Helping Children Understand: Using Picture Books to Age – Appropriately Explain Dance-Movement Therapy and Childhood Cancer

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Helping Children Understand: Using Picture Books to Age- Appropriately Explain 
Dance/Movement Therapy and Childhood Cancer 

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Thesis Committee 
Dr. Crystal Duncan Lane, Chair 
Dr. Kimberly Doudna, Committee Member
Acknowledgments

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Abstract

Cancer is the leading cause of childhood death by disease, and there are many different therapies available to patients. One of the most promising forms of therapy is Dance/Movement Therapy (DMT). DMT is an engaging and creative form of rehabilitation, and focuses on the interaction between the body and mind. With this exercise, patients are able to express their emotional processes through physical movement, allowing for an alternate form of communication.

The way that children engage in DMT is highly influenced by their age and developmental stage. When children are presented with a new task, it may be necessary for the therapist to provide assistance or scaffold the child in achieving goals that they could not reach alone. Children may have varying responses to the therapy, and the Dance/Movement Therapist must be ready to meet each child’s unique needs and individual stage of development.

Children may struggle to comprehend complex terms like cancer or DMT, and so it is important to present this information at an age-appropriate level. One way that this can be accomplished is through a children’s book. Annalise’s Dance is a picture book that will explore the ideas of cancer and DMT and will be completed following this thesis. This book has the potential to be both a coping strategy for children battling cancer, and a teaching tool for both adults and children who may not be familiar with these concepts. This thesis outlines the evidence-base, storyboard, and character sketch of this book.
Introduction

Creating this story was a very personal journey for me. I started my thesis project in the summer of 2016, and struggled at first to find a topic to which I felt connected. I began to think back on my personal life experiences, and an idea quickly stood out from the rest: My best friend’s battle with cancer. On January 3rd, 2013 at three o’clock in the morning, my very close friend was diagnosed with Acute Myeloid Leukemia. Her fight with cancer lasted the better part of two years and included a clinical trial, two bone marrow transplants, relapse, treatment at two different hospitals, countless outpatient clinic visits, therapy sessions that are still ongoing, and finally, remission. This is only a partial list of what my friend has endured since her diagnosis almost five years ago. Her courage and resiliency were my main source of inspiration while creating this project.

Another part of my friend’s journey that interested me was her ability to incorporate her lifelong love of dance into her healing process. My friend has been a dancer since early childhood, and used the skills that she learned in the studio to help rehabilitate both her mind and her body. My friend did not work with a Dance/Movement Therapist (further defined below), but rather took her pre-existing knowledge of dance and related stretching exercises as a part of her independent strengthening process. Being a dancer myself, I was intrigued by the idea of formal Dance Movement Therapy (DMT) and quickly decided that I also wanted to make this a focus of my thesis.

I decided to center my thesis research on the topic of creating a children’s book situated within existing research and theory because of my passion for working with children. Cancer is a difficult subject for anyone to discuss, let alone children. However, as will be seen in the literature review of this paper, cancer is so prevalent that it is almost impossible to find someone
who has not been affected by it in one way or another; which unfortunately includes children. I wanted to present this information to children because I believe that if children have a better understanding of cancer, it may help alleviate their fear of it. This is an incredibly difficult topic to understand at an adult level, and it becomes even harder to make these conversations appropriate for children. My goal for this story is to create a tool that can be used by adults in homes, schools, hospitals, and other settings to help children better understand elements of cancer. The following sections will dive deeper into available research regarding DMT, pediatric oncology, socioemotional development, and children’s literature.

**Dance/Movement Therapy**

DMT is a relatively new field of study, and extensive research has yet to be conducted. DMT psychotherapeutically uses movement and dance to allow biopsychosocial patient engagement (Meekums, 2002). The American Dance Therapy Association (ADTA) formed in 1966 (ADTA, 2016a). The association’s founder and first president was Marian Chace, and she was a major contributor to the evolution of DMT in the United States (Health Professions Network, 2005). Chace began as a modern dancer, but moved into teaching after her professional career ended in 1930. After noticing an increased interest by her students in the exploration of emotion while dancing, Chace switched the focus of her classes to reflect their passions. The local hospital, St. Elizabeth’s Hospital in Washington D.C., quickly took notice of Chace’s overwhelming success, and began referring psychiatric patients to her classes. Chace later became part of the staff at St. Elizabeth’s, and DMT soon evolved into a major study focus at the facility.
The use of DMT as a form of psychotherapy enforces one of the practice’s major theoretical principles: The mind and body are interactive with one another. As in psychotherapy, DMT also works to provide patients with condition management which includes coping skills.

Movement is known to be a form of symbolism, allowing for individual expression and communication. DMT can help individuals express their personality, process subconscious thought, and experiment with new ways of being. A DMT session will look quite different from one patient to the next, as each person has a unique need that is being addressed during the therapeutic engagement. A patient may attend DMT therapy privately, or they can choose to participate in a group session. Sessions may include choreographed routines, exploration of rhythm, mirroring exercises, or improvised movement created by the patient. DMT sessions are effectively tailored to the needs of the client or group, and any one or combination of the above techniques may be utilized at one time.

The goal of DMT is to provide both psychological and physical support as well as empowerment to the patient. What a patient hopes to accomplish through DMT is dependent on the health status of each individual, and goals are made to reflect the physical and mental fitness a patient aspires to realistically achieve. DMT may also be used as a diagnostic tool. DMT is utilized with a multitude of individuals, and it is not exclusive to a particular medical situation. DMT is implemented with patients suffering from both physical and mental health ailments. Some examples are individuals living with cancer, major depression, post-traumatic stress disorder, schizophrenia, autism, and eating disorders, among others (Halsten, 2012). DMT is inclusive of all people, regardless of race, background, gender, age, or ability. Although DMT may not be specifically mentioned as part of a patient’s treatment plan, participating in this type of therapy presents new opportunities for growth with all patients.
An important part of DMT is its emphasis on safety. It is important to make sure that basic safety measures are taken to prevent physical injury, such as making sure there is adequate space available and that the patient is dressed appropriately. Patient needs in regard to physical mobility will also be taken into effect when planning for a DMT session. For example, if a patient is wheelchair bound, modifications are made so that the patient will still be able to benefit from the session. When working in a group setting, it is important to maintain respect of individual physical and socio-emotional boundaries, and ensure that physical interaction is purposeful and consensual (Kornblum, Halsten, & Valentine, 2016). DMT professionals must always work to provide an emotionally safe space for patients, as they cannot be expected to successfully participate in DMT until they feel their physical and mental needs are being respected. Allowing patients to have control over their bodies and space is a critical part of the process as well as building self-confidence and respect.

Becoming a Dance/Movement Therapist requires extensive schooling and on-the-job practice. According to the ADTA (2016b), there are currently two options for becoming a Dance/Movement Therapist. In order to earn the Registered Dance/Movement Therapy (R-DMT) credential, an individual must graduate from an ADTA approved graduate program that meets all of the educational requirements. Graduate programs for DMT are approved by the ADTA if the curriculum meets all necessary requisites. An individual may also obtain the DMT certification through an alternate route. This educational process requires a master’s degree or higher from an accredited institution in combination with general training, specific DMT coursework, fieldwork, and an internship. Right now, there are two levels of credentialing for Dance/Movement Therapists. The first level is the R-DMT credential, which allows the individual to obtain an entry level position in a medical or educational setting. The next level is
Board Certified Dance/Movement Therapist (BC-DMT). This credential can be earned only if the individual already has the R-DMT certification. This second level of credentialing allows the BC-DMT to provide training and supervision within the field, as well as work in a private practice.

**Pediatric Oncology**

Pediatric oncology, by definition, is the “branch of medicine that specializes in the diagnosis and treatment of cancer” (National Cancer Institute, 2016a). There are currently three areas in which oncology is separated; medical oncology, radiation oncology, and surgical oncology. Medical Oncology is the use of chemotherapy, hormone therapy, and other drugs to kill cancer cells. Radiation oncology is the utilization of radiation to kill cancer cells. Surgical oncology is when surgery and other procedures are employed to remove cancerous cells.

When children and teens are diagnosed with cancer, they are typically treated at large pediatric centers that specialize in the care of youth. Although it varies between medical centers, the typical age range for pediatrics is birth to age 18-21 (American Cancer Society, 2014). Many of these pediatric cancer centers offer clinical trials run by the Children’s Oncology Group (COG), which is supported by the National Cancer Institute. A clinical trial is a research study that explores “whether a medical strategy, treatment, or device is safe and effective for humans” (National Institute of Health, 2016a). Clinical trials are the last step in an extensive, highly-developed research process. The main goal of a clinical trial is to “advance medical knowledge and help improve patient care” (National Institute of Health, 2016a).

There are currently eight types of cancer that are considered the most prevalent in the pediatric population. These include leukemia, brain and other central nervous system tumors, neuroblastoma, Wilms tumor, lymphoma (both Hodgkin’s and non-Hodgkin’s),
rhabdomyosarcoma, retinoblastoma, and bone cancer (American Cancer Society, 2016a). Leukemia, which is a cancer of the bone marrow and blood is the most common childhood cancer, and makes up about 30 percent of all cancers in children. The second most prevalent type of cancer in children is brain and spinal cord tumors. There are many different types of tumors, and the treatment style and prognosis are dependent on the tumor’s classification which is based on how far the cancer has spread or how much of the body is affected. Table 1 further explains cancer types, the area of the body that each affects, and its prevalence in childhood cancers.

Table 1

<table>
<thead>
<tr>
<th>Cancer</th>
<th>Affected Area</th>
<th>Prevalence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leukemia</td>
<td>Cancer of the bone marrow and blood</td>
<td>30%</td>
</tr>
<tr>
<td>Brain and Spinal Cord</td>
<td>Tumors that grow on or in the brain and spinal cord</td>
<td>26%</td>
</tr>
<tr>
<td>Neuroblastoma</td>
<td>Begins forming within the nerve cells during the development of a child in utero</td>
<td>6%</td>
</tr>
<tr>
<td>Wilm’s Tumor or Nephroblastoma</td>
<td>A cancerous mass in one or both kidneys</td>
<td>5%</td>
</tr>
<tr>
<td>Lymphoma – Hodgkin’s</td>
<td>Cancer that affects the immune system – Hodgkin’s type is most common in early adulthood</td>
<td>3%</td>
</tr>
<tr>
<td>Lymphoma – Non-Hodgkin’s</td>
<td>Cancer that affects the immune system – Non-Hodgkin’s type is most common in younger children</td>
<td>5%</td>
</tr>
<tr>
<td>Rhabdomyosarcoma</td>
<td>Type of cancer that affects the skeletal muscles</td>
<td>3%</td>
</tr>
<tr>
<td>Disease</td>
<td>Definition</td>
<td>Incidence</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>-----------</td>
</tr>
<tr>
<td><strong>Retinoblastoma</strong></td>
<td>Cancer of the eye</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Bone Cancer - Osteosarcoma</strong></td>
<td>Cancer that often develops near the ends of the long bones in the arms and legs – Most common in teens</td>
<td>3%</td>
</tr>
<tr>
<td><strong>Bone Cancer – Ewing’s Sarcoma</strong></td>
<td>Cancer that most likely manifests in the pelvic bones, chest wall, or in the middle of the long leg bones</td>
<td>3%</td>
</tr>
</tbody>
</table>

Note: Adapted from “Cancers that Develop in Children” by The American Cancer Society, 2016a.

Osteosarcoma is the most common form of bone cancer, and as stated before, most often occurs in the long bones of the outer extremities. In children and teens, osteosarcoma is more likely to manifest itself in the regions near the knee (National Institute of Health, 2016b). There are varying degrees of severity within osteosarcoma, and this is often dependent on the specific type of osteosarcoma from which a child is suffering.

Depending on the type of the cancer and how far it has advanced, there are several different ways that it is treated. Individuals that may be involved in the treatment process include an orthopedic surgeon, an orthopedic oncologist, a radiation oncologist, and a medical oncologist. Other more interdisciplinary health care providers that may take part in the care process would be rehabilitation specialists, social workers, nurses, psychologists, and other health care professionals (American Cancer Society, 2016b).

As previously mentioned, surgery, radiation, chemotherapy, and targeted therapy are all possible treatment styles. Targeted therapy occurs when physicians analyze the specific changes taking place in cancer cells that allow them to grow, divide, and spread (National Cancer
Institute, 2014). The analysis of these changes allows physicians to design more effective therapies for patients. One or a combination of these techniques may be used to fight the cancer.

The type of treatments that are offered to pediatric patients can be highly different than what would be provided for an adult. There are fundamental differences that shape the way physicians treat pediatric cancer patients, and some of these include intensity, toxicity, supportive care, and the family context (National Cancer Institute, 2016c). Depending on the type and stage, the treatment of childhood cancer can be much more aggressive than that of adults, and when necessary, more intensive therapy styles may be utilized. The highly toxic levels of treatments like radiation and chemotherapy can have a much more significant and lasting effect on a child’s body. Throughout childhood and adolescence, organ systems are still actively developing. Because of this, there is a higher chance that a young person’s body will experience more adverse effects from high toxicity treatments. The developmental differences between children and adults also extends into supportive care. Medications that may typically be provided to an adult for a specific type of cancer are not always the best option for a child in the same situation. Certain periods of childhood development require a unique treatment style, and physicians must be aware of what is needed at each life stage. Physicians must also be conscious of the needs of the family throughout the duration of treatment. Family context is the recognition that treatment of cancer does not stop with the sick child, but extends into the family system as a whole.

Family context is arguably one of the most complex factors in treating childhood cancer. It is important that care supports should be extended to the family members of the sick child, as childhood cancer can be a horrific experience for all involved. If the cancer patient is still considered a minor, many or all of their medical decisions will ultimately be decided by a parent
or guardian. There is often a larger number of individuals involved in the legal and ethical decision-making processes of pediatric cancer treatment, which can sometimes complicate the treatment plan if there are differing opinions.

When providing medical treatment to an individual, it is crucial that health professionals assume a biopsychosocial approach to patient care. A biopsychosocial approach occurs when medical intervention is based upon an analysis of the patient’s biological and psychological status, their social environment (including family), and in particular the available health care system (Engel, 1977). By looking deeper at all contributors to illness and patient demographics, rather than looking solely at biological factors, the physician can better understand the needs of the whole patient. In order to provide complete care to a patient, a physician’s medical decisions must be based upon the combination of biological, psychological, and sociological components. This approach can be guided by family systems theory, via the belief that patienthood is a consolidation of the interactions between nested systems of molecules, cells, organs, the organism, the person, the family, and society (Engel, 1977). Family systems theory recognizes that changes in one level of being will likely have a direct effect on the others. For example, if an individual is facing heart problems, it will affect the way that the person behaves on a daily basis, and can also reciprocally affect their interactions with family and society through his/her unique health care needs. If a family systems lens were to be included in all educational programs for future health professionals and medical scientists, these individuals would be more prepared to utilize a biopsychosocial perspective of disease and illness while conceptualizing patients as whole beings who are integrated in a society as well.

As of today, cancer is the leading cause of death by disease in children past infancy (National Cancer Institute, 2015a). Individuals of Caucasian and Hispanic backgrounds have a
higher incidence of childhood cancer than do children of other racial groups. Overall, the survival rate of childhood cancer has drastically improved between the mid 1970’s and today. In 1975, the average five-year survival rate was just over 50 percent. Today, the five-year survival rate hovers between 83 and 86 percent (National Cancer Institute, 2015a). It is important to remember that these statistics are not concrete, and other factors must be taken into account when determining a child’s prognosis. These factors include the type of cancer, the stage of the cancer at diagnosis, patient age, and other patient characteristics.

Childhood cancer is highly stressful, disruptive, and challenging for all involved individuals. Contrary to what one might assume, pediatric cancer survivors do not regularly experience significant psychological adjustment problems (National Cancer Institute, 2015b). It is important to make the distinction between emotional difficulties and psychological adjustment problems. Having a negative emotional response to cancer is considered to be a normal reaction, but it is classified as atypical when the psychological distress embodies characteristics of a mental health disorder (National Cancer Institute, 2015b). These responses are not classified in binary terms by health care professionals, but instead are analyzed and placed along a continuum of stress reactions. Distress is most commonly seen immediately following diagnosis, during the early stages of therapy, and in times of frequent hospitalization. Adjustment disorders may occur within a child if he/she experiences an abnormal amount of difficulty reacting to change following a cancer diagnosis (National Cancer Institute, 2015b), or if there are other stressors occurring concurrently with the cancer (Boss, Bryant, & Mancini, 2017). The symptoms of an adjustment disorder include anxiety, depression, or other social, emotional, or behavioral problems that worsen a child’s quality of life. The frequency or continuation of these symptoms are taken into account when identifying an adjustment disorder. Family factors also play a large
role in psychological adjustment. When a family is cohesive and works together while facing adversity, better emotional outcomes can be expected for the patient (Walsh, 2016). Poor emotional outcomes are much more likely when a family experiences high levels of conflict and antipathy (National Cancer Institute, 2015b). In order for a child to have the best possibility of a positive healing experience, stressed families should be given access to resources that can increase resiliency and strength of the family as a whole.

Family stress theory is applied widely in research, and is highly relevant to pediatric oncology. It is generally accepted that families are a product of their social and cultural environment. A family’s ecosystem, or external environments, consist of historical, cultural, economic, genetic, and developmental components (Boss et al., 2017; Bush, Price, Price, & McKenry, 2017). These factors all contribute to the way that a family reacts to a particular stressor event, for example, a cancer diagnosis. The ABC-X model (Boss et al; Bush et al., 2017) is a clear, easy-to-understand method of evaluating the degree of stress that a family might experience following a cancer diagnosis, or other distressing event. The “A” factor represents the stressor event itself. The “B” factor defines a family’s access to resources that provide healthy coping mechanisms. The “C” factor delineates the meaning or significance of the stressor event, and is created by the family. The “X” factor illustrates the degree of strain or crisis that is experienced by a family, and is influenced by the A, B, and C factors. In relation to DMT, therapy are a B factor, or a resource that has been made available to the patient and family. This model helps put in perspective that stress is not an isolated event, but is instead a function of the family’s response to the disturbed equilibrium of the family system.
**Dance/Movement Therapy in Pediatric Oncology**

As the environment plays an involved role in DMT, there are several locations in which this form of therapy may be implemented. These locations include hospitals, rehabilitation facilities, mental health facilities, schools, nursing homes, daycare centers, private practices, and health promotion programs (ADTA, 2016c). In truth, as long as the environment is safe, there is no wrong place to practice DMT. As the focus of this paper is pediatric oncology, the following section will describe the relationship between DMT and pediatric oncology within the hospital setting.

The oncology unit of a hospital is often associated with the act of waiting; Waiting for results, waiting for a cure, and sometimes waiting for a miracle. It is a place where the familiarity of home must be adapted into a small, medical equipment-filled room. The room may also be filled with a sense of anxiety or fear of the future, possibly regarding whether it is a changed life or death that follows this journey. Each pediatric patient and their family creates a unique feeling in the hospital room, and it is crucial for the entering Dance/Movement Therapist to be sensitive to this feeling. This unique ambience is both created and influenced by the presence of others, whether it be parents, siblings, other relatives, friends, or the lack thereof. *Corpo Ambiente* is a term that describes the interaction between body and mind in the creation of the atmosphere inside a patient’s hospital room (Pleven & Partelli, 2014). By definition, it is the “physical and mental state of being that encompasses a moving, dancing, playing, holding environment that is both created from and influenced by the particular atmosphere the therapists find when they enter a room” (Pleven & Partelli, 2014, p. 230). This atmosphere is influenced by external cues including sights, sounds, smells, materials, and the communication between these fixtures. The process of assessing each unique environment is called *somatic countertransference* (Pleven &
Partelli, 2014). A necessary part of entering patient rooms as a therapist is the ability to separate one’s own mental and physical sensations from that of the patient (Pleven & Partelli, 2014). This then allows the therapist to effectively and appropriately respond to the needs of the patient. Once the therapist enters the room, she must become one with the environment and be ready to provide the level of service that it requires.

When a Dance/Movement Therapist first enters a patient room, initial communication between patient and therapist may not always be verbal. As physical movement is the focus of DMT, body language is much more significant in how a therapist will approach and communicate with the child. For example, if a child is curled up on their bed and not responding to stimuli that is already in the room, the therapist may need to be gentler in their initial approach. In the opposite situation, where the child is open and responsive, the therapist may have the opportunity to more enthusiastically engage the child. In order to enter a healthy therapeutic relationship, the therapist must be able to identify the emotional communication between herself and the patient (Pleven & Partelli, 2014). When establishing initial interaction after the therapist has entered the room, the most effective way to gain the child’s attention is by addressing whatever object is already holding their focus (Pleven & Partelli, 2014). Playing to a discernable interest is a positive way to draw the child’s attention towards the therapist, and invite them to explore the possibilities that a DMT session may bring.

It is also important to recognize the role that parents and guardians play in the hospital room. Occasionally, family members may be apprehensive regarding the therapeutic process or lack knowledge about DMT in general. Other times, the family may be more passionate about the DMT practice and have a desire to engage. The therapist must then assess the needs of the family just as she has assessed the needs of the patient, as both are equally important (Pleven &
Partelli, 2014). When working in a pediatric unit, more often than not, the family is present throughout the hospital stay. Just like any health care provider: It is necessary for the therapist to view the patient and family as one working system as opposed to separate entities (Pleven & Partelli, 2014).

A Dance/Movement Therapist must be conscious of the child’s physical abilities when deciding which activity is best to implement. Child development professionals have created various lists that explain which developmental markers a child should be reaching at each year of life. However, when a child is facing a life threatening illness like cancer, these developmental indicators may no longer be as applicable. Illness may have an internal and external impact on age-appropriate development. Internal limitations may include extreme emotional distress or inability to cope (Katz, Kellerman, & Siegel, 1980). Younger children are much more likely to display higher levels of distress when undergoing medical treatment (Katz, Kellerman, & Siegel, 1980). This distress is typically displayed through physical and vocal protests against the treatment, and is a developmentally appropriate reaction. It is also shown that young girls are more likely to cry and request emotional support, whereas young boys are more likely to hinder the treatment in some way (Katz, Kellerman, & Siegel, 1980). External limitations for regular development may include a reduced ability to move around due to the effects of medical intervention, or the presence of assistive technology. Children undergoing cancer treatments may have had a limited ability to move for a number of reasons, including lack of energy, risk of falling, health concerns like anemia or arthritis, or the various impacts of more extreme medical procedures like surgery (American Cancer Society, 2014). Certain treatments, like chemotherapy, can be responsible for a loss of muscle mass and flexibility. It is also important to remember that different cancers have a different impact on the body. For example, a blood
cancer will have a significantly different physical impact on a child than that of a bone cancer (Marcus, 2012). These effects must be taken into account by therapists when planning activities for a child to complete during DMT. Assistive technologies like IV poles, oxygen tanks, and wheelchairs may limit the range of motion for children, and therapists must be able to adapt their practice to fit the needs of each child.

As stated earlier, body language is an integral part of communication between therapist and patient. Just as children use body language to convey meaning about their physical abilities and readiness for therapy, children also use body language to display their emotional readiness. One of the first considerations is how the child initially reacts to the therapist’s presence in the room (Pleven & Partelli, 2014). Does the child seem curious or interested in DMT? Is the child indifferent about the therapist’s presence, or does the child refuse to participate? These are all important reactions for the therapist to consider when deciding how to approach the child. No matter what reaction the child displays, the therapist must do her best to meet the child at their need level (Pleven & Partelli, 2014). Questions that a therapist might ask herself when figuring out how to do so might include, what type of intervention might be appropriate, what is the child’s diagnosis, what stage of treatment is the child at, and how a child might be feeling about him or herself regarding their diagnosis and treatment (Pleven & Partelli, 2014).

It is very important for a therapist to recognize the differences that come into play when a child has received a terminal cancer diagnosis versus a curable one. When a child receives a terminal diagnosis, they are more likely to receive palliative care, a type of care focused on easing pain and providing comfort, to improve their quality of life. Based on their developmental state, children will have a varied understanding of what means to be approaching death (Marcus,
2012). This understanding may also be influenced by any larger belief systems that the family has about life and death.

When a child is receiving end of life care, the focus of care often shifts to include both the child and their family (Doe & Katz, 2016). Parents of a dying child often struggle with the prognosis, and may require professional help to get through this difficult time (Doe & Katz, 2016). Family members often go through a stage of denial after a diagnosis becomes terminal, and struggle with the realization that they are no longer able to provide healing for their child (Doe & Katz, 2016). A cancer diagnosis does not always remain the only diagnosis in a child’s medical history; children may also experience psychosocial issues like depression and anxiety as a result of their diagnosis (Marcus, 2012). However, it is also important to recognize that this is not always the case, and each child’s emotional response to their diagnosis is unique. It is important for the therapist to be aware of these other diagnoses, as it may alter the DMT session in regards to what was previously considered best practice for the child. Throughout a child’s journey with cancer, it is possible that the family struggles to accept the diagnosis more than the child does. In cases like these, a role reversal may occur causing the child to take on the position as emotional caregiver (Pleven & Partelli, 2014). Each child’s experience with cancer is unique, and the necessary supports may look different from case to case.

Ending the DMT session can be a positive or negative experience, depending on the child’s willingness to part with the therapist. The duration of the therapy session is not typically a fixed amount of time; instead, it is based on the child’s emotional readiness, physical endurance, medical condition, and other medical needs (Pleven & Partelli, 2014). Children may provide the therapist with a variety of signals to communicate that they are ready to end the DMT session. These signals include the loss of self-control, a decrease in interest level, or a
closed off body position (Pleven & Partelli, 2014). These physical means of communication may be subtly or loudly displayed, so it is important for the therapist to quickly recognize the child’s body language and analyze what he or she is trying to say. However, the opposite may also occur, meaning that the child does not show signs of wanting to end the session and the therapist must instead initiate separation. In an attempt to prolong the session, children may express various emotions like anger, sadness, or procrastination (Pleven & Partelli, 2014). This can be a very delicate situation, and the therapist must be able to gently direct the child toward a more positive expression of their feelings. Simple acts like asking the child to help clean up objects that were used that day can be a healthy, more meaningful way of showing the child that the DMT session is ending (Pleven & Partelli, 2014). Helping to signify the end of the session in a way that is valid to the child is an important role of the Dance/Movement Therapist. Making connections with children is a necessary part of their growth, and this can be observed in various forms.

**Applying Child Development Theory to DMT**

Vygotsky’s *zone of proximal development* or the area between what a learner can accomplish without help versus what is possible with assistance comes into play when Dance/Movement Therapists work with children and especially when they introduce them to new types of movement. When a new task is too difficult for the child to accomplish on his/her own, the therapist will guide the child toward success by providing an appropriate amount of skilled assistance (Santrock, 2001). This assistance provides a *scaffold* for the child to reach beyond the level of learning that they can achieve on their own. Because of the possibility of physical limitations, it is in the child and therapist’s best interest to scaffold learning by progressively introducing new movement over several DMT sessions and to utilize the zone of proximal
development in terms of physical ability as well. Starting out slow and within the child’s zone of proximal development allows the body to grow used to new movement without aggravating or worsening the child’s current health status. One aspect of this progression of movement is only participating in physical activity for a short amount of time at first, and gradually lengthening the therapy sessions as the child grows stronger (American Cancer Society, 2014). Other aspects of positive physical activity include focusing on large muscle groups, warming up the body and cooling it back down, taking frequent breaks, staying hydrated, stretching, not overworking the body, and staying in tune with the child’s needs (American Cancer Society, 2014). Guided participation is an important part of this process, meaning that the professional and patient are actively working together to accomplish set goals (Santrock, 2011). Depending on age and developmental ability, children may not be able to effectively recognize their own needs. This requires the therapist to be diligently aware of the child’s physical and emotional state throughout the session.

Throughout middle childhood (i.e. five to ten years old), children often make noticeable progress in their ability to understand, recognize, and express emotion (Santrock, 2011). This is especially true when it comes to more complex emotions like anxiety and sympathy. Santrock (2011) tells us that children are also better able to make connections between life circumstances and their emotions, and understand that feelings can be directly related to happenings in their lives. Children are also beginning to take ownership of their feelings, and emotion is often “less tied to the reactions of other people” (Santrock, 2011, p. 298). Children are also developing a new capacity for empathy during this life stage, which is the ability to understand and experience the emotions of others.
Another important part of socioemotional development that occurs during middle childhood is learning how to cope with stress. Children are mastering the ability to recognize a stressor, determine how much control they have over it, and then employ positive coping strategies (Santrock, 2011). However, this coping process may be more difficult for children who are dealing with chronic stressors such as a cancer diagnosis. A child’s ability to continue developing positive coping mechanisms depends upon the support system available to them throughout the stressor event (Santrock, 2011). Coping mechanisms can look different for each child depending on his/her unique needs. One example of a possible scaffolding and coping mechanism for children is books. The following section describes elements of children’s literature, which is another vessel through which connections can be made.

**Children’s Literature**

There are many different elements to consider when writing or reading a children’s book. A few of these elements include communication between words and pictures, audience, setting, characterization, point of view, and genre. All of these components work together to not only tell a story, but create a unique experience for every reader.

The working together of words and images creates a unique experience for picture book readers. This literature form relies upon visual and verbal communication (Nikolajeva & Scott, 2001). Both the visual and verbal components carry out specific roles within the book. The visual element of the book includes any pictures or images used within the story, and the verbal element accounts for the actual words. The words on each page are responsible for narrating the story, and divulging the thoughts and conversations of the characters. The pictures displayed throughout the story work alongside the printed words by creating a representation of the story.
being told. Picture books are often used as an educational tool, and may allow young readers to advance in their language and social-emotional abilities (Nikolajeva & Scott, 2001).

Although children are typically considered the intended audience for picture books, it is possible for adults to enjoy, and maybe even learn something new as well. Some picture books are aimed towards a dual audience, meaning that the intended audience for these stories are both children and adults (Nikolajeva & Scott, 2001). These stories work to appease both audiences by creating another layer to the visual elements. To satisfy the younger audience, the illustrator may create iconotexts, or pictures of objects being used in non-traditional, humorous ways (Nikolajeva & Scott, 2001). An example provided by Nikolajeva & Scott (2001) includes an image from *Looking for Atlantis* by Colin Thompson. Included on one page is the image of a Swiss army knife, where among the blades lay a toothbrush, paintbrush, and a mushroom. In order to amuse the older audience, the illustrator may employ elements that speak to the matured humor of adults.

The setting of a picture book plays the important role of communicating the time and place of the story. The author/illustrator may also use the setting as a means to establish the genre of the story, showing readers that the book is either fiction or non-fiction (Nikolajeva & Scott, 2001). Character development is also an important part of the setting, and is an opportunity for readers to get to know who or what will be part of the story (Nikolajeva & Scott, 2001). The author/illustrator may engage both words and pictures when setting up a story. The verbal elements will describe to readers the time, place, and characters, while the visual elements create a representation of what those details look like (Nikolajeva & Scott, 2001). Children often receive the setting of the story more effectively through pictures, as it actually shows children what the author/illustrator is trying to say. When an author/illustrator is establishing the setting
of the story, it is often clear whether an integral or backdrop setting is being used (Nikolajeva & Scott, 2001). When an author/illustrator utilizes an integral setting, it means that the story could not happen anywhere else. This is in contrast to a backdrop setting, which is when the time and place of the story does not play an essential role. The choice between integral and backdrop settings can heavily affect plot development.

Characterization within a picture book can be done using a variety of methods. Through the verbal narrative of the story, the author can describe to readers both physical and psychological components (Nikolajeva & Scott, 2001). For example, physical descriptions might include what the character looks like, how they dress, or how they communicate with other characters. Psychological descriptions would include the thoughts or emotions of the character. Images of these physical and psychological descriptions play into how characters are received by readers, as it creates a more complete picture of the story characters. Images are typically more effective in portraying relationships between characters, as illustrators can utilize spacing, body language, and facial expressions to demonstrate how two characters might feel about one another (Nikolajeva & Scott, 2001). Dialogue is an important part of the characterization process, as it exposes how characters interact with one another (Nikolajeva & Scott, 2001). The cooperation, or lack thereof, between characters may help reveal other dimensions otherwise missed by narrative descriptions. As readers take in all of this information and combine it with their unique imaginations, they become able to create connections with and interpretations of the characters.

Point of view is an essential part of storytelling, as it can alter the way that readers interact with the story. Nikolajeva and Scott (2001) tell us that narration helps distinguish between point of view (“who sees”), and narrative voice (“who speaks”). When looking specifically at picture books, it is primarily the words that represent the narrative voice, and the
pictures that convey point of view. The narrator of the story has four main jobs; describing the setting, describing the character, summarizing events, and commenting upon the characters’ actions (Nikolajeva & Scott, 2001). All of these elements may be shown visually, verbally, or both.

Genre plays an important role in a story, especially within fiction books. There are various types of fiction that may be utilized by authors and illustrators, and each one alters the way that a reader explores the setting, characters, and plot. The type of genre that is at play in Annalise’s Dance is realistic fiction. Realistic fiction is when made-up characters face real life problems, ranging from everyday circumstances to life-altering events (Davis, 2016).

