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# Effects of Childhood Cancer and Hospitalization on Preschool Aged Children: Benefits of Movement Programming in Child Life Departments

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**Effects of Childhood Cancer and Hospitalization on Preschool Aged Children:  
Benefits of Movement Programming in Child Life Departments**

A Senior Honors Thesis

Submitted in Partial Fulfillment of the Requirements  
for Graduation in the Honors College

By  
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*Educational use of this paper is permitted for the purpose of providing future students a model example of an Honors senior thesis project.*

### **Abstract**

Child Life departments have been prominent in most children's hospitals to provide psychosocial care for children experiencing time in a hospital environment. This literature review will demonstrate the impact of Child Life intervention in pediatric oncology as well as promote new ideas for movement/dance therapy in Child Life programming. New methods for healthcare therapies have been rapidly increasing especially in cancer treatment centers. The creative arts have been implemented into pediatric hospitals as a form of therapy for children and families undergoing treatments.

The overview of play therapy and the developmental purpose it provides for preschool aged children is essential to understand why it is important to have in an environment such as the hospital. Play therapy is a new and upcoming type of therapy that focuses on helping children understand and deal with issues triggered from being hospitalized. Through play and the creative arts children are able to cope, portray their fears and anxieties, and have a sense of normalization. Children's hospitals use this technique to help children cope with their illnesses in and outside of their time in the hospital. New perspectives on play therapy and ideas on how to tie in movement/dance therapy to greater benefit the Child Life department are offered through this research.

### **Keywords**

Child Life – play therapy – movement therapy – pediatric – oncology – psychosocial – hospital – creative arts – development

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## **Section One**

### **Introduction to Child Life**

Child Life fills in the missing gaps that a child desperately needs during their time in the hospital that a doctor and nurse do not have time to provide. The Child Life staff provides a reliable relationship for young patients to have during their stay in an unfamiliar environment. One of the most important aspects of Child Life is that it offers normalcy in a not so normal situation. I believe that Child Life provides comfort and support during a potentially life altering event for young patients and their families. Child Life staff and volunteers are often there during the times where the child needs attention the most. Many parents cannot stay with their child 24/7 in the hospital and the staff is there to fill that void and ease the anxiety that comes with being in the hospital.

Child Life specialists armed with a strong background in child development and family systems, Child Life specialists promote effective coping through play, preparation, education, and self-expression activities. They provide emotional support for families, and encourage optimum development of children facing a broad range of challenging experiences, particularly those related to healthcare and hospitalization. Because they understand that a child's wellbeing depends on the support of the family, Child Life specialists provide information, support and guidance to parents, siblings, and other family members. They also play a vital role in educating caregivers, administrators, and the general public about the needs of children under stress.

Child Life specialists have a broad range of capabilities and responsibilities within the medical setting. To begin with, Child Life staff ease a child's anxiety and fear of treatment, procedures and change of environment through therapeutic and recreational play activities. They establish trusting relationships and foster an environment that incorporates emotional support. By educating children on medical procedures, tests, and surgeries, the Child Life staff encourages

understanding and cooperation with other medical staff. They also offer pre-operation tours, consultations and resources for families and patients to allow the families to feel comfortable and prepared for their admission into the hospital. When the hospital admission is sudden or an emergency for the patient, the Child Life staff provides families with trauma support within the emergency department. In addition, Child Life considers the needs of siblings or other children affected by the patient's illness or trauma by advocating for family-centered care. Child Life specialists educate the families of patients as well as the medical team about the psychosocial needs of the child so that the entire team is working towards providing a stable environment for the child. Along with being educators, Child Life specialists coordinate and organize special events within the hospital for entertainment and group activities for patients and their families. During the more difficult times, Child Life is often the major support for families during their time of bereavement and grief. In these instances, they organize family meetings and activities that help siblings or family members understand the process of grief. They also help the families to create memoirs together to keep the legacy of their lost loved one alive.

It is clear the Child Life specialists wear many hats as they care for children in the hospital. The many roles of Child Life specialists make it clear that these individuals must have the education and background to provide the child and their families with the best possible experience during their time in the hospital. Hospitalization can have lasting effects on children and their families by addressing these effects Child Life specialists are able to address potential issues that may arise.

### **Hospitalization and the Child**

Entering the hospital environment can be a very stressful and anxiety producing event for a child, especially for children being hospitalized with a chronic, long-term illnesses. A child with a terminal illness may have a script for entering the hospital that looks something like this:

unfamiliar faces, medicine, shots, IV's, surgery, blank white walls, and beeping machines. With associations such as these, it is evident that Child Life services will provide a relief for fearful children. Having Child Life intervention has been proven to lower the stress levels of pediatric patients being admitted into the hospital for chronic illness. Massachusetts College of Pharmacy and Health Sciences developed research that found prominent themes with pediatric patients and the intervention of Child Life staff. All of these themes suggest that Child Life staff provide meaningful relationships that foster an overall healthy psychosocial well-being for the pediatric patients (Kaddoura, et al., 2013).

When children are admitted into the hospital they are stripped away from all sense of normalcy within their daily routine. Now they sleep in a stark room, eat food that is served to them while they eat it in an uncomfortable hospital gown. The routine of attending play groups or school is no longer and they rarely have the opportunity to run around and play with their friends or family. A child's world is built around exploration and social peer interaction, a child can sense the absence of those necessities and it affects their overall health.

Observing medical staff in the hospital with patients can sometimes be unbearable for individuals who are advocates for children. Patients at times can be treated like just a rare medical case or diagnosis instead of a human being with emotional needs and concerns. For example, if a child is diagnosed with a rare incurable and terminal illness a team of doctors and medical students may pile into the child's room poking and prodding them as if they were only a tool for research. It is the Child Life specialist's role to advocate for situations such as these. Children have routine and throughout most of their development if they sense a change in their schedule, it can cause stress for the child. This also applies to environment; children are comfortable in an environment that provides opportunity for exploration and play. When those

two main components of a child's environment are absent it diminishes the opportunity for growth of a child's mind which craves creativity and learning.

Another theme that these researchers revealed was the reoccurrence of medical staff lying to the pediatric patients as tool used for coping strategies (Kaddoura, et al., 2013). This is an extremely ineffective strategy and can actually be detrimental to the pediatric patient. Not properly informing the child about their diagnosis, illness or the treatment they will be receiving will not allow the child to cope with stress effectively nor successfully. Instead, parents and medical staff should assess the child's developmental understanding on medical equipment and the elements that pertain to the procedure or treatment and then explain to them in appropriate language that allows the child to process the information adequately. Child Life specialists have to knowledge of developmental theories in psychology that they use as groundwork when they are working with children of various ages. They are able to assess the patient's developmental level and provide medical play as an educational tool used to expose children to medical equipment they are likely to see during their time at the hospital. Medical play allows the child to cope all while using play and the arts. Child Life specialists lead medical play by first giving the child a 'blank' cloth doll with no features and encourage them to draw the dolls face and other features they feel necessary to include. After the child has given the doll an identity the Child Life specialist introduces the patient to IV's, EEG sensors and other medical equipment they will see. By exposing the children to the medical equipment they will encounter, it opens up an opportunity for children to familiarize themselves with it and in turn they will most likely feel more comfortable when the procedure is done on their own bodies. The Child Life specialist often demonstrates the procedure the child will be having on their cloth doll first. When the child has had enough exposure and knowledge with the medical equipment and terminology, they

should be able to perform aspects of the procedure on their cloth doll. This is considered a coping technique because it gives children the opportunity to express any fears or anxieties they might have through role play. Through medical play the child is also in control of the role play. Control is an incredibly important element to consider when working with children in the hospital, their environment and interactions in the hospital allow them to have very little control. By giving the child the chance to take control of what happens in medical play will give them a more positive schema for the hospital. A Child Life specialist is able to pick up cues that the child is giving through their dialogue that suggest that certain equipment or procedures are unfamiliar and therefore scary for them.

Crying and how it is perceived in a medical setting is also an important aspect of coping for pediatric patients in the medical setting. When asked, medical staff and nurses often categorize a crying child as a stressed child. However, when Child Life specialists are asked the same question they are more likely to say that the child is using crying as a coping strategy (Kaddoura, et al., 2013). These differences are important to note, staff must be aware that crying is a form of coping and that it is not a negative expression of emotion for a pediatric patient. Being able to understand why a child is crying is the most important, are they scared?, is their environment unfamiliar?, do they have opportunity to express their needs? All of these questions and several more need to be acknowledged before it is assumed that the child is crying because they are under stress and stress only. There have been many studies on crying and the impact both positively and negatively it has on a child. To begin with crying can consume a lot of a child's energy which is negative; however, crying is also a technique used to release and return to a state of equilibrium (Kaddoura, et al., 2013).

Child Life intervention can be used for a crying patient through distraction such as using bubbles or a simple game during treatment. In addition, Child Life staff can assess the child's surroundings and pin-point what exactly the child needs in order to have a sense of control over the situation they have been placed in to be able to cope effectively.

### **Pre-School Aged Children and Hospitalization**

The reaction of pre-school aged children to hospitalization can differ drastically between each child; however, understanding appropriate developmental characteristics will help staff provide the best care possible. Appropriate reactions from children experiencing hospitalization can be addressed through explanation and open communication between the child and health care providers or Child Life specialists. An open line of communication and clear, trusting relationships will allow the child to feel comfortable in the foreign environment of the hospital. Allowing the child to engage in normalization activities will also give the child an opportunity to feel more at home in the hospital. Normalization activities may include familiar toys, books, craft activities, movies, music, and even programs that allow the child to get up and moving.

For this age, children are usually most fearful of the separation from their care-taker. Preschool aged children often have a difficulty with the transition of care-taking, moving from their primary care-giver to the medical staff team, who are nearly strangers to them. This can also contribute to the child feeling abandoned from their daily routine when they are admitted into the hospital for treatment. When they are away from home, daycare or preschool their 'normal' routine is taken away and their social relationships are stripped as well. At this age the importance of peer relationships and socialization is very important for their psychosocial well-being. The restriction of normal play and exploration can take a toll on the child's emotional, physical, social and cognitive well-being (Bibace & Walsh 2006).

During hospitalization for cancer a preschool aged child may go through stages of regression, aggression and withdrawal. A child who has been hospitalized with cancer, they may have experiences that cause them to regress. For example, treatment can cause fatigue and the inability to care for themselves like they previously had. A patient may experience a regression in bodily function where they now must have assistance in using the bathroom or changing their clothes. Other children in this age range may regress to comforting actions such as thumb-sucking or bed-wetting (Bibace & Walsh 2006). Another reaction to hospitalization and cancer treatment may include aggressive behavior. During hospitalization and treatment, children have little control about what happens to them; as a result the child may react with anger or resistance to medical treatment (Bibace & Walsh 2006). The loss of control is a very debilitating change that the child may experience during hospitalization. This is where the importance of giving the child the opportunity to make their own decisions and choices in areas such as play and activities becomes incredibly important. When the child is given the opportunity to have control they may be able to find more of a balance and stability in their new world. This allowance of control will also help the child become more compliant with medication and instances where they have limited control.

Another difficulty that may arise with the hospitalization of a child is the potential of that child withdrawing. To further elaborate, parents or staff may notice that the child has become increasingly less interested in activities that they previously had enjoyed. In addition, the child may show symptoms of withdrawal by sleeping more, talking less, eating less, and avoiding eye contact. When the child withdraws, they may refuse to interact and play with others or their family members.

Young preschool aged children may also have outbursts or tantrums related to their hospitalization and diagnosis of cancer. The child may react in ways such as yelling, screaming, hitting, or biting. This anger and frustration can come from the confusion that they are facing and the lack of control that they have in their drastically different world. Other children this age may cling to their parents or care-takers with a fear of being separated from them. The environment of a hospital is foreign and the child is introduced to new faces and individuals that they associated with pain. It is important that the child has the opportunity to create trusting relationships with staff members such as a Child Life specialist, doctors or nurses. When the child feels as though they are safe in the presence of these staff members they will have an easier time cooperating with medical procedures. Preschool aged children undergoing treatment may also notice a restriction from their normal play and exploration which causes sadness. Play is essential to a child's normal development and incorporating play can help normalize their life in the hospital. There are techniques that Child Life staff encourages families to engage in to help ease the anxiety and help children to cope with hospitalization. For example, simple tasks such as holding the child's hand or being held on someone's lap offers a sense of comfort and support. Blowing bubbles, pinwheels and distraction activities are beneficial for children needing to focus on something other than their treatments. Breathing activities are also calming for children under stress because it allows the child to take deep exhalations and inhalations, which can be a soothing technique. Bringing in toys, books, pictures, stuffed animals or blankets from home is something that families can do to make the hospital room feel more comfortable. Engaging in normal developmentally appropriate play is often the most important technique towards coping for hospitalized preschool aged children.

### **Overview of Play Therapy**

Giving children the opportunity to solve problems through play can help instill a sense of accomplishment and engagement in the task at hand. Children that do not receive stimulating and challenging developmental are at risk for having an increased dependence on others and low motivation. I believe that for children in the hospital setting these techniques on problem solving and play tasks can be related to their will and determination to get well and stay positive by making their task to go home and feel/be healthy. If Child Life specialists allow the children to have opportunities to solve problems and work hard for something rather than watching a child withdraw from explorative play and engagement in activities, I believe that the child may be more responsive and cooperative with staff during procedures. I believe this because the child may sense that they are in control of their body by working with the staff and realizing that they are given certain tasks/challenges to make them feel better. A child who does not cooperate with staff may feel like the doctors are in control of their body's rather than themselves which may cause them to become uninterested in helping themselves.

I believe that medical play resembles play that allows the child to be in control, perform problem solving tasks and educate children about procedures. To me this type of play seems the most beneficial to a child undergoing medical procedures. Medical play allows the children to explore the new and unfamiliar tools used by professional staff to help them better understand what it does. Also, medical play gives the child the opportunity to be in control of a 'procedure' by performing it on a hospital doll that they can decorate and name. Having this opportunity might help the child express their concerns about previous procedures done to them and it gives the child the control they would not normally have in the hospital setting. Combining medical play with expressive play may also give the child an opportunity to use medical tools during expressive play to communicate what they are feeling that day. They may direct expressive play

towards images commonly found in the hospital to maybe get some frustrations out or just play around for a stress reliever.

For Child Life specialists, play that provides assessment is the most beneficial type of play. When children are given the freedom to express through play, they may project their fears and anxieties with their actions/ dialogue during play. When the children are ‘performing’ procedures on their hospital dolls, Child Life specialists are able to witness how much the child knows about what is going on in the hospital and what more they should be informed about. Medical play can also reveal the fears a child might have about a certain procedure they were told they were going to have. Some forms of play may not be effective for certain children. Children that have a developmental delay and have trouble communicating/ understanding may benefit more from distraction and visual stimuli rather than interactive play.

## **Section Two**

### **Developmental Characteristics/Needs of Children that are Preschool Aged**

A preschool aged child goes through several dramatic changes during this developmental stage in their life. Physical, social, cognitive, emotional and overall psychosocial developmental needs are very different from that of an infant's. Preschool children are growing rapidly through this stage socially, emotionally, cognitively and physically. They are starting to understand the world around them through exploration and play. In order to better understand children at this age, it is important to acknowledge all aspects of their development, both the needs and characteristics. Providing psychosocial care to children is nearly impossible if caretakers or Child Life staff do not understand their individual developmental abilities. One of the most important duties of a Child Life specialist is to keep the child's developmental growth on track throughout their treatment and hospitalization. Children who are undergoing treatment for cancer

have the stress of their diagnosis as well as change in routine and environment which can contribute to a regress in development.

### **Psychosocial and Cognitive**

To begin with, the overall psychosocial characteristics of preschool aged children help caretakers understand how and why children do what they do. During this stage of development children enter the psychosocial stage called initiative versus shame and doubt. This is part of Erik Erikson's developmental theory on psychosocial stages. Erikson explains development based on the conflict that children face during stages in their life. This stage occurs during the preschool years, between the ages of three and five. During the initiative versus guilt stage, children begin to assert their power and control over the world through directing play and other social interaction. He believes that when the child has confronted and mastered the challenges they are faced with in each stage they can move on to the next. According to Erikson, preschool aged children are confronted with the question of "am I good or bad?" in the stage of initiative versus shame and doubt. During this stage children are beginning to assert their power and control over the world they are in. They are also starting to affirm their independence through directing play and other social interaction. Children are also searching for a sense of purpose in everything that they do and learn in this stage of development. Curiosity is prominent and children are seeking answers to the wonders of the world around them. The focus on play and exploration is essential for psychosocial growth in preschool aged children. As a caretaker, fostering play and imaginative play allows children to have a reinforced sense of freedom and encouragement to play when they are given ample time and opportunity for play. When their environment or physical well-being stifles this freedom for play, the child may begin to feel that their efforts towards imaginative play were a source of embarrassment. In other words, if the

child does not have opportunity to succeed in exploration and imaginative play they may feel unsuccessful, which may result in a sense of guilt. Children need to begin asserting control and power over the environment by taking initiative by planning activities, accomplishing tasks and facing challenges. It is also important for caregivers to encourage exploration and to help children make appropriate choices. Caregivers who are discouraging or dismissive may cause children to feel ashamed of themselves and to become overly dependent upon the help of others.

According to Piaget children are in the middle of the pre-operational stage of cognitive development during their preschool aged years. Pre-operational children are considered egocentric and are unable to see another person's point of view. In addition, children are also developing and enhancing their self-control skills. Not only are they learning to control bodily functions, such as the transition from diaper to toilet training, they are noticing the effects that their bodies have on the world around them. For example, a child this age may learn that hitting a peer is inappropriate and therefore have more self-control of their bodies. At this age there is a significant increase with the use of verbal communication; children are learning to communicate their needs with caregivers.

### **Emotional**

The emotional needs of preschool-aged children should also be examined to fully understand how they interpret the world around them. Understanding their emotional needs can also help caretakers and hospital staff to provide an environment that fosters healthy communication and expression of emotion. For a child in this age range, it is important for them to have ample opportunity to develop trusting relationships with other children their age. The need for peer interaction is also an incredibly important factor in a child's development during this stage in their life. Peer relationships have a strong influence on a child's overall well-being and

development. Peer interactions foster positive feelings through friendship; contribute to school adjustment and later life problems through bullying and rejection. Another emotional necessity for preschoolers is to have the ability to separate easily from their parents without anxiety. It is also appropriate and necessary for children to build their self-esteem as well as gain confidence and positive body images through this stage of development.

At this age, children still lack a sense of impulse control. If they feel like acting upon something, they are likely to act on it. This may cause the child to become upset or distressed when a situation does not go the way they want it to. For example, if the child observes their peer playing with a toy that they want to play with, taking the toy away from the other child may seem like the most logical option for the preschooler. The idea of delayed gratification has little meaning to children this age, if they want something, they want it now. The emergence of self-image is another important characteristic that should be considered for a preschooler's emotional being.

Empathy is also beginning to develop around the ages of three to five. Children are starting to understand that other people have emotions too. Children begin to observe others emotions and react to them in an emotionally appropriate way. In addition to developing empathy they are starting to form self-image and perspectives of themselves.

### **Physical**

During this stage of developmental growth it is important to provide an environment that fosters appropriate and accessible play. Caretakers should be aware of the child's ability to accomplish tasks that are developmentally appropriate for their age. If there is a delay in any aspect of development, the caretaker can incorporate activities that will aid the growth in the

delayed aspects of their development. For the preschool aged child there are things that should be encouraged in order to keep the child on track for their development.

Most importantly, preschool aged children should be encouraged to engage in physical activity with supervision. During this age, children are developing the bulk of their gross motor skills, walking, running, skipping, and jumping are just a few of the skills that they should have at this age. Along with their gross motor skills, coordination and balance is an important thing developing for preschool aged children. Allowing children make their own decisions is also very important for children this age. Preschool aged children are very explorative and learn by pushing the limits with their exploration. Children at this age are beginning to crave independence and are looking to gain control within their environment. Caretakers should encourage the child to make their own choices and allow them to become their own being. In addition to permitting decision making, allowing the child to complete age appropriate tasks on their own will encourage independence. Caretakers can have the child engage in simple chores and tasks to foster the child's independence. These tasks can also make the child feel important and accomplished as well. Social interaction with peers is also another important aspect to encourage for children of this age. Engaging in play and social activities with peers will help the child develop social skills while learning to develop healthy relationships.

Parents should provide stable and predictable environments and routines for children during this stage in development. Although consistency is important for all stages of a child's development, having a routine can help children have stability and organization in their life which reflects in their play. Stable and predictable environments are especially important for children who are hospitalized. For pediatric patients they are placed in a new environment that may be filled with the overwhelming knowledge of their diagnosis and unpredictable health

concerns. To balance the unpredictability in their life, it is important to provide organized play and stable routines.

### **Social**

At this age children are also learning at a rapid pace. Caretakers can gauge the child's understanding through the zone of proximal development and scaffolding. Zone of Proximal Development is range of skills that a person can perform with assistance but not able to do independently. Being able to recognize the Zone of Proximal Development means that the caretaker can recognize when a child is developmentally ready to learn a new skill and can support them through the learning process. Mentors guide learners through the zone of proximal development. Both learner and society develop as a result of this collaboration. Societies and cultures change when individuals choose which knowledge to pass on.

Psychologist, Vygotsky provides a theory called guided participation that illustrates the importance of having an individual to imitate in order to learn about the world around them. Children learn a lot through observation in this stage. Guided participation is a learning process in which an individual learns through social interaction with a parent, a teacher, a more skilled person who offers assistance, structures opportunities, models strategies, and provides explicit instruction as needed. Children's intellectual growth is stimulated and directed by their guided participation in social experiences and exploration of their environment. They are also using care-givers as role models and children observe their actions and imitate what they do. Encouraging role play activities, imaginative play and letting children become independent thinkers can help the child initiate peer interaction and foster healthy self-esteem.

### **Section Three**

#### **Children with Cancer: Psychosocial Evaluation**

Cancer has increased to the leading cause of death by disease in children. Every year approximately nine thousand children are diagnosed with cancer (Toro). In that nine thousand more than seventy percent of children come out being survivors of cancer (Toro). These children may experience medical and physical effects, psychological effects, and cognitive effects. All of these effects and changes in the child's life can impact their experience transitioning back into the lives and routines they had prior to diagnosis. Therefore, interventions are vitally important in helping children and their families cope adaptively to ensure positive long-term adjustment. Throughout a child's development, children understand the world around them in different ways. As a result, children understand medical terminology and diagnosis in a way that makes sense to them during their preschool years. Preschoolers understand cancer and medical terminology when they are explained in the simplest terms. They also look for a specific cause for their cancer in order to make sense of their illness. Often the child thinks that they are the cause of their cancer, whether it was caused by something they did or thought.

Children develop scripts for events, objects, situations, and even individuals in their life. Scripts allow the child to identify and form conclusions about the world. Scripts and schemas are a way of collecting data in order to develop your own conclusions and theories about everyday social situations and interactions. Those conclusions and theories can change when new information is introduced. Schemas are dynamic, active structures from which children acquire information through experience. Playing allows a child the experience of figuring out how things work and solving problems. The banks of information that children acquire from their experiences may be used in new and different situations to solve problems.

Children between the ages of two through six think symbolically. As a result, pretend play is possible because of their symbolic thinking. Children often base their play on situations or events they have observed in their life. These are what psychologists call scripts and schemas. Preschoolers tend to lack creativity in what they play and therefore they play out the scripts of what they know to be true from what they have observed either in their life at home or on television. They tend to lack creativity in what they play, so they are playing out the "scripts" of what they know to be true. In other words, they may act out something they've seen on television or at home or at school.

Children aged two to seven years old are in the preoperational stage of cognitive development. In this stage develop a sense of egocentrism, this means that the child is unable to differentiate between self and other. Their thoughts and communications are typically egocentric. This can often cause the child to blame themselves for events and situations surrounding them, even when it is out of their control. When a preschool aged child is diagnosed with cancer it is important for them to be reassured that they did not do anything that caused their cancer. They also need to be reminded that they will not be abandoned during their time with treatment. Many times children fear that they will end of living in the hospital and they do not understand that

It is also incredibly important that children know the truth about their illness and what the treatment entails. Children this age are afraid of being hurt and having pain as well as the unknown. Being honest with the child about any procedures or medical equipment is the best way to keep the child informed and aware of what is happening to them. If the child is not properly prepared for procedures it may cause them anxiety as well as lack of compliance with future tests and procedures.

Exposing children to the medical equipment through medical play is a beneficial way for children to familiarize with the foreign objects that they will encounter during treatment. Engaging in play therapy can help children with cancer express their trauma, negative emotions and then integrate their experiences in a healthier way. It can enable children to move beyond the crisis of childhood cancer, helps children deal psychologically as well as physically with cancer all while building resilience.

### **Cognitive Changes**

Preschool children are moving away from the toddler stage and beginning to significantly expand their emotional, cognitive and social understanding of the world. During this age children that are hospitalized usually experience separation anxiety when away from their caregiver and regression can also occur during this stage. However, a unique distinguishing response that preschool aged children have is the fear of punishment that can be aroused by the feeling of guilt. To further explain, children this age may feel that they are the cause of their illness or that they became sick because of something they did that was bad. During this stage, children's anxieties are often tied to egocentric thought, fantasies and magical thinking (Noll,1999).

During this age children are developing Theory of Mind about the events and situations that are occurring around them. Theory of Mind is the ability to interpret one's own and other people's mental and emotional states. With this train of thought, children are often asking the question of "why" and "how" and "what if". All of these potential questions can lead to heavy conversations with a preschool aged child, in order to understand their diagnosis a child must have someone to explain it in a way that they will understand. Preschool-aged children may fear that they will end up living at the hospital, so it important to let your child know he or she can return home. Kids at this age are afraid of pain and of being hurt. Being honest with the child about tests and procedures that may hurt, but also explaining that the treatment is being done to

help make them better will give the child time to process and understand the information. Child Life staff may also explain that doctors can help make procedures less painful and that they are there to help them feel better to help establish a more trusting relationship between the child and medical staff.

Children being hospitalized for cancer also have the potential of having lower IQ scores, which can vary depending on how intense the treatment is. In addition, many times children with cancer have lower academic achievement test scores as well as problems with memory and attention. Behavioral problems an overall slowed development over time is also common in preschool aged children that are hospitalized for cancer.

### **Emotional Changes**

As previously mentioned, the emotional needs and characteristics for preschool aged children are very important to their healthy developmental growth. When children are diagnosed with cancer they face several changes and a lot of those changes put a strain on their emotional development. Children this age are beginning to build positive self-esteem and self-images perspectives. However, research has shown that children diagnosed with cancer are at risk for a significant decrease in their self-esteem and image. The changes occurring to their body and health have a direct effect on their confidence and body image perspective.

Another emotional need for preschool aged children is need to build healthy peer relationships (Rokach, 2010). This need tends to be pushed aside during the child's treatment periods and school absences. However, it is essential for children, primarily at this age to develop social skills and form relationships with children their age. Peer interaction is a huge contributor to how children understand the world and human beings. At this age children are beginning to understand that other individuals have emotions and feelings such as they do, and they react to their peers emotions. Children diagnosed with cancer as well as survivors of cancer

may form some symptoms of anxiety, behavior problems, intense stress, frustration, somatic complaints and even post-traumatic stress disorder (Toro). In addition children with cancer also have the risk of experiencing peer relationship difficulties and academic complications (Rokach, 2010). These issues may stem from or cause the child to become emotionally distressed.

As previously mentioned, preschool aged children need a stable environment and when their routine is disrupted it can throw off the emotional stability of the child as well. The change in routine when a child is admitted into the hospital for treatment can potentially cause the child to withdraw or become uncooperative with medical staff. The child's medical team along with Child Life specialists can develop a structured daily plan or routine for the patient while they are being hospitalized. Because children with cancer can be hospitalized for several days, weeks or months, a schedule can help provide structure and predictability within their environment.

All of these potential issues and changes that come from the diagnosis of cancer can be lessened with the help of Child Life specialists and professionals that are experienced with providing psychosocial care for children who are experiencing trauma and life changes from cancer treatments.

### **Physical Changes**

Children who are undergoing treatment for cancer experience a lot of changes with their image, health and social self. Research has shown that the diagnosis of cancer in young children can cause several psychological as well as physical changes in children. Cancer treatment can often leave the child feeling like a different person. Often there is hair loss, dramatic weight change, and scarring. A child who is in the rapid stages of development may lose a sense of identity and could develop poor self-image (Rokach, 2010). Research indicates that the negative

perceptions of self- appearance often found in children with cancer can be associated with poor social adjustments, self-esteem, psychological well-being and academic success (Rokach, 2010).

Visible side effects of cancer treatment include weight gain or loss, hair loss, physical disfigurement and scarring. Not only are the physical changes visible, cancer treatment also causes significant changes to the child's physical ability. Cancer patients also endure continuous sickness, chronic pain and severe fatigue throughout treatment. Sleep disturbance is also a symptom of cancer treatments, for young children this can be very straining. In addition to lack of proper routine, a healthy sleep cycle is critical for a child's healthy growth. Radiation treatment and chemotherapy, which are the two most common cancer treatments, have a negative effect on the child's bone and muscle health. Treatments have an effect on the bone and muscles growth and development in young children, slowing down the growth in areas that are exposed to the treatment. Young children going through periods of development with rapid increase in growth are at risk for these adverse effects. Along with stunted bone and muscle growth children may experience joint stiffness, unequal growth, bone pain, and weak or fragile bones (American Cancer Society, 2014). Slowed growth is a very common symptom of children who have undergone treatments for cancer.

### **Social Changes**

The hospital environment exposes the child to many new faces and often the child will have a different nurse each day. It is important for the child to have a consistent staff member in the hospital such as a Child Life specialist, that way they are able to develop a strong and trusting relationship with a staff member that will provide care for them every time they are hospitalized. If the cancer treatment causes the child to become seriously ill, their peer interaction and overall social interaction will become strictly limited during their course of treatment. The limited peer and social interaction can be extremely difficult on the social

development of the child. As previously mentioned, the disruption in routine can take a toll on the child's social life. Treatments often cause the child to remain out of school for weeks or even month depending on their situation. These changes have an effect on both the child's academic and social adjustments. They are now interacting with a new set of faces and these new interactions mostly involve medical staff. Many times the child is unable to form significant bonds with individuals on the medical team because the medical team changes and new faces are introduced to the child on a daily basis. For children that are in the hospital for extended amounts of time, undergoing treatment, Child Life specialists are the individuals who children see as 'safe playmates' in the hospital and many times turn to them to develop a trusting social relationship.

#### **Section Four**

##### **Overview of Movement and Dance**

A child's development socially, physically, and emotionally can be a very complicated process. Throughout the course of a child's development, there are several challenges they can and often will face in order to grow. As human beings we develop through social interaction. Being involved in social situations stimulates a child's growth; dance fulfills this need for social acceptance because the child is able to be a member of an intimate group. This allows children to learn how to interact and work with others while being a part of a collaborative group. Children's physical development can also be stimulated by dance. Children learn body awareness techniques as well as expanding their rhythmic skills. Scientific evidence supports that physical activity such as dance will encourage physical growth (Humphrey, 1987). If children participate in a well-balanced dance program they will gain strength, endurance, flexibility, as well as coordination. A young child's emotional development is very critical and they can reach their needs for emotional growth through dance. Dance can stimulate mental processes, develop

creativity, encourage independence, build self-esteem, and gain confidence. Dance is an all-around beneficial activity for the growth and development of children.

Overall, I believe that children act as they do based on the environment in which they are placed. They will act differently in an environment that is familiar and comfortable than an environment that is unwelcoming and unfamiliar. I sketched out my own theory based on range of movement during the early years of development and how it is affected in the hospital setting. Children are constantly on the move and range of movement differs throughout development. As motor skills become increasingly advanced, children act differently to their environment and explore through movement and play. The development of movement progresses rapidly through a child's beginning years of life. Psychologists have provided developmental time lines for a child's progression of movement. I have taken my knowledge of dance and movement and connected it to my background of child psychology.

Children in the hospital may have restrictions on their movement or have limited mobility due to IV lines, injury, hospital machinery or if they are bound to a wheelchair. These obstacles could have lasting effects on children if they are admitted into the hospital for long periods of time. I believe that this especially pertains to toddler and preschool aged children who may spend most of their days in a hospital bed due to a terminal illness (Noll, 1999).

The most rapid time of development for movement happens in the preschool stage. During this period of development preschool aged children crave to be active and move around. They are becoming increasingly social and beginning to develop a sense of self and identity. Preschool children who are experiencing time in a hospital setting are exposed to a new and completely different environment that is filled with unfamiliar senses and restrictions. Preschool children tend to feel the need to assert their independence through exploration and testing the

limits of what they can and can't do. In the hospital room there is a limited amount of room for exploration; there are areas off limit and often children are confined to their hospital room for safety. Child Life provides exploration with playrooms; this provides normalcy for children while they are being treated in the hospital. Many preschool aged children may find the limiting factors of the hospital uncomfortable and limit their movement as a result. Depending on the diagnosis of the child, medical staff can work towards providing an environment for children to explore and move around as much as possible.

Young children are naturally active and will move, run, kick, throw, and play on their own in nearly any environment. However, children that are hospitalized are faced with a variety of challenges that reduce their natural aptitude toward movement. Providing an opportunity such as yoga or creative movement gives the patient, who may be feeling like they can't do anything, the opportunity to move around and be active in a new way.

Yoga has proven to be an incredible mind and body experience and is an art form that is often associated with dance. It includes a whole body experience with breath and inward focus. Children that participate in yoga can learn to be more mindful of themselves and others as well as learn a healthy option for stress relief. One of the major benefits of using yoga is that it can be practiced in any environment and from any position, wheelchair, hospital bed or even lying down. Many times children with cancer do not have a surplus of energy from their treatments; yoga can be practiced for short amounts of time with minimal strain on the body. Also it has been proven to lower the bodies heart rate and blood pressure as well as improving circulation of oxygen in the body.

A lot of tension builds up in our bodies when we are stressed and overwhelmed, this happens with children as well. A lot of times children this age are not given the opportunity or say in their

treatment or what happens to their bodies. Dance or yoga can be an outlet where the child is given the opportunity to gain the control over their bodies back.

Ideas from previous well accredited developmental theories tie into new ideas of this movement theory. For children in the preschool age range, they could also feel out of control of their environment. To give preschool aged children access to control their movement staff might put on music and encourage the child to move and wiggle around. This lets the child feel like they are in control of their bodies all while freely expressing emotion.

Connecting this to Jean Piaget's Cognitive Theory, preschool aged children are categorized as being in the pre-operational stage. Creative dance is incredibly beneficial for children that are in the pre-operational stage. In this stage children have exceptionally creative and love to engage in role playing and magical thinking. Creative dance can take children into a world away from the hospital scene where they can create and express their emotions through their bodies. Creative dance and movement can allow the child to evaluate their bodies and the space around them as well as engage in conversation with the therapist/specialist and peers.

From a social standpoint, creative dance and yoga also offers the children an opportunity to connect with other patients their age and build a sense of community and togetherness. Providing a movement program for children of this particular age will help them feel included with other children in the hospital. Programs should be divided into age groups, that way there is an opportunity for children to connect and socialize with children among their age group. By giving children these opportunities it will help strengthen their social well-being, without these programs a pre-school aged child is at risk for developing a social delay or lag, if they are hospitalized for a long period of time.

Dance and creative movement offers children a healthy outlet to express emotion. Children this age can have difficulty adequately communicating their emotions. Through movement, children expose their fears, interests and understanding of their current state. Dance and movement can also help the patient open up to expressing built up emotions and anxieties that they may have been suppressing throughout their diagnosis (Cohen & Walco, 1999).

Being admitted into the hospital can be a stressful and anxiety producing experience for anyone, but imagine you are a child coming into the hospital where there are no playgrounds and limited access to exploration. The restrictions that come with being admitted into the hospital can be life altering for children and could disrupt their ever changing development. Continuing with movement and developmental play is essential for children who have been diagnosed with terminal illness. When terminal illness is an obstacle that a child faces their development alters in several ways. Physical development is rapidly changing with a child's growing bodies, when a terminal illness such as cancer takes over the child's body takes on new battles. Often times the patients need for movement and play declines when their body and mind focuses on getting healthy. In addition to working towards getting healthy, the hospital environment is very different from the child's home and school environment. Their routines are altered and social relationships are also put on hold. These sudden changes put a strain on the child's physical well-being. Child Life programs are implemented in hospitals to help prevent the stressful changes that children endure when being admitted into the hospital for treatment or a procedure. Moments of normalcy in a new and anxiety producing environment can be refreshing for both the patients and their families. These moments can be as simple as a child's favorite book or more importantly the opportunity for play and movement. Children who are experiencing extreme stress may react by 'wearing' their stress, meaning they hunch over and close in on

themselves. Dance and movement can help open the child's body up and encourage a more positive self-image. Moving and being active is how a child explores and learns about the world around them. Having opportunities to run around, wiggle, dance, stretch and have active movement is essential for a child's growth and development. Research exploring various forms of movement has uncovered the benefits for children in the hospital setting to experience physical movement to release anxiety and stress in the body.

