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What Works? A Qualitative Exploration of Play Therapy for Children in Pediatric Oncology

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Submitted in Partial Completion of the  
Requirements for Departmental Honors in Social Work

Bridgewater State University

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**What Works?: A Qualitative Exploration of Play Therapy for Children in Pediatric Oncology.**

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**Author Note**

I received funding through the Adrian Tinsley Program at Bridgewater State University.

### **Abstract**

This qualitative phenomenological study seeks to understand the use and perceived effectiveness of play interventions for patients with socio-emotional issues brought about by their treatment of pediatric cancer by exploring the perceptions of nine Certified Child Life Specialists and one Licensed Independent Clinical Social Worker who works with this population. Interviews, done over Zoom with each participant, were semi-structured, and between thirty minutes to an hour in length. Questions asked explored what socio-emotional issues they see develop in their patients throughout their treatment, and their perceived effectiveness of play in mitigating those socio-emotional issues. After transcription of each interview analysis ensued. Following multiple rounds of coding, five core themes and five subthemes were identified and the essence of play interventions in pediatric oncology units emerged. The essence is best characterized as "trust is the foundation of coping"; highlighting that the rapport built between the clinician, child, and family opens the door for needs to be identified, coping skills to be taught, and for the clinician to empower the family in the hospital setting.

According to the American Cancer Society, in 2018 there were an estimated 10,590 children in the United States diagnosed with cancer, with 1,180 of those succumbing to their diagnosis. The most common cancer diagnoses for the ages 0 to 14 are Leukemia, cancers of the Central Nervous System, Lymphomas, and Soft Tissue Sarcoma (Rhabdomyosarcoma) (Siegel et al., 2018). Since 1975, incidences of pediatric cancer in the United States are trending upwards at 0.6% each year, with most of the causes unknown (Ward et al., 2014). Children receive treatment for cancer in inpatient and outpatient settings with many beginning their initial course of treatment in a hospital setting.

Cancer treatment is a mentally and physically taxing experience, especially for young children. As a result, socio-emotional issues, defined as emotional dysregulation and the development of negative emotion (Thompson & Virmani, 2012) can develop from young patients' experiences in a hospital setting. Many children experience severe social withdrawal because of the isolation experienced in a hospital setting and no longer being able to socialize as they once had (Chari et al., 2012). There is extremely low self-esteem present in these young patients due to their physical changes (e.g., hair loss, weight loss, or weight gain), as well as an overall feeling of hopelessness due to their lack of understanding and control (Manav & Ocakci, 2016). Many of these children see the inability to regulate their pain as deeply upsetting, which can cause lasting issues, including an increase in severe anxiety and depressive symptoms (Mehrrara et al., 2019). Furthermore, these sick children experience a loss of concentration, aggression, withdrawal, fatigue, nausea, and a deep need to understand what's happening to them and why they can no longer do the things they did before (Witt et al., 2019). Their treatment and hospital visits may also result in intense mood swings, dysregulated behavior, and abreaction

response in which children take on more aggressive roles within their play in order to better understand their environment and take back control within their situation (Locatelli, 2019).

The ensuing socio-emotional difficulties can affect children across their lifespan. Adult survivors of childhood cancer are at risk of chronic distress following their diagnosis and remission (Brinkman et al., 2018). Neuroblastoma survivors have an increased prevalence of anxiety, depression, attention deficit, peer conflict, social withdrawal, and antisocial behaviors (Zheng et al., 2018). In a study of 78 individuals aged 18 to 40 who survived childhood cancer, 20.5% (1/5) of them met the criteria for Post-Traumatic Stress Disorder (PTSD) as characterized in the Diagnostic and Statistical Manual of Mental Disorders (DSM–5). In addition, childhood cancer survivors are prone to neurocognitive and neurosensory impairment (Ward et al., 2014) and trait state anxiety, defined as constant worry as a facet of an individual's personality and not just a temporary reaction to stimuli or events (Hobbie et al., 2000; Mehrara, 2019). Trait state anxiety and PTSD symptoms later in life are also associated with missing or delaying developmental milestones; with 60% of pediatric central nervous system cancer survivors being unlikely to achieve independence as adults (Brinkman et al., 2013; Hobbie et al., 2000; Ward et al., 2014).

### **Literature Review**

Many factors exert influence on a child receiving cancer treatment. These factors include larger system issues ranging from larger structural issues of hospital funding, structure and range of services to the experience of the child's parent and family. Each of these will be addressed in paragraphs that follow.

#### ***Hospital Financing***

Hospital funding in the United States varies greatly depending on ownership status (e.g., government, nonprofit, for-profit; American Hospital Association, 2019) and income streams (e.g., investments, government subsidy, contributions; Bai et al., 2020). The financial health of the hospital influences a myriad of services offered to patients, staffing patterns, and care available. Overall, however, hospitals that possess more capital can hire better quality staff, invest in updated technology, facilitate continuous staff training, and initiate quality improvement strategies. Stronger financial standings are also associated with lower readmission rates, and increased safety outcomes for patients (Akinleye et al., 2019).

**Hospital Environment.** One way, other than the quality of the medical interventions, in which the financial resources of a hospital may influence outcomes is through the quality of daily life for children receiving cancer treatment. Hospital environment and architecture have a large impact on daily quality of life. Over the past 50 years, hospital environments and architecture have vastly shifted from the focus on enhancing hospital performance in the 1960s to the current focus of creating a more inviting and therapeutic environment. Children and their families are greatly impacted by the physical quality and therapeutic usage of the environment, which, in turn, influences the stress associated with treatment. Young patients benefit from having access to or a view of green spaces. It is demonstrated that having a view of green space can reduce the length of pediatric hospital stays by 8.5%. In addition, children and families benefit from calming colors such as green and blue, attractive decor (including water features, posters, pictures, and animals), clear hospital signs and paths, proper ventilation, and particular smells. It is also suggested that the specific dimensions of the hospital room and furniture play a part, as well as the use of curvature in the hospital architecture (Nourmusavi Nasab et al., 2020).

Providing a therapeutic environment "affects the person's behavior, and positive experiences can help the person to overcome stress" (Nourmusavi Nasab et al., 2020).

The inclusion of playrooms in children's hospitals and wards is vital to the child's emotional and physical health. Play is an avenue for the child to communicate and express themselves throughout admission (Koukourikos et al., 2015). Thus, access to toys enables the child to normalize their environment and understand complex emotions related to their hospitalization. In a study of ninety Certified Child-Life Specialists, the specifications of pediatric hospital playrooms were explored. In addition to the presence of toys, it was illustrated that nature themes, light, and windows were paramount in the design of such rooms (Weinberger et al., 2017).

### ***Family Resources***

Caregivers also experience stress that affects children's quality of life and often include financial struggles, parental Post Traumatic Stress symptoms, parental roles, parent-child relationship, and a lack of social support (Pierce et al., 2016). High parental stress is associated with behavioral and emotional dysregulation in children, and mental health issues later in life (Hattangadi et al., 2020).

