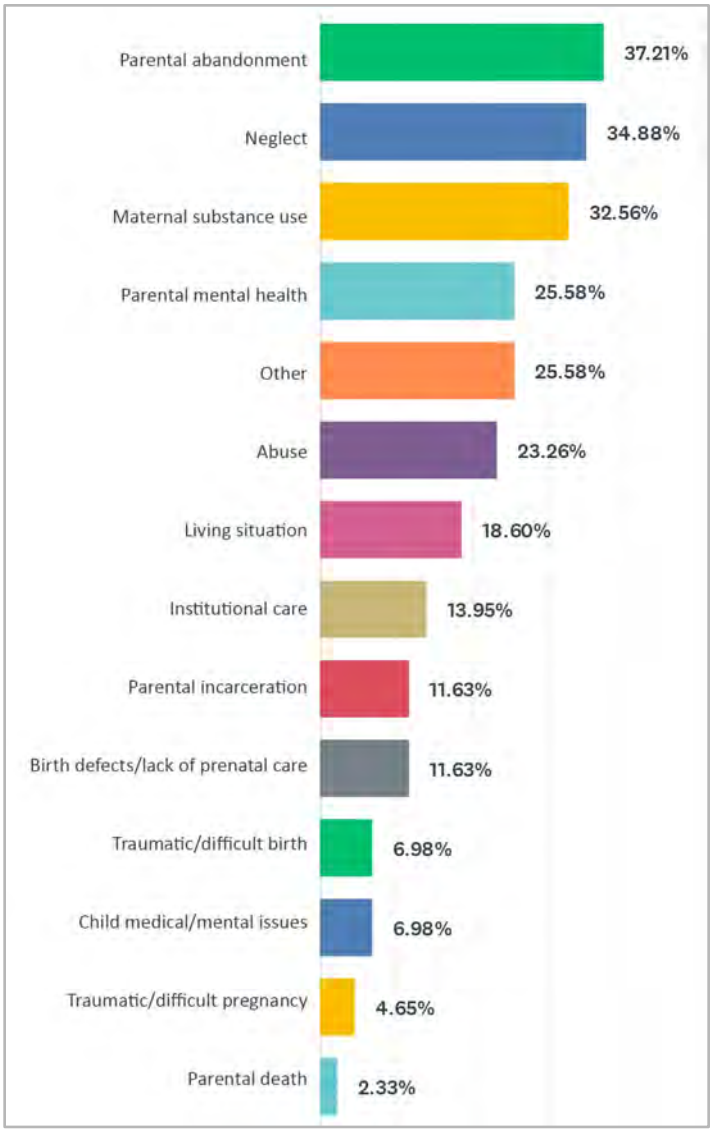


Figure 4.11 - Factors contributing to a child being available for adoption

There are many reasons why children whose parents participated in this study were available for adoption. As shown in the previous graph, over 37 percent of children were abandoned, 35 percent experienced neglect, 33 percent had parents with substance abuse problems, 26 percent had a parent who was mentally ill, and over 23 percent suffered some form of physical, mental, or sexual abuse. Typically, these contributing factors are intertwined. For example, a child may experience neglect due to poverty or a medical condition like spina bifida or cerebral palsy. They may have experienced abuse, not at the hands of their birth parents, but while they were in an orphanage or state care. To make matters more difficult, many adoptive parents know little about their child's birth parents, only that their child was left in a hospital or found abandoned on a street corner.

Contributing Factors	**Foster care**	**International**	**Domestic**
Parental abandonment	4	9	1
Parental death	1	0	0
Parental incarceration	4	0	1
Abuse (Physical, emotional, sexual)	9	1	0
Neglect	11	2	0
Maternal substance use	7	0	5
Parental mental health	9	0	2
Traumatic/difficult birth	1	2	0
Traumatic/difficult pregnancy	0	2	0
Living situation (transient, homeless, multiple caregivers/homes)	5	1	1
Birth defects/lack of prenatal care	0	4	1
Child medical/mental issues	1	2	0
Institutional care (orphanage, group home)	2	4	0
Other (please specify)	2	1	7
TOTAL	**16**	**11**	**12**

Figure 4.12 - Contributing factors based on adoption type

Contributing factors vary based on the type of adoption. For example, while 82 percent of international adoptees have experienced parental abandonment, children adopted from foster care had experienced high rates of neglect (69 percent) and abuse (56 percent). Children adopted through domestic adoption as young babies were more likely to be put up for adoption due to maternal substance abuse (42 percent), child medical issues and other reasons. Several of the families I spoke to said their children were born addicted, and suffered from some of the effects of Fetal Alcohol Syndrome, a debilitating condition that can result in physical defects, brain and central nervous system problems, and social and behavioral issues (Mayo Clinic, 2020).

ADOPTION CHALLENGES AND STRUGGLES

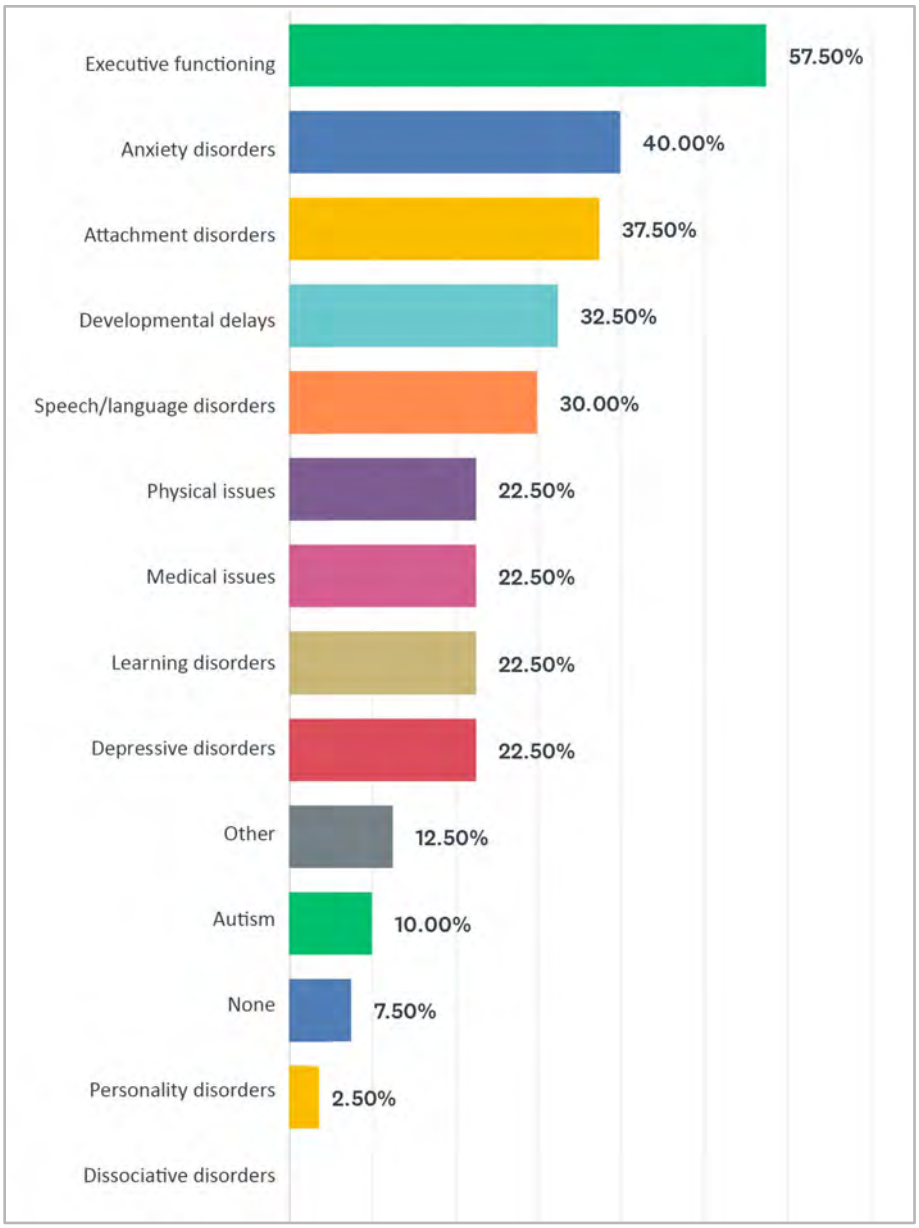


Figure 4.13 - Prevalence of special needs and diagnoses in adopted child survey population

As shown in the previous section, a child's background often results in challenges and problems after they are adopted into a family. As a result of these conditions, over 38 percent of adopted children in the survey sample have been diagnosed with an attachment disorder. Nearly 60 percent have some sort of problem with executive functioning, such as Sensory Processing Disorder or Attention Hyperactivity Deficit Disorder (ADHD). Forty percent suffer from anxiety, such as Generalized Anxiety Disorder, Panic Disorder, Phobias, Insomnia, or Post-Traumatic Stress Disorder (PTSD).

These rates are even higher for children adopted from foster care. Over 56 percent of these children have an attachment disorder, 62 percent have issues with executive functioning, 50 percent have developmental delays, and 50 percent have issues with anxiety. When compared to the high rates of neglect and abuse and the older age (4+) at the time of adoption, these results are not surprising.

On the flip side, children adopted internationally tend to have more special needs and require specialized medical treatment for conditions such as cleft palate, heart problems, deafness, blindness, spina bifida, cerebral palsy, clubfoot, birth defects, and lack of prenatal care. They also struggle with speech/language delays and disorders (40 percent) and learning disorders (40 percent). Interestingly, children adopted domestically as infants encounter higher rates of medical issues as well.

Special needs and Diagnoses	**Foster care**	**International**	**Domestic**
Physical issues (foot/hand deformities, missing limbs, cleft palate, etc)	0	6	3
Medical issues (heart disease, diabetes, vision/hearing impairment, etc)	3	2	4
Developmental delays	8	2	2
Executive functioning (ADHD, Sensory Processing, etc)	10	4	7
Speech/language delays and disorders	4	4	3
Autism	1	1	1
Learning disorders	4	4	1
Anxiety disorders (Anxiety, Panic disorder, OCD, PTSD, phobias, etc)	8	3	5
Depressive disorders (Major depression, Bipolar depression, etc)	5	1	2
Dissociative disorders	0	0	0
Personality disorders	0	1	0
Attachment disorders (RAD, ODD)	9	2	3

None	1	0	2
Other (please specify)	1	1	3
TOTAL	**16**	**11**	**12**

Figure 4.14 - Prevalence of special needs and diagnoses by adoption type

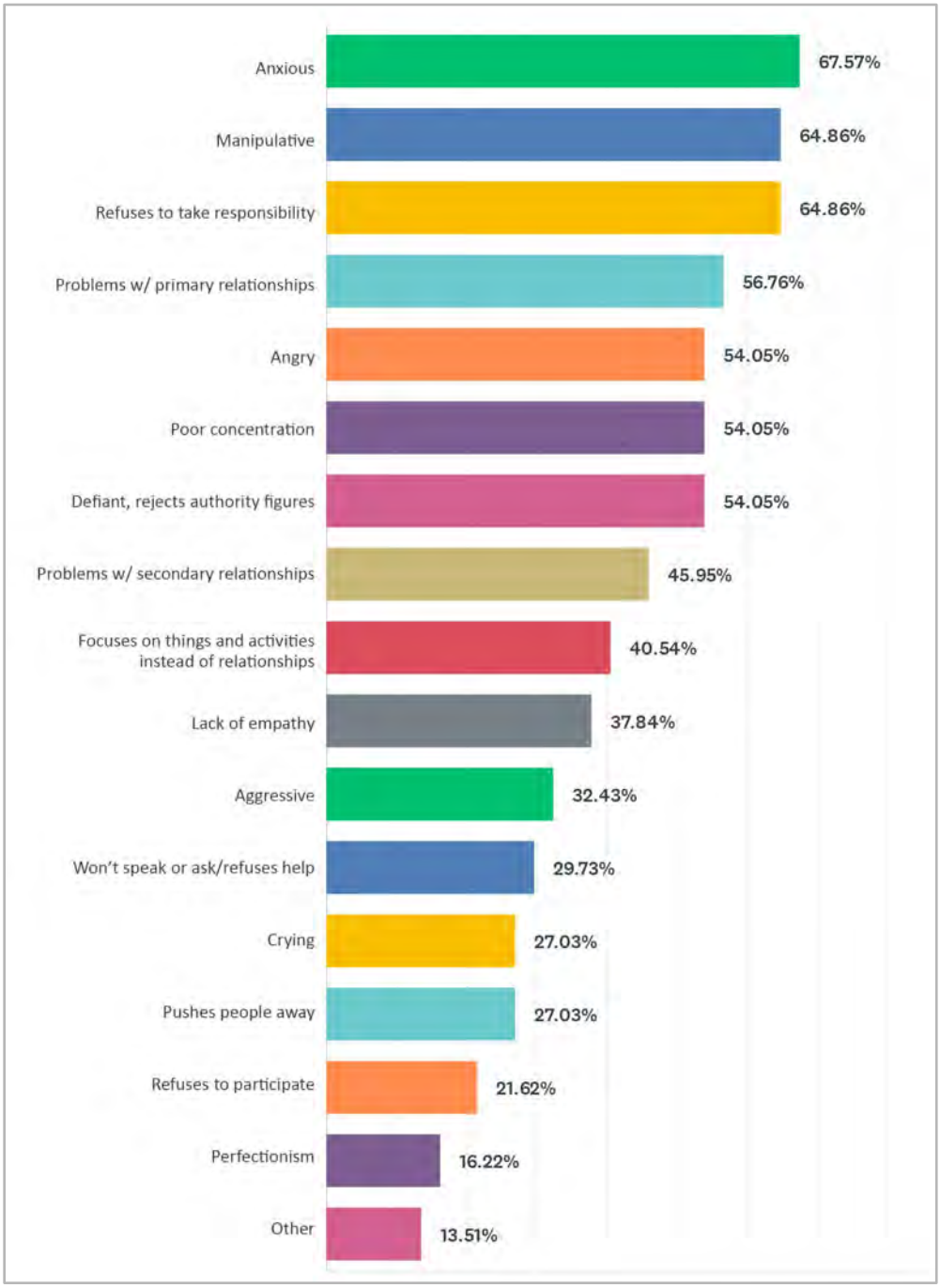


Figure 4.15 - Prevalence of problematic attitudes and behaviors exhibited in adopted survey population

Adopted children overall tend to exhibit more problematic attitudes and behaviors than the general population. Sixty-eight percent of adoptees have issues with anxiety, 65 percent engage in manipulative behavior and tend to deflect responsibility for their actions, 55 percent have problems with primary relationships (parents, siblings), and 54 percent exhibit anger issues.

Problematic Attitudes and Behaviors	**Foster care**	**International**	**Domestic**
Anxious (constantly stressed, hyper-vigilant, irritability, appetite changes, sleep issues)	9	7	7
Angry (frequent outbursts, lashes out, screaming, stomping, slamming doors, etc)	8	6	4
Crying (highly emotional, cries constantly, hard to calm down, etc)	3	3	4
Manipulative (controlling, lying, cheating, deception)	11	6	6
Aggressive (breaks things, hurts others)	6	2	4
Poor concentration (tunes out, daydreams)	9	4	5
Perfectionism	2	2	2
Focuses on things and activities instead of relationships	8	4	3
Problems with primary relationships (parents, siblings, family)	10	5	5
Problems with secondary relationships (friends, colleagues)	8	5	4
Lack of empathy	6	5	2
Refuses to take responsibility, blames others	11	5	7
Won’t speak or ask/refuses help	5	4	2
Refuses to participate	2	4	2
Pushes people away	4	4	2
Defiant, rejects parental/authority figures	10	4	5
Other (please specify)	0	1	3
TOTAL	**14**	**9**	**11**

Figure 4.16 - Prevalence of problematic attitudes and behaviors by adoption type

Having an attachment disorder or other behavioral diagnosis appears to increase the severity of these symptoms. For example, of the 15 children diagnosed with an attachment disorder, 87 percent engaged in manipulative behavior and tended to deflect responsibility for their actions. Eighty percent had problems with primary relationships (parents, siblings), where they exhibited defiant and oppositional behavior toward their parents and other authority figures. Seventy-three percent had issues with anxiety, 67 percent had problems with secondary relationships (friends), and 60 percent had issues with angry and aggressive behavior.

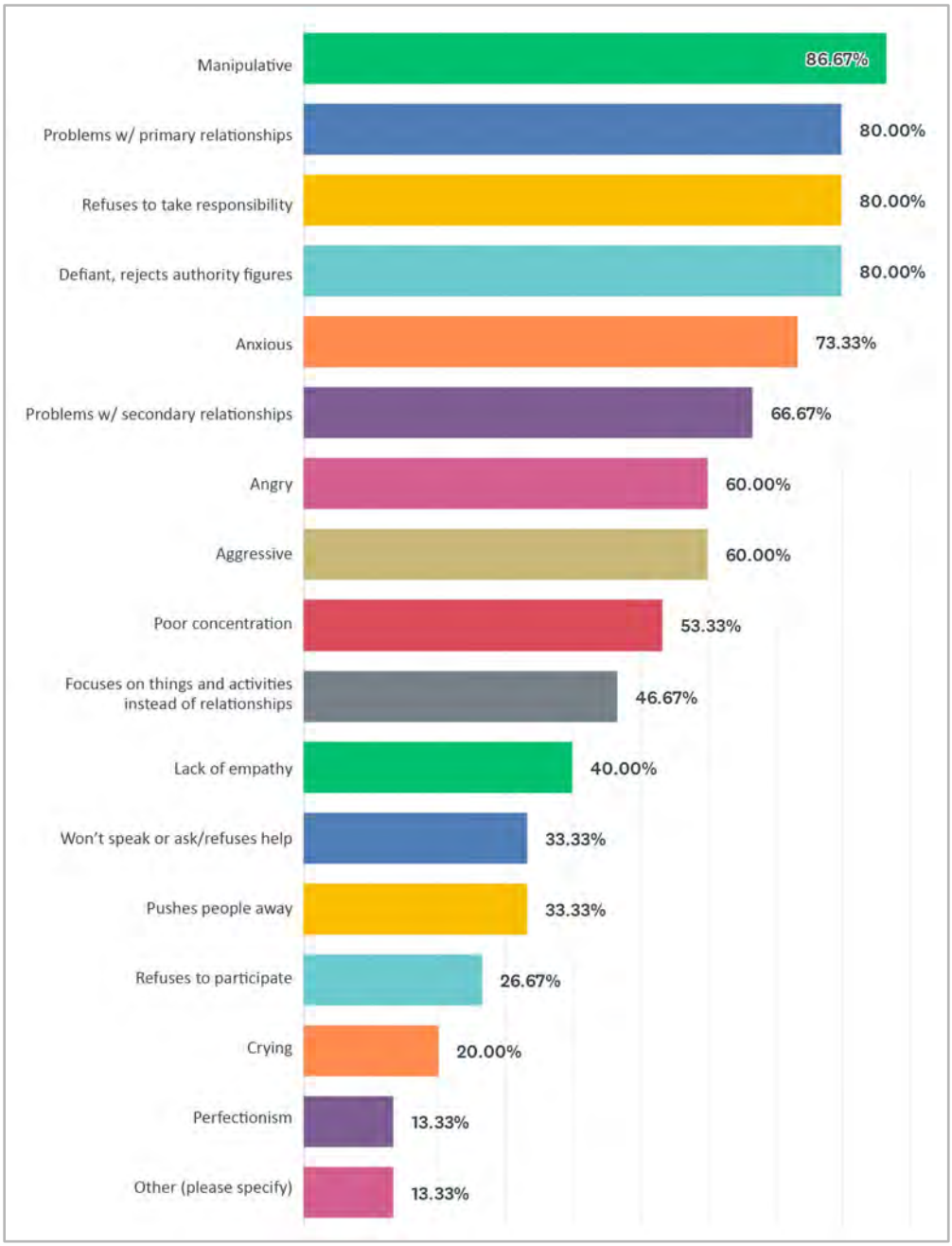


Figure 4.17 - Prevalence of problematic attitudes and behaviors among adopted children diagnosed with attachment disorders

Interventions and Support

Due to the high prevalence of diagnoses and problematic behaviors, adopted parents employ a variety of interventions and treatments to help their children. Sixty-five percent of these children take some type of regular medication, nearly 63 percent undergo regular individualized counseling, and 55 percent have Individualized Education Plans (IEPs) and receive in-school services. These services can include speech and language therapy (45 percent), occupational therapy (43 percent), learning support (38 percent), emotional support (38 percent), behavioral support (35 percent), and physical therapy (30 percent).