All of these literary elements must work together to successfully complete a story. Authors and illustrators are very intentional about how a children’s book is put together, and it is up to the reader to determine how each component is to be interpreted. Each component within the book (the communication between words and pictures, audience, setting, characterization, point of view, and genre) is an integral part of the story, and helps create a unique reading experience for all audiences.

**Method**

This section details the processes utilized in reviewing the literature, as well as contributing factors to the storyboard and character sketch which are included below. The literature review discusses the topics of childhood cancer, Dance/Movement Therapy (DMT), and children’s literature at an in-depth level.

The first part of my literature review discusses existing research regarding pediatric oncology and Dance/Movement Therapy (DMT). I began exploring these topics by using the ProQuest database to locate recent peer reviewed articles dating from 1977 to 2017. I accessed
this database through Western Michigan University’s (WMU) library website. I began by searching key terms such as “childhood cancer and families,” “history of Dance/Movement Therapy,” and “Dance/Movement Therapy and children,” related to the before mentioned topics, and used appropriate articles that provided information relevant to my thesis topic.

The next section of the literature review breaks down information regarding children’s literature. At the behest of my thesis chair, I sought out an expert in this area. A virtual introduction was facilitated by my chair between myself and a faculty member in the English department at WMU who specializes in children’s and adolescent literature. This faculty member and I set up a face-to-face meeting where she guided me in finding reliable literature to use as a resource. She suggested that I use *How Picture Books Work* by Maria Nikolajeva and Carole Scott. I used this book to fuel the children’s literature section of my literature review, while also incorporating information from *How to Write a Children’s Book* by the Institute of Children’s Literature (2016), which I found on the website of Amazon.com.

The knowledge gained through reviewing the literature formed the foundation for the creation of a storyboard, synopsis, and character sketch for a children’s book. The storyboard will demonstrate how each of the elements in the children’s literature section will be addressed within the written story. The synopsis and character sketch serve the purpose of further illustrating how the characters and plot will appear and interact throughout the picture book. Throughout the creation of my story, I felt that it was important to include a diverse set of characters. Diversity is an essential part of my own life, and I wanted my characters to represent strong individuals from different racial and ethnic backgrounds. I created my storyboard, character sketch, and book synopsis based on a combination of background knowledge and imagination. The storyboard was guided by the information found in *How Picture Books Work*
Running head: HELPING CHILDREN UNDERSTAND

(Nikolajeva & Scott, 2001). The character sketch was written using my own creativity and ideas for how I imagined the characters to look and behave. My book synopsis was created through a combination of imagination and background knowledge. I kept in mind my main character’s age of seven while writing the synopsis, and made sure that her reactions to the circumstances within the story were developmentally appropriate. The book synopsis was reviewed by a member of my thesis committee who is an expert in child development.

The below section includes the storyboard, synopsis, and character sketch. The storyboard will highlight the essential elements of children’s literature, and then further explain how each will be addressed throughout the story. The synopsis will give readers a glimpse into what a pediatric DMT session looks like through the eyes of the main character, a seven-year-old cancer survivor named Annalise. The character sketch will then detail all individuals who appear in the story, all of whom are fictional.

Results

This section will present the outlining structures for the picture book. The actual story will be written following this thesis, but the below evidence-informed pieces illustrate what the future product will include. This section consists of the storyboard and synopsis. The storyboard further details how elements of children’s literature will manifest in the picture book. The structure of the storyboard was created using literary elements provided by Nikolajeva and Scott (2016) in How Picturebooks Work. The synopsis provides a brief overview of the storyline, and gives readers a glimpse into what a Dance/Movement Therapy (DMT) session looks like for the main character.
Storyboard

Table 2

*Elements of Children’s Literature and their Incorporation into Annalise’s Dance*

<table>
<thead>
<tr>
<th>Element</th>
<th>Book Representation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combination of Words and Pictures</td>
<td><em>Annalise’s Dance</em> is a picture book that will include both words and pictures on every page. The words on each page will dive deeper into thought and emotion, while the pictures will create a visual representation of the story.</td>
</tr>
<tr>
<td>Audience</td>
<td>The intended audience of <em>Annalise’s Dance</em> is upper elementary-age children (7 – 10 years old). However, the story discusses topics that adults may benefit from hearing about in more simplistic language. This language may assist adults with communicating with children in this age group who are sick.</td>
</tr>
<tr>
<td>Setting</td>
<td>The setting of <em>Annalise’s Dance</em> is the pediatric cancer ward of a fictional hospital. This story utilizes an integral setting, meaning that it cannot take place anywhere else. The story takes place in modern day United States of America.</td>
</tr>
<tr>
<td>Characterization</td>
<td>Readers will receive both a visual and verbal description of the characters in <em>Annalise’s Dance</em>, as appearances will be both written out and represented in the pictures. The thought processes of each character will be described in the narrative, while emotions will be shown in both the words and the pictures. Relationships between characters will be discussed throughout the narrative, and readers will be able to see how they interact with one another in the pictures.</td>
</tr>
</tbody>
</table>
**Point of View**

*Annalise’s Dance* is written in the third-person limited perspective, meaning that pronouns like she, he, it, or they will be used. The story will focus on the main character’s point of view.

**Genre**

*Annalise’s Dance* is a realistic fiction story. This means that the people, places, and events are purely fictional, but elements of the story could happen in real life.

### Synopsis

Surviving cancer is not something that every seven-year-old can say that they have done, but this is the story of main character Annalise. Six months ago Annalise was diagnosed with osteosarcoma, which is cancer that is found in bones, and now she is recovering from a tumor-removal surgery and undergoing chemotherapy. Part of Annalise’s rehabilitation process includes DMT which is an engaging and creative way to regain her strength. *Annalise’s Dance* walks readers through a DMT session with Annalise and her Dance/Movement Therapist, Kelsey. Readers will also meet Annalise’s best friend Sara, who is joining the DMT session as a guest. Throughout the story, Annalise experiences both physical and emotional struggles (such as weakened muscles and a tough battle with self-confidence), but with support from friends, family, and the hospital staff, she finds the courage to persevere through the difficult moments.