**Caregiver-Clinician Relationship.** Caregiver relationship with the medical team is also paramount to the child's mental and physical wellbeing. Caregivers who are in racial ethnic minority groups, have high school or less education, and experience high anxiety typically have less therapeutic relationship with their medical team than their white counterparts (Karvonen & Rosenberg, 2021). One contributor to the unique experiences racial and ethnic minority families face in medical settings is the lack of diversity in staffing. One survey-based study in the United States found 1 Black and 2 Hispanic clinicians for every 80 physician and nurse practitioner



surveyed. Lacking a diverse workforce can inhibit communication, limit culturally and racially competent practice, and stall the patient-clinician relationship (Mack et al., 2021).

Therapeutic alliances among the family, physician and nursing staff influence the coping and treatment process. The medical team must, in collaboration, provide human connection, empathy, partnering, and honesty (Rosenberg, 2021). Caregivers experience an intense array of emotions during their child's treatment and addressing those emotions "can provide space for the family to work through some of these challenging issues. By asking questions and empowering patients and parents, the clinical team can follow their lead to identify and support their needs." (Sisk et al., 2020). In a study consisting of 35 recordings of caregiver and medical team conversations, 91% of them were found to contain emotional cues from the caregiver. These cues mostly pertained to their child's prognosis, side effects, social issues, emotional wellbeing, and the healthcare system. Although 87% of those emotional cues were addressed, the responses were a majority filler with phrases such as 'yup', 'mmm-hmm', and 'okay' (Sisk et al., 2020). Often, parents are more optimistic regarding prognosis than their physician, even if parents believe the physician is more hopeful than they are. These unrealistic expectations can inhibit decision-making and impact a child's medical care and wellbeing. Physicians communicate over-optimistic prognosis and goals through implicit communication, and many times caregivers misinterpret treatment updates as overall prognosis (Sisk et al., 2017).

With parents of critically ill children rating higher levels of burnout than their peers, acknowledging their experience and mitigating their stress is paramount (Lindström et al., 2010). Higher levels of parental stress are not only associated with negative effects in their children, but also impact family functioning (Streisand et al., 2003). This distress can also indicate the child's

adjustment to the hospital setting both socially and behaviorally (Wolfe-Christensen et al., 2010), and affect them later in life (Hattangadi et al., 2020).

**Patient Experience.** For pediatric hospitalization, high amounts of stress and anxiety can be combatted not only with the physical environment of the hospital but also with services provided aimed at improving coping strategies (Commodari, 2010). The ability to provide in hospital dispensations such as educational services aids in providing a normalized environment and improve feelings of isolation (Commodari, 2010). Furthermore, relationships with peers and care staff in the hospital setting, and overall length of the hospitalization have an impact on the child's coping abilities (Commodari, 2010). Positive experiences and close relationships with healthcare staff are associated with lowered patient distress (Enskär et al., 2019).

Communication within pediatric subspecialty units presents distinct challenges, as each child and family posit intricate relationships and functions (Fustino et al., 2018). Unlike adult patients, decisions in pediatric subspecialty units are typically made by caregivers. However, the communication and decision-making processes between patient and medical team is dependent upon how open the child is on any given day (Lambert et al., 2010). Children enjoy being included in these communications, but they are mostly excluded and inhibited by adults in this circumstance (Coyne & Gallagher, 2011).

Children also have varying coping abilities based on a myriad of individual characteristics. The age of the child impacts nearly every aspect of their hospitalization and self-efficacy. Age is shown to dictate levels of anxiety, what the child finds upsetting, and ability to understand treatment and admission (Bonn, 1994). Younger children experience more anxiety regarding maintenance procedures and female patients tend to report higher levels of distress overall (Katz et al., 1980). Furthermore, high intelligence levels in children are associated with

better coping skills throughout admission and individual procedures and treatment. Children with higher intelligence levels tend to be cooperative for procedures, curious about their diagnosis, and coped better overall (Rutter, 1981).

Children's relationships with their Certified Child Life Specialists (CCLS) or Social Worker are also vital in the treatment process. Therapeutic relationships between the clinician and child are focused on affording the child a positive supportive environment to explore emotions and express themselves fully. The exploration of these emotions allows them to grow in self-efficacy, security, and feelings of worthiness. They gain more insight into accurate self-perceptions and can explore those perceptions without guilt or shame (Moustakas, 1953/1977).

### ***Current Interventions***

There are a variety of services available within the pediatric oncology setting to help mitigate socio-emotional outcomes. In a national study of 81 pediatric cancer institutions in the United States (Jones et al., 2018), it was illustrated that many of these hospitals provide peer-support groups for patients through which they can receive pre-treatment education, and access to more normal social interactions. Furthermore, this study suggests that over half of these institutions provided school support services aimed at working collaboratively with the child's school to provide continuing education as well as school re-entry (Jones et al., 2018).

Many interventions exist to address socio-emotional issues associated with pediatric cancer treatment, including family systems-oriented consultation model (FSTCM), cognitive behavioral therapy (CBT), and play therapy. FSTCM, according to current research, is successful in treating patients and families during treatment, and reduces post-traumatic stress related symptoms (Kazak et al., 2007); whereas CBT is demonstrated successful in reducing anxiety and depressive symptoms in pediatric oncology patients (Coughtrey et al., 2018). Play interventions

focus on children's innate ability to play and allow the patient to explore their feelings and make meaning of their experiences through this innate ability (Parker et al., 2020). Research demonstrates that play interventions are effective in allowing children to fully explore and understand their complicated emotions related to medical trauma resulting in improved emotion regulation and behavior (Chari et al., 2013; Goldberger, 1995; Locatelli, 2019).

### **Study Aims and Research Questions**

Research regarding play interventions with this population is typically done through case studies. Lacking are studies that seek to understand the range of play interventions clinicians employ with childhood cancer patients. The aim of this study is to understand the use and perceived effectiveness of play interventions for patients with socio-emotional issues brought about by their treatment of pediatric cancer.

This research seeks to explore two questions - What play interventions are currently being used with children who received treatment for cancer to address their socio-emotional issues brought on by their hospital stay? What is the perceived effectiveness of play interventions in resolving the socio-emotional issues for children who receive treatment for cancer?

### **Methods and Sample**

The methodology of this research follows the phenomenological method defined by Clark Moustakas (1994). These methods focus on understanding an individual's lived experience and perceptions of a phenomenon. Analysis of data involves identifying themes that best describe that phenomenon as it's observed and articulating the "essence" of the phenomenon (Creswell 2013; Davidsen, 2013). Exploring the perceptions of clinicians' aids in understanding the complexities and effectiveness of play with pediatric oncology patients by gaining an understanding of how play interventions, on paper, translates to real world practice, and how

different methods and approaches to play interact with these patients and their coping within the hospital environment.

### **Sample**

For this study, I employed purposive sampling. I identified potential participants through their work at medical centers and offices that provide pediatric oncology services and contacted them via email or telephone if contacting them through email was unavailable. Interested participants received a welcome letter and study information prior to their interview and provided informed consent before engaging in the interview.

The sample consisted of nine Child Life Specialists and one Licensed Independent Clinical Social Worker; all of whom hold professional licensure in their field. Three of the participants provide home-based services with pediatric oncology patients, while seven work within a hospital setting. The participants work primarily with children aged three to twelve years old but do see children ranging from zero to eighteen years old. Nine of the participants identify as female and one as male, six of the participants identify as non-Hispanic white, with two identifying as being of Asian descent, one identifying as Hispanic, and one identifying as other. The ages of participants ranged from twenty-five to fifty years old, and participants have been employing play as an intervention for anywhere between less than one year to over twenty years (Table 1).

Interviews occurred using the zoom platform hosted and conducted by this author and ranged from forty minutes to one hour in length. Pre-interview, each participant received information on the study subject matter and completed a demographic questionnaire. Interviews were semi-structured and consisted of five questions (explained below). The interviews were

audio recorded omitting participant names and transcribed using Zoom technology. All study procedures were approved by the author's university Institutional Review Board.

Interview questions asked participants to share how they implement play with this population, what socio-emotional issues they see manifest, how much of their caseloads consisted of pediatric cancer patients, as well as their perceived effectiveness of play as an intervention with children receiving cancer treatment. These questions were informed by Bronfenbrenner's (1994) Ecological Model and Bandura's (1989) Social Cognitive Theory. The Ecological Model asserts that an individual's development is an elaborate network of relationships consisting of numerous levels that include immediate environment, family, larger cultural values, and laws that influence an individual's experience and the outcomes of their experience. This theory provides the framework from which the lived experience of an individual can be viewed in its totality through analyzing the systems that beget them (Bronfenbrenner & Morris, 2007). Social Cognitive Theory avouches that human learning occurs in gregarious environments with an emphasis on reciprocal interactions, learning type, and self-regulation to sustain behavior (Bandura, 1986). These theories coalesced to provoke questions regarding how coping strategies are learned within this setting and the factors that influence the child's experience in a pediatric oncology unit.

### **Data Analysis**

Moustakas' method of phenomenological analysis was employed to analyze the data. This method includes multiple steps to understand the essence of the participants' experiences. The first step entails understanding and acknowledging pre-existing beliefs the researcher may have regarding the topic of research. These pre-existing beliefs can compound as research continues and have an impact on the information gathered and the outcome of the research.

Exploring these beliefs and emotions was vital for this author, who felt the emotional impact of this process throughout interviews and the data analysis process. Identifying the emotional impact of learning about terminally ill children, end of life for this population, complicated feelings regarding funding for pediatric cancer research, the impact of larger systems on this population, and the accessibility of services for patients and their families aided in more accurate and nonbiased analysis. The potential influence of emotional responses effectuated by the topic of terminally ill and dying children were surveilled using peer debriefing with the author's mentor, memos, and journaling.

The second step of analysis according to Moustakas involved the researcher engaging in the process of horizontalization which entails reading, in detail, the transcripts from each interview and identifying important statements throughout. These quotes were then viewed once more and clustered into themes. Initial coding identified eleven themes. Subsequent rounds of coding, aimed at reducing the repetition of themes, resulted in five distinct themes. Initial individual themes of parents and siblings were distilled into the family theme, and importance of play, older children and play, and examples of play were condensed into one theme of toys and play. Textural descriptions were written that described the clinicians' experiences and structural descriptions were completed that chronicled the premise of how each clinician worked within its theme. Composite textural and composite structural descriptions were then identified for each theme. Lastly, the essence of this experience from the perspective of clinicians was identified. The essence describes what makes play interventions effective with children in pediatric oncology units. (Moustakas, 1994)

To enhance result credibility peer debriefing was employed which consisted of weekly meetings and frequent communication, memos, and journaling throughout the data analysis and

collection process. Triangulation and auditing were also used to support credibility (Rubin & Babbie, 2016). Furthermore, member checking was done with one participant following data analysis and collection.

Prior to beginning the research process, IRB (Institutional Review Board) approval and a summer stipend from the Adrian Tinsley Program were obtained from Bridgewater State University.

## **Results**

The clinician participants, who employ play interventions with this population, provided descriptions of play as an intervention in pediatric oncology units, and their perceived effectiveness of play in mitigating socio-emotional issues brought about by treatment. Results are presented through five themes in alignment with how they answer the research questions (Table 2). Following the presentation of themes, the essence of play intervention usage in pediatric oncology units is discussed.

**Research Question One:** What play interventions are currently being used with children who received treatment for cancer to address their socio-emotional issues brought on by their hospital stay?

One theme answers the question of what methods are currently used with children receiving treatment for cancer to address socio-emotional issues brought on by their hospital stay. This theme is labeled “Toys and Play.”

### ***Toys and Play***

There is an enormous number of different toys used with pediatric cancer patients, and their use is dependent upon the patient's preference, developmental level, and therapeutic goals. Common toys include craft supplies, dolls, electronic devices like iPads and gaming consoles,



and toy doctor's kits with the addition of medical equipment the child could see throughout treatment. If funding allows, the clinician may purchase specific toys the child expresses interest in. Implementation of toys happens both inside and outside the playroom, and in a variety of ways.

The inclusion of medical equipment in play, known as medical play, aids in understanding "...medical play is something that Child Life Specialists utilize. It's a way to introduce medical equipment in a non-threatening way using it as play". Included in medical play kits are blood pressure cuffs, plungers without syringes, feeding tube supplies, and plastic medical tubing. Medical play also includes dolls which could have port accesses or gastrostomy tubes to resemble the patient. Watching how children interact with the medical equipment provides the clinician with insight into the child's understanding of its usage and feelings towards it. Although the clinician may not correct the incorrect usage of the equipment, they can open a conversation about the medical equipment and the child's coping needs.

Medical play is not limited to medical usage, and the clinician can introduce the equipment through other avenues. Patients can use the medical equipment in a variety of diverse ways depending on the child's needs and emotions.

Or it could be... even less threatening where it's like art, with medical supplies where they're just... making Band Aid posters or they're making... a collage of all the different medical things where they're using a lot of the medical tools in a really non-threatening, fun, creative way. So, it's an opportunity to explore, become familiar with the materials, and... just get comfortable. And it's not so threatening anymore...

When the clinician sets a therapeutic goal for the play, they will encourage the patient to interact with certain toys or engage in an activity. Adult-directed play can be particularly useful

when preparing a child for an upcoming procedure and encourages interactive learning and active conversation. This time can be used to teach breathing techniques and other coping skills, as well as diagnostic education. The clinician will cater diagnostic education to each child's particular diagnosis, severity, restrictions, and overall needs,

... some patients will come in and they'll say, 'My mom told me my body is really sick.'

Okay, what does that look like? What does that mean? [We] kind of go from there. And just the very basics of breaking down like 'what does it mean to be in the hospital?'

Regarding developmental levels, a child's preferences and needs change from age to age. While interactions with infants tend towards supportive touches and comfort holds, toddlers express their magical thinking skills. Toddlers tend to be more interested in traditional toys, and dramatic play, namely dressing up in costumes and reenacting their experiences.