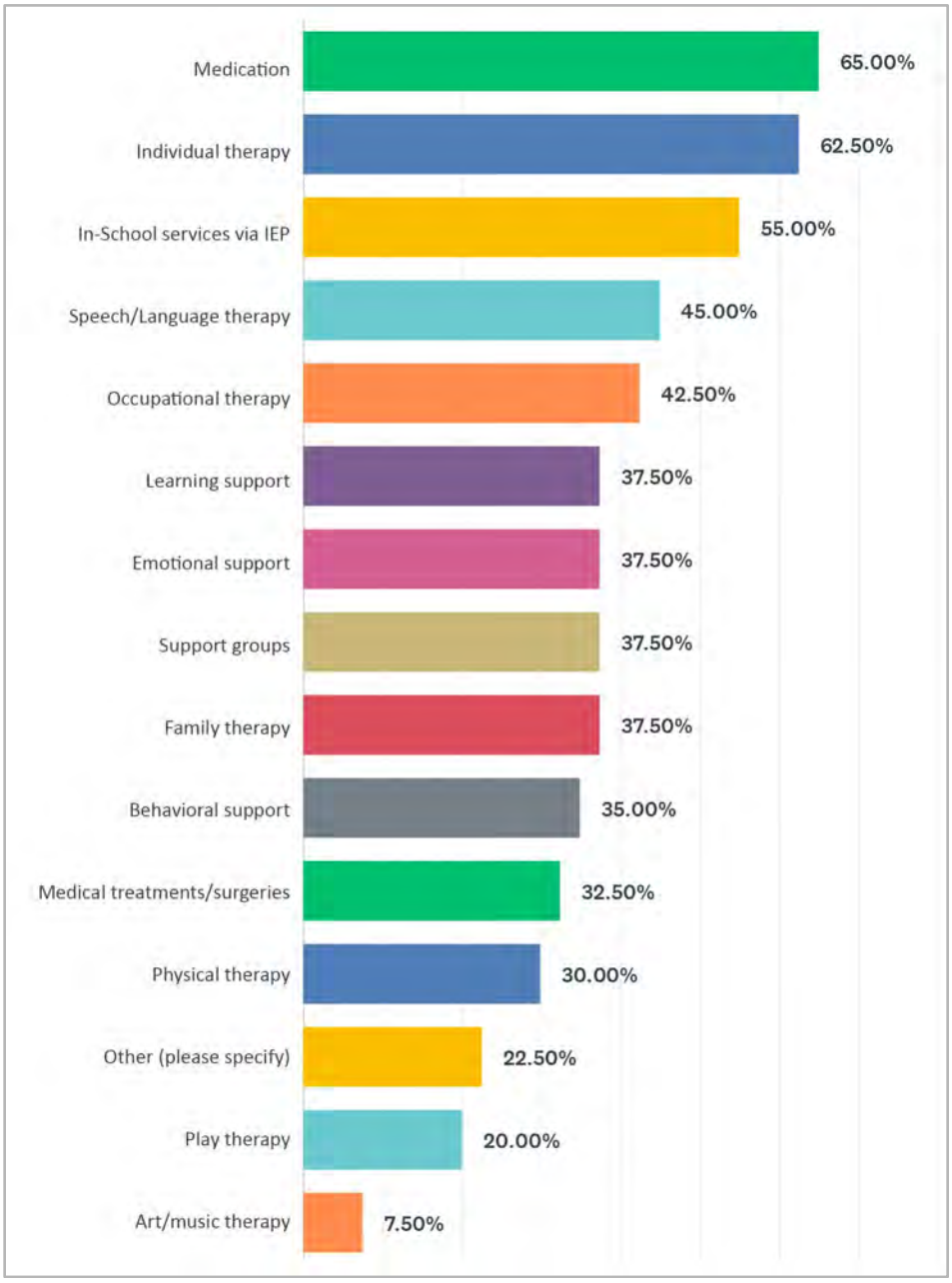


Figure 4.18 - Prevalence of interventions and treatments used with adopted children

In the same token, parents often go the extra mile to educate themselves and surround themselves with adoption experts and peers who have also adopted—all in an attempt to find ways to help their children.

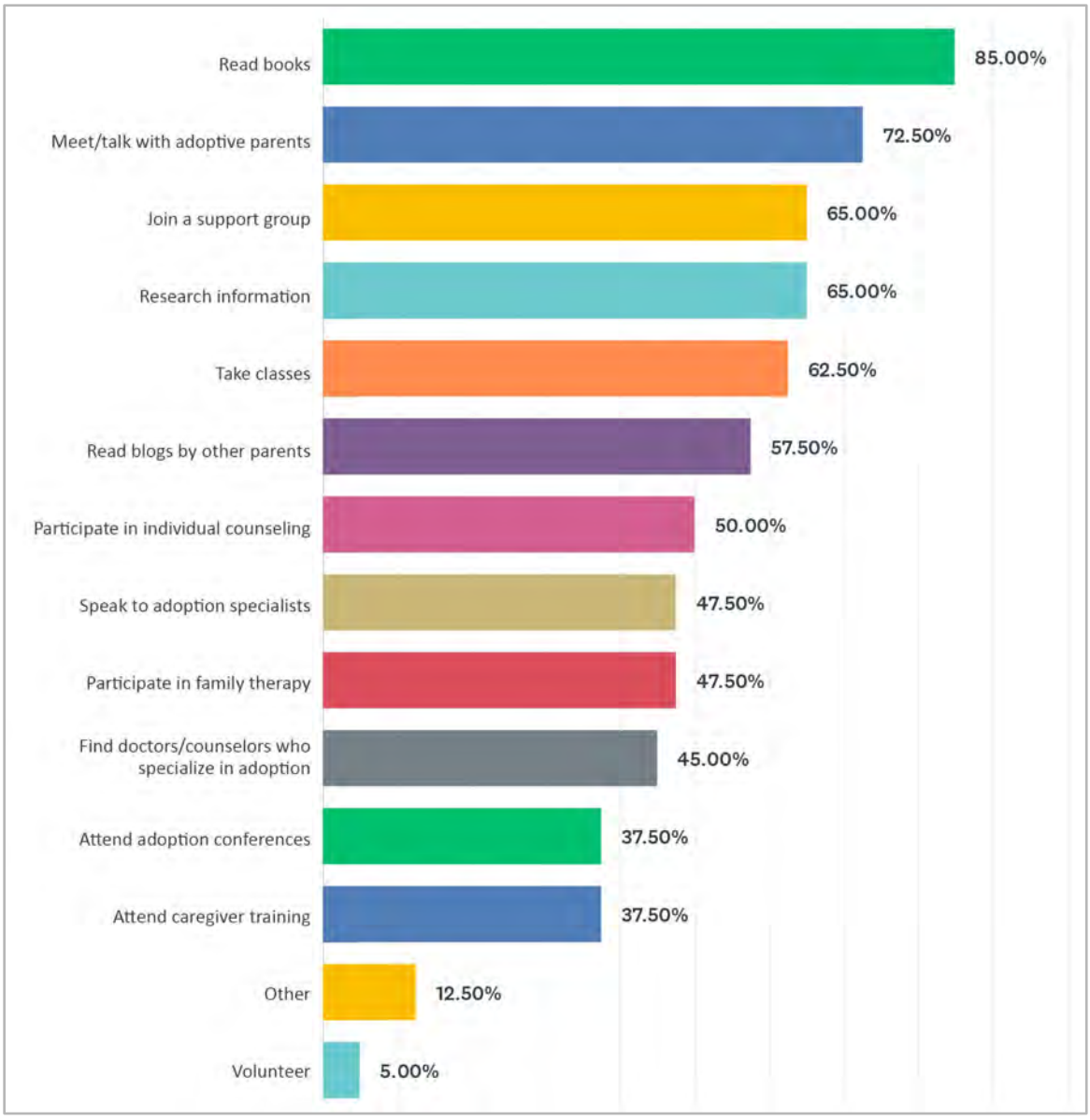


Figure 4.19 - Prevalence of education and support employed by adoptive parents

ADOPTED CHILDREN AND PLAY

From these results, it is clear that adoptive children face extra challenges and hurdles once they come home to their new adoptive family. These challenges not only affect their relationships with their parents, but also their ability to learn, regulate themselves when stressed, make friends, and play.

An early sign points to the use of comfort objects, such as a stuffed animal, blanket or other transitional object. Many child development experts believe having comfort objects is important (Schwartz, 2014).

The strong attachment between the child and comfort object enables them to feel safe when alone or frightened. Comfort objects can also help reduce a child's stress and anxiety and act as a conduit for healthy expression of their emotions (Women's and Children's Health Network, 2018).

In the survey sample, only two children, regardless of age, came home with a comfort object. About half of the children later adopted a stuffed animal or blanket as their comfort object. Twenty percent never had a comfort object. Typically children choose to sleep with their comfort object, 26 percent turn to their comfort object when stressed, and 28 percent include their comfort object in their play.

Use of Comfort Objects	**Responses**	
Sleeps with comfort object	48.72%	19
Turns to comfort object when upset	25.64%	10
Plays with comfort object	28.21%	11

Figure 4.21 - Use of comfort objects

Children's Perceived Overall Level of Play

As part of the survey, parents were asked questions about their child's modes of play, as well as activities their child likes to do for fun or to de-stress. These responses were followed up by detailed interviews with six participants, conducted via Zoom and in-person. Several participants had adopted multiple children, for a total of ten children.

Based on the survey results alone, it appeared that adopted children play just as any other child. Nearly 70 percent of children play by themselves, 59 percent play with other children, 56 percent play with their parents, and 54 percent play with their siblings. They also engage in many different types of play.

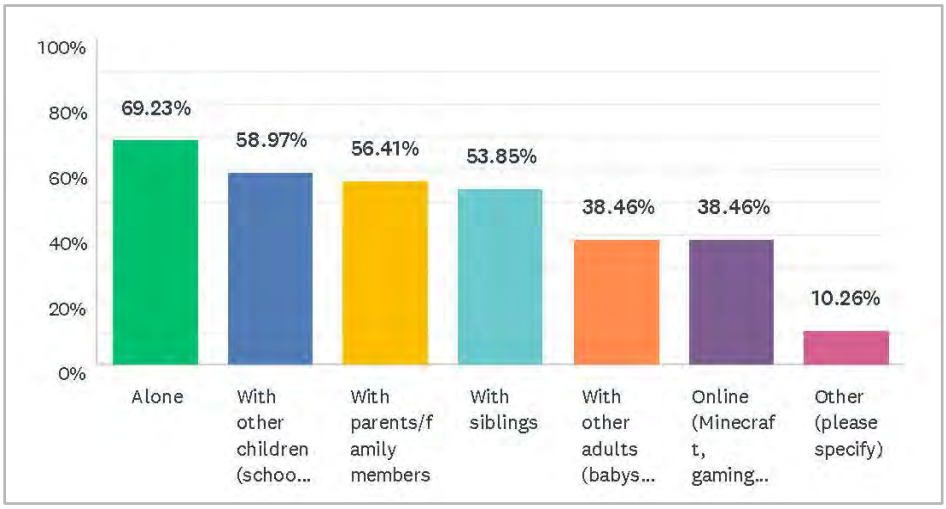


Figure 4.22 - Modes of play

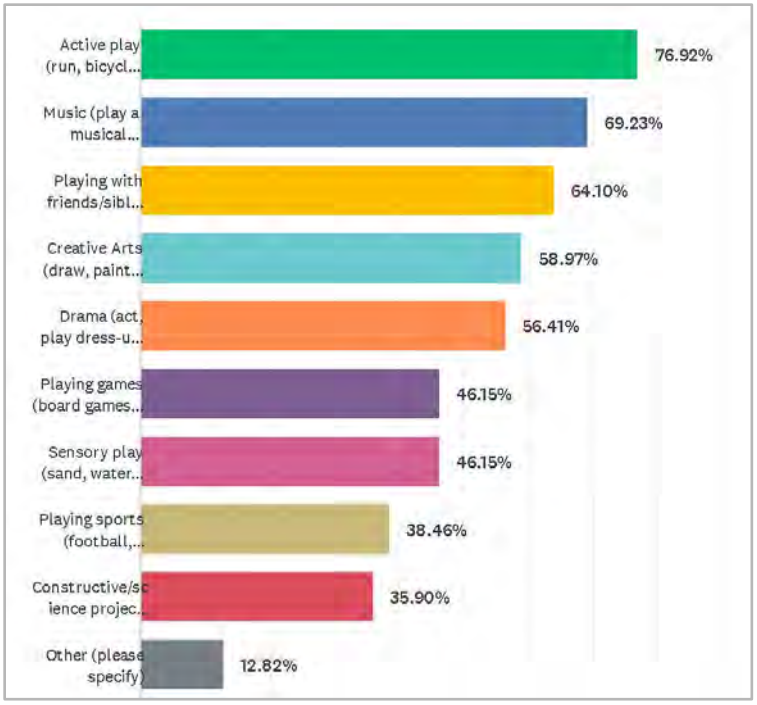


Figure 4.23 - Activities children enjoy for fun

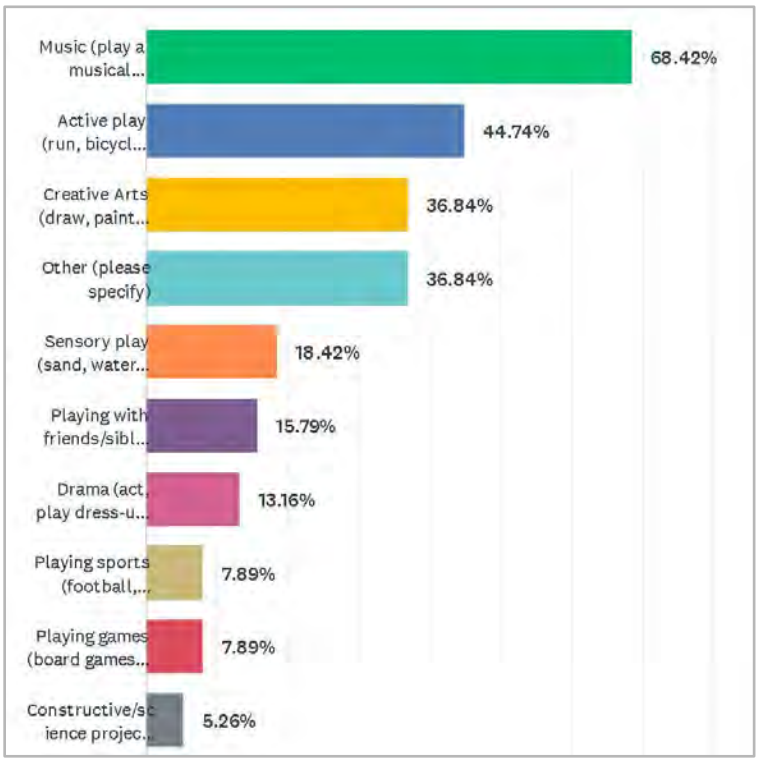


Figure 4.24 - Activities children use to calm themselves down

However, upon further examination in detailed interviews, it became apparent that parents had miscalculated the meaning of the survey questions. While the researcher's intent reflected play and activities that were self-directed by the child, parents often included parent-directed play and organized activities, such as playing sports or music as part of a school band. This appears to reflect an even larger disconnect between parents and their perception of play, which is discussed in the next chapter.

KEY CATEGORIES AND THEMES

Interviews were transcribed via an online transcription tool called Otter. The results were categorized first with sticky notes, and then later added to an Excel spreadsheet. Parent findings were broken down by their perception of play, play experiences and attitudes, play styles, play environment, and parental challenges. Child findings were broken down by attitude, behavior, play styles (current and at the time of adoption), play attitudes, and play activities.

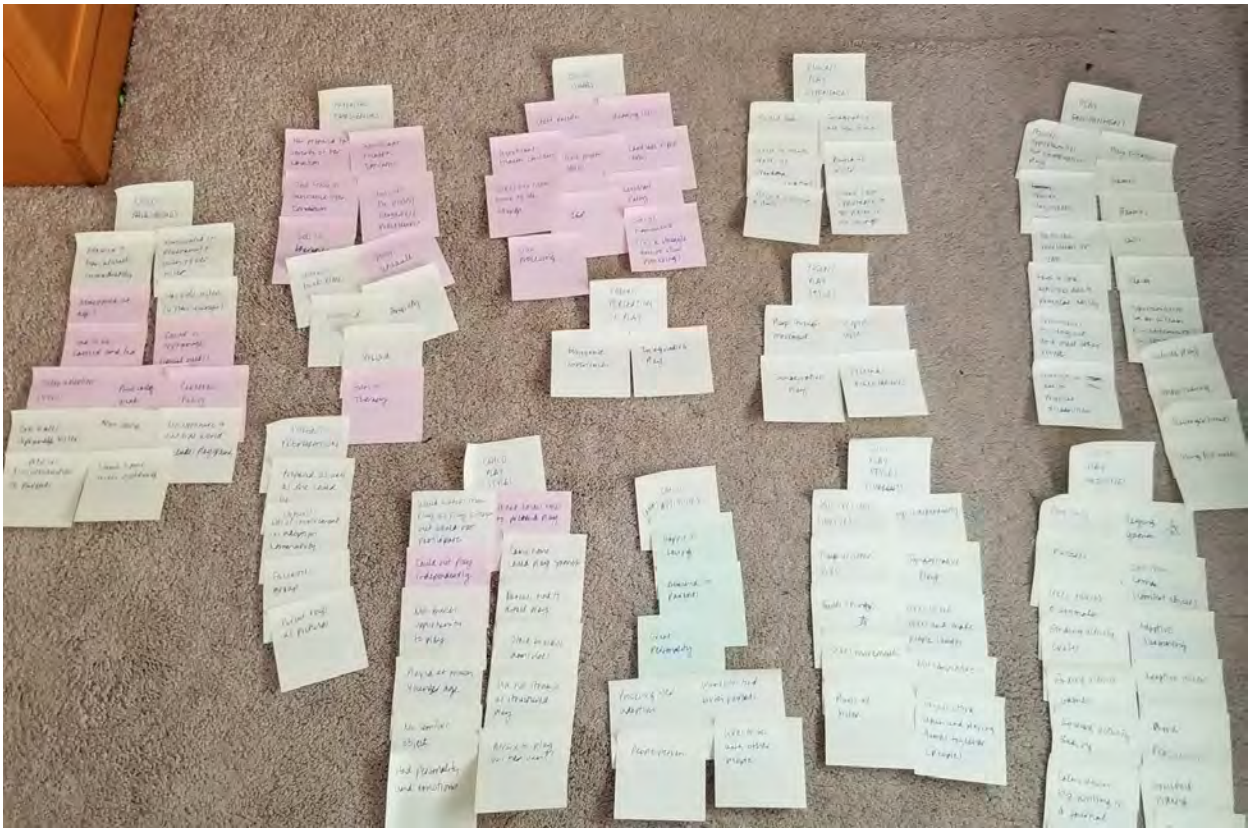


Figure 4.25 - Affinity map of interview coding results

Parent categories		**Child categories**	
Parent perception of play	PT	Child issues	CI
Parent play experiences	PE	Child attitudes	CA

Parent play styles	PS	Child behaviors	CB
Play environment	ENV	Child supports	CSUP
Parental challenges	PCH	Child play styles (at time of adoption)	CSI
Parental supports	PSUP	Child play styles (current)	CSC
		Child play activities	CPA

Figure 4.26 - Categories of interview results

Coded results were then reshuffled into distinct themes, highlighting key findings. Key mega themes revolved around the parent's concept of play, play environment, connecting through play, the ability to play, social play, independent play, and imaginative play.

