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Efficacy of Concreteness Training with Persons Qualifying for Palliative Care: Piloting an iOS Application

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Efficacy of Concreteness Training with Persons Qualifying for

Palliative Care: Piloting an iOS Application

by

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Efficacy of Concreteness Training With Persons Qualifying for Palliative Care: Piloting an iOS

Application
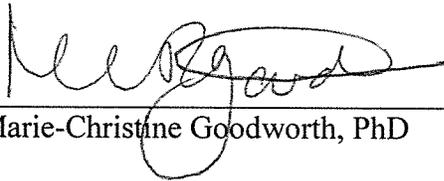
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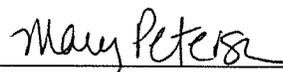as a Dissertation for the PsyD degree

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Abstract

Palliative care services (PCS) seek to increase quality of life and manage symptoms of persons with chronic illnesses. Depression and anxiety are common concerns for persons receiving PCS. One intervention that has demonstrated some effectiveness and requires further research is a brief concreteness training (CT) intervention based on cognitive-behavioral techniques. This study piloted the implementation of a brief CT intervention via an iOS application for persons qualifying for PCS. Forty-one people completed all of the pretest measures, and 9 participants completed the entire study. Variables measured were anxiety, depression, spiritual well-being, health-related quality of life (HRQOL), and patient activation. Participants were randomly assigned to either a control group or a treatment group that completed the CT intervention. Results found that the CT intervention iOS application had no significant difference on anxiety, depression, spiritual well-being, HRQOL, or PAM. Homogeneity of effects sizes test were run due to the small sample size and also found no significant differences from pretest to posttest between the groups. However, effects sizes of the final sample demonstrate that there may have been differences between the CT and control group at pretest, which may have influenced the results. Implications and suggestions for further research are discussed.

Keywords: palliative care, intervention, concreteness training, depression, anxiety

Acknowledgements

I want to dedicate this work to my mother. Without seeing her through her own experiences with terminal illness and palliative care, I would have never been inspired to conduct this study. I am forever grateful to my committee: Drs. Goodworth, McMinn, and Peterson for their unwavering support and generous help throughout the dissertation process. Special recognition goes to Drs. Foster and Ellis for their help while my chair, Dr. Goodworth, was on a leave of absence. Additionally, I would like to recognize Dr. Gathercoal for graciously lending her expertise to this study. Finally, I would be remiss not to acknowledge that this work would have been impossible without the love and support of my husband, Justin Zarb, and my best friend, Emily Johnson. The entire process was full of frustration, hope, joy, and prayer, and I thank God for being faithful and allowing me to complete this work.

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Chapter 1

Introduction

Palliative Care

Palliative care focuses on optimizing quality of life and overcoming pain and suffering (National Quality Forum, 2006). Specifically, palliative care "addresses the physical, emotional, social, and spiritual needs of patients and their families with the goal of improving their quality of life" (Sherman & Cheon, 2012, p. 154). Unlike hospice, palliative care is not limited solely to persons with terminal illness. Rather, it begins at the time of diagnosis of a chronic illness and occurs along curative therapies, continuing into the bereavement phase for family members should death occur (Spugnardi, 2011). Nonetheless, hospice is part of palliative care services (PCS), and it is offered at the end of life as part of a continuum of palliative care (Sherman & Cheon, 2012). The main goals of PCS are to increase quality of life and manage symptoms by decreasing uncomfortable interventions and managing pain. This may include the reduction of invasive procedures and the use of pain medications. Even though the primary goal of PCS is to increase quality of life and not necessarily curative, some research shows that PCS can reduce symptom severity and prolong life (Bakitas et al., 2009; Meier, 2011; Temel et al., 2010).

Medical centers often have specific criteria before enrolling a patient into PCS. For the purposes of this study, criteria will be close to that established by Reville, Reifsnyder, McGuire, Kaiser, and Santana, (2013). The criteria will include a diagnosis of a chronic/incurable illness and at least two hospital visits as a result of that illness within a 3-month period.

Demand for PCS

Considering the increasing demands for PCS in health care reform, the expectation is that PCS will become more available (Sherman & Cheon, 2012). The Affordable Heath Care Act of 2010 includes stipulations that expand the eligibility criteria to receive palliative care, which opens PCS to more people. In addition, demand for PCS should increase along with expected increases in the aging population and the life expectancy for persons with diagnoses often associated with PCS, such as cancer, HIV/AIDS, and terminal illnesses. As demands for PCS increase, further training for healthcare professionals to provide quality PCS is important. Healthcare professionals may benefit from learning more about the needs of persons receiving PCS.

Psychological Issues in Palliative Care

Even though persons with incurable illnesses are at a higher risk for developing depression, it often goes undetected and untreated (Hallford, McCabe, Mellor, Davison, & Goldhammer, 2012; Robinson & Crawford, 2005). Assessment and management of psychological, emotional, and spiritual concerns is a need of many persons receiving PCS (McIlfatrick, 2007; Milligan, 2012). Increased anxiety and depression are primary concerns. Since persons receiving PCS experience elevated levels of depression and anxiety, finding effective psychological interventions is important. More specifically, persons receiving PCS experience elevated worry, which contributes to their experiences of elevated distress (De Faye, Wilson, Chater, & Hall, 2006). Their worry represents concern about the future in general in addition to concern about the future welfare of family and others (De Faye et al., 2006).

Worry can often include repetitive thoughts, which are "repetitive, prolonged, and recurrent thoughts about one's self, one's concerns and one's experiences" (Watkins, 2008, p.

163). When these repetitive thoughts focus on personal goals and concerns, they can represent

rumination. Further, the rumination can be more concrete or abstract, with more abstract

ruminations leading to undesirable consequences. Examples of consequences of abstract

ruminations include feelings of depression, anxiety, and problems with physical health (Watkins,

2008). Abstract rumination is more common among persons who are depressed (Di Schiena,

Luminet, Change, & Philippot, 2013; Lyubomirsky, Boehm, Kasri, & Zehm, 2011). Further,

persons who are more abstract in their rumination tend to have greater difficulty when making

decisions and process information slower than those who are less abstract in their rumination.

This is relevant to persons receiving PCS because making difficult decisions about treatment

options is often a part of their experience. Galfin and Watkins (2012) found that persons

receiving PCS reported higher levels of abstract rumination than age-matched controls. Also, the

higher levels of rumination was associated with increased psychological distress. Therefore,

methods to help reduce abstract rumination would potentially increase decision-making ability,

and therefore improve overall quality of life for persons receiving PCS.

In addition to depression, anxiety, and rumination, spirituality is increasingly becoming

an important consideration for palliative care (Albers et al., 2010; Okon, 2005). The concept of

spirituality addresses issues of purpose and meaning as well as some aspects of quality of life

(Albers et al., 2010; Okon, 2005). Peterman, Fitchett, Brady, Hernandez, and Cella (2002) have

demonstrated an inverse relationship between spiritual well-being and psychological distress. As

such, maintaining healthy spiritual well-being could be a protective factor against psychological

distress.

Patient Activation

As people continue to live longer with chronic diseases, treatment that includes longer-term and self-management options are becoming more popular (Howell, 2012). Howell notes that self-management means the person receiving palliative care is working on managing symptoms, treatment, and changes they are experiencing both physically and psychologically as a result of living with a chronic illness. