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Bibliotherapy's effect on anxiety in children with cancer

Nicole Schneider
George Fox University

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Bibliotherapy’s Effect on Anxiety in Children with Cancer

by

Nicole Schneider

Presented to the Faculty of the
Graduate Department of Clinical Psychology
George Fox University
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of the requirements for the degree of
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Bibliotherapy's Effect on Anxiety in Children with Cancer

by
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at the
Graduate Department of Clinical Psychology
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Date: 3/19/2012
Children who have cancer and undergo various treatment procedures tend to have higher levels of emotional distress than their peers. Although traditional therapy can be effective in decreasing such distress, bibliotherapy has been found to be a convenient, inexpensive, effective psychological intervention. This study examined how reading a disease-relevant story, embedded with literature-supported coping strategies, influenced a child’s chronic illness-related distress. It was expected that children who read this book would experience a decrease in their perceived distress compared to their pre-intervention level distress. Twenty-one children ages 4 to 12 with various cancers, primarily hematological diagnoses, were recruited for this study and asked to rate their functioning across several domains utilizing the Child Outcome Rating Scale and a supplemental form targeting perceived physiological arousal (Duncan, Miller, & Sparks, 2003). Participants were read an illustrated bibliotherapy intervention and subsequently asked to rate themselves utilizing the same scale both immediately after and several months later. Results indicate that perceptions of intrapersonal functioning improved and physiological arousal
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decreased immediately after the initial book reading (T2). Significant improvements were found several months after the initial intervention (T3) when books were left with participants. This study demonstrates the value of a low-investment intervention.
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This study was made possible by a generous grant from the Paul K. Richter Memorial Fund and the Evalyn E. C. Richter Memorial Fund. The study would also not have been possible without the participation of the Emmanuel Cancer Foundation in Scotch Plains, NJ or the children and their families who participated in this study.
Chapter 1

Introduction

Anxiety is the most common mental health problem for children, with 13% of children aged 9 to 17 in the United States experiencing it (Substance Abuse, 2009). This serious mental health condition is often exemplified in the child who worries excessively, tires easily, has trouble concentrating and sleeping, or is easily irritated (American Psychiatric Association, 2000). Such distress can be pervasive through all areas of a child’s life, disrupting social and academic domains. Anxiety is paired with physiological arousal, including a more rapid heart rate and increased blood pressure in individuals experiencing such extreme stress (Lang, Davis, & Öhman, 2000). A child’s constant worry may result in numerous somatic issues, including headaches, stomachaches, nausea, dizziness, and respiration (Barrios & O’Dell, 1998; Last, 2006). Another concerning response to anxiety occurs when the child either overtly or subtly avoids certain situations that tend to provoke worries or distress. Furthermore, in up to half of those individuals who experience anxiety, co-occurring mental health problems also exist; usually the co-occurring problem is another anxiety disorder or a mood disorder, like depression (Substance Abuse, 2009).

Sub-clinical levels of anxiety are even more common and may occur in up to 25% of the general population of children. These sub-clinical symptoms may include irritability, generalized or specific worry, difficulty sleeping, and feelings of guilt or excessive responsibility. These
symptoms may develop or become further exacerbated by stressful life events, which include a myriad of traumatic family situations or major life changes, like the death of a loved one, divorce of parents, birth of a sibling, or sudden or major illness or accident (Last, 2006). While sub-clinical anxiety may later diminish, depending on a variety of factors and circumstances, it can also progress into clinically significant anxiety. As such, early intervention in sub-clinical levels of anxiety may prevent the development of future mental health problems.

**Anxiety and Cancer**

While anxiety is quite common among children in the general population, its prevalence is particularly high in children who have serious health conditions and who are undergoing ongoing medical procedures, as in the case of cancer. Children with cancer have trouble managing their stressors, especially those related to their medical care, which increases their overall anxiety (McCaffrey, 2006). In one study examining this population, 27% of children who were recently diagnosed with Acute Lymphoblastic Leukemia (ALL) in the month prior were found to be at risk for clinically significant anxiety (Buchanan et al., 2008).

The ALL study indicates that children with cancer experience a rate of anxiety that is twice as common as that in the general population. This is of concern because with anxiety often comes a decrease in quality of life; individuals who are anxious may be in a constant state of worry and even feel the physical burden of these emotions. Therefore, it is not surprising that children with chronic illnesses tend to report having a notably lower quality of life than those children who are healthy (Sawyer et al., 2004).

**Predictors of Increased Stress and Anxiety.** There are several factors that have been demonstrated to be related to the level of anxiety that children with cancer experience. One
Bibliotherapy’s Effect on Anxiety in Children with Cancer

predictor of emotional stress is the age at which a child is diagnosed with cancer, as it is inversely related to his or her level of anxiety; those diagnosed at a younger age tend to have more anxiety than those diagnosed at an older age (Frank, Blount, & Brown, 1997). This seems to hold true cross-culturally, as studies with Indonesian children exemplify the same phenomenon (Sitaresmi, Mostert, Gundy, Sutaryo, & Veerman, 2008). Presumably, this difference is due to a lack of development of cognitive skills that coping strategies hinge upon (Derevensky, Tsanos, & Handman, 1998). Therefore, although cancer is unarguably traumatic for nearly any individual, it is even more so challenging for young children, which contributes to high levels of anxiety. This is especially notable, as cancer is the second leading cause of death among children; further, two of the most fatal cancers, leukemia and brain cancer, are most prevalent in children under the age of 10 (Jemal et al., 2009; Center for Disease Control, 2009).

Another contributor to one’s anxiety level is gender. Females have been found to exhibit more anxiety than their male counterparts (Katz, Kellerman, & Siegel, 1980). In a comprehensive study of child survivors conducted in 2009, females were found to endorse anxiety symptoms one and a half times more often than males (Zeltzer et al., 2009). Specifically, females evidence significantly higher levels of stress within the physical and social dimensions of anxiety (Walsh, Stewart, McLaughlin, & Comeau, 2004). While there are likely a number of contributing factors, many attribute this phenomenon to gender role socialization. For example, females’ externalization of anxiety and worry tend to be reinforced more so than males, who are often socialized to “get over it” (Stewart, Taylor, & Baker, 1997).

Anxiety levels are also related to pain levels. Anticipatory anxiety often co-occurs with pain, which is especially concerning since cancer medical procedures are often physically
demanding. Bone-marrow biopsies, blood tests, and central line surgeries are all common cancer-related procedures that children are faced with experiencing during and following diagnosis (Kuttner, Bowman, & Teasdale, 1988). Not surprisingly, research has shown that children who have cancer are forced to employ coping strategies that are far beyond what a typical, healthy child would normally utilize (Dcrevensky et al., 1998).

While a variety of risk factors increase the likelihood of anxiety in children with cancer, some factors do not appear to exacerbate such distress. One example is treatment power; the toxicity of chemotherapy or dose of radiation has been found to not have a significant bearing on a child’s present or future anxiety (Stuber et al., 1997).

**Treatments for Anxiety in Children**

Recently, research efforts have been devoted to studying symptoms of anxiety and emotional distress in children and discovering the most effective treatment methods. Treatment interventions for anxious children most often include traditional cognitive-behavioral therapy with a counselor or psychologist once per week over the course of several months (Kendall, Hudson, Gosch, Flannery-Schroeder, & Suveg, 2008). In working to diminishng anxiety, relaxation training is often utilized, in which individuals learn to be attuned to their breathing and their body’s physical tension (Friedberg & McClure, 2002). Successful treatment occurs when patients are able to regulate their breathing and reduce muscle tension, which in turn reduces symptoms of anxiety, because stress and relaxation are mutually exclusive. Additionally, self-monitoring can be utilized, in which children rate how anxiety provoking a specific situation or event is, and how it affects them emotionally and physically (Last, 2006). In such therapy
sessions, the mental health professional focuses on helping the child recognize, understand, and learn appropriate coping skills to manage symptoms of anxiety (Petersen, 2008).

In one study, children diagnosed with anxiety were treated using evidence-based cognitive-behavioral strategies over the course of 8 to 13 sessions, with an additional five individual sessions for participants’ parents. Immediately after the intervention, the majority of participants improved, at a rate of twice that of the control participants who did not receive treatment (Hirshfeld-Becker et al., 2010). One year after the intervention, all children in the intervention group reported their improvement in functioning had continued, with 59% no longer meeting diagnostic criteria for an anxiety disorder. Ginsburg et al. (2011) found similarly notable improvements in children’s anxiety levels after several months of cognitive-behavioral therapy.

**Reducing Anxiety in Children with Cancer**

For children with cancer, there are a variety of attempts to manage treatment-related anxiety. Avoidant coping, which involves denying or evading the ongoing stressor, has been correlated with children’s increased depression and anxiety (Frank et al., 1997). In contrast, acknowledging and working to emotionally cope with or adapt to the stressor is inversely related to anxiety (Miller et al., 2009). Further, encouraging self-statements by both parents and children has been associated with a more effective and less stressful adjustment to cancer with decreased levels of hopelessness (Coletti, 1997).

Distraction is a coping strategy that is associated with less fear and distress when used during a medical procedure (Windich-Biermeler, Sjoberg, Dale, Eshelman, & Guzzetta, 2007). When this strategy was encouraged with imagery and relaxation during physically demanding procedures, children reported having, on average, no additional fear after the intervention than
they had originally. One notable change, however, was their perceived level of pain, which was reduced following the distraction, visualization, and relaxation tactics (Broome, Lillis, McGahee, & Bates, 2007). Other effective strategies to lessen anxiety include helping children learn more about their illness and teaching them to be inquisitive about their disease (Frank et al., 1997).

An adjunctive method to reduce anxiety is bibliotherapy, in which books are utilized as a form of therapy. These books provide the individual with tools needed to better cope with their current life situation. Although not as effective as traditional psychotherapy, bibliotherapy has been found to be more effective than no therapy at all; giving non-cancer patients with mild to moderate anxiety psychoeducational literature about relaxation techniques and stress management diminished overall anxiety (Kupshik & Fisher, 1999; Parslow et al., 2008; Rappee, Abbott, & Lyneham, 2006). Bibliotherapy interventions eliminated anxiety disorders in 15% of the sample children. In addition, this intervention can also be helpful in improving the problem-solving abilities of individuals (Forgan, 2002).

Practically, bibliotherapy is far less expensive and much more accessible than traditional therapy, with an intervention book costing as little as $10 (Amazon, 2011). Psychotherapy, in contrast, is a far more financially-laden venture; a single counseling session by a mental health professional typically ranges from about $100 to $200 per 50-minute session and also requires one to navigate the logistics of scheduling an appropriate referral (Petersen, 2008). Furthermore, psychotherapy is time-intensive, lasting several months at minimum, and labor-intensive, requiring the child’s parents to schedule and attend sessions when their schedules are likely crowded with other medical appointments. Taken together, psychotherapy is quite costly when compared to bibliotherapy interventions (Kendall et al., 2008). Although bibliotherapy may not
be as effective as traditional psychotherapy, this economically and time efficient intervention holds a great deal of merit.

Bibliotherapy can be very helpful for children with cancer because it teaches individuals how to deal effectively with problems that are out of one’s control and that cannot necessarily be eradicated (Rokke, 1993). According to Nicholson and Pearson (2003), when bibliotherapy books have a character who the child can relate to, then children have a “powerful tool” to help them develop coping strategies (p. 19). Discussing the contents of the book is a crucial element of bibliotherapy, because the opportunity to generalize and apply the coping strategies allows the information to become an individualized intervention, thus increasing its effectiveness as a psychological tool (Rokke, 1993). In addition, a bibliotherapy text can be read by a parent, allowing the natural parent-child relationship to further develop (Fosson & Husband, 1984).

Not surprisingly, being diagnosed and subsequently receiving treatment for cancer presents a major, stressful change in both the life of the ill child and the life of his or her family. Though cancer treatment regimens vary depending on type and stage of cancer, among a myriad of other factors, the ensuing distress can last for months or even years. For children who are undergoing cancer treatments, therapeutic interventions can help them learn to cope with the psychological side effects of their disease.

Bibliotherapy is an accessible, relatively inexpensive, and yet still effective psychological tool for reducing anxiety. It is hypothesized that reading a children’s book that describes what a character undergoes when he or she has cancer, along with coping strategies employed, will improve a child’s subjective perception of functioning and decrease their perceived emotional distress.
Participant

Participants were English-speaking male and female children aged 4 to 12 (M = 9.1, SD = 2.1) who had been diagnosed with cancer and were undergoing or had recently completed treatment. Approximately 57% of participants were Caucasian (n = 12), 29% were Hispanic (n = 6), and 14% were African-American (n = 3). Fifty-seven percent were male (n = 12) and 43% were female (n = 9). Most participants had acute lymphoblastic leukemia (ALL) diagnoses (n = 14).

Procedure

Following approval from the George Fox University Internal Review Board, details about this study, including a consent form (Appendix A) and an assent form (Appendix B), were given to participants and their caregivers. As part of the informed consent process, patients and their caregivers were shown the intervention book, *Nikki’s Day at Chemo*. The book was developed for this study and was embedded with coping strategies for a child diagnosed with cancer including the emotional implications of diagnosis and treatment. This bound book was written in English, illustrated with color pictures, and independently published. The intervention was provided in the patients’ home by masters-level caseworkers who had been assigned to specific
patients by the non-profit cancer foundation which provides psycho-social support to cancer patients and families.

Caseworkers provided participants (Time 1) with a demographic questionnaire (Appendix C) and a measure of general functioning, Child Outcome Rating Scale (CORS; Appendix D; Duncan et al., 2003). The CORS asks children to report their functioning across four domains: intrapersonal, family, school and global functioning. The CORS is designed as a 10-point visual analog scale with a frowning face on one end of the Likert-type scale and a smiling face on the other end of the scale. In addition to the standardized questions on the CORS, two symptom-specific items were included to assess physiological arousal.

The caseworker then read the book to the patient. Following the reading, the child was asked several questions about the book and its story line to gauge their comprehension level. Next, the child was asked how he or she would generalize or apply the coping strategies that were used by the character in the book in their own lives. For example, the book explained how Nikki used her imagination to “fly to the park” when she was nervous; in the intervention component of this protocol, the child was asked how he or she might use his or her imagination to feel better. Following the reading of the book and the discussion questions, which lasted approximately 15 minutes, the CORS (Appendix E) and supplemental questions (Appendix F) were repeated along with the participant’s report of satisfaction with the book (Time 2).

As an incentive to participate, patients were given a copy of Nikki’s Day at Chemo after the caseworker visit was completed with the child’s answers to his or her comprehension and coping strategy questions recorded inside. Caseworkers were paid $50 for the home visit by the cancer foundation, which was reimbursed by the grant that supported this study.
Approximately one month after the initial visit (Time 3) patients’ caregivers were contacted via the telephone number they provided on the initial questionnaire. Follow-up assessment packets were then mailed to patients’ homes; the follow-up packets included a third and final administration of the CORS (Appendix G), a second satisfaction survey, a questionnaire (Appendix H) regarding frequency of reading the book, and an updated demographic form to record any significant changes in treatment or disease status. Participants were asked the return the surveys as soon as possible.

**Instruments**

The Child Outcome Rating Scale (CORS) is a self-administered tool available in English (Duncan et al., 2003). This measure is highly effective in measuring quality of life and self-esteem in children ages 6 to 12, as well as quantifying depression and anxiety as a whole (Campbell & Hemsley, 2009; Duncan et al., 2003). The CORS was created as an alternative measure to the Youth Outcome Questionnaire 30 (YOQ; Burlingame et al., 2001). Psychometrically, the concurrent validity of the CORS with the YOQ is statistically significant at -.43 (Duncan, Sparks, Miller, Bohanske, & Claud, 2006). The reliability of CORS is high (coefficient alpha = .84). Furthermore, the CORS is much faster and simpler to administer and score than many other assessments, yet it maintains high psychometric measures (Campbell & Hemsley, 2009). Its simplicity is likely to be appreciated by children, who are constantly undergoing extensive and draining procedures, as well as by their caregivers.
Chapter 3

Results

This study examined whether a bibliotherapy intervention affected a child’s subjective perception of functioning and level of emotional distress. Participants were 21 English-speaking male and female children aged 4 to 12 who had been diagnosed with cancer and were currently undergoing or had recently completed treatment. Table 1 highlights the demographic distribution of the participants.

It was hypothesized that reading a book describing coping strategies used by a child undergoing treatment for cancer would increase subjective perception of functioning as measured by the four domains (intrapersonal, family, school, and global) of the Child Outcome Rating Scale (CORS) as well as reduce perceived levels of physiological arousal.

Differences Between Time 1 and Time 2

In order to compare participants’ perception of functioning and emotional distress from immediately before and after the book reading ($n = 21$), a paired samples $t$-test was conducted. On the item targeting children’s perceived ability to manage their nervousness, there was not a significant difference in the scores prior to the book reading ($M = 7.26, SD = 3.82$) and immediately after the book reading ($M = 7.82, SD = 3.17$); $t(20) = -0.93, p = 0.363$, but there was a small effect size (0.20). The results suggest that although statistical significance was not reached, the reading may lessen overall arousal; with a larger sample size, significance would
Table 1

**Demographic Data**

<table>
<thead>
<tr>
<th>Category</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
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<td></td>
</tr>
<tr>
<td>Male</td>
<td>12</td>
<td>57.1</td>
</tr>
<tr>
<td>Female</td>
<td>9</td>
<td>49.2</td>
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<tr>
<td>Ethnicity</td>
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<td>African-American</td>
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<td>14.3</td>
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<td>Hispanic</td>
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<td>28.6</td>
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<tr>
<td>Diagnosis*</td>
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<tr>
<td>Acute Lymphoblastic Leukemia (ALL)</td>
<td>14</td>
<td>66.7</td>
</tr>
<tr>
<td>Other leukemia</td>
<td>1</td>
<td>4.8</td>
</tr>
<tr>
<td>Lymphoma</td>
<td>2</td>
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</tr>
<tr>
<td>Neuroblastoma</td>
<td>1</td>
<td>4.8</td>
</tr>
<tr>
<td>Kidney cancer</td>
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<td>4.8</td>
</tr>
<tr>
<td>Osteosarcoma</td>
<td>1</td>
<td>4.8</td>
</tr>
<tr>
<td>Hepatoblastoma</td>
<td>1</td>
<td>4.8</td>
</tr>
<tr>
<td>Unknown</td>
<td>1</td>
<td>4.8</td>
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<tr>
<td>Treatment Type**</td>
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<td>Chemotherapy</td>
<td>17</td>
<td>81.0</td>
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<tr>
<td>Radiation</td>
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<tr>
<td>Surgery</td>
<td>9</td>
<td>42.9</td>
</tr>
<tr>
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<td>4.8</td>
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<td>14.3</td>
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<td>Outpatient</td>
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<td>Both</td>
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<td>Unknown</td>
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<tr>
<td>Primary Caregiver's Marital Status</td>
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<td>Married/Partnered</td>
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<tr>
<td>Divorced</td>
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<td>14.3</td>
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<tr>
<td>Single/Widowed</td>
<td>7</td>
<td>33.3</td>
</tr>
<tr>
<td>Unknown</td>
<td>4</td>
<td>19.0</td>
</tr>
</tbody>
</table>

*Percentages do not add up to 100; one child had diagnoses of lymphoma and hepatoblastoma.

**Percentages do not add up to 100; many children received more than one treatment during their illness.
have been reached. Other constructs tested yielded similar results; for example, paired-samples $t$-tests used to compare participants’ intrapersonal functioning initially ($M = 8.08, SD = 2.41$) and following the book reading ($M = 8.72, SD = 1.65$); $t(20) = -1.1, p = 0.286$. This data failed to show significance but yielded a small effect size (0.24). Table 2 shows the means for all outcome measures at T1 and T2. All other comparisons showed no effect (ES < 0.2).

Table 2

<table>
<thead>
<tr>
<th>Outcome Measure Means Across Time (T1 &amp; T2)</th>
<th>T1</th>
<th>T2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td>Intrapersonal: How am I doing?</td>
<td>8.08 (2.41)</td>
<td>8.72 (1.65)</td>
</tr>
<tr>
<td>Family: How are things in my family?</td>
<td>8.13 (1.74)</td>
<td>8.47 (2.58)</td>
</tr>
<tr>
<td>School: How am I doing at school?</td>
<td>8.07 (2.58)</td>
<td>8.41 (2.07)</td>
</tr>
<tr>
<td>Global: How is everything going?</td>
<td>8.7 (1.72)</td>
<td>8.52 (2.14)</td>
</tr>
<tr>
<td>Physiological Arousal:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived ability to relax</td>
<td>7.86 (2.71)</td>
<td>8.31 (2.24)</td>
</tr>
<tr>
<td>Perceived ability to manage nervousness</td>
<td>7.26 (3.82)</td>
<td>7.82 (3.17)</td>
</tr>
<tr>
<td>Child’s Satisfaction with Book</td>
<td>-</td>
<td>8.48 (2.32)</td>
</tr>
</tbody>
</table>

Participants were also asked how *Nikki’s Day at Chemo* compares to other books they have read, based on a 1 to 10 scale ($n = 21$). As a whole, participants indicated a general sentiment that they enjoyed the book, with higher scores indicating greater satisfaction ($M = 7.8, SD = 2.48$). All participants accurately answered basic comprehension questions following the
initial book reading, suggesting that children sustained attention throughout. This comprehension check also served as a validity measure, ensuring that participants comprehended the material.

**Differences Between Time 1 and Time 3**

Twenty-nine percent of participants responded to follow-up surveys, which were collected one to three months after the intervention. No significant patterns were found between participants who responded in Time 3 compared to those who did not respond. Paired-samples $t$-tests were conducted to determine the change across the intrapersonal measure of the CORS from immediately before the initial book reading and from several months later ($n = 6$). With no reported differences in additional treatment or prognosis between T1 and T3, there was a significant improvement in scores reporting perception of intrapersonal functioning prior to the book reading ($M = 8.47$, $SD = 1.28$) and several months later ($M = 9.51$, $SD = 0.68$); $t(5) = -2.64$, $p = 0.046$. Table 3 presents the mean paired samples outcome measures at T1 and T3.

It is clear that children’s sentiments about the book were relatively positive throughout the duration of this study. Using a scale ranging from 1 to 100, parents were asked to rate their perception of how much their child liked the book, with higher numbers indicating more satisfaction. Children ($n = 5$) appeared to be very satisfied with the book ($M = 94$, $SD = 13.4$). Parents ($n = 5$) appeared to have similar positive opinions about the book, as they were also asked to evaluate how much they liked it using the same 1 to 100 scale ($M = 96$, $SD = 8.94$).

**Analysis of Qualitative Data**

Post-intervention questions at Time 2 encouraged the child to apply the book character’s coping strategies (e.g., talking to a trusted adult, using their imagination) to their own situation.
Table 3

<table>
<thead>
<tr>
<th>Outcome Measure</th>
<th>T1 Mean (SD)</th>
<th>T3 Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intrapersonal: How am I doing?</td>
<td>8.47 (1.28)**</td>
<td>9.52 (0.68)**</td>
</tr>
<tr>
<td>Family: How are things in my family?</td>
<td>9.10 (1.06)</td>
<td>9.57 (0.78)</td>
</tr>
<tr>
<td>School: How am I doing at school?</td>
<td>9.32 (0.86)</td>
<td>9.93 (0.10)</td>
</tr>
<tr>
<td>Global: How is everything going?</td>
<td>8.82 (1.66)</td>
<td>9.93 (0.10)</td>
</tr>
<tr>
<td>Physiological Arousal:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived ability to relax</td>
<td>7.68 (3.00)</td>
<td>9.72 (0.44)</td>
</tr>
<tr>
<td>Perceived ability to manage nervousness</td>
<td>5.98 (5.19)</td>
<td>7.52 (3.85)</td>
</tr>
<tr>
<td>Child’s Satisfaction with Book</td>
<td>-</td>
<td>8.95 (2.10)</td>
</tr>
<tr>
<td>Parent’s Satisfaction with Book*</td>
<td>-</td>
<td>96 (8.94)</td>
</tr>
<tr>
<td>Frequency of Book Reading</td>
<td>-</td>
<td>1.40 (2.61)</td>
</tr>
</tbody>
</table>

*Parents rated the book on a 1 to 100 scale, with higher numbers indicating greater satisfaction.

**Significant differences (p < .05 for mean score comparison of intrapersonal functioning at T1 vs. T3). No other t-test comparisons yielded significant differences.

Children were asked to identify someone they could turn to when they felt worried. When encouraged to think about how they might use their own imagination to feel better, the children responded with a range of adaptive coping strategies including “I could go to outer space to jump around freely and collect rocks,” as well as go to “California” or to “the park, running, which I can’t do right now.” In the open-ended questions, several children expressed their desire to ask questions and share their feelings, just as the character in the book had done. One child told the
caseworker “having you read this book to me makes me want to write my own story that everyone can read.”

Parents generally agreed that the book was “appreciated” and “covers everything,” with different individuals stating that “this is the first time I’ve seen a book like this where it explains everything so well” and it “captured everything a child needs to know or can feel in the book.” Other parents noted that they “love the book” and that, along with their child, they “read it all the time.” One of the parents further stated that reading the book has prompted her child to be more forward with asking his doctor questions, which has in turn allowed him to gain confidence to speak freely about his disease, with both peers at school and with the general public at a fundraising event.
Chapter 4

Discussion

This study attempted to determine if a brief bibliotherapy intervention could affect a child’s subjective perception of functioning and decrease his or her perceived emotional distress. Although a small pilot study, the findings supported the hypothesis that positive results that may emerge by providing children with a book that not only details a realistic portrayal of what one faces during a cancer experience, but also includes questions to activate coping strategies. Quantitative data suggested that the intervention might have improved the perception of intrapersonal functioning while decreasing physiological arousal on a self-report measure. For participants remaining in the study, the perception of improvement remained stable or increased during the three months following the intervention. Qualitatively, participants consistently recalled the specifics of the coping strategies employed in the book. Many children were able to custom-fit the strategies used by the main character to their own lives. During follow-up contact, qualitative responses indicated several children had continued to use the coping strategies that they learned from the book.

As previous literature on the subject suggests, bibliotherapy is an effective intervention, for reducing symptoms of anxiety and emotional distress (Rappee et al., 2006). The study’s positive results extend the literature by suggesting that bibliotherapy may also be an effective intervention for children who show sub-clinical levels of anxiety.
In recent decades, pediatric cancer survivor rates have drastically improved. Compared to 50 years ago when a child’s diagnosis was often synonymous with a death sentence, advances in treatments have vastly improved children’s cancer prognoses. Statistics now show that approximately four out of five pediatric cancer patients survive at least five years past their diagnosis (American Institute, 2010). Therefore, learning evidence-based strategies may continue to help patients when dealing with stress and anxiety throughout their lives, far beyond coping with their illness.