Code	**Mega theme**	**Code**	**Theme**	**Subtheme**
PT-CON	Parent concept of play	PT-PLY-DEF	Parent perception	Definition of play
PT-CON	Parent concept of play	PT-PLY-EXP	Play experiences	Childhood play experiences
PT-CON	Parent concept of play	PT-PLY-STY	Play styles	Parent play styles
P-ENV	Play environment	P-ENV-TOY	Play items and toys	Environment full of play items and toys
P-ENV	Play environment	P-ENV-QA	Quality play	Focus on quality- focused, structured play
P-ENV	Play environment	P-ENV-QAO	Quality play items and toys	Quality-focused play objects and opportunities
P-ENV	Play environment	P-ENV-EXP	Experiences	Enjoyable experiences
P-ENV	Play environment	P-ENV-SOC	Team	Opportunities to be part of a team
P-ENV	Play environment	P-ENV-SOC	Play with others	Opportunities to meet and play with others
P-ENV	Play environment	P-ENV-MOV	Active play	Opportunities to engage in active play
P-ENV	Play environment	P-ENV-MOVO	Active-play items and toys	Active-play focused play objects and toys
P-ENV	Play environment	P-ENV-TRY	Try new things	Opportunities to learn new skills and try new things

P-ENV	Play environment	P-ENV-INT	Child self-interests	Focus on discovering/ maintaining self-interests
P-AB	Child's ability to play	P-AB-KNO	Inability to play	Are not able to play
P-AB	Child's ability to play	P-AB-DEV	Inability to play	Age appropriate play
P-CON	Parent-child connections	P-CON-ENG	Connect through play	Opportunities to engage and connect through play
P-CON	Parent-child connections	P-CON-REF	Refusal	Child rejects parent attempts to connect
P-CON	Parent-child connections	P-CON-REF	Refusal	Child refuses to participate
P-SOC	Social play	P-SOC-PLY	Play with others	Wants to play with others
P-SOC	Social play	P-SOC-EST	Self Esteem	Wants to be like others
P-SOC	Social play	P-SOC-EST	Self Esteem	Goes with what others want
P-SOC	Social play	P-SOC-EST	Self Esteem	Puts on a public face
P-SOC	Social play	P-SOC-DIR	Self-Direction	Cannot direct or initiate play with others
P-IND	Independent play	P-IND-SELF	Inability to play	Cannot play independently
P-IND	Independent play	P-IND-DIR	Self-Direction	Inability to self-direct
P-IND	Independent play	P-IND-DIR	Self-Direction	Need for direction
P-IND	Independent play	P-IND-DIR	Self-Direction	Rejects direction
P-IND	Independent play	P-IND-DIR	Self-Direction	Refuses to participate
P-IND	Independent play	P-IND-EST	Self Esteem	Won't try new things
P-IMG	Imaginative play	P-IMG-AB	Ability to play	Not able to engage in imaginative play
P-IMG	Imaginative play	P-IMG-PTP	Parent perception	Parent perceptions of play
P-IMG	Imaginative play	P-IMG-ACT	Play activities	Imaginative play activities

Figure 4.27 - Key mega themes found from interviews

CONCLUSION

This research shows it is clear that adopted children come with an array of personal baggage that affects every aspect of their life. Past traumas and extenuating circumstances surrounding their adoption feed into fears and false beliefs about themselves and the world around them, which are reflected in their mental state and then acted out through certain behaviors. Sometimes these attitudes and behaviors are so intrusive that children are later diagnosed with depression, anxiety, post-traumatic stress disorder, and other behavioral health conditions, which interfere with their ability to attach to their new families-- and more importantly, interact in this thing we call life.

To confirm my findings, I interviewed two play therapists and a social worker who works with adopted children. None were surprised by what I found.

> *Sometimes families don't realize what trauma looks like and that it's going to be challenging. I cannot imagine what that would be like, to think that you're just going to raise a kid and it's going to be pretty straightforward. And then to realize, wait a minute. Yeah, this isn't what I thought it was going to be." (Therapist #2)*

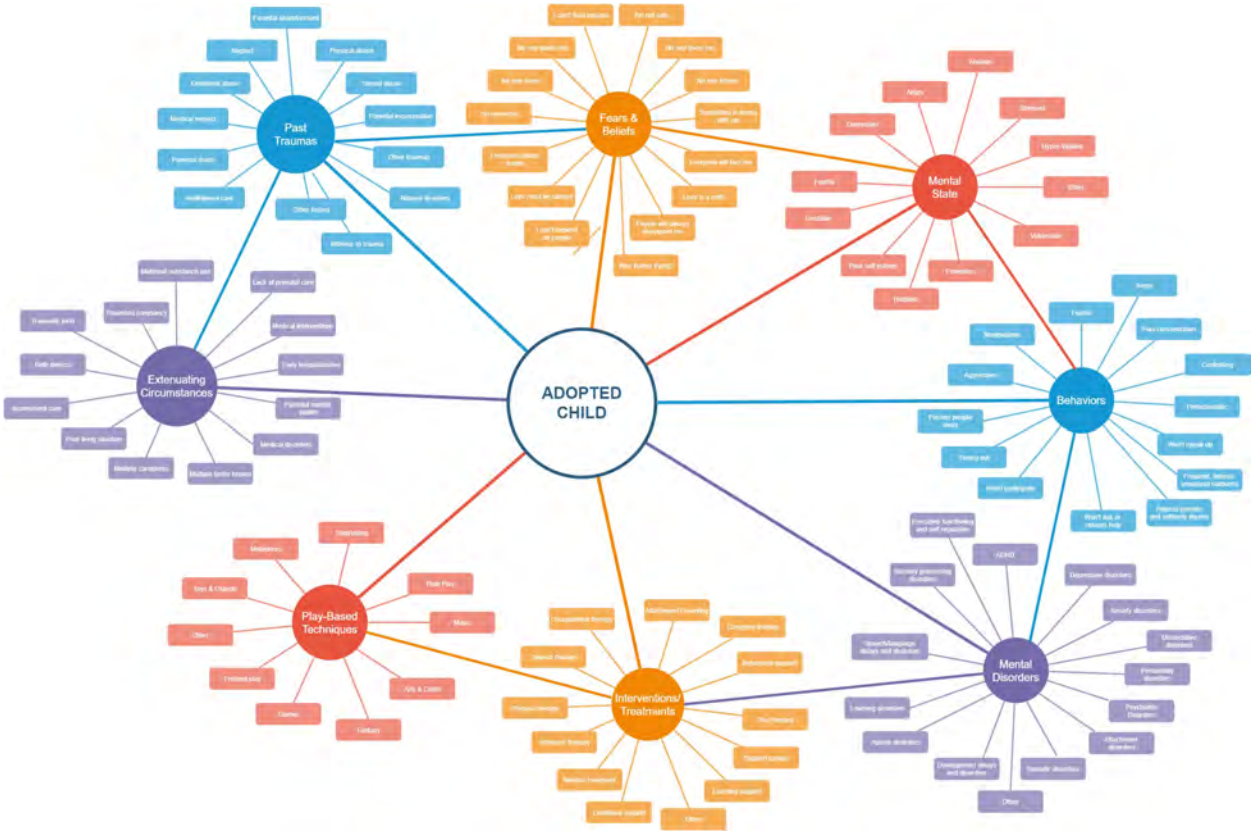


Figure 4.28 - Mindmap of adoption challenges

At the same time, many of these children have other challenges. For example, a sizable percentage of children adopted domestically as infants had mothers with substance abuse problems. Many children were born with difficult medical challenges, such as cerebral palsy, Down's Syndrome, spina bifida, deafness, or heart disease, which interfere with their ability to do everyday things and turn their lives into a never-ending wheel of doctor visits, surgeries and therapies. Children adopted internationally for the most part reside in orphanages, where they receive little to no stimulation or interaction with caregivers, resulting in difficulties with self-regulation and executive functioning.

Even more heartbreaking, sometimes a child's trauma simply is too much. For some, like a little girl with spina bifida who will never walk, they decide to check out of life, sit on their bed and simply stare at the wall. For others, like a teenager who spent the first eight years of his life chained in a dark closet, they simply never make it back to the human world, always remaining a stranger in a strange land.

As shown, adoptive parents go above and beyond to help their children, but in story after frustrating story, sometimes this isn't enough. Most say they did everything they could to educate themselves, but still found themselves woefully unprepared, with no place to turn when things don't go as planned. They struggle to connect with their children and worry that they've messed up and done something wrong.

Taking part in a program like Pennsylvania's SWAN program can do much for a parent's self-esteem. By interacting with other adoptive parents like themselves, they realize their situation isn't unique and that they don't have to go it alone. They have hope that things will get better.

But for them, how this will happen is the ultimate question. Most importantly, how can we reach children who sometimes seem like they're irretrievably lost and beyond all help?

Chapter 5:

Phenomena Research Conclusions and Discussion

As we discussed in the previous chapter, adopted children struggle with an array of challenges. Interviews revealed that adopted children, especially those with trauma, seriously struggle with the concept of play. While children tend to prefer active play, such as bike riding or jumping on a trampoline, or playing games, parents reported that they typically had to be directed. Preferences also varied when children were stressed, requiring parents to take a much bigger role to help them calm down.

PARENT ATTITUDES

Perception of Play

As mentioned previously, survey responses tended to reflect a disconnect between parents and their perception of play. When asked, parents generally agreed that play is about having fun: play is relaxing,

brings enjoyment, and makes you smile. However, this definition often doesn't match the play environment parents provide for their children. Instead, parents gravitate towards what they call *quality play*: enrolling children in organized activities like football or dance, or organizing and providing materials such as painting kits, lego kits, science kits, and so on. Research shows these attitudes are typical for parents, especially in Western society. Instead of free play, parents often use structured, purpose-driven play as preparation for education, learning and academic achievement (Laney, 2007).

Parents tend to view play the way they played—or did not play—as children. Some may focus on providing play opportunities they didn't have growing up, while others may have a prepackaged idea of what play is. As people grow older, they often develop preferences for certain types of play over others. According to Stuart Brown, founder of the National Institute for Play, these preferences generally fall into eight different play personalities (Brown, 2009).

Play Personality	**Premise**
The Joker	Plays through silliness and practical joking
The Kinesthete	Pursues play through movement and active play
The Explorer	Plays through exploration and adventure
The Competitor	Enjoys specific rules and plays to compete and win
The Director	Enjoys planning and organizing events
The Collector	Enjoys collecting objects and experiences
The Artist/Creator	Loves to play by making and creating things
The Storyteller	Plays through imagination, reading and stories

Figure 5.1 - Stuart Brown's eight play personalities

Parents frequently view play with their own lens, usually based on their own play experiences and play personality. This often dictates how they encourage their kids to play, including the toys they purchase and the activities they provide. For example, if a parent views play as being imaginative (Storyteller) but their child plays by building things (Creator), they may not view that as play and may push their own views instead. A person's play personality may also vary based on their emotional frame of mind: a person who plays through movement for fun may resort to storytelling when stressed (Brown, 2009).

Play Environment and Activities

Survey and interview responses revealed that adoptive parents tend to go above and beyond to provide their children with a diverse, enriched play environment. This includes not only typical play objects and toys but a key focus on providing opportunities: engaging in active play, meeting people and playing

with others, being on a team, learning new skills, trying new things, discovering and nurturing individual self-interests, and embarking on enriched experiences, such as going to the beach or snow tubing.

Puzzles and Games	**Experiences**	**Active Play**	**Sports**	**Creative Play**	**Imaginative play**
Puzzles	Horseback riding	Nerf guns	Hockey	Art	Books
Word searches	Raising goats	Wiffleball	Baseball	Drawing	Dolls
Uno	Beekeeper	Swimming	Golf	Painting	Stuffed animals
Connect 4	Traveling	Dance	Swimming	Coloring	Army soldiers
Dominos	Camping	Playing catch	Bowling	Music	Star Wars/ Avengers
Board games	Kayaking	Handstands	Football	Singing	Toy cars/trucks
Card games	Hiking	Trampoline	Track	Violin	Dinosaurs
Video games	Beach	Adaptive equipment	Cross country	Piano	Toy animals
Jenga	Museums	Bicycling	Soccer	Drums	Play tent
	Zoo	Sledding	Adaptive sports	Guitar	Toy castle
	Hiking	Snow tubing		Singing	Doll house
		Playing outside		Legos	Writes stories
		Playing in the snow		Construction toys	Acting class
		Bowling		Lincoln logs	Dressing up in costumes
		Skating		Construction projects	Reads to stuffed animals
		Yoga		Using tools	Play-fighting
		Going on walks		Wood carving	Talking stuffed animals
		Miniature golf		Metal fabrication	Play camping
		Air hockey		Crafts	

Figure 5.2 - List of common activities and toys

Children like to participate in all sorts of active play activities, regardless of their physical and mental ability to play. Research shows that active play has multiple benefits. Repetitive rhythmic movements, such as singing, dancing, swinging, deep breathing, and music, help over-stressed children calm down. Large motor activities, such as running, jumping or climbing, promote the release of accumulated energy and stress chemicals, reducing the long-term impact of trauma (Nicolson, 2019).

In this same vein, playing or listening to music was a top form of play, as well as engaging in a variety of creative activities like drawing, painting, building legos, doing crafts, and using tools. Children appreciate the use of games and puzzles, have access to books and learning materials, and enjoy a variety of play objects and toys. They also spend a lot of time playing with friends, siblings and other children.

Connecting through Play

Because of what they've been through, normal play attitudes do not work with adopted children with trauma. As stated earlier, children need to feel safe in order to engage in play (Ziegler, 2009), and being in a forever family does not necessarily change those behaviors. When they do play, they may find little enjoyment or sense of adventure, which makes it difficult for them to find things that they're interested in (Nicolson, 2019). This, in turn, makes it challenging to influence behavior and connect with others, especially with their adoptive family (Purvis, 2013).

Figure 5.3 - Adoptive parent empathy map

Parents expressed incredible frustration and disappointment at this situation. To top it all off, due to other challenges, some feel their entire life is consumed by doctor appointments and therapies. As one mother so aptly stated, “She needs something that’s fun, that’s *not* therapy.” Many wondered if they had done something wrong, or felt like a failure. They struggle with depression, worry and anxiety. Again, according to the therapists I interviewed, this is a common experience.

> *“The trust thing is really hard with kids who are adopted--to actually trust someone. Especially the kids who have been abandoned. That's a huge one for them. It's gonna be like, everyone's gonna leave them. So why even try?” (Therapist #3)*

Adoptive parents frequently find themselves thinking outside the box to connect with their children and discover what they truly enjoy: they take up horseback riding, travel to new places, purchase a trampoline, buy photography or art supplies, or sign their children up for adaptive soccer. Unfortunately, this often ends up in a "throwing paint at the wall" situation where parents will keep trying and introducing new things with the hope that eventually something will stick. For example, ten years later I've finally figured out that my son really loves active play, but due to his physical disabilities and the fact that he can't participate in sports or normal active play, it’s been difficult to find ways to accommodate his needs.

Some families resort to desperate measures to connect with their children. One family ended up purchasing property in the country and invested in bees for beekeeping. When that wasn’t successful, they moved on to purchase a family of goats, which crazily enough did work. Now, for the first time in his life, their teenage son has finally bonded with a living creature--which in the spirit of life means everything in this world.

CHILD ATTITUDES

Adopted children’s struggles with play affect the way in which they see the world, as well as their ability to play with others and by themselves. This is especially true for children who have been through some type of trauma, were adopted at older ages (age three or older), came from foster or institutional care, or have some type of special need. In fact, some studies have indicated behavior and social problems for children who were adopted as young as 18 months of age (Julian, 2015).

For these children across the board, parents emphasized the fact that their children came home in a delayed, somewhat shut-down state. Most did not know how to play, and of those who did, they tended to play at much younger biological ages. For example, one five-year-old girl came home obsessed with stacking and knocking down blocks--play that resembled a two-year-old. Another settled for collecting unsavory objects.

Cognitive Stage	**Age**	**Premise**
Sensorimotor Stage	Birth to 2	Infants and toddlers mostly gain knowledge through sensory experiences and by manipulating objects.

Preoperational Stage	2-7	Children are primarily concrete thinkers and tend to learn best through pretend play. Their language skills grow by leaps and bounds in this stage.
Concrete Operational Stage	7-11	While still concrete and literal, children's thinking becomes more logical. They are more willing to explore how others think and feel, while at the same time recognizing their thoughts and emotions are unique to them.
Formal Operational Stage	12 and up	Thinking abstractly is the hallmark of this stage.

Figure 5.4 - Jean Piaget's Four Stages of Cognitive Development

According to developmental psychologist Jean Piaget, children undergo four different stages in their cognitive development (Cherry, 2020). When looking at their play deficits, adopted children with trauma appear to have completely missed the Preoperational Stage of development.