School aged children have continued interest in common toys and games, and the clinician can carry out adult-directed play. They can customize everyday toys to work towards therapeutic goals; the block game Jenga can be geared towards coping by writing questions on blocks, and Uno can be altered to encourage conversations about emotions. Children of school age also enjoy crafts and art supplies, and spending time on long-term projects like a Lego kit which they can work on throughout treatment.

Adolescents, who often don't like the word 'play', gravitate towards more relaxing activities, and complex craft projects. They show more interest in technology that may be offered by the clinician such as gaming consoles and video games. Sessions with adolescents can be more conversational, and work can be done through the clinician providing emotional support.

Although they are receiving treatment, pediatric cancer patients enjoy active play by riding or pushing toys up and down halls. On days that are particularly difficult, children engage

with the toys differently. “They might not have the energy to play, or they may feel too sick or too tired, but they still want to try to engage.” They may ask the clinician to play with the toys for them as they watch and instruct from their bed. iPads are commonly used to watch videos or play games. The clinician can play a movie the child picks or collaborate with a music therapist to supply calming music in their room. The play is “still engaging... still doing something with somebody that they trust that's still being therapeutic in some way, it just might not be the active play that we're used to”.

Through play, the clinician can discern the patient's fears, worries, and address misconceptions as they arise. The child, in exploring complex feelings and experiences, can learn appropriate coping skills. The clinician can then inform the medical team about the child's coping needs identified through play to ensure a comfortable and normalized hospital environment.

I feel like it absolutely gets kids coping better, it helps normalize the environment and they get to continue their normal growth and development. [It] reduces anxiety... it helps them, you know, learn through play so they're learning so much about themselves and about the environment and about... what's happening to them, and... how to interact with other people and relationships... I feel like just especially in the hospital and with cancer treatment they're able to learn so much because of play.

**Research Questions Two:** What is the perceived effectiveness of play interventions in resolving the socio-emotional issues for children who receive treatment for cancer?

Four themes explain the participant’s perceived effectiveness of play interventions in resolving socio-emotional issues for children who receive treatment for cancer. Each theme is explained in the paragraphs below

### *Families*

Parents' experiences throughout treatment are characterized by both the stress of parenting and the weight of navigating cancer treatment. Both parents and siblings of the cancer patient play a key role in the patient's coping and wellbeing throughout treatment and work closely with the clinician, who is "...assessing ways that [they] can be supportive through not only the patient but through the family". Parents can supply vital information about their child's needs to the clinician such as risk factors, support systems and coping challenges. "Following the caregiver's lead and letting them direct us is very important. It also empowers them and... it's just strong collaboration."

Caring for other children, financial resources, and work obligations contribute to the stress parents feel and affect the mental health of the entire family.

So, it can be for days to weeks to months. And so, we're also really understanding that... some parents can't take off... months at a time. Parents will alternate at the bedside so maybe mom will be there for like a week and then switch and dad will be there for a week. And... some patients only have one parent, and so that makes it a little bit more difficult. Then of course, some patients have multiple siblings at home. And so, parents are kind of shuffling back and forth trying to pick up the other kids and trying to organize childcare for the other kids

Those on fixed incomes experience the broad effects of financial stress encompassing their life both at home and within the hospital. Parents coming from significant cultural backgrounds also experience unique pressure as they must "navigate having a cancer diagnosis, but then also having to navigate a new hospital and a new team". Conversations about caregiver-related stressors are usually done away from the patient. "... my patient may or may not feel like

a burden because of the conversation that they've heard so we try to have like adult conversations, outside of the room, so that the kids aren't witnessing a lot of things that they don't have to.”

During play sessions and throughout the clinician's interactions with the patient, parents are invited to join the play. Play sessions afford parents the ability to see their child beyond their diagnosis; "You're seeing your kid losing their hair, struggling, [and] having really hard days. It makes it harder. But I think play therapy...gives parents hope...because it makes them see their kids laughing and engage...kids are so resilient". Encouraging parent involvement can also promote normal relationship development between the family, particularly among the younger children and toddlers. Play also supports rapport building in non-English speaking families, as it is universal across cultures.

Through the clinician, parents can set boundaries on communication, verbiage used, and what the medical staff can and cannot tell the children. "They'll definitely understand the emotions and the reactions that their parent is having. So, we often give them the choice about where they want the conversation to happen and... if they want the child present or not." The clinician can supply parents with guidance as difficult conversations arise with the child. "So, we always offer that we can... [to] be a supportive presence and be nearby if they feel like they can't get the words out. If they need the language, we can help them with the language... some families are like just waiting for that like 1% of a miracle to happen and then we never get to talk about that subject until that happens." said one participant "... [we are] modeling some of those behaviors and some... language that they can use". Furthermore, parents seeking a supportive figure during interactions with medical staff and prognosis meetings may rely on the clinician if available.

Sibling involvement in play throughout hospitalization is encouraged, as siblings are educated about the diagnosis and explore emotions with the clinician. “I personally love to involve siblings, and whatever I'm doing with, with a patient because it's, it's good for them to sort of see what that patient is going through... it's an opportunity for them to learn as well” Not understanding the implications of the diagnosis, siblings get jealous of the attention their sick brother or sister is receiving. To avoid growing resentment, the clinician encourages sibling bonding through play and can refer siblings to proper support services.

Diagnosis education with siblings can happen both in person and over video platforms such as Zoom, or resources may be sent home to them. Information not only covers what their diagnosis is, but also encompasses the importance of hand washing, and wearing masks to avoid effecting compromised immune systems. Giving the sibling control of their environment provides comfort with the clinician giving them the choice to visit the hospital in person or not. If a sibling chooses not to visit in person, the clinician can facilitate communication between the patient and siblings through video calls or sending crafts back and forth including tracing hands for as high-fives or tracing their bodies as hugs.

For the patient, cultivating family interaction and bonding can facilitate coping, affect their mood, and influence adjustment to the hospital environment. Family events can be scheduled to promote normalcy and supply healthy family interactions. As the hospital environment is an intimidating environment for families, creating a collaborative relationship between the family unit and the clinician is consequential. This partnership creates an avenue for the family unit to ascertain coping skills and confidence for self-advocacy throughout hospitalization.

### ***Affective and Behavioral Impact***

Two subthemes demonstrate the affective and behavioral impact pediatric cancer patients experience throughout their experience. These two subthemes are expounded upon in the following paragraphs.

**Socio-emotional.** Pediatric cancer patients experience numerous socio-emotional complications throughout their treatment and their emotional and mental wellbeing is consistently evolving. One example of these socio-emotional issues is regression emotionally, physically, and cognitively seen through behavioral outbursts and difficulties, self-imposed isolation, and difficulties in potty training among others. Continuous assessment is done by the clinician to understand mental wellness and potential risk-factors including previous hospitalizations, support systems, and current coping skills and needs. Each developmental group experiences different socio-emotional responses to their treatment and hospitalization.