Aside from the positive outcome that children experienced, parents also appeared to benefit from the intervention. Many voiced their appreciation for this type of therapeutic tool aimed to help their children; several of them described positive effects that the book had on their children. Overall, participants’ and parents’ interest and enjoyment in the intervention highlight a demand for such products, yet a paucity of books targeted for children dealing with serious chronic illness exists (Amazon, 2011).

Unlike other studies, this research focused on identifying and affecting a child’s subjective perception of global functioning as well as reducing physiological arousal. This represents a unique contribution to the literature by looking at patients’ perceptions across these domains, rather than using objective anxiety and biofeedback measures with a specific clinically diagnosed population. As sub-clinical anxiety is even more common than clinically significant anxiety, this is a relevant population for evidenced-based interventions (Last, 2006).

**Implications**

This research demonstrates the effectiveness of a brief intervention that yields meaningful results in improving intrapersonal functioning as well as reducing physiological
Bibliotherapy’s Effect on Anxiety in Children with Cancer

arousal. After participants had several months with the book, their improvements were even more evident, suggesting that the positive effects are likely to continue with increased exposure to the intervention. The bibliotherapy tool employed in this study is easy to use and portable, two qualities that are vital for patients and families with demanding and time-consuming medical treatment schedules. *Nikki’s Day at Chemo* is further effective as it empowers both the parent and child to cope with cancer together. As a whole, this book represents a tool that is a low investment and has a high yield for an incredibly vulnerable population.

**Limitations**

This study has several limitations. With a greater participant pool, a randomized-control design could have been employed, allowing the participants to be parsed into two groups, one of which would be assigned *Nikki’s Day at Chemo* and one of which would be assigned a non-cancer related control book of a similar length. This would have strengthened the validity of the study, as the change could then have been attributed to the specific intervention book, rather than reading in general. Another limitation was the varying times between participants’ diagnoses; more stringent selection criteria would have been helpful so that, for example, newly diagnosed individuals could have been compared to their counterparts. Children who have dealt with their illness for several years compared to those who have recently been diagnosed undoubtedly have different levels of knowledge about their disease, treatment, and how to cope.

**Directions for Future Research**

Future research examining this specific book would be valuable. Based on qualitative responses from participants’ parents, a future study identifying caregiver anxiety would be valuable, particularly in determining how a bibliotherapy tool like *Nikki’s Day at Chemo* affects
it. Finally, as the study was conducted in a single geographical region, it would be valuable to expand the study to include a wider, more diverse range of individuals in different geographical regions. As the bibliotherapy tool is currently written solely in English, a Spanish translation would be valuable in order to expand eligibility criteria to include Spanish-speaking children in the United States.
References


Bibliotherapy’s Effect on Anxiety in Children with Cancer


Duncan, B. L., Miller, S. D., Sparks, J. A. (2003). The Child Outcome Rating Scale. Authors: Ft. Lauderdale, FL


Bibliotherapy’s Effect on Anxiety in Children with Cancer


Bibliotherapy’s Effect on Anxiety in Children with Cancer


Appendix A

Consent Form
CONSENT FORM

“You” or “you” means your child in this consent form.

PURPOSE:
You have been invited to be in this research study because you have a cancer diagnosis and are between the ages of 4 and 12. The purpose of this study is to understand if a children’s book embedded with coping strategies for pediatric cancer patients affects a child. The study is part of a doctorate research project in clinical psychology, under the supervision of Dr. Mary Peterson, PhD.

If you choose to take part in this study, you and your caregiver will be asked to complete three paper questionnaires over the course of several months—two on the first day and then another one to three months later. You will be asked to listen to a trained investigator read a storybook and you will be asked to answer a few questions. The questionnaires ask you about your psychosocial support, mental health, and feelings towards your cancer treatment. The investigator will take this signed consent form, assent form, and first two sets of questionnaires with him/her at the completion of the first day. We will call you before the follow-up questionnaire and we will provide you with a stamped, addressed envelope to mail your surveys to the investigators.

Each questionnaire will take about 5-20 minutes to complete.

The following information will be collected from you: caregiver’s name, caregiver’s marital status, your name, your current age, your age at diagnosis, diagnosis, types of surgeries (if any), chemotherapy medications and doses (if any), the sites, dates and doses of radiation (if any). Your contact information will be used for the purpose of keeping in touch with you while you are participating in this study.

This study was reviewed and approved by a Human Subjects Review Board.

If you have any questions regarding this study now or in the future, contact Nicole Schneider, MA at (503) 482-5655 or cancerstorybook@gmail.com.

RISKS AND DISCOMFORTS:
There are minimal risks and discomforts to participating in this study. The cancer storybook is written in a warm, gentle way and was reviewed and fully approved by the Human Subjects Review Board. Despite this, it is possible that you may feel mildly distressed reading about one’s experience with cancer.

BENEFITS:
Participants who are read the original cancer storybook may gain insight into how to effectively cope with their cancer treatment, including how to ask questions about treatment, employ relaxation techniques, and use imagery. The book may provide comfort for you, as it
gently tells a story about a character undergoing cancer treatment. By participating in this study, you may help us learn how to benefit patients in the future. You may learn more about yourself by completing the questionnaires.

**ALTERNATIVES:**

You may choose not to be in this study. You may also choose to stop participating in this study at any time. Tell a member of the research team if you are thinking about stopping or decide to stop.

**COMPENSATION:**

All participants will receive a copy of the original storybook to keep.

**CONFIDENTIALITY:**

Efforts will be made to keep your personal information confidential. Any information containing your name or protected health information will be secured in a locked physical location or on password protected computers. We cannot guarantee total privacy. Your personal information may be disclosed if required by law. We will not use your name or your identity for publication or publicity purposes.

The specific health information that may be used in data collection and/or publication is limited to your responses to the questions on the questionnaires. The purposes of our use and disclosure of this health information are described in the Purpose section of this Consent Form. Any specific identifying information (ie, names and birthdates) will be used only for the purpose of data collection and will remain confidential.

**SIGNATURES:**

Your signature below indicates that you have read this entire form and that you agree to be in this study.

<table>
<thead>
<tr>
<th>Signature of Subject/Subject’s Representative or Guardian</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Printed Name of Subject/Subject’s Representative or Guardian</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Signature of Person Obtaining Consent</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Printed Name of Person Obtaining Consent</th>
</tr>
</thead>
</table>
Appendix B

Assent Form
ASSENT FORM

For Children

The investigator has explained this research study to me. I know how it may or may not help me. I also know that this study will help researchers know more about children’s feelings about cancer.