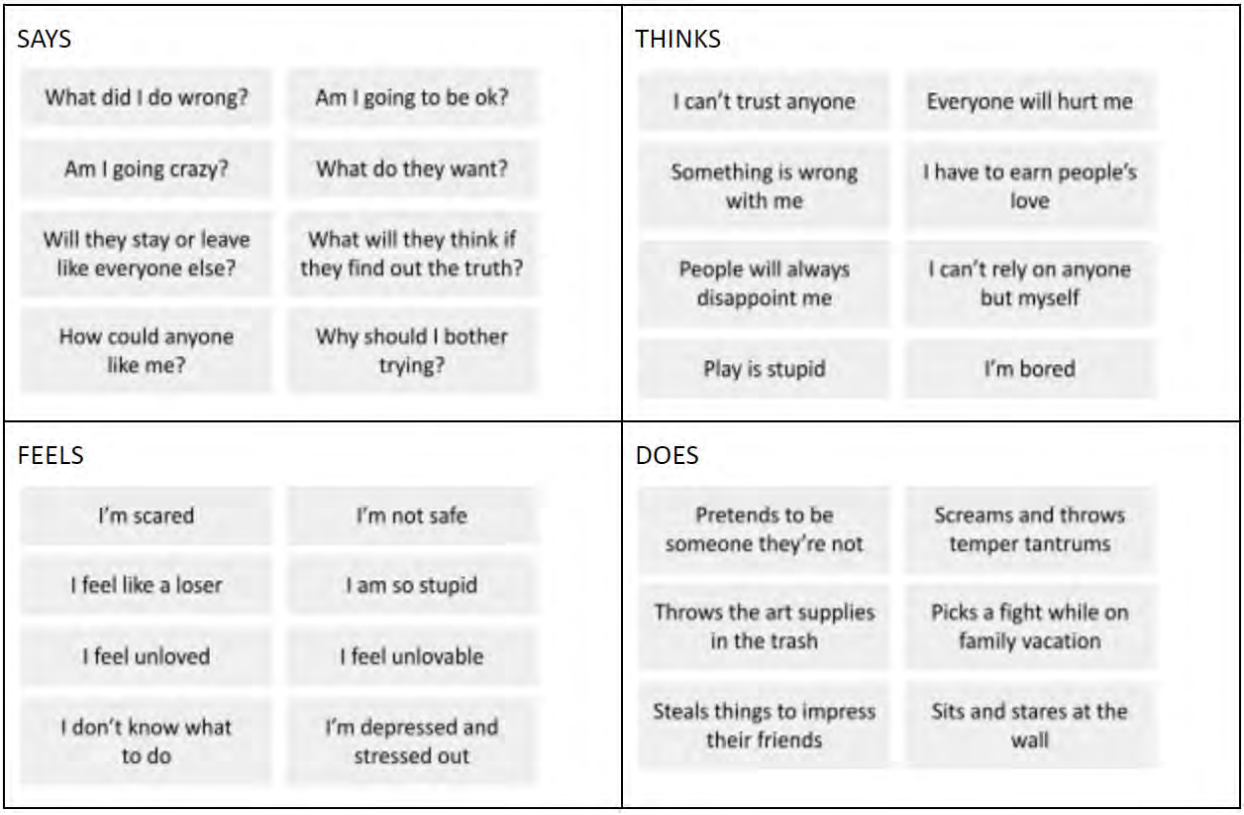


Figure 5.5 - Adopted child empathy map

As shown in the above child empathy map, these deficits, coupled with their trauma experiences, tend to influence children's ability to engage in imaginative play, self-direction, and language development. This, in turn, affects the way they view themselves and the world around them. Because these stages function as a progressive, linear "staircase", adopted children often find themselves stuck and unable to progress to the next level, resulting in lower rates of cognitive development and academic achievement, and higher rates of behavior problems, especially in adolescence (Julian, 2015).

Social Play

Adopted children often struggle with social play, both in terms of self-esteem and directing play with others. Interestingly, this appears to be the case even for children who were adopted at birth or who had not been exposed to trauma. For the most part, these children have varying levels of difficulty engaging in social play on their own. Most like to play with other kids, but they find themselves unable to initiate or direct play; as a result, they tend to go with the flow of whatever everyone else is doing.

They often struggle with poor self-esteem. Due to their background and the fact that many of them have some sort of disability, they may feel different from everyone else and hate themselves for it. They often view play as a success/fail situation: What if I pick the wrong thing? What if they don't like what I pick? What if they pick some sort of activity that I'm not good at? What if they don't like me and make fun of me? (Mindes, 2015)

For some, their need for attention and the approval of others require that they shift their perspective to fit the people around them. Others put on a public face to get the approval of others, where they act differently than they do at home and pretend to be someone they're not. They may complain about what their friends are asking them to do, but they insist that going with the flow is what's important.

These results are in line with previous studies, where researchers found that adopted children generally scored lower in terms of social skills and social competence than their non-adopted peers. They may encounter difficulties in maintaining peer relationships, regulating their emotions, and understanding and interpreting facial expressions and body language. These attitudes can cause problems that last into adulthood, prompting them to engage in risky behaviors and affect their ability to develop meaningful relationships with others (Julian, 2015).

Self-Directed Play

Another difficulty faced by adopted children with trauma revolves around their ability to engage in independent and self-directed play. These children have ample opportunities to play on their own, but they have extreme difficulties in playing independently and won't take the initiative. Parents say they don't know how to play by themselves and have to be taught. If they do play, they tend to play at much younger ages. They often complain they are bored, even if they are surrounded by a room full of toys. Finding things that interest these children is near impossible. They are hesitant to try new things or pursue their interests. New things take a lot of convincing.

This often results in parents over-directing in an attempt to help their children find what they're interested in. Children frequently reject these attempts, sometimes to an extreme degree. For example, one girl liked to draw, but when her parents bought her art supplies with the hope of helping her grow her talent, she announced she wasn't interested in drawing anymore. Unfortunately, this is common, as children classify something as play only when they choose it on their own terms (Bergen, 2015). With children who have attachment problems, these reactions may be more pronounced: some downright refuse to participate and reject all attempts to help and connect, preferring to simply sit and do nothing.

According to psychologist Peter Gray, self-direction is a key defining characteristic of play (Gray, 2013). When children choose what to play and direct what that play looks like, they use their imagination to think about the world and how it works, find ways to take healthy risks and overcome obstacles, and experience the thrill of self-discovery without a fear of failure (Juster, 2015).

Self-direction is an important milestone that typically occurs during the Preoperational Stage of cognitive development. Children who have been deprived of this valuable form of play often exhibit higher rates of childhood mental disorders and lower rates of creativity and empathy (Gray, 2013). For adopted children in particular, some researchers theorize the lack of self-direction stems from the adopted child's previous environment, which may have been abusive or chaotic. Children from institutional care, such as foster homes or orphanages, may have been raised in a very structured environment, where they eat, sleep and play at scheduled times. Playtime was most likely adult-directed, where "children are shown the right way to play with toys and corrected if they deviate from that method." (Julian, 2015) These attitudes can persist long afterwards, requiring possible intervention by play therapists to help children re-learn how to play.

Imaginative and Fantasy Play

Many parents said their children particularly struggled with imaginative play, which is often required for children to play by themselves. Parents said the ability to engage in imaginative play took the longest to develop, and in some cases, really never developed. For example, my son showed his first signs of imaginative play this year--a full ten years after he came home. The ability to engage in imaginative play did not correlate with children's ability to self-direct play.

Russian psychiatrist Lev Vygotsky defined the dramatic and make-believe as the hallmark of play. Imaginative play evolves most during the preschool years, where children as young as four can create elaborate play worlds and scenarios (Bodrova, 2015). Sometimes, this ability is missed by parents due to commonly-held misconceptions about play. For example, some parents said their children don't know how to do imaginative play, but later on they talked about how their kids play fought like the Mandalorian, pretended they had facial hair or had their stuffed animals talk to each other. However, for the most part, this form of play is essentially absent in adopted children with trauma, especially those adopted at older ages, from abusive backgrounds, or with some type of special need.

There are a variety of reasons why adopted children with trauma struggle with imaginative play. As shown by the survey results, many expressed challenges in executive functioning, which affect their

ability to plan, organize, problem solve, and self-regulate. This, in turn, contributes to problems with an "inflexible or restricted imagination." (Wolfberg, 2015). Others experience delays in expressive and receptive language, which make imaginative play difficult. Due to their inability to communicate, they may "skip the storytelling and sharing, active listening, acting, and role-playing" opportunities typically offered in the preschool setting (Mindes, 2015). Children with attention problems and learning disabilities may encounter "missed chances," where they don't understand the entire story or picture, or are easily overwhelmed by too much information or details (Mindes, 2015). These challenges can put children at risk for not developing complex play skills--including imaginative play--requiring additional therapeutic assistance.

USE OF PLAY THERAPY

As shown by this study, exposure to trauma severely diminishes children's ability to engage in true, childlike play. Having their brains stuck in a state of traumatic stress makes it impossible for them to engage in the imaginative and expressive healing power of play (Ziegler, 2009).

According to the therapists I interviewed, this results in a catch-22 situation: children need to be in a position of safety in order to play, but this same exact position is frightening and scary for them.

> *"Being in a safe environment can be scary for the first while because they don't know it. They've never been in it. And so that's a whole new experience. And so they will attempt to create chaos, because at least they know the chaos." (Therapist #1)*

In addition, the effect of ambiguous loss in this process cannot be understated. Children who lack certainty in their lives struggle in terms of relating to others, as well as their self-confidence and their sense of self (Itzkowitz, 2020).

To help, social workers often use a counseling technique called play therapy to help children incapable of verbalizing and expressing themselves to communicate and work through difficult subjects using objects and toys (Taheri, 2015). There, therapists work to "help them experience those feelings in containment and in safety," so they can rewire the brain and create new patterns. Studies have shown that when paired with a strong family and stable home environment, play therapy can be especially beneficial for adopted children who have experienced complex trauma, abuse and neglect (White, 2014).

The play therapy space is a sensory-rich environment with a wide variety of materials and activities for children to choose from. The goal is to create a safe space, where children feel they are in control and, in the end, feel comfortable to "say" those things they can't or won't say anywhere else. Children may use sensory activities, such as bubbles, playdough, sand and water tables, to help them calm down. They may use a toy telephone, doll, or a puppet to role-play. Expressive arts, such as drawing, painting, music or dance, may help children to tell a story. Therapists may also use games, such as "Simon Says," Twister, or Candy Land, to talk about difficult subjects (Selva, 2017).

Interestingly, while over 60 percent of children took part in individual therapy, only 20 percent participated in play therapy. When prompted, parents either did not know about this valuable form of therapy, or were unable to find a local provider that accepted their insurance. To make matters more difficult, play therapy is typically employed face-to-face in a hands-on environment and is not well suited to a remote setting (Landreth, 2020), which limits therapeutic choices. Shifting from a hands-on environment to the digital world is in progress but is still not optimal at this time (Stone, 2020).

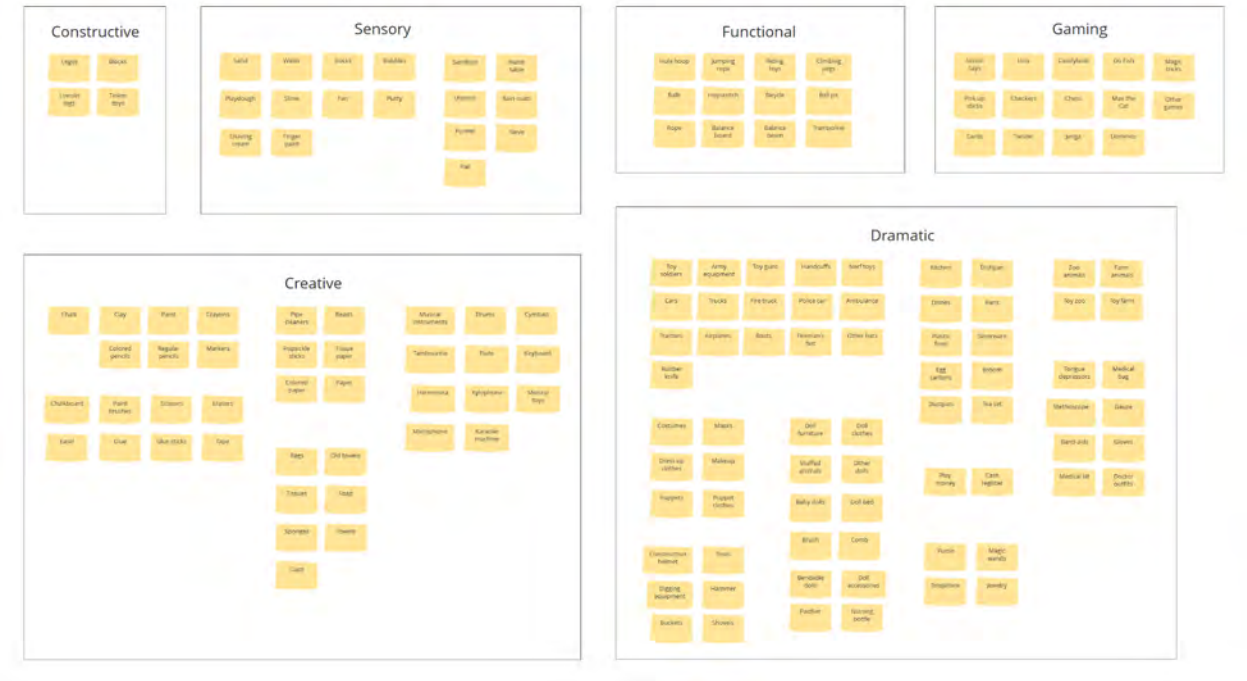


Figure 5.6 - Range of play objects employed by play therapists

RECOMMENDATIONS FOR FUTURE RESEARCH

This study has shown that adopted children face a variety of challenges that interfere with their ability to heal from their past traumas and transition to their adoptive families. There have been a variety of research studies on adoption and/or foster care, yet to my knowledge, there have been no studies on adopted children and their use of play. Conversely, there have been many articles and books written about the effect of trauma on children, including their ability to play. There is also detailed information on the use of play therapy to help children with trauma, as well as to teach them how to play.

Adoptive families have long recognized that their children, especially those with trauma, struggle with the entire concept of play, especially social play, self-directed play, and imaginative and fantasy play. The ability to play is not innate for these children. This study attempts to explain these deficits and demonstrate why their absence is detrimental. Additional research is needed to better understand the impact of childhood trauma on the Preoperational Stage of cognitive development and, most importantly, discuss ways to fill in the gaps for these children.

While social play for adopted children has received a variety of attention in terms of exploration and intervention, self-direction and imaginative play require more scrutiny. Research shows these areas are a natural and integral part of development, yet they are often underdeveloped and/or missing in adopted children with trauma. Clinically-based research is needed to determine the overall impacts of trauma on these children in terms of play, which should include the creation of clinical outcomes geared toward assessing and treating children to develop adequate play skills.

RECOMMENDATIONS FOR DESIGN INTERVENTION

Throughout this study, it has become clear that adopted children have major challenges that require intervention. Because of its unique focus and environment, play therapy is uniquely suited to help these children, both to help them work through past traumas and to teach them how to play. Based on the results, a design intervention would need to consist of several components:

Partnership with therapy - Building and maintaining the therapist-child relationship is essential. Therapists focus on creating a safe environment, building rapport, and allowing the child to dictate where and how sessions go.

Focus on attachment - Working through trauma is, in itself, a traumatic process. As a result, it is absolutely crucial that therapy be rooted in attachment, with a strong family component, consistent structure, and a stable environment (Cranny, 2016).

Meets the child where they're at - Sometimes you have to go backward in order to move forwards. Since many adopted children have missed an important stage in their cognitive development, therapists need to meet the child at whatever stage they're in. The key is to fill in critical gaps so they can successfully move on to the next cognitive stage.

Flexibility to accommodate various challenges and needs - Because every child and their story is different, design solutions need to be flexible to accommodate varying treatment goals, based on situation and child.

Centers on imagination and decision-making - Design solutions need to allow children to use their imagination, explore, make decisions, and gain a variety of skills, such as identifying their feelings, learning coping skills, understanding grief and loss, among others.

Focus on fun and appeal - Many adopted children are caught in a never-ending cycle of doctor visits and therapy appointments. In addition, due to their situation, some children may be inherently resistant to therapy. The key is to create something that is fun and appealing--that is ***not*** therapy.

Chapter 6:

Design Intervention

Throughout this study, it has become clear that adopted children have major challenges that require intervention. Because of its unique focus and environment, play therapy is uniquely suited to help these children, both to help them work through past traumas and to teach them how to play. The play therapy space is a sensory-rich environment with a wide variety of materials and activities for children to choose from. However, as stated previously, play therapy is typically employed face-to-face in a hands-on environment and is not well suited to a remote setting.

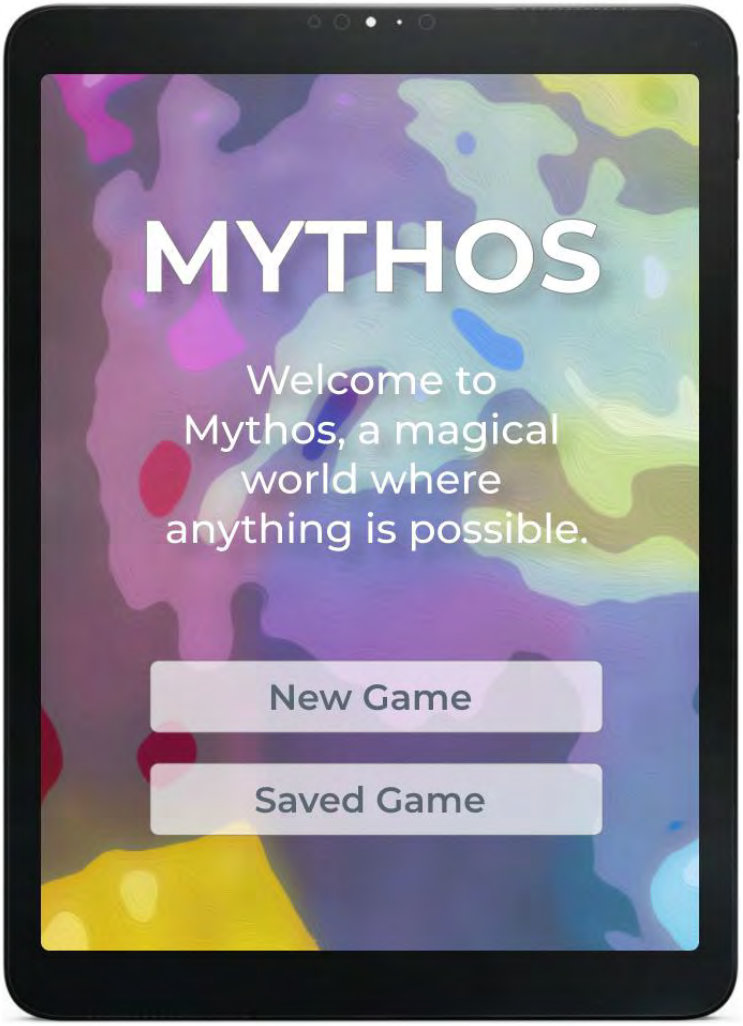
As a result, instead of using older paradigms, such as computer-based cognitive behavioral therapy, this study borrowed concepts from play-based learning within the educational realm. In the spring of 2021, I took a class on game-based learning to better understand this concept. Earlier analysis of popular digital play-based platforms, such as virtual makerspaces, games like Minecraft and Roblox, and frameworks that promote interactive storytelling and creative expression, such as Night ZooKeeper and Toy Theater, showed the value of such platforms for the needs of play therapists.