Infants diagnosed with cancer struggle with attachment during their treatment, and experience mistrust that may lead to behavioral and mental health difficulties later in life. Due to possible separation from caregivers, infants may form attachments to medical staff they interact with regularly. Having developmental milestones effected by their treatment can result in unique challenges and needs.

...if they were diagnosed as an infant, they likely spent a lot of time in the hospital as an infant, meaning they're behind on a lot of those developmental milestones so just using like different fine motor toys that work on those things, or encouraging gross motor.

Usually along with the music therapist, we do a lot of dancing and singing to get going on those different gross motor skills.

Preschoolers and toddlers endure the effects of lack of control and sudden upheaval of routine. At the age where they begin to practice independence and find their voice, this self-

determination is abated. "They're finally you know starting to use their words and starting to have some sort of autonomy, and that sort of gets stripped away." The sudden change in routine and new circumscriptions can result in behavioral difficulties and more mental pressure. "...with the younger ones, that manifests as large tantrums refusals to do specific care or take meds. It's screaming as soon as they arrive at the hospital. Just...pulling up to the building can be traumatic because they know they're going to go inside and they're going to get poked, or they're going to have to do something they don't want to do." Younger patients also regress in potty training skills, and communication. They struggle with needle-related procedures and the effects of anesthetics. Following operations involving anesthetics, toddlers and preschool aged children may wake up in intense distress from the loss of control.

Although toddlers and preschoolers tend to be more literal in understanding; " we say you know 'you're here at the hospital you're getting this medicine to help get your body healthy' ...they're like okay...[to] help get my body healthy. They stick to that.", they are still enormously aware of their treatment. They experience trauma and remember the emotions of treatment; they remember being "poked and prodded, and that's uncomfortable."

Grade school through adolescents is marked by the discovery of self-identity; "they're also going through the identity part of...who they are. 'Am I a kid with cancer or am I... [a] kid that's dealing with cancer?'" The struggle for identity is amplified as their physical appearance changes through treatment through acne, weight gain or loss, or hair loss among others. They aim to be directly involved in their treatment and have a say in what happens. No longer having the privacy they had at home and unable to experience social events with peers, many adolescents self-isolate in their rooms and withdraw socially. Although, they can become clingier



to family members and caregivers. Similarly, longing to be seen beyond their diagnosis, adolescents may exhibit risk taking behaviors that put their health at risk.

These ages also struggle with more intrusive thoughts regarding diagnosis and treatment. "...school agers and adolescents are like, 'but what if it doesn't?', which can be...an outcome. So, they have the ability to think about this hypothetical outcome. And so definitely more anxious behaviors or tendencies and my school agers and adolescents." Teenage patients also struggle uniquely with nurses and medical staff of the opposite gender. Because of their developmental stage, adolescents may be uncomfortable having a nurse of the opposing sex.

They are "in a club that no one ever wants to be a part of." explained one participant "...this is a kid who did absolutely nothing wrong, who now has some sort of cancer process that's happening. And... a lot of times they don't know how to deal, and they don't know how to feel." Although each developmental stage presents unique needs, no one comes into this situation unaffected.

Play allows the child to explore their experiences and emotions with someone they trust who is equipped to handle their unique situation. The clinician can "...try to make it less crappy. We can't make it good...we can't make it better sometimes...we can just make it less bad." Through play, the clinician becomes a "sounding board" for the child and a shoulder to lean on. "The play therapy can pause whatever issue is...taking place, and it can be an avenue to educate them and develop new skills in coping with social and emotional distress."

**Isolation.** Feelings of isolation are common with children receiving cancer treatment. Isolation and loneliness set in quickly upon arrival at the hospital as they are not "able to do things that their peers can do or...just not being able to do things in general that they should be

able to do.". One of the larger stressors in relation to isolation stems from school. When speaking about loneliness with this population, one clinician explained

"I'm not even in school and I don't get invited to parties and I can't go to birthday parties because I can't be around patients or other kids...my chairs empty at school every single day and everybody else gets to be there.'. So that was a really big piece...it's always school even if they don't love school."

Whereas younger children struggle with mostly familial separation, older patients and adolescents lose the peer-to-peer contact and support they crave. Peer and familial separation "just makes them feel even a little bit more of an outcast...". Feelings of isolation within the adolescent population manifest into experiences of depression and hopelessness.

In the spring of 2020, when the COVID-19 virus began spreading through the United States, it shifted the feelings of isolation for children receiving cancer treatment. As people began spending more time at home, and events were canceled or went virtual, participants reported that their patients no longer felt alone. "...what everyone's going through right now and the pandemic it's how we always feel. But now things are...starting to open up again and... kids are going back to school then they're like 'Oh, wait, I'm still here in the hospital and not able to do...what everyone else is doing.'".

To mitigate feelings of isolation in relation to their treatment and hospitalization, the clinician can help foster a connection with the client. Not only is that connection being nourished between the clinician and the child and family but also between the client system and their outside resources. The clinician can go into the child's school and educate the child's class on their diagnosis and normalize their experience through encouraging continued connection to their peers and friends. This can alleviate feelings of isolation and loneliness.

### ***Trust-building***

Through play, rapprochement is established between the patient and the clinician, and can enable a deeper and more meaningful relationship. "If it wasn't for play...we [wouldn't] have that kind of opportunity to...build our therapeutic relationships.". Trust is the vehicle that enables the clinician to be there for the child emotionally and help clear up misconceptions and support coping needs. Building relationships and supplying coping mechanisms empowers the child and family to self-advocate in the hospital setting.

Relationship building begins immediately following admission. Before the relationship is built, involving caregivers can help accelerate and begin growing the therapeutic relationship. "I think that that helps, especially when the patient is still a little uneasy about me or unsure...that really helps build that trust and move it along a little faster." Exploring the child's interests in toys and play and implementing them also helps establish trust.

So just learning about what they enjoy and then being about to really just listen to what they like, go out, adapt whatever it may be, and bring it in. [It's] key to building rapport and meeting them where they're at. Learning about their interests and being able to provide what it is they like to do.

As the relationship and rapport evolve, the clinician remains a felicitous face throughout their treatment. As other hospital staff may rotate, the child associates the clinician as a consistent person who always wants to play and brings toys. It is through toys and play that trust is further established, coping needs are met, and misconceptions are explored. "Play is a way to build rapport, to clear up misconceptions, to normalize, to support development, to facilitate coping in the hospital setting."

### ***Understanding, Integrating, & Coping***

Three subthemes make up the final theme of children understanding what is happening to them, integrating that understanding to their daily life, and coping with the various medical procedures and emotional responses triggered by hospitalization. The subthemes are explained in the following paragraphs.

**Abreaction.** Abreaction, the process through which a child takes on more aggressive roles to understand their environment through play, is achieved through child-directed play with the clinician. Initiating child-directed play allows the child to dictate what toys they want to play with and how they want to play with them without the direct instruction of the clinician. This allows the child to process emotions surrounding their environment based on their perceptions of it, even if their perceptions are not accurate. Exploring these emotions enables the child to see their situation and future situations from a new perspective. "To just see how it can relax somebody if you can give them a sense of control; it can help them just feel a better headspace...[it's] so important."