This study involves a researcher reading me a storybook. Before reading the book, I will be asked to answer several questions about how I am doing. My caregiver will also fill out a survey. After I am read the book, I will be asked to answer some questions about the book and I will answer some of the same questions again about how I am doing. One to three months later, I will answer several questions about how I am doing again and my caregiver will fill out a survey once again.

This study may or may not help me. I might enjoy having a story read to me and to learn about someone going through cancer as well. I also may learn some things that I did not know. I will be given a copy of the storybook to keep if I participate.

The investigator will ask me if I have any questions or want to know anything else about this study.

I have thought about being a part of this study. I have asked and received answers to my questions. I agree to be in this study. I know that I don’t have to agree to be in the study. Even though I agree to be in it now, I know I may feel differently later on and can ask to stop being in the study. I know that I may talk with my parents about not being in this study at any time.

Name/Signature: ________________________________ Date: _______________
Appendix C

Initial Questionnaire
Initial Questionnaire

Your name: __________________________  Relationship to child: __________________

Name of child: ______________________  Child’s Gender:  □ M  □ F
Names are only used for the purpose of data collection.

Telephone number: ___________________  E-mail: _____________________________

Marital status of child’s primary caregiver:  □ Single  □ Married/Partnered  □ Divorced/Separated

Age at Diagnosis: __ years ___ months  Child’s Age: ___ years ___ months

Treatment:  □ Outpatient, frequency ________  □ Inpatient, average stay __________

Child’s Diagnosis Please include as much as possible, including staging if applicable.

Child’s Treatments Please note chemotherapy, radiation, surgery, and any other types of modern, traditional, or supplemental medical treatment.

Psychosocial Support
Please indicate what, if any, support has been received to deal with life affected by cancer.

<table>
<thead>
<tr>
<th>About your child</th>
<th>Never</th>
<th>Once</th>
<th>Several Times</th>
<th>Frequently</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 My child has seen an oncology social worker.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 My child has attended a support group in the hospital.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 My child has attended a support group outside of the hospital.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 My child has seen a counselor, psychologist, psychiatrist, or mental health professional outside of the hospital at any time after receiving diagnosis.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 My child has talked to at least one other child with cancer.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### About you

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>I have joined a support group, online or in person, to deal with my child's illness.</td>
</tr>
<tr>
<td>7</td>
<td>I have seen a counselor, psychologist, psychiatrist, or mental health professional outside of the hospital at any time after receiving news of my child's diagnosis.</td>
</tr>
<tr>
<td>8</td>
<td>I have talked to another parent of a child with cancer.</td>
</tr>
</tbody>
</table>
Appendix D

Child Outcome Rating Scale (Before Book Reading)
To Be Completed Immediately Before the Book Reading

Child Outcome Rating Scale (CORS)

<table>
<thead>
<tr>
<th>Name ________________________</th>
<th>Age (Yrs):____</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex: M / F ________</td>
<td>Session # ____</td>
</tr>
<tr>
<td>Who is filling out this form? Please check one: Child______ Caretaker______</td>
<td></td>
</tr>
<tr>
<td>If caretaker, what is your relationship to this child?</td>
<td>______________________________</td>
</tr>
</tbody>
</table>

How are you doing? How are things going in your life? Please make a mark on the scale to let us know. The closer to the smiley face, the better things are. The closer to the frowny face, things are not so good. If you are a caretaker filling out this form, please fill out according to how you think the child is doing.

Me
(How am I doing?)

I------------------------------------------------------------------------------------I

Family
(How are things in my family?)

I------------------------------------------------------------------------------------I

School
(How am I doing at school?)

I------------------------------------------------------------------------------------I

Everything
(How is everything going?)

I------------------------------------------------------------------------------------I
Bibliotherapy’s Effect on Anxiety in Children with Cancer

Supplemental Questions

Mood
(How relaxed am I?)

Feelings
(How nervous am I?)
Appendix E

Child Outcome Rating Scale (After Book Reading)
To Be Completed Immediately After the Book Reading

Child Outcome Rating Scale (CORS)

Name ________________________ Age (Yrs): ____________
Sex: M / F ____________
Session # ____________ Date: ______________________
Who is filling out this form? Please check one: Child_______ Caretaker_______
If caretaker, what is your relationship to this child?

How are you doing? How are things going in your life? Please make a mark on the scale to let us know. The closer to the smiley face, the better things are. The closer to the frowny face, things are not so good. If you are a caretaker filling out this form, please fill out according to how you think the child is doing.

Me
(How am I doing?)

I-----------------------------------------------------------------------------------I

Family
(How are things in my family?)

I-----------------------------------------------------------------------------------I

School
(How am I doing at school?)

I-----------------------------------------------------------------------------------I

Everything
(How is everything going?)

I-----------------------------------------------------------------------------------I

Institute for the Study of Therapeutic Change

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Supplemental Questions

**Mood**
(How relaxed am I?)

[Scale from sad face to happy face]

**Feelings**
(How nervous am I?)

[Scale from sad face to happy face]

**Nikki’s Day at Chemo**
(Compared to other books I have read, I feel this way about the book)

[Scale from sad face to happy face]
Appendix F
Questions from the Book (Investigator)
Questions from the Book – To Be Filled Out By Investigator

Please record the child’s exact words!

When Nikki was scared, what animal made her feel better? ______________________

*Who is someone or what is something that can help you when you are feeling worried?

________________________________________________________________________
________________________________________________________________________

Where was one place that Nikki imagined herself flying? ______________________

________________________________________________________________________

*Where can your imagination take you if you need to feel better?__________________

________________________________________________________________________
________________________________________________________________________

*When Nikki was not sure if she would have to drink her medicine, she asked her nurse.

Do you ever have questions for your doctor or nurse? ____________________________

________________________________________________________________________

How did Nikki feel after her mom told her she was all finished with chemo for the day?

________________________________________________________________________

*How do you feel or how do you think you will feel after you finish a chemo day?

________________________________________________________________________
________________________________________________________________________

Other notes or comments made by the child:
Appendix G

Child Outcome Rating Scale (One to Three Months After Book Reading)
# Bibliotherapy’s Effect on Anxiety in Children with Cancer

To Be Completed One to Three Months After the Book Reading

**Child Outcome Rating Scale (CORS)**

<table>
<thead>
<tr>
<th>Name __________________________</th>
<th>Age (Yrs):__</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex: M / F__________</td>
<td></td>
</tr>
<tr>
<td>Session # ____ Date: ________________________</td>
<td></td>
</tr>
</tbody>
</table>

Who is filling out this form? Please check one: Child_______ Caretaker_______

If caretaker, what is your relationship to this child? ______________________

---

How are you doing? How are things going in your life? Please make a mark on the scale to let us know. The closer to the smiley face, the better things are. The closer to the frowny face, things are not so good. *If you are a caretaker filling out this form, please fill out according to how you think the child is doing.*

### Me
(How am I doing?)

I---------------------------------------------------------------I

*Smiley face (happy)*

### Family
(How are things in my family?)

I---------------------------------------------------------------I

*Sad face (unhappy)*

### School
(How am I doing at school?)

I---------------------------------------------------------------I

*Smiley face (happy)*

### Everything
(How is everything going?)

I---------------------------------------------------------------I

*Smiley face (happy)*

---

Institute for the Study of Therapeutic Change

[www.talkingcure.com](http://www.talkingcure.com)  
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Supplemental Questions

Mood
(How relaxed am I?)