When interviewed, play therapists and other therapists who work with children stated that they have used video game themes, such as Minecraft, in their practice, or watched their child patients play a

video game, such as Roblox, but they have not employed the use of actual video games for therapy. For the therapeutic games that do exist, a common complaint is that they're too wordy and not built to suit the unique needs of children and what they're going through. At the same time, therapists believed that video games can play a valuable role in therapy: "I think that it has a ton of potential because it's a safe thing for kids. It captures their interest, and it isn't as vulnerable as playing with something in the room." (Therapist #2) In addition, by "entering their world and their language," therapists can connect on a deeper level with the children they're trying to help.

As a design project, this study varies from traditional research in that it includes a design intervention. Using a co-design process, I worked hand-in-hand with a play therapist to analyze the research and understand the play therapy environment. From there, together we explored new and innovative ideas to harness the make-believe world through virtual role play, storytelling and story-acting, allowing children to create their own small world and negotiate their role within it.

MYTHOS: A Role-Play Video Game for Adopted Children



In the form of a video game, adopted children and children with trauma role-play as a stuffed bear who has lost their home and finds themselves on a journey of self-discovery. The game uses a variety of learning styles and game-based learning techniques to accommodate children at different developmental levels. To ensure optimal outcomes, the game will be partnered with therapy and a physical stuffed bear. At the end of each session, the therapist will ask the child questions about their experience.

Target audience: Adopted children, ages 5-12

Ultimate learning/treatment goal: Termination of self-defeating acting out behaviors and acceptance of self as loved and loveable within an adopted family.

Figure 6.1 - Game home screen

GAME COMPONENTS

Borrowing concepts from game-based learning, the game's focus is to mirror experiences often faced by adopted children and children with trauma.

- **Role-play:** Children participate in the game as a stuffed animal, allowing them to project their emotions and experience the trauma journey using an outside lens. A self-defensive mechanism, projecting uncomfortable and difficult feelings onto another helps to "keep discomfort about ourselves at bay and outside our awareness." (Healthline, 2018)
- **Storyline:** The game uses the 12-step hero quest, a common narrative technique used in role-play games, to mimic the process often used in trauma and recovery programs. Many recovery programs, such as Alcoholics Anonymous, use a 12-step program. Child therapists often use a program called the 3-5-7 Model to help children work through feelings of grief and loss (Henry, 2014).
- **Learning opportunities:** To advance the game, children use their imagination, explore, make decisions, solve puzzles, collect objects, and pick up a variety of skills, such as identifying their feelings, learning coping skills, understanding loss, and others.
- **Physical object:** Children will be provided with a physical stuffed animal that emulates the stuffed bear in the game. The hope is that children will use it to embody and project their feelings, both positive and negative, to help them process their experiences and heal.

Partnering with therapy throughout the game is key. Designed to be used as a tool by therapists, they can incorporate the game into their individual/play therapy sessions, as well as with child support groups.

- **Therapy relationship:** Building and maintaining the therapist-child relationship is crucial. Therapists focus on creating a safe environment, building rapport, and allowing the child to dictate where and how sessions go.
- **Treatment goals:** Since many adopted children have missed an important stage in their cognitive development, therapists need to meet the child at whatever stage they're in. Because every child and their story is different, the game is flexible to accommodate varying treatment goals, based on situation and child.
- **Companion guide:** Therapists will be provided with a companion guide to help them prepare and work in concert with the game. Split into modules, the guide will discuss various aspects of the game and provide suggestions for treatment goals. Therapists can incorporate these goals or create their own as needed.
- **Frequent check-ins:** Working through trauma is, in itself, a traumatic process. Throughout the game, therapists check in to see how the child is doing and provide support. They can also work with parents to continue necessary support at home.

GAME ELEMENTS

Characters: Participants play in the main role of a stuffed bear. They can customize the bear's name, age, color and choose a superpower. Superpowers are based on character traits rather than physical traits, such as funny, fast, strong, brave, smart, kind or curious.

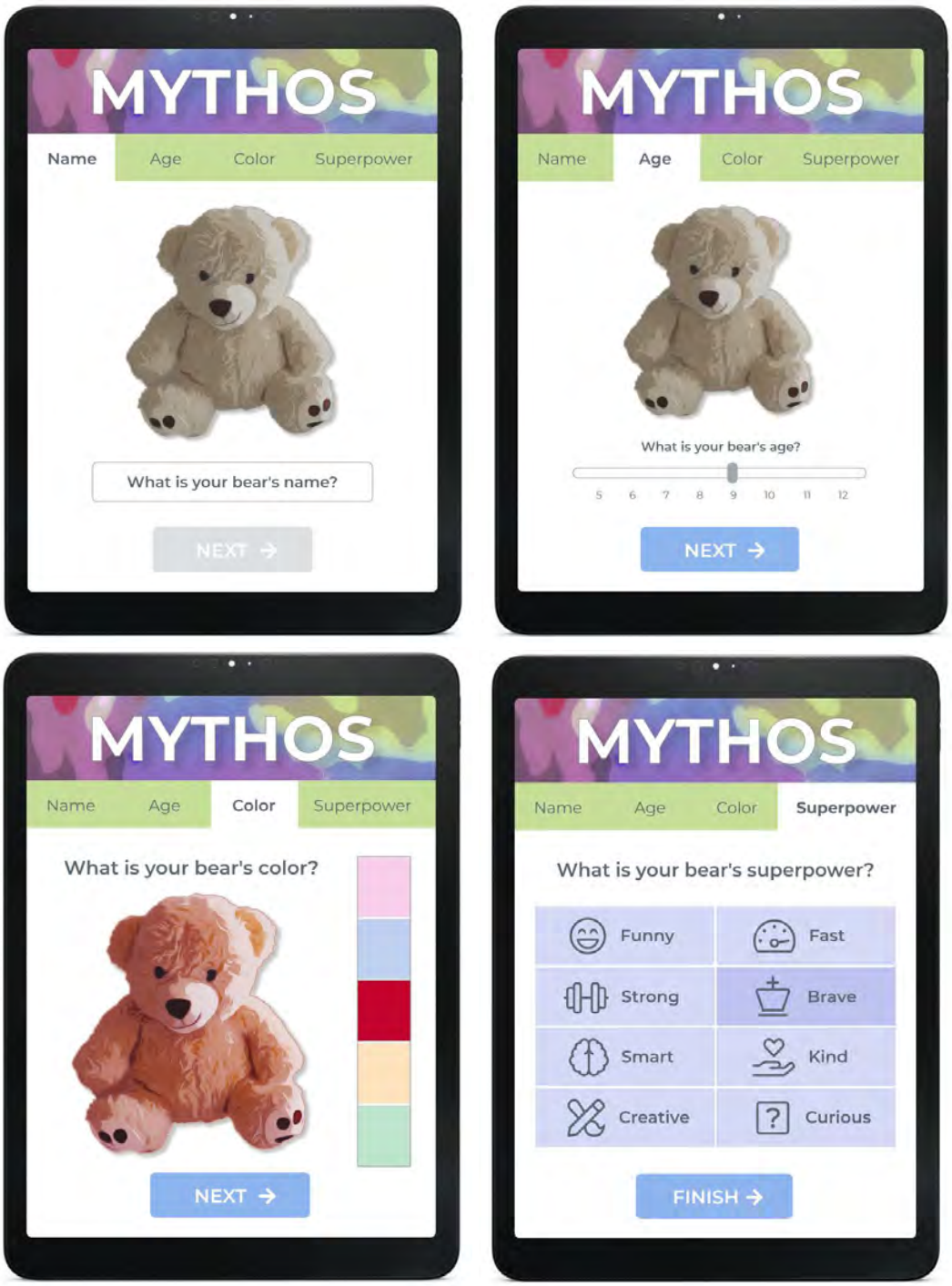


Figure 6.2 - Game onboarding process

World: Mythos is a modern-day world with fantasy underpinnings:

- Mythical beasts (fairies, gigantic spiders, dragons, unicorns, trolls, etc.)
- Magical objects (wands, potions, spells, books, etc.)
- Magical powers (teleporting, invisibility, flying, shapeshifting, etc.)

Narrative: The game is based on a character-based narrative. In the form of a predefined character, the focus is on performing actions that enable some type of character transformation.

- **Plot Hooks (Backstory):** Provides dramatic context for game play. Used at the beginning to draw players into the game.
- **Main Character:** Provides emotional proximity with the player.
- **Non-Player Characters (NPCs):** NPCs serve as key context. The player must interact with other characters to learn information and advance the plot.
- **12-Step Quest:** Frames the storyline for the entire game.
- **Small Quests:** Framed as small tasks with reward upon completion.

Challenges: Players encounter a variety of challenges to advance the storyline:

- Focus on exploration
- Uncover clues and solve puzzles
- Collect objects
- Interact with other characters to learn information
- Learn new skills
- Engage in battles and fights

GAME THEMES

Adopted children face a variety of issues that impede their ability to heal from past traumas, grow, and ultimately attach to their adoptive family. The game will attempt to provide opportunities to address the following core issues (Roszia, 2014):

- Loss
- Rejection
- Guilt/Shame
- Grief
- Identity
- Intimacy
- Mastery/Control

A large part of the game revolves around teaching a variety of life skills and strategies. For example, when the bear suddenly finds themselves alone in a strange land, children are prompted to analyze her emotions and how she might be feeling. In another instance, children employ coping strategies to help the bear calm down in the midst of a stressful situation. Children gain points for every skill they gain and are able to revisit these exercises throughout the game, as needed.

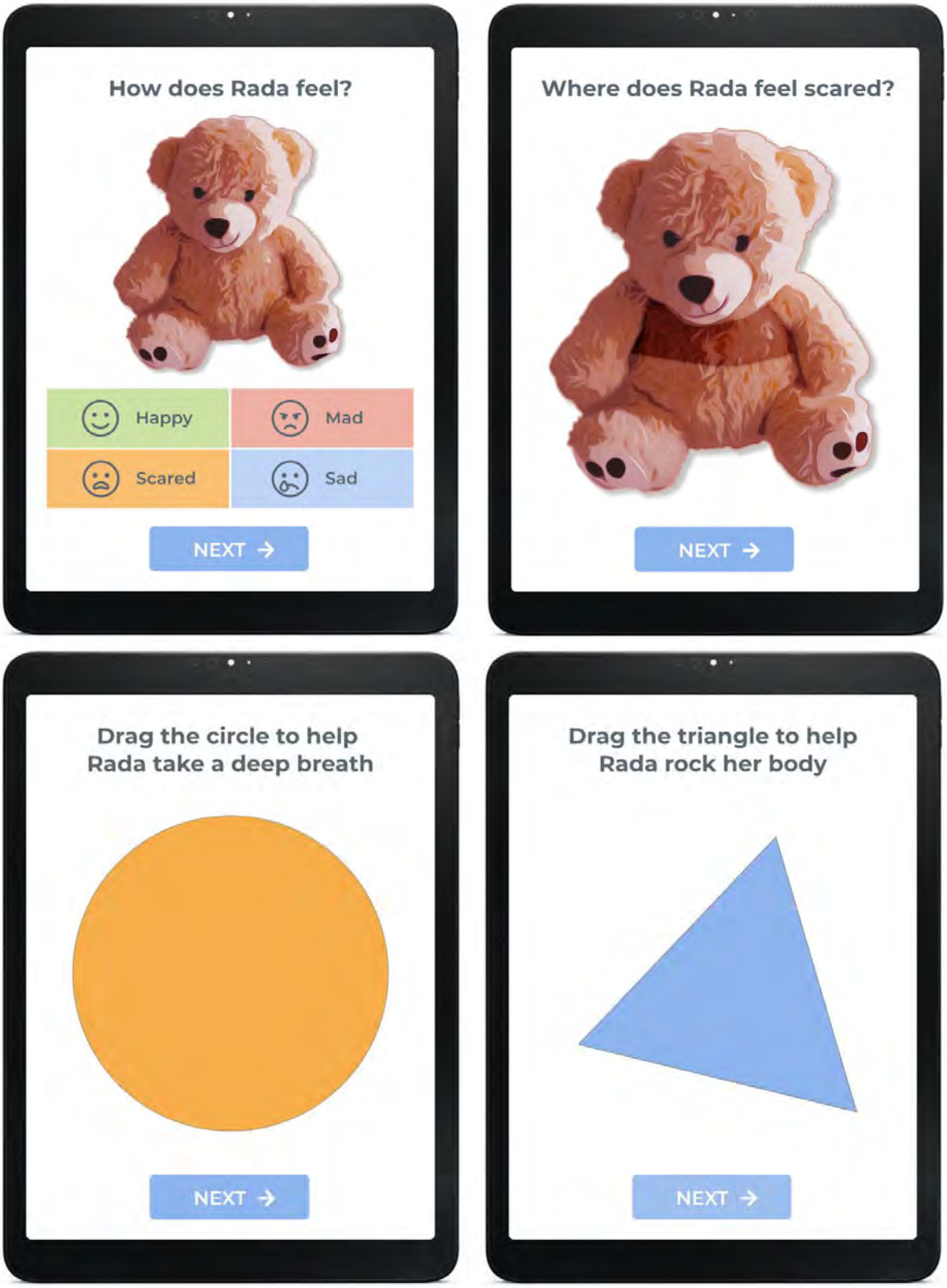


Figure 6.3 - Examples of therapeutic skills and strategies employed in the game

Decision points in the game are based on clinical concepts; for example, when initially confronted with a stressful situation, children must decide the bear's reaction: fight, flight, freeze, or collapse. Each is based on typical reactions to stress, and sends players down a different path in the game.

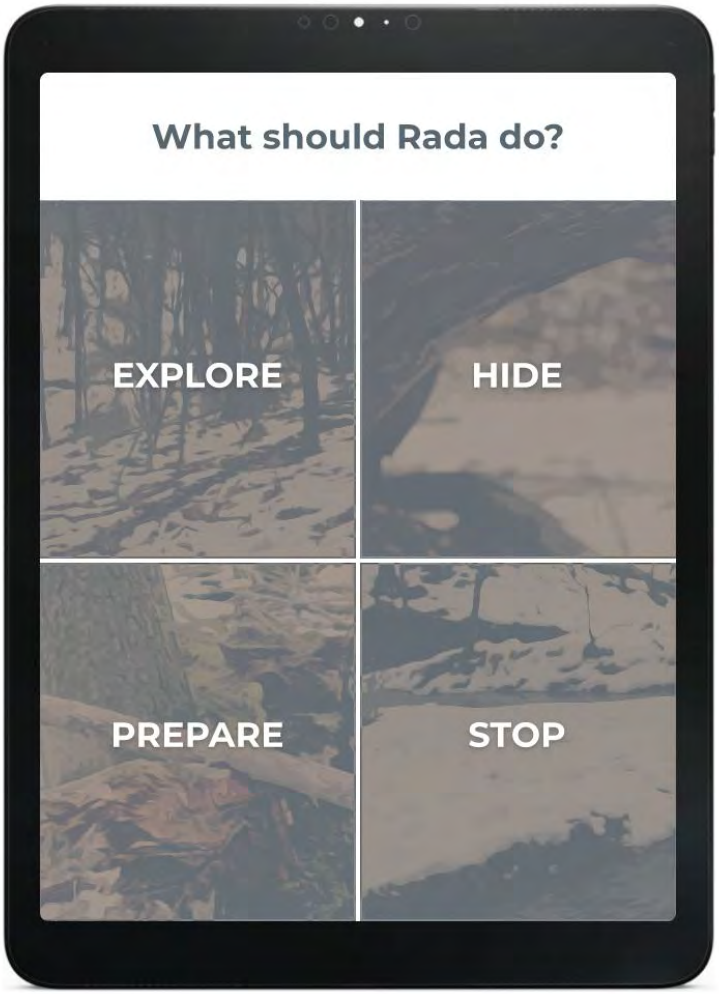


Figure 6.4 - Examples of clinically-based decision points

Throughout the storyline, the game uses the 12-step hero quest to mimic the process often used in trauma and recovery programs. The story takes child players through the stuffed bear's trauma journey, with the goal of making them co-participants in the process. Because each child and situation is different, therapists will monitor them as they engage with the game and create appropriate treatment goals as they progress. The 3-5-7 Model defines three distinct stages that adopted children will experience (Henry, 2014):

Act 1: Departure (Clarification)

The hero finds their world completely torn apart and will experience many of the first stages of grief: denial, anger, bargaining, and depression.

1. *Ordinary World* - Limited awareness of problem.
2. *Call to Adventure* - Increased awareness of problem. Reaction: denial, fear
3. *Refusal of the Call* - Reluctance to change. Reaction: anger, depression
4. *Meeting the Mentor* - Overcoming reluctance. Reaction: anger, bargaining

Key Focus: Understand the events of their lives and reconcile the losses they have experienced (clarification)
Core Issues: Loss and Grief

Act 2: Initiation (Integration)

The hero has accepted that their world has changed and must find a new path within it.

5. *Hero Accepts Call* - Committing to change
6. *Tests and Obstacles* - Experimenting with change
7. *Preparation* - Preparing for change
8. *Ordeal* - Confronting change

Key Focus: Learn to accept themselves and rebuild relationships in their lives (integration)
Core Issues: Rejection, Guilt, Identity

Act 3: Return (Actualization)

The hero now has to confront their new reality. The decisions they've made haven't turned out the way they thought they would, and they have to find a way to adapt to their new world.

9. *Reward* - Consequences of the attempt to change
10. *The Road Back* - Rededication to change
11. *Resurrection* - Last attempt to change
12. *Return* - Final mastery of problem

Key Focus: Visualize belonging to a permanent family (actualization)
Core issues: Identity, Intimacy, Mastery/Control

GAME STORYLINE

The storyline itself takes players through the adoption journey, with the ultimate goal of letting go of the past, accepting themselves for who they are, and embracing their new life within an adopted family.

1. **Ordinary World:** The story begins with Rada (or other name), a stuffed bear, sitting with a slew of toys. She is happy in her room, with her friends.

2. **Call to Adventure:** Rada sees a mysterious light, which transports her to a frigid, dead world. She wakes up, cold and alone in a forest. She can't remember how she came to be there.

   Suggested learning/treatment goal: Identify personal emotions and feelings.

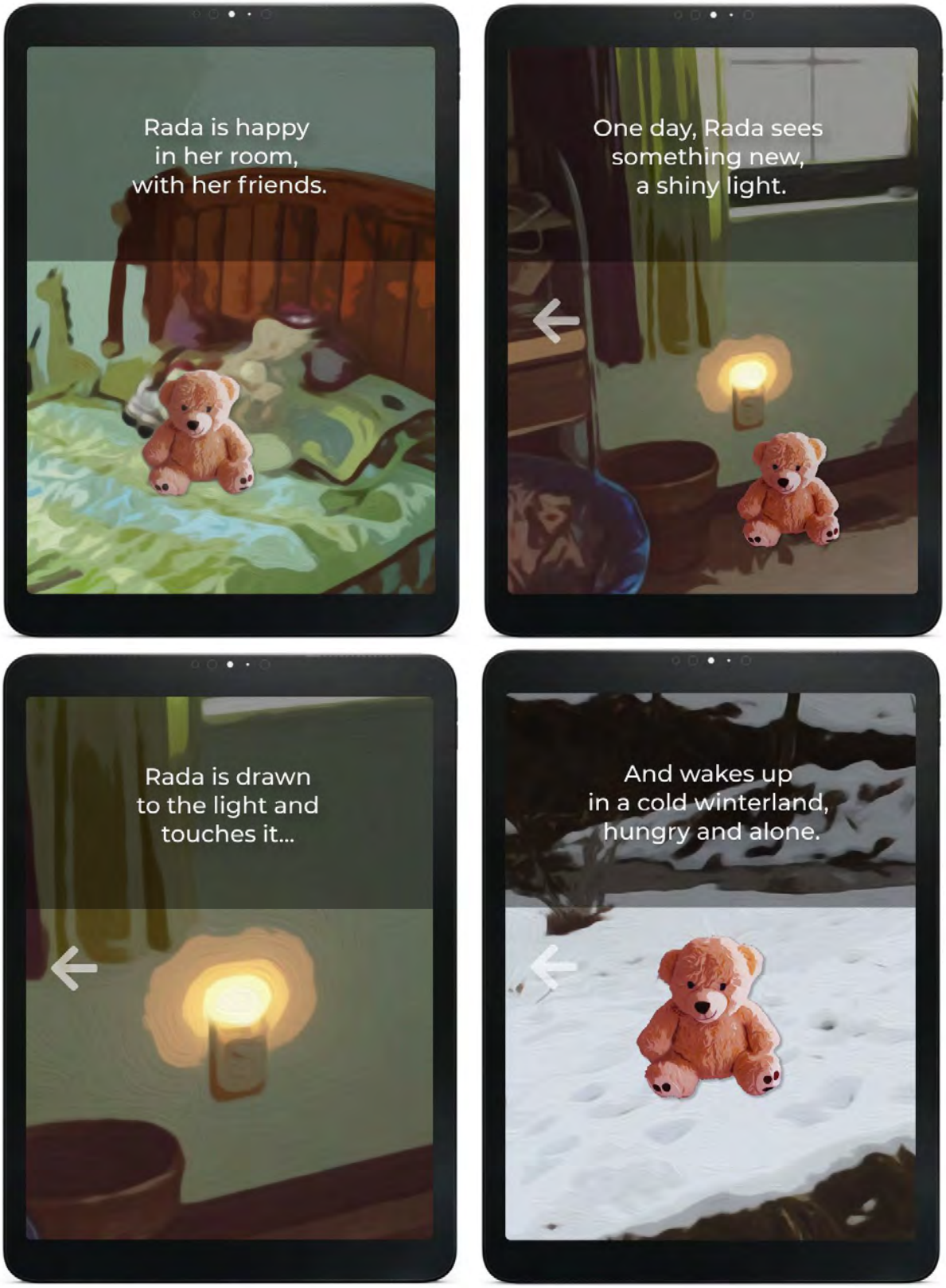


Figure 6.5 - Opening scene and backstory

1. **Refusal:** Frightened and confused, Rada runs into the forest, where she comes across a terrifying creature that lives in a nearby cave. After a close call, she realizes that she is truly alone. Missing her home, she sits in the leaves, dejected and unsure of what to do.

   Suggested learning/treatment goal: Increase coping skills related to trauma symptoms.

2. **Meets a Mentor:** Rada meets a beautiful bird-fairy, whose magic wand has been stolen by a large spider. In return for her help, the bird-fairy teaches Rada how to collect objects, go on mini-quests, and use her superpower. In the real world, the therapist functions as the child's mentor, helping them process their emotions and giving them tools and techniques to practice what they've learned in the game.

   Suggested learning/treatment goal: Express feelings of grief connected to the losses associated with being adopted.

3. **Hero Accepts Call:** The bird-fairy gives Rada an interactive map and sends her through a magical portal. This world is different from where she came from, so she spends some time collecting resources and exploring her surroundings. She goes on a series of mini-quests to gain information and equipment and hone her skills.

   Suggested learning/treatment goal: Identify and release feelings in socially acceptable, developmentally appropriate, non-destructive ways. Therapists will provide child with a toolbox of techniques and objects to help.

4. **Tests and Obstacles:** While exploring her surroundings, Rada encounters a dog who's being chased by a large spider and hides. At some point she hears voices as a group of three children follow the dog. She introduces herself and together they go on a quest to fight the spider and save the dog.

   Suggested learning/treatment goal: Resolve the loss and begin reinvesting in relationships with others and in age-appropriate activities. Therapists will provide assignments at home and follow up with parents.

Figure 6.6 - Examples of villains faced by players in the game

5. **Preparation:** Their quest is not easy. Decisions have consequences. Rada prides herself on doing things herself and isn't used to working with other people. To be successful, Rada has to learn to trust others and work together as a team.

   Suggested learning/treatment goal: Identify situations that require working with others. Experiment with reaching out to others and asking for help.

6. **Ordeal:** While working together makes their quest easier, Rada is confronted by her past. She's afraid that once they succeed, her friends will go their way and she will be alone once again. She wonders if she deserves a family.

   Suggested learning/treatment goal: Identify and express residual feelings of guilt, shame, abandonment, and rejection.

7. **Reward:** The four of them save the dog and Rada retrieves the bird-fairy's wand. In response, the fairy tells Rada that with one wave of their wand they can give her what she really wants: a family and a home.

   Suggested learning/treatment goal: Express feelings and identify positive aspects directly related to being an adopted child.

Figure 6.7 - Bird-fairy and mentor

8. **The Road Back:** Rada has to decide what she wants to be and where she wants to go. She can continue to figure things out on her own or choose to embrace her new life and home with her newfound family.

   Suggested learning/treatment goal: Report decreased feelings of guilt, shame, abandonment, and rejection. Embrace new thoughts and paradigms.

9. **Resurrection:** The spider returns and takes Rada's family hostage. Rada goes on a final quest to save them.

   Suggested learning/treatment goal: Increase feelings of safety and connection with their adopted family. Therapist will provide opportunities for family connections and help family work through obstacles and problems.

10. **Return:** Rada vanquishes the spider and saves her family. Ultimately, she chooses to let go of the past and embrace her new life.

    Suggested learning/treatment goal: Acceptance of self as loved and loveable within an adopted family.

CONCEPT TESTING

Mythos was created as a proof-of-concept in Adobe XD. It uses a variety of design effects and illustration components, as well as interactions and sound. Imagery was staged and photographed, and later edited in Photoshop.

For the purposes of concept testing, the goal was to determine the viability of the game within the therapeutic space. I showed three participants a design presentation describing the concept of the game, as well as a fully-functioning high-fidelity prototype. Two were play therapists and the other was a social worker who worked with adopted children.

Reviews for the game and overall concept were enthusiastic. As mentioned before, none had incorporated the use of video games into their practice for therapy, and they felt the game was unique and different. They appreciated the fact that the game was based on research--on really digging in and understanding the different thoughts and perspectives of everyone involved--and that the game was co-designed with a play therapist to ensure a solid, clinical component.

> *"I like how thoughtful you've been in this process of considering different experiences of children that have been adopted. I think that you've taken a lot of things into account. And you recognize it might not be the experience of all kids, but a lot of kids and how it could be used. I really appreciate that." (Therapist #1)*

Partnering with Therapy

I first started with the background of the project and the research question, and then introduced the premise of the game. I then discussed essential components of the game, specifically its tie with therapy, and explained how it would work. As therapists who regularly treat adopted children and children with trauma, this piece was especially important. Because working through trauma, even with detailed training, is complicated, therapists spend a lot of time cultivating the therapist-child relationship and creating a safe space for the children to be themselves and process what they've been through.

> *"As the big, kind, caring, safe adults, we get to be there and over and over again. And that's where it begins to rewire that they get to experience these feelings again, because we work in the present to heal the past by working with the feelings because the feelings are there no matter what." (Therapist #1)*

They especially appreciated the idea of having a companion guide to help them better understand different components of the game, which would allow them to create treatment goals, depending on the situation and child. This is similar to other recovery programs, such as Alcoholics Anonymous and DivorceCare (DivorceCare4Kids, 2008), where the material is positioned as modules, with workbooks for both coaches and participants.

> *"I think I would stress in the manual that, whoever is facilitating this game needs to be able to know that not all parents know how to discuss some of this stuff. This game has to open up doors in order to have these tough conversations with the kid. That's part of the therapeutic point of it, to be able to help them identify how they're feeling, how we help them know, and work issues." (Therapist #3)*

Customization and Role-Play

From there, I used the prototype to show how children can customize their stuffed bear. Therapists liked that superpowers were based on character traits. One mentioned that while people may typically define the word "strong" as physical strength, it can also mean resilience and mental strength.

Figure 6.8 - Customizing the bear avatar

Overall, everyone felt the ability for children to role-play and experience the trauma journey as a stuffed bear was a useful strategy. As mentioned previously, projection can be an effective self-defensive tactic to help individuals process harmful and hurtful feelings within a safe place (Healthline, 2018).

> *"I love that being a bear in what's going on is removed enough from their experience that it's not threatening, but it's close enough to their experience that their brain can still make those connections, which is what you're going for." (Therapist #2)*

They also felt the additional component of providing a companion stuffed bear would be helpful as a way to project their emotions when they're away from the game. For example, when they're having a hard time, parents could ask them what they're thinking and feeling through the lens of the bear.

> *"And so kids could say with play--and especially if there's like an object like this that kids are likely to project their experience--what they would do onto that object. And so you could talk about it in the context of the bear. And really, you know, they can be internalizing that message. It's the same thing." (Therapist #1)*

They also believed the bear might have potential as a comfort object. As shown in the research, very few adopted children come to their families with comfort objects. Some eventually adopt a comfort object, but many don't. This could potentially fill that void.

> *"As a transition object, it's safer. I have seen several kids from foster care that have a toy that they've attached to that communicates for them for a while until they get comfortable with their family. Especially for the younger kids, or the kids that are developmentally in a place that they're not as verbal or not as able to communicate." (Therapist #3)*

Focus on Transferable Life Skills

By far, everyone's favorite feature of the game was its focus on teaching children life skills that are transferable to the outside world. In the prototype, children learn two skills. The first is called "Feeling Zones," where they identify how the bear is feeling and then point to the part of their body where they might be experiencing those feelings. The second skill is called "Brain Breaks," where they help the bear clear their head after a stressful situation: they can take a deep breath, move around, or rock their body. All are based on real exercises therapists teach children in their practice, and can be revisited as necessary throughout the game.

As shown in the research, adopted children and children with trauma often have problems identifying and regulating their emotions, so teaching these skills are typically the first step in therapy. The goal is for children to learn how to respond and react to stressful situations in appropriate ways.

> *"I like that you have the skills integrated because there's like this real-world application, but it's about someone else. And it's fantasy. But they're practicing those skills, which helps them get that into their brain. I think that will make it stick in their brain more than if someone just talks about it with them, or has them do it." (Therapist #2)*

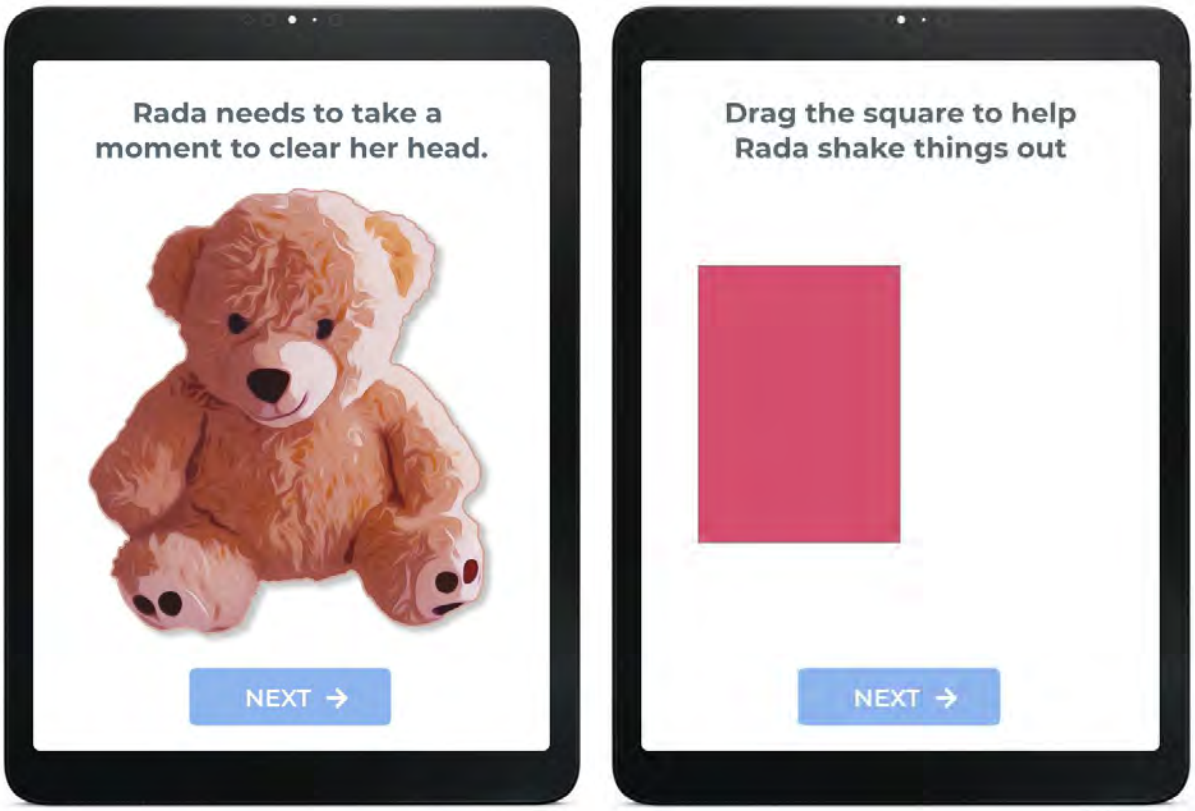


Figure 6.9 - Learning self-calming strategies

One therapist mentioned that it's not uncommon for these children to simply not know how to respond in situations like this, which is why the therapist-child relationship is so important. They're simply too disconnected from their body to understand.

> *"So it's important, even if they are like, 'I don't know how the bear is feeling? I don't know. I'll just click one.' So then, as the therapist, I would know, okay, maybe we need to go back to our other work and kind of pause and get curious about experiences." (Therapist #1)*

Teaching life skills also opens the door to connecting on a deeper level, which could help better connect adoptive parents and their children.

> *"So that's the cool thing about having a therapist doing it with them, is that they could initially play the game with a therapist, and they could still play it at home. And then, not only are you working through that, but you also bring up anything you could even talk about, like, how would you tell others that you were feeling this way?" (Therapist #3)*

Flexible Storyline

Another quality therapists appreciated was the game's flexible storyline. While the main story revolves around adoption, it's still high-level enough that it can be molded to fit any child's experience, regardless of where they came from and what they've been through.

“I like the whole storyline here, where you begin in the ordinary world, something happens, and then you end up somewhere and you're really depressed. You have no idea what happens. I love that it's vague, but it's not like, you don't really say exactly what happened. So it's open ended. I love that because the therapist can adjust it in the ways they need to.” (Therapist #2)

Therapists pointed out they can connect the game to the child’s own story, in their own time and in their own way. Of course, in the end, this is the core purpose of the game.

“That's the cool thing about having a therapist doing it with them. Eventually you'd be able to, once you build that relationship with them and once they trust you more, you would eventually be able to get to the point where you could talk about their story. You can kind of adapt it to their story and build upon it. ” (Therapist #3)

Connecting with Parents

Throughout the process, therapists emphasized the importance of strengthening the parent-child relationship. As research has shown, parents do their utmost to connect with their children, and all of them thought this game might be a good tool to help accomplish that. One therapist theorized that, together with the companion guide, parents might get a better sense of what their children have been through. Another believed that, together with the physical stuffed animal, parents could continue utilizing the concepts their children have learned at home.

“So even (as) the parent, I like that it saves that, where they can go back and review it. For a parent coaching a kid when they're having a hard time, (they can say) ‘Let's go back to your game and see which of these might help us right now.’” (Therapist #2)

And finally, everyone believed that by simply being an observer, parents could provide their children with the sense of safety they need.

“I love that part of this game is you do this with a caring adult. This isn't something the kid does alone. That's so important. Because that's part of this whole process to have, even just being a parent of any kid, and especially adoption, is that they're not alone, even in the game. They're safe, and caring people are there with them.” (Therapist #1)

DEFINITION OF SUCCESS

Overall, the therapists I interviewed were enthusiastic about the game and concept. Everyone thought it was a viable tool that could be of use for adopted children and children with trauma, and were excited at the thought of the game becoming a reality. Of course the ultimate goal would be for children to use the game to connect the dots between the experience of the stuffed bear and their own, and then use that to process what they’ve been through. But, as one therapist put it, trauma is hard.

> *"It is not simple at all. It is incredibly complex. And it just has so many layers. And I think one of the trickiest things is that if you looked at every kid, every single one of them is going to present differently and have different challenges and different ways in which it shows up. Because it's personality, it's what they went through, it's how their brain decided to handle it." (Therapist #2)*

Another said that "if it could be used even with one kid and change their life in a positive way, just a little bit, that's a success to me." She emphasized the importance of celebrating the small victories: taking a deep breath when a child is frustrated, identifying how they feel when they meet someone new, or overcoming their fear when they need to ask a waitress for a fork.

> *"For all kids--especially children that have experienced trauma--it's overlooked to celebrate the small victories sometimes because it's a lifelong thing. It's a lifelong process to heal and grow and change. And we know that change is possible. And sometimes it's just little things." (Therapist #1)*

For myself, I can sympathize. My son has required multiple surgeries just to walk, and I'll never forget when we were finally able to put him in a pair of real shoes, or when he transitioned to a crutch from his wheelchair, or when we could finally throw away his leg braces, or when he could actually stand on one foot. For children who have been through so much, it really is the little things that matter most.

On a deeper level, all therapists felt the game can function as a way for these children to connect with a caring adult--something that can be highly elusive for a child who's experienced trauma. This, in turn, can enable the people in their life to engage with them, perhaps transforming a group of individuals into a family.

> *"I think success would be defined as the kid's ability to be able to connect with a (social) worker. Maybe it could be success if they've ever connected with someone through this, or connected with their parents through this." (Therapist #3)*

SUGGESTIONS FOR FUTURE DESIGN

All therapists were willing to try out the game with some of the children they work with, but due to the lack of time and robust testing protocols, testing with children was not a possibility at the time of this writing. My daughter was a willing test participant, and was enthusiastic about her experience. She found it easy to customize her character, appreciated the beginning story, and loved the skills so much she kept going back to them time and time again. This is a positive sign.

The next phase should consist of testing with adopted children to observe their reactions and gauge their performance. Testing should consist of two parts: in the first phase, child participants would be given a set of tasks to complete on the prototype to identify points of interest, confusion, frustration or improvement in the final solution. Afterwards, researchers would conduct a short interview to determine children's reactions to the design intervention and also identify their perspectives of play. Testing results would be analyzed to diagnose usability issues and pinpoint design problems and

then compiled into a report for further discussion. The goal would be to ensure the game is fun, easy to use and is able to compete within the gaming landscape.