### **Movement and Dance Therapy: A Literature Review**

#### **Yoga, Meditation and Breath**

When used as a form of therapy to help treat kids, the combination of breath and movement through various yoga postures improves balance and strengthens the entire body. One of the amazing tools that we have as humans is simply, the breath. Most of us take for granted the ease of our breathing and hardly notice the miracle of our life force. Often our breathing is shallow and in situations that are scary, we may hold our breath, leading to reduced intake of oxygen.

Once we become conscious of breathing, it can become a valuable tool for self-regulation. Not only is awareness of the breath considered the foundation of yoga, many feel it is fundamental to healthy living. Learning mindful breathing, especially for children who struggle with anxiety and self-regulation, will improve a child's sense of self, emotional awareness and self-control. Breath offers children many benefits including centering the mind and body and increasing self-awareness. By regulating the breath, the body as a whole relaxes. Conscious breathing is a tool for children to use to calm themselves and manage their emotions. It is also a great preparation for yoga and meditation. Like any physical activity, doing breathing activities with children in hospitals and medical settings should be approved of by a doctor or other care provider who is aware of the child's physical needs.

During meditation, ask children to create an affirmation in the positive. Such as, “I am smart,” “I am healthy,” “I am kind. I am confident.” Having them repeat it three times to themselves during meditation. Having them visualize an image to represent this affirmation (Kanitz, et al., 2013).

The greatest challenge with children is to hold their attention long enough to teach them the benefits of yoga: stillness, balance, flexibility, focus, peace, grace, connection, health, and well-being. Luckily, most children love to talk, and they love to move—both of which can happen in yoga. Children will jump at the chance to assume the role of animals, trees, flowers, warriors (Kanitz, et al., 2013).

Guided imagery and visualization empowers children by giving them a positive way to deal with the world and themselves. “From preschoolers to adolescents, guided imagery can build confidence and self-esteem, as well as help children develop their own inner resources, and learn to express feelings they generally are not able to verbalize” (James, 2008). Imagery and visualization is not only beneficial in stress management and reduction. It encourages their creativity to flow; releases their fears, anger, and sadness; and allows their trust in the inner self to shine and their minds and hearts to be in synch.

In guided imagery, children are offered a magical journey within themselves. It should always be a pleasant and comforting journey. This inner journey should have a beginning, middle and an end--like any good story. You can go into as many details and descriptions as you want, or you can just slowly guide the child letting them fill the story with details of their own imagination. When you do guided imagery, try to use as many senses and feelings as you can -- this will make the experience more powerful. Having the patients describe what see around them in the journey, what they hear, feel, sense, smell, taste, etc. Bringing imagination to a child’s

world is one of the most important things to do. A child's imagination can easily be explored and developed through the vastness of a child's inner world with storytelling and guided meditation using imagery (James, 2008).

### **The Physical, Psychosocial, and Emotional Needs of Hospitalized Children**

Children are constantly going through developmental changes and are growing every day. Being in the hospital for procedures disrupts the physical functions of infants, school-aged children and adolescents. Rokach published research on an evaluation of the physical, psychosocial, and emotional needs of hospitalized children. She explained the differences in development between children who have long term illnesses that prevent them from a normal course of development. Rokach described four of the major periods of development for children, toddler age, preschool-age, middle school age, and adolescence. During all of the previously stated periods in a child's development the need for movement and play are critical. Their mobilization is limited and there is limited space to play these restrictions can upset the physical developmental progress of children. Preschool children who are admitted into the hospital for extended amounts of time are missing out on engaging in physical activities with peers. Having physical play with peers is a very important aspect for school-aged children's development. Not only are they engaging in active movement, they are building critical social relationships. Developing social relationships at this age by engaging in physical play helps children develop imagination, resourcefulness, and initiative. Children who have chronic illnesses may have a significant decrease in opportunities to play with peers which may make them feel different and isolated. When children reach adolescence their focus tends to shift toward their body image. Finding alternatives for patients to participate in physical activities with their peers may take time but it is a huge aspect of a child's social development as well as physical (Rokach, 2010).

### **Yoga as an Alternative Therapy for Anxiety in Patients**

Sharma and Haider published research on yoga and its effects for children, adolescents and adults on the hematology and oncology units in a hospital. In the article, '*Yoga as an Alternative and Complementary Therapy for Patients Suffering from Anxiety*' the researchers explain the results of a systematic review before and after yoga sessions for inpatients. The benefit of yoga for healthy and terminally ill individuals was explained throughout the article. The study focused on three different groups of patients, children ranging from five to twelve years old, adolescents ranging from 13 to 18 and parents of patients.

The participants/patients were either parents of patients or patients being treated for cancer or blood disease. They participated in forty-five minute yoga sessions administered by a certified yoga teacher. Each yoga curriculum was created according to the population and was modified based on the developmental needs of the patients. During the session the yoga instructor demonstrated poses that were easy to execute and able to be modified based on the needs of each patient. The session was a blend between active and restorative yoga poses. Each participant was measured on the Spielberger State Anxiety Scale both before and at the end of each yoga session. The scale measured both 'state' and 'trait' anxiety. The article explained 'state' anxiety as how the patient is feeling right at that moment and they described 'trait' anxiety as how the patient generally feels. The questions were simple and answered on a four point scale (Sharma & Haider, 2012).