From the child's experiences in the hospital, many patients pretend to play doctors or nurses with a doll, or the clinician may play the patient. "You definitely see a lot of play with kids acting out things in the hospital. Things that you know...[it] didn't quite happen that way. But that's their perception." The child will administer medical treatments that they've experienced to the play patient, like g-tube related procedures or IV insertions. Many times, the child enjoys surprising the doll or clinician with the fake shots, as they feel surprised or scared when they get one as well. The patient is looking to turn their fear and their frightening situation into empowerment through play. "They're doing it on a doll," said one clinician "and you see them start to take more and more control and ask to do it again and again."

A participant provided a recent example of abreaction within a young oncology patient.

...[she] took the Barbie and then threw her on the ground in front of the ambulance and ran her over. 'What happened to your Barbie?'. 'She dead.'....and she said, 'She has to go to the hospital.'. I'm like 'Okay, so she has to go to the hospital because she's dead?'. 'Yeah, because you die at the hospital.'...so in my mind I'm like okay, that's obviously a concern of her's right now...that's what she thinks the hospital is like. Like, she thinks in her mind [that] this is where people go to die.

Through abreaction, the clinician can identify further coping needs and misunderstandings the child has "...we can learn so much about where they are and like, what their understanding is of hospitalization through play...to see how they're adjusting or like what are some areas that they're really having a hard time coping". Furthermore, allowing the child to walk through medical procedures and their experiences during play can open the channel to further understanding; "Yeah...kids aggressively play. I mean it's just in their nature...it's how they learn."

**Distraction.** Distractive play encompasses play and interactions aimed at creating diversion during pre-op, procedures and difficult daily procedures and treatments. "It's hard to also concentrate on how crappy you feel...it's your brain...it's not meant to do two things at one time. So, to be able to come in and offer those things to the patient...that's all about play." Time during pre-op is extremely limited, thus limiting the options for distraction.

Though the child may be in pain and experiencing anxiety, they still express wanting some sort of distraction by the clinician. "...still introduce, still offer [the play] and sometimes they're like 'Maybe I'll try it because maybe I'll get my mind off this pain.'" The type of distraction can change based on the child, their age, and their coping needs. While some patients prefer not to know every step of their procedure as it's happening, others prefer narration as a

distraction. If requested, the clinician can explain to the child what is happening to them as it is happening in detail. The clinician can also provide alternate focus coping, which provides the child with another object or activity to be focused on. The CLS might bring a book about the ocean and ask them what the ocean looks like, taking them out of reality to somewhere else. Some children may even just sit and alternatively focus themselves through video games, as they know what works for them. In addition, there are deep breathing coping exercises that can be implemented.

The clinician also uses various sensory toys or videos to aid in distraction. Examples of this come in the form of light up toys, bubbles, movies, tv shows, books, or YouTube videos. "By focusing on...these other visual or any other kind of sensory intervention really; that can distract them away from whatever might be anxiety provoking going on in the room.". The use of iPads or books acts as a literal wall between the child and the distressing situation. The clinician, in conjunction with music therapy, can also provide a relaxing environment through music and sounds.

Outside of the pre-op environment, distraction can be used to shift focus from negative experiences surrounding treatment; like restricted diets or being bed confined. One clinician provided the example of a toddler patient they had who was on a restricted diet and was incredibly hungry. "...and so, I brought up a bubble wand...and just like immediately was able to see a change in her mood from crying and screaming."

Parental figures can also be involved in distraction both in and outside of the pre-op suite. Protective holds and calming touches, for example, are common for younger children and infants. "...I'll allow the parent to perform some kind of supportive hold, and then I will provide

the distraction in some form of whatever is going to best distract the child, even if we know they're still going to cope pretty poorly...".

There is a wealth of options for distraction, and it is paramount throughout treatment. "It's how most of our kids get through their procedures, that is what we use a lot on a day-to-day basis," explained one clinician. "I mean there's so many, there's just...there's so many options."

**Legacy Planning.** Legacy planning involves the clinician providing memory making opportunities and long-term crafts and activities that can be cherished by the family beyond hospitalization. Although commonly employed towards end-of-life, it is implemented throughout their stay and focuses primarily on child-directed play and experiences. "It doesn't have to be end of life" expressed one clinician "it means that patient's legacy". The play itself does not change as end-of-life approaches, rather the focus of the play shifts to more memory-making opportunities and the clinician changes their language to teach about goodbyes thus altering the intention of their role.

To provide legacy planning services, the clinician supplies developmentally appropriate activities and language tailored to each child. Regardless of age, patients during this time are encouraged to make crafts with higher quality craft products like collages or fingerprint charms. Younger children, in addition to the craft projects, will continue to play with any other toy "...they still just want to play with their trucks and their...dinosaurs regardless of how bad they're feeling.". Older patients can also journal or write and make video diaries throughout their admission. One clinician provided the example of a male adolescent patient she had who created video diaries as end-of-life approached. These diaries showcased the experience of a cancer diagnosis for this client, and the emotional toll it took on him. These video diaries were then kept

by the family. "...it's really difficult but look at all these things we've got to do with him while he was alive like here in the hospital."

Language surrounding end-of-life preparation is also individual based on the child's age and readiness. For younger patients, the clinician may use developmentally appropriate picture books and other learning tools but may not directly address dying. The clinician will continue explaining to the child what's next in their treatment and ensuring the child is comfortable. Older children and adolescents can express if end-of-life is something they want to talk about. Because of their age, they are more aware of the implications "...they are going to understand it obviously more than the five-year-old but maybe they don't want to know.". Conversations with the older patients encompass what they aim to leave behind, and how the clinician can best help "...to make these visions come true."

Hospitals may also offer interviews with local television stations if requested, VIP visits, and professional photographers for the entire family regardless of the child's age. Music therapists may also be brought in to provide a calming environment. The clinician can include the child in end-of-life by asking them what they prefer to do and attempting to provide it. Taking into consideration the child's wishes and implementing them can be very validating and impactful to both family and patient. "Depending on the age and understanding of the child sometimes we're able to actually get the wishes of the child before the child passes, which is always super meaningful for their families as well because then they know that their child kind of had an opinion and kind of, like, had their own input...."

Legacy planning also encompasses the patient's family and their readiness for discussions surrounding death. The clinician will continue supplying legacy planning activities but may not



directly address death itself if the family is uncomfortable. For the parents, the clinician aims to provide memories and patient-made creations that the family can cherish after their child is gone.

Whatever the child chooses to do to create their living legacy, the impact can be profound for both patient and family. For children, legacy planning can facilitate long term projects as distraction from daily routine and can alleviate some feelings of isolation and loneliness that treatment can bring. For families, if their child's life is cut short due to their diagnosis, it can supply heartfelt memories and items that can be cherished long after their child passes.

### **Essence of the Experience**

The five themes presented above illustrate the perspectives of play as an intervention and its perceived effectiveness in pediatric oncology units. These themes amalgamate into the essence of the experience, which is best described as "trust is the foundation for coping". This trusting relationship is influenced by all levels of the child's bio-ecological system, specifically the clinician's interactions with the child and family and their considerations of the family's unique experience in the hospital (Figure 1). Through the established trust, the clinician can create an environment conducive to learning and establishing coping skills.