The second phase of testing would focus largely on clinical outcomes. Ideally, testing should take place with a therapist on the team who can identify and understand the impact of trauma and identify ways to circumvent its effects. As one therapist pointed out, the goal would be to analyze the game for its ability to teach children coping skills and identify with the stuffed bear and their journey: “It would be better for me to give feedback after it's like, played along with a kid. It's not necessarily something I didn't like. It's just, there are things that we don't know until it's played out.”

Another piece to test would revolve around possibly setting up the game into modules for use with adoption child support groups. This information would be beneficial in documenting and creating the companion guide for widespread use, as well as coordinating the delivery of physical stuffed bears to child participants.

Finally, since this is only a proof-of-concept, the goal would be to obtain a grant to help build out the game and make it real. Design suggestions revolved around adding more avatars than simply the stuffed bear, or allowing children to add clothing similar to the toy store Build-A-Bear. Therapists mentioned the possibility of allowing children to access the skills both within the game and separately, or providing options for group play. But most of all, as shown by therapist responses, I believe the game shows a lot of promise, in that it’s unique in the landscape, and could be a useful tool in helping bridge the gap between play therapists and the digital realm.

Chapter 7:

Design Research Conclusions and Discussion

Using the lens of attachment, the purpose for this research was to help adopted children in Pennsylvania work through past traumas so they can form healthy attachments with their adoptive families. By better understanding the challenges adopted children and their families face, and investigating the use of play—especially the use of role play in play therapy as well as virtual play—this research project explored new and innovative ideas to harness the make-believe world through virtual role play, storytelling and story-acting.

SUMMARY OF PROJECT FINDINGS

This study has shown that adopted children face a variety of challenges that interfere with their ability to heal from their past traumas and transition to their adoptive families. These deficits show up in a variety of ways, including their capacity to engage in play, especially social play, self-directed play, and imaginative and fantasy play. These, in turn, affect the way in which they see the world, as well as their

ability to play with others and by themselves. This is especially true for children who have been through some type of trauma, were adopted at older ages (age three or older), came from foster or institutional care, or have some type of special need. Adoptive parents frequently find themselves thinking outside the box to connect with their children and discover what they truly enjoy. Sometimes these attempts work out, but a lot of the time they don't.

As an adoptive parent, these findings were eye-opening, and at the same time, confirmed that my experience was in no way unique. The truth is, our children have been through something we can't begin to comprehend and understand. Trauma is a sly beast that weaves itself into every facet of a person's life, and is the lens through which our children see themselves and the world around them. When something as simple and innocent as play becomes a mirror that showcases one's deficits and inadequacies, the idea of being unconditionally loved and belonging to a family can seem almost myth-like and unattainable.

Unfortunately, many people only see the results of trauma: children who act out in inappropriate ways, scream and throw temper tantrums, say inappropriate things, throw and destroy personal property, collect strange objects, or spend hours in their room staring at the wall. This creates many challenges in getting an education, participating in activities, learning new things, finding new interests, making and playing with friends, and ultimately, connecting with family. But as one therapist put it, in the end they're just kids:

> *"They just want to be kids, they want to play, they want to have fun. And I think a lot of times, we label them. Sometimes they get labeled as being these bad kids or as problem kids. But they're just kids. They've gone through a lot of trauma and had a wide diversity (of things) like that. They all have their stories, and they're all different. But they're not problem kids. They're just kids." (Therapist #3)*

Because of its unique focus and environment, play therapy is uniquely suited to aid these children, both to help them work through past traumas and to teach them how to play. Using a therapeutic video game like Mythos can be a valuable tool to help with this process. Reviews for the game and overall concept were enthusiastic. As mentioned before, none of the therapists I interviewed had incorporated the use of video games into their practice for therapy, and they felt the game was unique and different. Therapists appreciated the game's solid, clinical focus, from its partnership with therapy and the ability for children to role-play and experience the trauma journey as a stuffed bear to its focus on transferable life skills and flexible storyline to accommodate any child and any situation.

SUGGESTIONS FOR FUTURE RESEARCH

A weakness of this research paper is that it tried to tackle several different subjects at once: attachment, complex trauma, children's use of play, and virtual play therapy, which complicated the process of analyzing the research and also cut down the time available to spend on a design intervention. While all therapists were willing to try out the game with some of the children they work with, due to the lack of time and robust testing protocols, testing with children was simply not a possibility at the time of this

writing. Detailed testing needs to occur on several different levels: first, to analyze childrens' perceptions and their ability to navigate and use the game; and second, to observe their reactions and gauge their performance in terms of clinical outcomes. Ideally, testing should take place with a therapist on the team who can identify and understand the impact of trauma and identify ways to circumvent its effects.

From a research perspective, there have been a variety of research studies on adoption and/or foster care (Hodges, 1989; Purvis, 2013; Tang, 2018), yet this study is one of the few to address adopted children and their use of play. It is also one of the first studies to revolve around the use of virtual play to treat adopted children with trauma. Conversely, there have been many articles and books written about the effect of trauma on children, including their ability to play, including *The Body Keeps the Score* (Van Der Kolk, 2015), *The Boy who was Raised as a Dog* (Perry, 2017) and *Traumatic Experience and the Brain* (Ziegler, 2011). There is also detailed information on the use of play therapy to help children with trauma, as well as to teach them how to play and form healthy attachments (Cranny, 2016; Teheri, 2015). *Dibs in Search of Self* by renowned therapist Virginia Axline (1964) is a fantastic account of how play therapy can bring life to children seemingly lost in the trauma of their mind.

Adoptive families have long recognized that their children, especially those with trauma, struggle with the entire concept of play, especially social play, self-directed play, and imaginative and fantasy play. This study attempts to explain these deficits and demonstrate why their absence is detrimental. Additional research is needed to better understand the impact of childhood trauma on the Preoperational Stage of cognitive development and, most importantly, discuss ways to fill in the gaps for these children.

While social play for adopted children has received a variety of attention in terms of exploration and intervention (Julian, 2015), self-direction and imaginative play require more scrutiny. Research shows these areas are a natural and integral part of development, yet according to this study, they appear to be often underdeveloped and/or missing in adopted children with trauma. Clinically-based research is needed to determine the overall impacts of trauma on these children in terms of play, which should include the creation of clinical outcomes geared toward assessing and treating children to develop adequate play skills.

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Appendix

APPENDIX A - Research Consent

Adoptive Parent
Research Consent Form

Greetings! My name is Coleen Sallot, and I am a graduate student at Miami University in the Experience Design program. My faculty advisor for this research project is Zack Tucker. Thank you for choosing to participate in this study. If you decide to change your mind at any time and not participate, feel free to let me know.

This interview is part of a thesis research project for Miami University, which focuses on how we might use play to help adopted children work through past traumas so that they can form healthy attachments with their adoptive families. As an adoptive parent of two children from Bulgaria and China, I know first-hand how challenging adoption can be. My goal is to better understand your experiences so that I can provide design recommendations that might help improve the experiences of other adoptive parents and their children.

Since you have self-identified as a parent who has adopted a child, your answers will be considered as integral and experienced information that will contribute to the validity of this study. Questions will be related to your experiences as an adoptive parent, particularly regarding your relationship with your child and their use of play. There will be 15 questions, but some of these questions might become very detailed and require a lot of thought. All questions are voluntary, and you may skip any question at any time.

Your name is only being used for this consent form and will not be used other than that. The answers to personal questions will only be used to identify and categorize the answers that pertain to your adoption experiences. The answers that you provide will be combined with the answers of other participants, and then all of the answers will collectively contribute to my overall understanding of adoptive parents' experiences with their children and their use of play.

You have the right to decline, and not participate, at any time. If you would like to leave the questions unanswered and withdraw them from the collection of answers for the study, please let me know. Before submitting your answers, please notify me if you decide that you do not want to participate in the study.

If you have any questions about the research now or in the future you may contact me at sallotcm@miamioh.edu or 314-221-1344, or my faculty advisor at zack.tucker@miamioh.edu. If you have any questions or concerns about the rights of research subjects or the voluntariness of participation, you may contact the Research Ethics and Integrity Office at Miami University at either (513) 529-3600 or humansubjects@miamioh.edu.

I PRINT NAME HERE agree to participate in this study for the purposes outlined above. I give the student researcher permission to record my written or spoken answers.

Signature SIGN NAME HERE **Date**

Play Therapist
Research Consent Form (Research phase)

Greetings! My name is Coleen Sallot, and I am a graduate student at Miami University in the Experience Design program. My faculty advisor for this research project is Zack Tucker. Thank you for choosing to participate in this study. If you decide to change your mind at any time and not participate, feel free to let me know.

This interview is part of a thesis research project for Miami University, which focuses on how we might use play to help adopted children work through past traumas so that they can form healthy attachments with their adoptive families. As a play therapist, you play a pivotal role in helping these children. My goal is to better understand your experiences so that I can provide design recommendations that might help improve the experience of other adoptive parents and their children.

Questions will be related to your experiences as a play therapist. There are no wrong answers. We want to learn about your unique experiences and viewpoint. There will be 15 questions, and some of these questions might become very detailed and require a lot of thought. Your name is only being used for this consent form and will not be used other than that. The answers to personal questions will only be used to identify and categorize the answers that pertain to your experience as a play therapist.

Your answers will never be used in any way that would identify you. They will be combined with answers from other people who participate in the study to make a report. The study results will be written into a report which will be shared with other university personnel and researchers.

Participation in the study is voluntary. You have the right to decline, and not participate, at any time. If you would like to leave the questions unanswered and withdrawal them from the collection of answers for the study, please let the student researcher know. You may decline to answer any questions for any reason. The study results will be written into a report which will be shared with other students, researchers, and university personnel.

If you have any questions about the research now or in the future you may contact me at sallotcm@miamioh.edu or 314-221-1344, or my faculty advisor at zack.tucker@miamioh.edu. If you have any questions or concerns about the rights of research subjects or the voluntariness of participation, you may contact the Research Ethics and Integrity Office at Miami University at either (513) 529-3600 or humansubjects@miamioh.edu.

I PRINT NAME HERE agree to participate in this study for the purposes outlined above. I give the student researcher permission to record my written or spoken answers.

Signature SIGN NAME HERE **Date**

Play Therapist
Research Consent Form (Prototype phase)

Greetings! My name is Coleen Sallot, and I am a graduate student at Miami University in the Experience Design program. My faculty advisor for this research project is Zack Tucker. Thank you for choosing to participate in this study. If you decide to change your mind at any time and not participate, feel free to let me know.

This interview is part of a thesis research project for Miami University, which focuses on how we might use play to help adopted children work through past traumas so that they can form healthy attachments with their adoptive families. As a play therapist, you play a pivotal role in helping these children.

Previously we spoke regarding your experiences as a play therapist. This time, we would like to show you a proof-of-concept of a proposed virtual play solution and obtain your feedback. Questions will be related to treatment goals and viability within the play therapy space, as well as your overall thoughts. There are no wrong answers. There will be 15 questions, and some of these questions might become very detailed and require a lot of thought. Your name is only being used for this consent form and will not be used other than that. The answers to personal questions will only be used to identify and categorize the answers that pertain to your experience as a play therapist.

Your answers will never be used in any way that would identify you. They will be combined with answers from other people who participate in the study to make a report. The study results will be written into a report which will be shared with other university personnel and researchers.

Participation in the study is voluntary. You have the right to decline, and not participate, at any time. If you would like to leave the questions unanswered and withdrawal them from the collection of answers for the study, please let the student researcher know. You may decline to answer any questions for any reason. The study results will be written into a report which will be shared with other students, researchers, and university personnel.

If you have any questions about the research now or in the future you may contact me at sallotcm@miamioh.edu or 314-221-1344, or my faculty advisor at zack.tucker@miamioh.edu. If you have any questions or concerns about the rights of research subjects or the voluntariness of participation, you may contact the Research Ethics and Integrity Office at Miami University at either (513) 529-3600 or humansubjects@miamioh.edu.

I PRINT NAME HERE agree to participate in this study for the purposes outlined above. I give the student researcher permission to record my written or spoken answers.

Signature SIGN NAME HERE **Date**

APPENDIX B

Information Sheet

Greetings! My name is Coleen Sallot, and I am a student at Miami University in the Experience Design program. My faculty advisor for this research project is Zack Tucker. Thank you for choosing to participate in this study on adoptive parents' experiences. Below is some important information about this project.

Who is doing the study?

This study is being done by researchers from Miami University, who are interested in learning more about your experiences as an adoptive parent, particularly regarding your relationship with your child and their use of play.

What is the purpose of the study?

This interview is part of a thesis research project for Miami University, which discusses the use of play to help adopted children work through past traumas so that they can form healthy attachments with their adoptive families. The goal is to better understand your experiences so that we can provide design recommendations that might help improve the experience of other adoptive parents and their children.

Why am I being asked to participate?

Since you have self-identified as a parent who has adopted a child, your answers will be considered as integral and experienced information that will contribute to the validity of this study. Questions will be related to your experiences as an adoptive parent, particularly regarding your relationship with your child. All questions are voluntary, and you may skip any question at any time.

What kinds of questions will be asked?

Questions will be related to your experiences as an adoptive parent, particularly regarding your relationship with your child. There are no wrong answers. We want to learn about your unique experiences and viewpoint.

Do I have to participate?

Participation in the study is voluntary. In particular, we anticipate your participation will have no effect at all on your daily activities. If you decline to participate in the study, it will not affect your employment or academic standing in any way.

How long will it take?

An interviewer will ask you a small number of questions about your initial experiences as an adoptive parent. The interview will last between 45-60 minutes. You may decline to answer any questions for any reason.

How will my answers be used?

The study results will be written into a report which will be shared with other university personnel and researchers.

Are my answers confidential?

Yes. Your answers will never be used in any way that would identify you. They will be combined with answers from other people who participate in the study to make a report.

How will my information be protected?

The transmission of online survey data is protected by Survey Monkey using Secure Sockets Layer (SSL) encryption. The survey software will communicate with your computer and record data that could identify the computer through the IP address; however, the IP address will not be reported to the researcher. All responses for this study will be stored on a secure Miami account. Contents will be encrypted and access protected by a password known only by the researchers.

Thanks again for agreeing to share your experiences with us.

Coleen Sallot
Design Researcher
Miami University

APPENDIX C

Survey

https://www.surveymonkey.com/r/J5GG9B3

Greetings! My name is Coleen Sallot, and I am a graduate student at Miami University in the Experience Design program. Thank you for choosing to participate in this thesis research project on adoption.

As an adoptive parent of two children from Bulgaria and China, I know first-hand how challenging adoption can be. Due to what they've been through, our kiddos come to us with challenges that are sometimes difficult and overwhelming. Most solutions, like the Trust-Based Relational Intervention (TBRI) training created by the Karen Purvis Institute, focus on the caregiver, but I've been researching how to design a solution that comes from the perspective of our kids.

This survey will take approximately 5-10 minutes to complete. Questions will be related to your experiences as an adoptive parent, particularly regarding your relationship with your child and their use of play. There are no wrong answers. My goal is to better understand your experiences so that I can provide design recommendations that might help improve the experiences of other adoptive parents and their children.

Participation in the study is voluntary. You may decline to answer any question for any reason. If you decline to participate in the study, it will not affect you in any way. All answers are confidential. Your answers will never be used in any way that would identify you. They will be combined with answers from other people who participate in the study to make a report which will be shared with other university personnel and researchers.

The transmission of online survey data is protected by Survey Monkey using Secure Sockets Layer (SSL) encryption. The survey software will communicate with your computer and record data that could identify the computer through the IP address; however, the IP address will not be reported to the researcher. All responses for this study will be stored on a secure Miami account. Contents will be encrypted and access protected by a password known only by the researchers.

Thanks again for agreeing to share your experiences with us.

Survey Questions

By selecting "yes," to this form below, you signify consent to participate in this study for purposes outlined above.

1. Information about you

How many children do you have?

- None
- One
- 2-3
- 4-6
- 7-10
- 10+

How many children have you adopted?

- I'm waiting to adopt
- One
- Two
- Three
- 4-6
- 7+

How long ago did you adopt your first child?

- Less than 6 months
- 1 year
- 2 years
- 3-4 years
- 5+ years

What was your age range when you first adopted?

- 18-25
- 25-34
- 35-44
- 45-54
- 55+

What type of support network do you have?

- ❑ Spouse
- ❑ Parents
- ❑ Siblings
- ❑ Friends
- ❑ Church
- ❑ School
- ❑ Other

2. Information about your child

Please focus on one child at a time. If you have multiple children, you can choose to repeat this survey for each child.

What is your child's gender?

- Male
- Female

How long has your child been home?

- Less than 6 months
- 1 year
- 2 years
- 3-4 years
- 5+ years

How old was your child when they were adopted?

- 0-12 months
- 1-2 years
- 2-3 years
- 4-6 years
- 7-9 years
- 10+

What was the type of adoption?

- ❑ Family member
- ❑ Foster care
- ❑ Domestic adoption
- ❑ International adoption
- ❑ Other

What factors contributed to your child being available for adoption?

- ❑ Parental abandonment/death
- ❑ Parental incarceration
- ❑ Abuse (Physical, emotional, sexual)
- ❑ Neglect
- ❑ Maternal substance use
- ❑ Parental mental health
- ❑ Traumatic/difficult birth
- ❑ Traumatic/difficult pregnancy
- ❑ Living situation (transient, homeless, multiple caregivers/homes)
- ❑ Birth defects/lack of prenatal care
- ❑ Child medical/mental issues
- ❑ Institutional care (orphanage, group home)
- ❑ Other (text box)

3. Diagnoses and Interventions

What types of special needs/disorders has your child been diagnosed with?

- ❑ Physical issues (foot/hand deformities, missing limbs, cleft palate, etc)
- ❑ Medical issues (heart disease, diabetes, vision/hearing impairment, etc)
- ❑ Developmental delays
- ❑ Executive functioning (ADHD, Sensory Processing, etc)
- ❑ Speech/language delays and disorders
- ❑ Autism
- ❑ Learning disorders
- ❑ Anxiety disorders (Anxiety, Panic disorder, OCD, PTSD, phobias, etc)
- ❑ Depressive disorders (Major depression, Bipolar depression, etc)
- ❑ Dissociative disorders
- ❑ Personality disorders
- ❑ Attachment disorders (RAD, ODD)
- ❑ None
- ❑ Other

What types of attitudes and behaviors does your child exhibit?

- ❑ Anxious (constantly stressed, hyper-vigilant, irritability, appetite changes, sleep issues)
- ❑ Angry (frequent outbursts, lashes out, screaming, stomping, slamming doors, etc)
- ❑ Crying (emotional, cries constantly, hard to calm down, etc)
- ❑ Manipulative (controlling, lying, cheating, deception)
- ❑ Aggressive (breaks things, hurts others)
- ❑ Poor concentration (tunes out, daydreams)
- ❑ Perfectionism
- ❑ Focuses on things and activities instead of relationships
- ❑ Problems with primary relationships (parents, siblings, family)
- ❑ Problems with secondary relationships (friends, colleagues)
- ❑ Lack of empathy
- ❑ Refuses to take responsibility, blames others
- ❑ Won't speak or ask/refuses help
- ❑ Refuses to participate
- ❑ Pushes people away
- ❑ Defiant, rejects parental/authority figures
- ❑ Other

What types of services/interventions has your child received?

- ❑ Medical treatments/surgeries
- ❑ Medication
- ❑ In-school services via IEP
- ❑ Occupational therapy
- ❑ Physical therapy
- ❑ Speech/Language therapy
- ❑ Art/music therapy
- ❑ Play therapy
- ❑ Learning support

- ❑ Emotional support
- ❑ Behavioral support
- ❑ Support groups
- ❑ Individual therapy
- ❑ Family therapy
- ❑ Other

What type of education/support have you as an adoptive parent participated in?

- ❑ Take classes
- ❑ Join a support group
- ❑ Read books
- ❑ Volunteer for a local foster care/adoption organization
- ❑ Read blogs by other parents who have adopted
- ❑ Meet/talk with other adoptive parents
- ❑ Attend adoption conferences
- ❑ Speak to adoption specialists
- ❑ Find doctors/counselors who specialize in adoption
- ❑ Attend caregiver training
- ❑ Research information on adoption, schools, medical/mental health conditions, etc
- ❑ Other

4. Use of Play

Describe your child's relationship with their comfort object:

- ❑ Comfort object is a doll or stuffed animal
- ❑ Comfort object is a blanket or other item
- ❑ Came home with comfort object
- ❑ Sleeps with comfort object
- ❑ Turns to comfort object when upset
- ❑ Plays with comfort object
- ❑ My child doesn't have a comfort object
- ❑ Other

How does your child regularly engage in play?

- ❑ Alone
- ❑ With other children
- ❑ With parents/family members
- ❑ With other adults (babysitter, daycare provider, family friend, etc)
- ❑ With comfort object (if a doll or stuffed animal)
- ❑ Online (Minecraft, gaming, etc)
- ❑ Other

What types of activities is your child interested in?

- ❑ Music (play a musical instrument, listen to music, sing, create music, etc)
- ❑ Drama (act, play dress-up, pretend play, imaginary friend, play with dolls, etc)
- ❑ Creative Arts (draw, paint, craft projects, write, storytelling, etc)
- ❑ Active play (run, bicycle, skateboard, swim, jump, swing, play on playground, etc)
- ❑ Playing sports (football, soccer, hockey, baseball, basketball, volleyball, track, etc)
- ❑ Playing games (board games, card games, word games, strategy games, etc)
- ❑ Playing with friends/siblings (tag, hide-and-seek, ball, etc)
- ❑ Constructive/science projects (legos, blocks, science experiments, etc)
- ❑ Sensory play (sand, water, playdough, slime, bubbles, fidgets, putty, etc)
- ❑ Other

What types of activities help your child calm down after a hard day?

- ❑ Music (play a musical instrument, listen to music, sing, create music, etc)
- ❑ Drama (act, play dress-up, pretend play, imaginary friend, play with dolls, etc)
- ❑ Creative Arts (draw, paint, craft projects, write, storytelling, etc)
- ❑ Active play (run, bicycle, skateboard, swim, jump, swing, play on playground, etc)
- ❑ Playing sports (football, soccer, hockey, baseball, basketball, volleyball, track, etc)
- ❑ Playing games (board games, card games, word games, strategy games, etc)
- ❑ Playing with friends/siblings (tag, hide-and-seek, ball, etc)
- ❑ Constructive/science projects (legos, blocks, science experiments, etc)
- ❑ Sensory play (sand, water, playdough, slime, bubbles, fidgets, putty, etc)
- ❑ Other

5. Invitation to participate in further research

As you well know, our kiddos come to us with challenges that are sometimes difficult and overwhelming. Most solutions, like the TRBI training we took this past summer, focus on the caregiver, but I've been researching how to design a solution that comes from the perspective of our kids.

One thing I have noticed with my own children is that they don't seem to be able to play. My older, biological son is highly imaginative and comes up with all sorts of stories and ideas, but this seems difficult for his adopted brother and sister. They love Minecraft but that's not real play. As a result, I'm exploring the importance of play and how we as parents and their therapists can use play to help our children work through their past traumas so they can settle in and enjoy us, their adoptive family.

I would love to speak with you more in depth about your relationship with your child and their use of play. My goal is to better understand your experiences so that I can provide design recommendations that might help improve the experiences of other adoptive parents and their children. The interview would take 45-60 minutes of your time. All answers are confidential, and participation is voluntary.

Would you be willing to participate in a more detailed interview to discuss your experiences?

- No
- Yes

Your first name:
Email address:

Is there anything else you would like to share?

APPENDIX D

Interview Guide (Adoptive Parents)

Greetings! My name is Coleen Sallot, and I am a graduate student at Miami University in the Experience Design program. My faculty advisor for this research project is Zack Tucker. Thank you for choosing to participate in this study. If you decide to change your mind at any time and not participate, feel free to let me know.

This interview is part of a thesis research project for Miami University, which focuses on how we might use play to help adopted children work through past traumas so that they can form healthy attachments with their adoptive families. As an adoptive parent of two children from Bulgaria and China, I know first-hand how challenging adoption can be. My goal is to better understand your experiences so that I can provide design recommendations that might help improve the experience of other adoptive parents and their children.

Questions will be related to your experiences as an adoptive parent, particularly regarding your relationship with your child and their use of play. There are no wrong answers. We want to learn about your unique experiences and viewpoint. There will be 15 questions, and some of these questions might become very detailed and require a lot of thought. Your name is only being used for this consent form and will not be used other than that. The answers to personal questions will only be used to identify and categorize the answers that pertain to your experience as an adoptive parent.

Your answers will never be used in any way that would identify you. They will be combined with answers from other people who participate in the study to make a report. The study results will be written into a report which will be shared with other university personnel and researchers.

Participation in the study is voluntary. You have the right to decline, and not participate, at any time. If you would like to leave the questions unanswered and withdrawal them from the collection of answers for the study, please let the student researcher know. You may decline to answer any questions for any reason. The study results will be written into a report which will be shared with other students, researchers, and university personnel.

Questions:

Demographic questions

- Number of children (adopted + biological)
- Age adopted/current age
- Type of adoption (international, domestic, foster care, etc)
- Factors contributing to adoption
- Special needs/diagnoses
- Interventions (play therapy?)

Questions focused on adoptive parent

- Describe the meaning of play in your own life. What does "play" mean to you?
- Describe your own play experiences as a child. What is your favorite memory of play? What was your favorite toy/activity? Why?
- How do you like to spend time with your children? What do you do to engage in play with your child?
- Describe a memorable play moment with your child. Why was it memorable? What did you do and how did your child respond?
- Which of the following best describes your play style?
    - plays through silliness and practical joking (P-JOK)
    - pursues play through movement (P-MOV)
    - plays through exploration and adventure (P-EXP)
    - enjoys specific rules and plays to win (P-RUL)
    - play by planning and organizing events (P-ORG)
    - enjoys play by collecting objects or experiences (P-COL)
    - loves to play through creating or building things (P-BUI)
    - plays through imagination, reading, and stories (P-IMG)
- What type of play environment have you created for your child?

Questions focused on adopted child

- Does your child have a comfort object (stuffed animal, doll, blanket, etc)? Did they come home with this object? If an animal or doll, is this object present when your child plays? What does this look like?
- Describe your child's ability to engage in play. Did they have opportunities to play in their previous environment? Do they regularly engage in play when alone? With other children? What does this look like?

- Which of the following best describes your child's play?
    - plays through silliness and practical joking
    - pursues play through movement
    - plays through exploration and adventure
    - enjoys specific rules and plays to win
    - play by planning and organizing events
    - enjoys play by collecting objects or experiences
    - loves to play through creating or building things
    - plays through imagination, reading, and stories
- What do they like to do for fun? What is their favorite toy/activity and why?
- What activities could they literally spend hours doing?
- What types of attachment/bonding activities do they enjoy? How often?
- How much time each day/week does your child have for self-directed play?
- Does your child engage in pretend play? Do they have an imaginary friend? What does this look like?
- What does your child do to de-stress/calm down?
- Has your child's ability to play changed over time? How?

Invitation to participate in play project

The results of this research will be used to create a design solution. This will be a digital play prototype that children will be able to interact with and use. They will be asked to complete a series of tasks and I will simply observe how they do. The goal is to create something that can be rolled out on a larger scale to help more children like ours.

Would you be willing to have your child participate in a play project research study? This will take place in March 2021. You will be notified in February.

APPENDIX E

Interview Guide (Play Therapists - Research phase)

Greetings! My name is Coleen Sallot, and I am a graduate student at Miami University in the Experience Design program. My faculty advisor for this research project is Zack Tucker. Thank you for choosing to participate in this study. If you decide to change your mind at any time and not participate, feel free to let me know.

This interview is part of a thesis research project for Miami University, which focuses on how we might use play to help adopted children work through past traumas so that they can form healthy attachments with their adoptive families. As a play therapist, you play a pivotal role in helping these children. My goal is to better understand your experiences so that I can provide design recommendations that might help improve the experience of other adoptive parents and their children.

Questions will be related to your experiences as a play therapist. There are no wrong answers. We want to learn about your unique experiences and viewpoint. There will be 15 questions, and some of these questions might become very detailed and require a lot of thought. Your name is only being used for this consent form and will not be used other than that. The answers to personal questions will only be used to identify and categorize the answers that pertain to your experience as a play therapist.

Your answers will never be used in any way that would identify you. They will be combined with answers from other people who participate in the study to make a report. The study results will be written into a report which will be shared with other university personnel and researchers.

Participation in the study is voluntary. You have the right to decline, and not participate, at any time. If you would like to leave the questions unanswered and withdrawal them from the collection of answers for the study, please let the student researcher know. You may decline to answer any questions for any reason. The study results will be written into a report which will be shared with other students, researchers, and university personnel.

Questions:

Demographic questions

- Degree/specialty
- Skills and training
- Level of experience
- Location
- Length of time in practice

Play therapy

Why play therapy?

- What does it mean to be a play therapist?
- Why did you decide to become a play therapist?
- Why do you feel play therapy is important?

Who does it work for?

- Who does it work best for?
- What types of challenges do you feel adopted children face in particular?
- When do you recommend play therapy to parents?
- What types of play therapy do you use?
- Do you include the parents in your treatment?

How does it work?

- How does play therapy work?
- How long does it take?
- What other types of behavioral interventions do you include in addition to play therapy?
- What types of objects do you use in your practice?
- How do you measure success?
- Would it be possible to see your space? Videos of play therapy in action?

Virtual play therapy

- Describe what happened when you were forced to move to virtual visits. How did you accommodate this shift? What did this look like?
- What changes did you have to make?
- What do you feel worked well?
- What did you find to be especially challenging?
- Describe your use of digital tools. What do you feel would translate well into the digital space?
- What do you feel you need more help with?

Anything else you would like to add?

APPENDIX F

Interview Guide (Play Therapists - Prototype phase)

Greetings! My name is Coleen Sallot, and I am a graduate student at Miami University in the Experience Design program. My faculty advisor for this research project is Zack Tucker. Thank you for choosing to participate in this study. If you decide to change your mind at any time and not participate, feel free to let me know.

This interview is part of a thesis research project for Miami University, which focuses on how we might use play to help adopted children work through past traumas so that they can form healthy attachments with their adoptive families. As a play therapist, you play a pivotal role in helping these children.

Previously we spoke regarding your experiences as a play therapist. This time, we would like to show you a proof-of-concept of a proposed virtual play solution and obtain your feedback. Questions will be related to treatment goals and viability within the play therapy space, as well as your overall thoughts. There are no wrong answers. There will be 10-15 questions, and some of these questions might become very detailed and require a lot of thought. Your name is only being used for this consent form and will not be used other than that. The answers to personal questions will only be used to identify and categorize the answers that pertain to your experience as a play therapist.

Your answers will never be used in any way that would identify you. They will be combined with answers from other people who participate in the study to make a report. The study results will be written into a report which will be shared with other university personnel and researchers.

Participation in the study is voluntary. You have the right to decline, and not participate, at any time. If you would like to leave the questions unanswered and withdrawal them from the collection of answers for the study, please let the student researcher know. You may decline to answer any questions for any reason. The study results will be written into a report which will be shared with other students, researchers, and university personnel.

Questions:

- What are your thoughts of using video games for therapy?
- Have you ever used video games or some other virtual medium in your practice? If yes, describe.
- What are your initial thoughts about the game?
- What are your favorite aspects of the game? Why?
- What aspects did you dislike? Why?
- What do you feel is missing? Why?
- Do you think something like this could be a viable solution for helping children with trauma? Why or why not?
- What are some requirements you feel are necessary and need to be included?
- How would you define success for a mechanism like this?
- How well do you think the game successfully achieves the following (score of 1-poor to 4-excellent):
    - Teaches children to use their imagination
    - Allows children to experience their feelings through the lens of a stuffed animal, both inside and outside the game
    - Allows children to make decisions on how to handle stressful situations
    - Allows children to guide how the game goes
    - Other?
- If the game met your expectations and requirements, would you be willing to incorporate its use into your practice? Why or why not?
- Are there any other thoughts you would like to share?

APPENDIX G - Email Invitation

Email Survey Invitation (Parents)

Greetings! My name is Coleen Sallot. I'm an adoptive parent of two children from Bulgaria and China, and this summer I participated in Bethany's Trust-Based Relational Intervention (TBRI) training. Kaci Ott with Steel River Counseling was amazing, and I can honestly say that the things I learned have helped me in my relationships with my adopted children.

I'm a graduate student at Miami University in the Experience Design program, and I'm reaching out to see if you would be willing to participate in a research study I'm conducting on adoption. As you well know, our kiddos come to us with challenges that are sometimes difficult and overwhelming. Most solutions, like the Trust-Based Relational Intervention (TBRI) training created by the Karen Purvis Institute, focus on the caregiver, but I've been researching how to design a solution that comes from the perspective of our kids.

One thing I have noticed with my own children is that they don't seem to be able to play. My older, biological son is highly imaginative and comes up with all sorts of stories and ideas, but this seems difficult for his adopted brother and sister. They love Minecraft, but that's not real play. As a result, I'm exploring the importance of play and how we as parents and their therapists can use play to help our children work through their past traumas so they can settle in and enjoy us, their adoptive family.

The following **survey** will take approximately 5-10 minutes to complete. Questions will be related to your experiences as an adoptive parent, particularly regarding your relationship with your child and their use of play. Participation is voluntary, and all questions are confidential and anonymous. There are no wrong answers, and you may decline to answer any question for any reason. My goal is to better understand your experiences so that I can provide design recommendations that might help improve the experiences of other adoptive parents and their children.

Thank you so much for agreeing to share your experiences!

TAKE THE SURVEY

Warmly,

Coleen Sallot

Participation in the study is voluntary. You may decline to answer any question for any reason. If you decline to participate in the study, it will not affect you in any way. All answers are confidential. Your answers will never be used in any way that would identify you. They will be combined with answers from other people who participate in the study to make a report which will be shared with other university personnel and researchers.

The transmission of online survey data is protected by Survey Monkey using Secure Sockets Layer (SSL) encryption. The survey software will communicate with your computer and record data that could identify the computer through the IP address; however, the IP address will not be reported to the researcher. All responses for this study will be stored on a secure Miami account. Contents will be encrypted and access protected by a password known only by the researchers.

Email Interview Invitation (Parents)

Greetings! My name is Coleen Sallot and I am a graduate student at Miami University in the Experience Design program. Recently you completed a survey about your experiences as an adoptive parent, in which you indicated that you would be willing to participate in an interview for further discussion.

This interview is part of a thesis research project for Miami University, which focuses on how we might use play to help adopted children work through past traumas so that they can form healthy attachments with their adoptive families. As an adoptive parent of two children from Bulgaria and China, I know first-hand how challenging adoption can be. My goal is to better understand your experiences so that I can provide design recommendations that might help improve the experience of other adoptive parents and their children.

Questions will be related to your experiences as an adoptive parent, particularly regarding your relationship with your child and their use of play. There are no wrong answers. We want to learn about your unique experiences and viewpoint. There will be 15 questions, and some of these questions might become very detailed and require a lot of thought. Your name is only being used for this consent form and will not be used other than that. The answers to personal questions will only be used to identify and categorize the answers that pertain to your experience as an adoptive parent.

Your answers will never be used in any way that would identify you. They will be combined with answers from other people who participate in the study to make a report. The study results will be written into a report which will be shared with other university personnel and researchers.

Participation in the study is voluntary. You have the right to decline, and not participate, at any time. If you would like to leave the questions unanswered and withdrawal them from the collection of answers for the study, please let the student researcher know. You may decline to answer any questions for any reason. The study results will be written into a report which will be shared with other students, researchers, and university personnel.

Thank you so much for agreeing to share your experiences. Please let me know what days/times would work best for you.

Warmly,
Coleen Sallot

Email Interview Invitation (Play Therapists - Research phase)

Greetings! My name is Coleen Sallot and I am a graduate student at Miami University in the Experience Design program. My faculty advisor for this research project is Zack Tucker.

I'm currently conducting a thesis research project for Miami University, which focuses on how we might use play to help adopted children work through past traumas so that they can form healthy attachments with their adoptive families. As a play therapist, you play a pivotal role in helping these children. My goal is to better understand your experiences so that I can provide design recommendations that might help improve the experience of other adoptive parents and their children.

Questions will be related to your experiences as a play therapist. There are no wrong answers. We want to learn about your unique experiences and viewpoint. There will be 15 questions, and some of these questions might become very detailed and require a lot of thought.

Participation in the study is voluntary. You have the right to decline, and not participate, at any time. If you would like to leave the questions unanswered and withdrawal them from the collection of answers for the study, please let the student researcher know. You may decline to answer any questions for any reason. The study results will be written into a report which will be shared with other students, researchers, and university personnel.

Thank you in advance for your help. I look forward to speaking with you soon.

Warmly,
Coleen Sallot

Email Interview Invitation (Play Therapists - Prototype phase)

Greetings! My name is Coleen Sallot and I am a graduate student at Miami University in the Experience Design program. My faculty advisor for this research project is Zack Tucker.

This interview is part of a thesis research project for Miami University, which focuses on how we might use play to help adopted children work through past traumas so that they can form healthy attachments with their adoptive families. As a play therapist, you play a pivotal role in helping these children.

Previously we spoke regarding your experiences as a play therapist. This time, we would like to show you a proof-of-concept of a proposed virtual play solution and obtain your feedback. Questions will be related to treatment goals and viability within the play therapy space, as well as your overall thoughts. There are no wrong answers. There will be 10-15 questions, and some of these questions might become very detailed and require a lot of thought. Your name is only being used for this consent form and will not be used other than that. The answers to personal questions will only be used to identify and categorize the answers that pertain to your experience as a play therapist.

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Thank you in advance for your help. I look forward to speaking with you soon.

Warmly,
Coleen Sallot

Colophon

Typefaces used: Calibri, Montserrat

Layout/writing: Google Docs, Microsoft Word

Survey tool: SurveyMonkey

Interview scheduling: Google Calendar

Data analysis: Microsoft Excel, SurveyMonkey

Graphics: Adobe Photoshop CC 2020, Adobe Illustrator CC 2020, Adobe XD 2020

Computer: Lenovo Gaming PC, 2018

Video/audio recording: Zoom

Transcription: Otter.ai