The beneficial aspect of yoga is that it can be practiced in any environment and from any position, wheelchair, hospital bed, and chair. Many times children with cancer do not have a surplus of energy from their treatments; yoga can be practiced for short amounts of time with minimal strain on the body. Sharma and Haider stated that yoga lowers heart rate and blood

pressure as well as improving circulation and oxygenation in the body. The results of the research yielded positive responses of the participants. The researchers found that there was a correlation to the rise in well-being after each yoga session. Not only does yoga improve well-being it strengthens upper and lower extremities as well as muscles in the body's core. Yoga contributes to a patient's balance, posture, flexibility and muscle relaxation. This type of movement activity has numerous benefits for patients. Being in the hospital and undergoing treatment is stressful and yoga releases 'happy' endorphins that relieve tension and lowers cortisol levels. In addition to the stress relieving properties that yoga offers it was also found that patients received better night time sleep after yoga sessions. The hospital environment has the potential to be disruptive to a child's or adolescent's sleep pattern. Often times patients are woken from sleep to have their vitals taken or take medicine; this can not only disrupt a healthy sleep pattern for children but in the long run irregular sleep will affect their well-being and energy levels. Children being treated for cancer experience symptoms that take a toll on the body such as vomiting, muscle weakness, lack of balance, and fatigue (Sharma & Haider, 2012).

After examining the results the researchers came to the conclusion that adolescents reported more positive results after the yoga sessions than children did. The teens reported that the sessions were relaxing, stress relieving and helped them build muscle strength. Although the younger children reported that they enjoyed the yoga sessions there was not a significant decrease in their anxiety score after the sessions (Sharma & Haider, 2012).

### **Dance as a Therapy for Cancer Prevention**

The treatment for cancer has broadened over the years; several therapies have been used to treat cancer. Music, herbal, meditation, nutrition, spiritual, yoga, dance therapy, and others have been used to treat cancer patients. Dance movement therapy has yielded very positive

results with cancer patients and researchers Gurbuz Aktas and Filiz Ogce have published as article explaining what exactly happens during dance movement therapy that causes the positive effects on cancer patients. To begin with dance movement therapy is a stress reducing form of exercise that has previously been used as a therapy for emotional, social, and cognitive concerns. Gurbuz and Filiz described the purpose of dance movement therapy as widely defined however they described it as a psychotherapeutic use of dance using a creative process which in turn can enhance an individual's emotional, cognitive, physical, and social integration (Aktas & Ogce, 2005). Dance movement therapy has healing properties and works wonders on the body and mind. For example, as explained in the article, dance therapists believe that mental and emotional problems are held within the body in the form of muscle tension and rigid, constrained movement. In turn, that feeling in the body can foster negative feelings, emotions and attitudes. The main goal in dance movement therapy is to guide people to achieve greater self-awareness and well-being. Different types of movement offer patients different types of therapy. Rhythmic movement has the ability to ease muscle tension. This can help when a cancer patient is stressed or anxious about their health because stress tends to cause tension throughout the body. Spontaneous movement offers patients the ability to let go and trust their impulses. This can help the patients come to terms with their diagnosis and help them let go of the negative aspects and focus on life and the positives. Moving creatively helps patients open up and encourages self-expression; this can help patients express emotions. On an emotional level dancing and moving makes people/patients feel joyful and confident. The researchers explained that there is a carefree feeling individuals get when they are dancing and it in turn allows them to explore the issues they are facing with their illness such as frustration, anger, and resentment. Dance increases energy in patients by getting the blood pumping throughout the body and increasing circulation,

it also releases happy endorphins into the bloodstream. Cognitively, it has been found that dance movement therapy can increase motivation and cognitive skills. For patients receiving treatment for cancer this may motivate them to stay active and keep a positive outlook on the future (Aktas & Ogce, 2005).

### **Creative Arts Therapy Improves Quality of Life for Pediatric Brain Tumor Patients Receiving Outpatient Chemotherapy**

For many school-aged children sports and physical activities are often very important aspects of their lives. Several researchers published an article outlining the affect that creative arts have had on the quality of life for cancer patients. One section of the article explains the view of an adolescent boy who after realizing that chemotherapy treatments would cause him to not play baseball was very devastated. The therapist encouraged him to begin a game of catch with the ball, after playing catch for about ten minutes the therapist asked the patient how he was feeling. The boy explained how his nausea had gone away and he was feeling more energetic. He then expressed his hope to maybe returning to baseball sooner than anticipated. By reviewing this case study it reveals that just by simply reminding the body that it still can move and work the way the patient wants it to that the body and mind as a whole can be energized. The researchers also reported results of decreased depression and anxiety in pediatric cancer patients receiving therapy through dance (Madden, et al., 2010). In the study, researchers found that when pediatric cancer patients were measured on their scores on the two subsets of 'physical appearance' and 'body build/moving parts' significantly increased after the movement experience. This means that the children reported a positive difference in how they perceived their physical appearance and their range of mobility in their body parts (Madden, et al., 2010).

Overall, movement experiences for pediatric patients can be very positive and therapeutic experiences for children undergoing treatment. Yoga, dance, and physical play have all yielded positive therapeutic outcomes for pediatric patients. Movement is a mind and body activity and it makes the body feel awake and live. For patients who are bed ridden most of the day, getting up and getting their blood circulating can be a re-energizing experience.

### **Creative Movement**

Creative movement is defined as, “Creative movement is an art form whose medium is the human body in motion. The four basic elements of dance are the body and its different parts and range of movement, and space, time, and energy.” (Dow, 2010) Understanding the four basic elements of dance can open up a limitless opportunity for movement. When children are knowledgeable on the four elements, their range of movement expands and it can allow their imagination to explode. Creative movement allows children to move around freely and discover that there is always often more than one solution to a problem.

Dance can have a powerful impact in children’s daily lives because it is both a physical activity and a vehicle for self-expression. It offers the rich experience of exploring and creating, with the added benefits of lively movement. Here are some reasons to encourage children to dance. Modifying creative movement is simple. Such as yoga, patients can participate in creative movement in any environment. Creative dance can be accommodated for children that are in a wheelchair, hospital bed or have limited mobility in a certain part of their body.

### **Conclusion**

This literature review and overview of how Child Life programming can expand and utilize movement/dance therapy as a means of a therapeutic outlet for preschool aged children diagnosed with cancer has a lot of opportunity for additional research. To begin with, creating and implementing an organized outline of a dance/movement class from children of this

demographic into a Child Life department is the first set to supporting this research. Educating the field of Child Life on movement and the benefits that derive from these experiences can help spread the knowledge and curiosity within Child Life specialists.

The social, emotional, physical and cognitive benefits of dance/movement as a therapy support a healthy overall growth for children all ages. Offering hospitalized children an outlet for mobility can promote healthy developmental growth and overall psychosocial wellbeing.

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