[Graphic of mood scale]

Feelings
(How nervous am I?)

[Graphic of mood scale]

Nikki’s Day at Chemo
(Compared to other books I have read, I feel this way about the book)

[Graphic of mood scale]
Appendix H

One- to Three-Month Follow-up Questionnaire
Today’s Date: __________________

One to Three-Month Follow-up Questionnaire

Your name: ___________________________ Relationship to child: __________________

Name of child: _______________________ Child’s Gender: □ M □ F
Names are only used for the purpose of data collection.

Telephone number: ___________________ E-mail: __________________________

Marital status of child’s primary caregiver: □ Single □ Married/Partnered □ Divorced/Separated

Age at Diagnosis: __ years ___ months    Child’s Age: ___ years ___ months

Treatment: □ Outpatient, frequency _______    □ Inpatient, average stay _______

Child’s Diagnosis Please include as much as possible, including staging if applicable.

____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________

Child’s Treatments Please note chemotherapy, radiation, surgery, and any other types of modern, traditional, or supplemental medical treatment.

____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________

Have any other major changes in your child's prognosis, treatment, or physical reactions to treatments occurred since the initial book reading? If so, please specify.

____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________

Since the initial book reading, my child read or has been read the book in its entirety ____ times.

____________________________________________________________________________
### About the book

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Never</th>
<th>Once</th>
<th>Several Times</th>
<th>Frequently</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Following the initial book reading, my child reviewed coping techniques filled in on the Questions page of the book.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Following the initial book reading, my child attempted at least of the coping techniques mentioned.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### About you

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Never</th>
<th>Once</th>
<th>Several Times</th>
<th>Frequently</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>I have joined a support group, online or in person, to deal with my child's illness.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>I have seen a counselor, psychologist, psychiatrist, or mental health professional outside of the hospital at any time after receiving news of my child's diagnosis.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>I have talked to another parent of a child with cancer.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

13 Have any other major changes in your family occurred since the initial book reading? If so, please specify.

14 On a scale of 1 to 100, with 1 being the worst and 100 being the best, the amount my child likes the book is ____. The amount I like the book is ____.

15 If you have any comments or suggestions about the book, please note them below.

Please direct questions to Nicole Schneider at cancerstorybook@gmail.com.
Please mail these forms back in the pre-stamped envelope. **Thank you for your participation!**
Appendix I

Curriculum Vitae
Bibliotherapy’s Effect on Anxiety in Children with Cancer

NICOLE M. SCHNEIDER
nik.m.schneider@gmail.com

EDUCATION

George Fox University
Graduate Department of Clinical Psychology, APA Accredited
Masters of Art of Clinical Psychology, awarded May 2010
Doctorate of Clinical Psychology, anticipated graduation May 2013
Cumulative GPA – 3.93

Kobe Institute, Oxford University
Multicultural Symbiosis Class, Summer 2008

Vanderbilt University
Bachelor of Science, awarded May 2008
Child Development major, GPA – 3.78
Human and Organizational Development major, GPA – 3.53
Art History minor

HONORS AND AWARDS

Richter Grant Scholar-Awarded $3640 to pursue research about bibliotherapy’s effect on anxiety in children with chronic illness, 2009-2011.
Kappa Delta Epsilon-Education Honor Society, 2005 – 2008
Vanderbilt University Dean’s List-Spring 2006, Fall 2006, Fall 2007
AP Scholar with Distinction-Spring 2004

SUPERVISED CLINICAL EXPERIENCE

Concordia University Counseling Center, 2011-2012
Portland, OR
Conducted and scored comprehensive ADHD and learning disability assessments for both traditional and non-traditional undergraduate students. Administered structured intake interviews. Wrote reports and provided feedback to students. Worked with student services to provide academic accommodations for students. Provided individual therapy to students. Received two to three hours of individual and group supervision per week.
Supervisors: Jaklin Peake, LPC and Marie-Christine Goodworth, PhD

Oregon Health & Science Univ., Doernbecher Children’s Hospital, 2010-2012 Portland, OR
Administered, scored, and interpreted cognitive, behavioral, and neuropsychological assessments for children, adolescents, and adults, including those who have a history of chronic physical illness. Assisted with intake interviews. Accompanied supervisor in sharing test interpretation with clients. Received one to two hours of individual or group supervision per battery.
Supervisor: Robert Butler, PhD, ABPP-CN
Virginia Garcia Memorial Health Center, 2010-2011 Beaverton, OR
Conducted short-term behavioral interventions and administered brief assessment measures with individuals ages six to eighty seeking primary care medical services. Served as a behavioral health consultant to providers, primarily for clients who are uninsured or on Medicaid. Aided in crisis situations with individuals contemplating self-harm and suicide. Co-facilitated dialectical-behavior chronic pain group. Received one to two hours of supervision per week.

Supervisor: Greta Lyders, PhD

Cedar Hills Hospital, 2011 Portland, OR
Co-facilitated one day per week of the mother-infant partial hospitalization and intensive outpatient program. Helped women facing post-partum depression, anxiety, and psychosis by using cognitive-behavioral interventions and psychoeducation. Worked with a doula to promote mother-infant bonding. Shadowed a psychiatrist during medication management appointments. Received one hour of supervision per week.

Supervisors: Scott Dillinger, MSW, LCSW and Nicole Cirino, MD

Camp Starlight, Summer 2009, 2010, 2011 Lincoln City, OR
Served on the mental health team working with boys and girls ages 3 to 14 affected and infected with HIV/AIDS. Helped campers deal with traumatic and adjustment issues and assisted them in resolving discord with each other. Supported volunteer staff at the week-long residential camp. Received one hour of individual or group supervision per day.

Supervisor: Rebecca Block, MSW, LCSW, PhD

Archer Glen Elementary School, 2009-2010 Sherwood, OR
Worked two days per week for the academic year with children ages 5 through 10 with a variety of developmental issues, including Asperger’s disease, ADHD, and anxiety and adjustment disorders. Worked on problem-solving techniques, friendship building, anger management, and other issues through individual counseling, play therapy, and group therapy. Received two hours of individual supervision per week.

Supervisor: Hannah Stere, PsyD

George Fox University, Spring 2009 Newberg, OR
Conducted ten weeks of therapy for one male and one female undergraduate student. Received two hours of supervision per week.

Supervisors: Hillary Lambert, MA and Clark Campbell, PhD, ABPP-CL

PRESENTATIONS AND PUBLICATIONS


MANUALS IN PROGRESS


RESEARCH EXPERIENCE

Univ. of New South Wales, Sydney Children’s Hospital
Psychology Research Fellow, July 2011 – August 2011
Developed a cognitive-behavioral web-based curriculum for parents of children and young adults who have completed cancer treatment and who are living in rural areas of Australia. Helped with choose primary and secondary measures for the study and submitted protocol to National Ethics Application Form. Assisted in revising a similar adolescent/young adult cancer survivor module. Helped with data collection for a study not yet publicly disclosed.

Supervisor: Claire Wakefield, MPH, PhD
Oregon Health & Science Univ., Department of Hematology and Oncology  Portland, OR  
Research Assistant, July 2009 – August 2010  
Worked to research psychosocial elements of oncology as it relates to adolescents and young adults. Helped create questionnaire items and a young adult function scale.  
*Supervisor: Rebecca Block, MSW, LCSW, PhD*

Triad at Vanderbilt  
Nashville, TN  
Undergraduate Researcher, September 2007 – May 2008  
Worked with psychologists and graduate students in a laboratory for younger siblings of autistic children. Set up and assisted in research studies finding early predictors of Autism Spectrum Disorders. Coded videos involving children’s reactions to various social orienting situations.  
*Supervisor: Tedra Walden, PhD*

**TEACHING EXPERIENCE**

Advanced Counseling  
Newberg, OR  
Teaching Assistant, Fall 2010  
Facilitated traditional and non-traditional undergraduate students ages 20 to 41 in developing basic and advanced counseling skills, including rapport building, reflection-making, and summarizing. Reviewed and provided feedback for students’ videotaped mock therapy sessions.  
*Supervisor: Kristina Kays, PsyD*

**PSYCHOLOGICAL TESTING TRAINING**

**Personality, Projective, & Behavioral Assessment**

- 16 PF, 5th Edition  
- ABAS-II  
- BASC-2  
- College Adjustment Scales  
- Denver II  
- FACES-IV  
- House-Tree-Person Projective Drawing  
- MCMI-III  
- MMPI-II  
- MMPI-II-RF  
- Myers-Briggs Type Indicator  
- OQ-45  
- Outcome Rating Scale  
- PAI  
- PHQ-9  
- Revised Dyadic Adjustment Scale  
- Rorschach (Exner Scoring System)  
- Rotter Incomplete Sentence Blanks  
- Stress Index for Parents of Adolescents  
- TEMAS  
- Thematic Apperception Test

**Cognitive and Neuropsychological Assessment**

- Beery Visual-Motor Integration Test  
- Bender-Gestalt II  
- Boston-Naming Test, Revised  
- BRIEF  
- California Verbal Learning Test-II  
- Rey Auditory Verbal Learning Test  
- Rey-Osterrieth Complex Figure  
- Stroop Color and Word Test  
- Test of Memory Malingering  
- Token Test for Children, Revised
Bibliotherapy’s Effect on Anxiety in Children with Cancer

- Children’s Memory Scale
- Conners’ CPT II Version 5
- Controlled Oral Word Association
- Delis-Kaplan Exec. Function System
- Expressive Vocabulary Test
- Grooved Pegboard Test
- Halstead-Reitan Battery, Selected Tests*
- Hooper Visual Organization Test
- Judgment of Line Orientation
- Memory Cards
- PPVT-4
- RBANS
- Revised Token Test
- Tower of London
- WAIS-IV
- WASI
- WIAT-III
- WISC-IV
- Wisconsin Card Sorting Test
- WMS-III
- Woodcock Johnson III, Achievement
- Woodcock Johnson III, Cognitive
- WPPSI-III
- WRAML2
- WRAT-4
- WRIT

*Training in Halstead-Reitan Tests includes Aphasia Screening, Booklet Category Test, Bilateral Simultaneous Sensory Simulation, Finger Tapping, Finger Tip Number Writing, Grip Strength, Seashore Rhythm Test, Speech Sound Recognition, Tactile Finger Recognition, Tactual Performance Test, and Trail Making Test A & B.

ADDITIONAL CLINICAL TRAINING

Michael Fulop, PsyD, *Motivational Interviewing*, October 2011
Rebecca Block, MSW, LCSW, PhD, *HIV and Stigma*, August 2011
Grant Betts, PhD, *...And While We’re On the Subject of Death….: The Psychological Benefits of Structured, Timely, Honest, and Compassionate Communication with Children and Adolescents Who Have Fatal Diseases*, August 2011
Antoinette Anzaodo, MD and Carrie Vanderweyden, *Adolescents – Big Kids or Little Adults?*, August 2011
Brian Byrne, PhD, *The “Learning” in “Learning Disabilities”: Insights on the Behavioural Genetics of Reading From a Study of Twin Children*, July 2011
Steven J. Hughes, PhD, LP, ABPdN, *Assessment of ADHD in Children and Adults: Update 2011*, June 2011
Kern A. Olson, PhD, *Chronic Pain: Some Nuts and Bolts*, March 2011
Anna Berardi, PhD, *Psychological First Aid*, March 2011
Wendy Bourg-Ransford, PhD and Todd Ransford, PhD, *Forensic Psychology Practice: The Good, the Bad, and the Ugly*, March 2011
Judy Hall, PhD, *Opportunities in the Field of Professional Psychology*, October 2010
Eleanor Gil-Kashiwabara, PhD, *Best Practices in Multicultural Assessment*, October 2010
Neftali Serrano, PsyD, *Primary Care Behavioral Health: Where Body, Mind, and Spirit Meet*, October 2010
Carol Carver, PhD, *Current Guidelines For Working With Gay, Lesbian, and Bisexual Clients: The New APA Practice Guidelines*, March 2010
Phil Watkins, PhD, *Integrative and Clinical Dimensions of Gratitude*, February 2010
John Mitchell, MD, *Consultation Skills in the Emergency Department*, November 2009
Gary Mesibov, PhD, *Understanding Learning Styles and Meeting the Needs of Students with Autism Spectrum Disorder*, April 2009
Patty Warford, PsyD, *Domestic Violence*, February 2009

**RELEVANT ACTIVITIES**

Double H Hole in the Woods Ranch—Volunteer. Camp counselor for a group of seven girls, aged 10-12, with cerebral palsy, sickle-cell anemia, and leukemia. Worked one-on-one and in groups to help with teambuilding exercises, arts and crafts, ropes courses, and social events, July 2008.


**PROFESSIONAL AFFILIATION**

American Psychological Association—Student Member, 2009-Present

**INTERESTS**

Enjoys ski racing, water skiing, tennis. Loves drawing, painting, and world travel. Active in cancer advocacy as a Hodgkins Lymphoma survivor of five years.