### Character Sketch

*All of the characters described below are entirely fictional, and have not been inspired by real individuals.*

The main character of *Annalise’s Dance* is a seven-year-old Caucasian female named Annalise. Annalise has blue eyes and blond hair. However, Annalise has lost her hair as a result of chemotherapy treatments, and wears a pink floral headscarf purchased by her mother.
Annalise was diagnosed with cancer six months ago, and is suffering from osteosarcoma which has resulted in a tumor on her left femur. Annalise is currently recovering from a surgery to remove the tumor, and is undergoing chemotherapy to prevent recurrence. Annalise’s cancer is curable, and she is currently considered to be in remission. This means that right now, Annalise does not have any detectable cancerous cells in her body. Annalise uses a wheelchair to move around, and is using DMT as part of her rehabilitation process. Some of Annalise’s favorite things are the color pink and her stuffed bunny named Carrot.

Annalise’s parents are named Karen and James. Karen is a 30-year-old Caucasian female with blue eyes and short blond hair. She is a second grade teacher. James is a 32-year-old Caucasian male who also has blue eyes and blond hair. James works as a dentist. Karen and James took time off of work to be with Annalise after she was first diagnosed, but have since had to go back to work. Because of this, Annalise has formed a close relationship with her nurse, Bailey, who takes care of her during the day.

Bailey is a 35-year-old African American female who has brown eyes and short black hair. Bailey is much like a second mother to Annalise, as they spend most of their time together at the hospital. Annalise’s Dance/Movement Therapist is a 28-year-old Caucasian female named Kelsey. Kelsey has green eyes and wears her long brown hair in a sleek ponytail. Kelsey is a great motivator for Annalise, and the two have a strong, trusting relationship. Annalise’s good friend Sara often comes to the hospital to visit along with her mom Vanessa. Sara is a seven-year-old Hispanic female with brown eyes and curly black hair. Vanessa is a 31-year-old Hispanic female who has brown eyes and long, wavy black hair. Vanessa teaches at the same school as Annalise’s mom, Karen, which is where they became friends.
Conclusion

The elements presented in this results section act as an outline of *Annalise’s Dance*, which will be created after this thesis. The storyboard highlights the literary pieces that make up a picture book, with the structure being adapted from *How Picturebooks Work* by Nikolajeva and Scott (2001). The synopsis provides a brief glimpse into the storyline of *Annalise’s Dance*, and gives readers an idea of the events that may occur. The character sketch serves the purpose of diving deeper into character development by providing both physical and relationship details. The results section equips readers with a concrete idea of what the final product will look like. In the following section, readers will learn more about the next steps for *Annalise’s Dance* and how it could be used by both professionals and other readers.

Discussion

The next step following this thesis is to create the picture book, *Annalise’s Dance*. Following its completion, the book will be used in a variety of ways. I plan on promoting this book via social media and have it available to purchase on an Internet platform such as Amazon.com. I also plan on donating copies of the book to local hospitals for use at their discretion. Another way that I intend to use *Annalise’s Dance* is by sharing it with faculty at Western Michigan University (WMU) who may find this book to be relevant to the courses that they teach.

My hope for this book is that it will become a coping tool for children in similar situations as Annalise. When children see a character that represents their own life, they may begin to feel less alone in their journey. *Annalise’s Dance* may also be used to help bring cancer awareness to friends and family. The intended audience for this book is both children and adults,
and the language will speak to both age groups by providing easy-to-understand explanations of terms specifically related to cancer and Dance/Movement Therapy (DMT).

Healthcare professionals may also be able to use *Annalise’s Dance* as a teaching tool for those within the hospital who have not experienced DMT and/or cancer. Whether it be patients or visitors, having this book available can provide a better understanding of idea-specific terminology and concepts. *Annalise’s Dance* could potentially be used as an ice breaker between Dance/Movement Therapists, or other healthcare professionals, and children with cancer. Initiating an interaction with a child using a picture book is an effective way to attract their attention. Another potential audience for this book could be elementary school classrooms with a focus on grades one through five. For example, if a child must leave school to undergo treatment for cancer, the teacher could use *Annalise’s Dance* to help the remaining students understand his/her situation more clearly. This picture book may also be used in after-school programs to serve a similar purpose.

Throughout the picture book *Annalise’s Dance*, readers will see major points of this literature review being illustrated as themes. The first of these themes is the exploration of emotion while dancing. DMT is an opportunity to experience and represent emotion through physical movement, allowing main character Annalise to feel her emotions in a way that she has not yet realized. Readers will also see Annalise’s Dance/Movement Therapist Kelsey emphasize the importance of creating a safe space during the session. This includes making sure the floor space is safe and free of clutter, wearing appropriate clothing, knowing one’s physical limitations, and trusting the other individuals in the room. Another theme that will be present within the book is the biopsychosocial approach to healthcare. Readers will see that Annalise’s treatment plan has been created based upon an analysis of her physical and mental health, her
social environment, and the available healthcare resources. Finally, the importance of family cohesiveness when facing adversity will emerge as a theme. Annalise is not alone in her cancer journey, and readers will see how the support of family and friends positively impacts Annalise’s social-emotional experiences. Overall, I hope that *Annalise’s Dance* will reach multiple audiences, and serve as a coping mechanism for children going through similar circumstances. Following the completion and publication of this picture book, I plan on making it available for purchase on an internet website.
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[https://www.cancer.gov/research/progress/snapshots/pediatric](https://www.cancer.gov/research/progress/snapshots/pediatric)