According to participants, through play and interactions with their patients, trust is established. Understanding the child's previous experiences, present coping skills, particular diagnosis, developmental level, and culture can impact the relationship and issues that arise. Larger systems also impact the child's needs, and how the clinician identifies and addresses those needs. Taking into consideration broader impact also affects what style of play and toys are utilized. Constructing the relationship, by analyzing the repercussions of outside influences, opens the avenue through which coping needs can be identified and coping skills taught.

Furthermore, familial support through siblings and caregivers can further trust thus enabling the effectiveness of play and impacting needs. Involving caregivers in play, providing them with support throughout treatment, providing resources and care for siblings, considering the impact of their culture, and taking into consideration the unique challenges each family presents are paramount to the trust-building process. Addressing specific family concerns as they arise and taking them into consideration empowers the family to advocate for themselves within the hospital and can impact the child's experiences throughout treatment, which fosters the rapport needed to create an effective, trusting, and therapeutic relationship.

Play is a way to build rapport, to clear up misconceptions, to normalize, to support development, to facilitate coping in the hospital setting. It is effective, I've seen it, obviously, firsthand. I wouldn't be a Child Life Specialist [if] I didn't think it was.

### **Discussion**

This study expands on existing literature on play interventions by exploring the usage and perceived effectiveness of play interventions for patients in a pediatric cancer setting. Clinicians discussed the socio-emotional impact of treatment on children, the implementation of play, and their perceived effectiveness of play interventions in aiding children through treatment. The effect on families of diagnosis and navigating the medical system, the manifestation of socio-emotional issues, and isolation experienced were explored and clinicians further explained how play supports understanding and integrates coping into their hospital experience. The essence of play as an intervention within pediatric oncology units can be encapsulated as trust creating the avenue through which experiences are explored and coping needs are addressed. The trust-building process enables the clinician to provide support and the child to learn effective coping behaviors to manage their experience. Participants accentuated the importance of rapport-

building as the foundation for play; allowing the child to have open discussions with them and to learn coping skills that best fit their needs.

Echoed in previous research, themes such as socio-emotional issues and abreaction were not surprising. It was expected that children, during play, exhibit abreactive tendencies. Particularly in relation to medical experiences (Locatelli, 2019). It was also illustrated in outside literature that children, throughout intense medical treatment, experience a myriad of socio-emotional responses (Jones et al., 2018). Two unexpected themes were trust-building and legacy planning. Existing literature did not speak to trust-building or legacy planning as it relates to pediatric cancer patients.

Results indicate the importance of taking into consideration outside Bio-Ecological Systems when innating play with this population. Each child presents unique challenges and needs dependent on individual diagnosis, socio-emotional state, previous medical experiences, developmental level, and culture. The family unit is unique, in that they exhibit their own norms, values, beliefs, cultures, religions, and familial roles. Parental figures of the family system are attempting to meet demands of both their child's diagnosis and of their everyday lives.

Although not always directly interacting, the layers of the ecological system influence in a nuanced and iterative manner; that then effect coping needs for both the family and individual patient, types of play and toys used, and what work needs to be done through the relationship. Children affected by cancer diagnosis and treatment experience not only the mental and physical weight of their ailment but are also influenced by the outside influences on their caregivers and siblings. Families, for example, are impacted not only by cancer treatment but also the demands of their workplace, care for other children in the household, finances, and their culture. Outside familial support systems, availability of transportation, income, financial resources, insurance

availability and aspects of the hospital including setting, location, and staff impact the experience of both the patient and family. Larger systems, like hospital leadership, funding, and financial health also influence the patient's experience and setting through the availability of certain services or toys and staffing. Previous literature regarding play usage in medical settings omitted the consideration of larger systems, and the repercussions of these systems of the experience of pediatric patients.

### **Implications**

Results of this study depict the importance of taking into consideration a multitude of influences over the child's needs. As socio-emotional issues are constantly evolving through treatment, and outside influences impact the work being done, taking into consideration those outside influences and constantly assessing socio-emotional needs is consequential.

The clinician should take into consideration all larger outside factors affecting the child's experience to effectively mitigate the socio-emotional impact of their treatment and empower the entire family in the medical setting. Looking beyond diagnosis parental and sibling stressors, hospital leadership and finances, larger economic and regulatory functioning in the macrosystem, and the advancements made in pediatric cancer treatment all interact with the individual child's experience in distinct ways.

Specifically, the implications of the family's race, culture, and ethnicity can play a large role in their interactions and experiences throughout treatment. Although culture is briefly addressed in only a small number of interviews, addressing the impacts of race and culture, as well as the difference between the two, is paramount. These identities can exert influence over preferred toys and treatments, as well as guide familial roles, norms, values, and practices and

change how the family and child interacts with the medical team and hospital system. The sometimes-subtle differences emphasize the need for the clinician to be continuously cognizant of racial, multicultural, and ethnic impact on their patients and families. The increased sensitivity and awareness of these enables the clinician to address specific concerns and provide services that best fit their clients' needs and informs person-centered care that takes into consideration all aspects of the child's life.

Furthermore, stressed by participants throughout interviews, the socio-emotional impact of treatment on the child is also dependent on their developmental level and age. While infants struggle with attachment, toddlers and preschool aged children grapple with the change in routine, lack of control over their situation, and struggle with healthy developmental milestones. These ages tend to be more fearful of needle-related procedures and can regress in both fine and gross motor skills and speech. Older children and adolescents struggle with the isolation of being away from peers and the battle of self-identity in relation to a cancer diagnosis. Regardless of age, clinicians highlighted the importance of addressing these experiences as leaving them unaddressed can have long term implications including struggles with severe anxiety and depression. When delivered via a trusting and well-built relationship, play can help address those concerns and work as an avenue to teach coping skills and foster self-efficacy both for the child and the caregivers.

Clinicians should focus heavily on creating a trusting relationship to identify how the child is understanding, integrating, and coping throughout treatment. Focusing on the relationship sets the foundation for teaching the child the coping techniques necessary to mitigate the impact of socio-emotional issues. To further develop this relationship and ensure needs are being met, the clinician must take into consideration broader impacts on the child's needs

through larger systems. Addressing larger concerns and catering toys and play to their specific needs provides the child with the best ability to learn through the play.

### **Limitations and Future Research**

Key limitations involve the analytic sample of this study. Due to the purposive characteristics, generalizability of results is limited. Additional deficits include the lack of representation across other disciplines such as social workers and other mental health professionals, and the absence of cultural and racial implications in hospital and play experiences. Including a broader range of professional perspectives in this study could broaden understanding apropos play usage in pediatric oncology settings.

Furthermore, the more nuanced exploration of identities as they relate to culture such as race, gender identity, religion, and sexual orientation warrant further research. Although culture was briefly discussed in a small number of interviews, further exploration needs to be done to highlight not only the impact of culture, race, and other identities on treatment and hospital experience, but also the fundamental difference between race and culture and how those difference shift the needs of the client. Understanding the experiences of historically minority populations in the United States serves to further the comprehension of how play is effective in mitigating the socio-emotional impact of treatment in pediatric oncology units.

### **Conclusion**

The results of this study found that there are many ways play is implemented within the setting of a pediatric oncology unit, and that play can have an immense impact on the child's experience. The essence of play with pediatric oncology patients stresses the importance of fostering trusting relationships and taking into consideration all the unique experiences and challenges each patient presents. According to participants, when the child trusts the clinician,

play can continue to be effective for a pediatric cancer patient and their families. Addressing socio-emotional needs for these children is paramount, and the integration of new coping skills into treatment proves effective in promoting a more positive hospital experience.

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**Table 1***Sample Demographic Characteristics (n=10)*

Demographic Characteristics	Demographic Characteristic Responses	
	<i>n</i>	%
Gender		
Female	9	90
Male	1	10
Age in Years		
25 - 30	2	20
31 - 35	3	30
36 - 40	2	20
45 - 50	3	30
Race		
White (Non - Hispanic)	6	60
Hispanic	1	10
Asian	2	20
Other	1	10
Highest Level of Education		
Bachelor's Degree	1	10
Master's Degree	9	90
Professional License in the Field		
Yes	10	100
Professional Licensures Obtained		
Certified Child Life Specialist	9	90
Licensed Independent Clinical Social Worker	1	10
Years of Experience Employing Play Interventions		
0 - 5 years	2	20
6-10 years	3	30
11 - 15 years	0	0
16 - 20 years	1	10
20 + years	3	30
Employment Environment		
Hospital	7	70
Home - Based Work	3	30
Client Age Range		
0 - 2 years old	5	50
3 - 5 years old	9	90
6 - 12 years old	9	90
13 - 14 years old	8	80
15 - 16 years old	7	70
17 - 18 years old	6	60

**Table 2***Play Interventions Used and Perceived Effectiveness of Play (n=10)*

Identified Themes	Example Quote
<p>Toys &amp; Play</p> <p>Exploring common toys and types of play used by clinicians within a pediatric oncology unit. The use of safe medical supplies and implementation of play techniques is discussed.</p>	<p>"I think that other professionals may see us as just playing...they may see us in the playroom just coloring, or...just playing with Barbies. But we know that it's not just play. We know that there's so much more that, you know, comes with that."</p>
<p>Families</p> <p>Understanding the impact of a pediatric cancer diagnosis on the family unit and exploring avenues through which caregivers and siblings are involved in the play process.</p>	<p>"...I'm assessing ways that I can be supportive through not only the patient but through the family."</p>
<p>Affective &amp; Behavioral Impact</p> <p>Socio-emotional impact</p> <p>Isolation</p> <p>This theme explores the impact pediatric cancer treatment has on patients.</p>	<p>"Those first few days, especially, can be a huge whirlwind. You're...coming in, sometimes you don't even know why you're here. Sometimes you felt fine and now you're having all these tests done. Sometimes you felt terrible."</p> <p>"It leads to guilt and shame...you know, not being able to do things that their peers can do or, you know, just...not being able to do things in general that they should be able to do."</p>
<p>Trust - Building</p> <p>Discussing the relationship-building process between the clinician and the child throughout their treatment.</p>	<p>"I've interacted with them in the most benign way, then we can turn around and utilize that relationship, and they can trust us when we tell them that we're going to help them do these things that a lot of times are awful."</p>
<p>Understanding, Integrating, &amp; Coping</p> <p>Abreaction</p> <p>Distraction</p>	<p>"You definitely see a lot of play with kids acting out things in the hospital, things that you know you can kind of go 'Didn't quite happen that way' but that's their perception."</p>

Legacy Planning

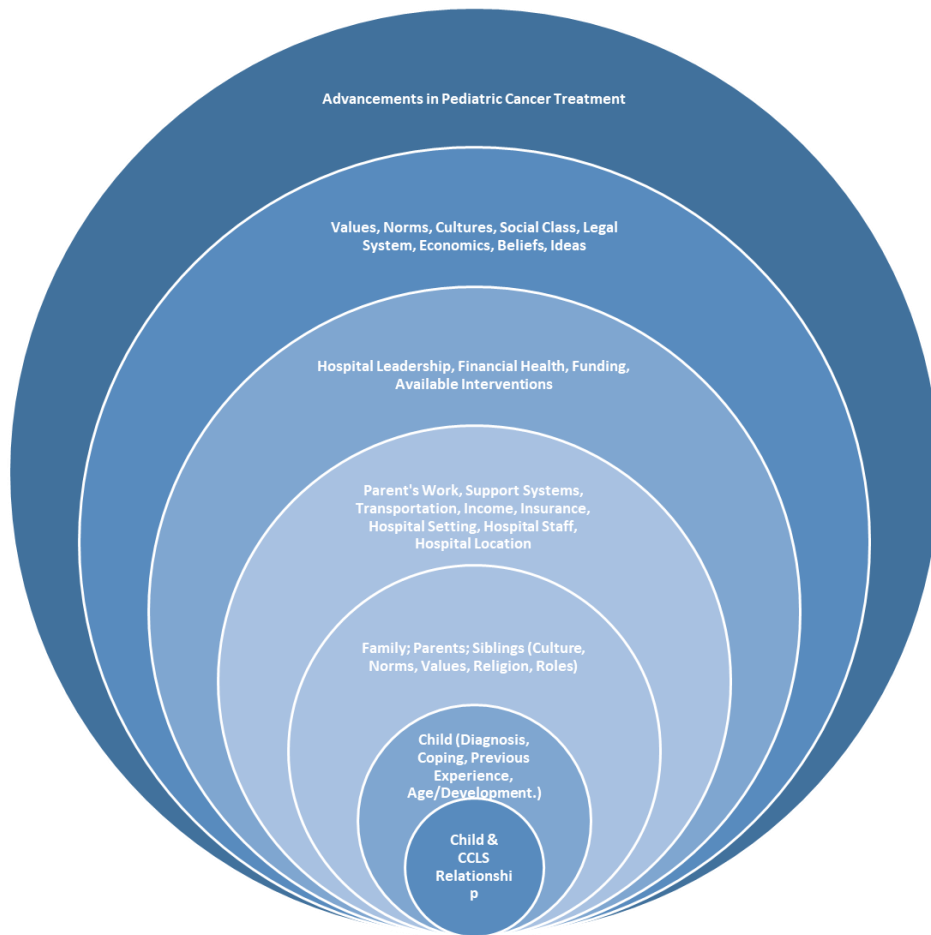
This theme explores the child's understanding related to their treatment, the integration of their understanding, and how coping needs can be addressed.

“By focusing on...these other visual or any other kind of sensory intervention...that can distract them away from whatever might be anxiety provoking going on in the room.”

“It doesn't have to be end of life; it means that patient's legacy”



Figure 1: Bio-Ecological System



*Note.* Bio-Ecological system depicting the levels involved in patient care.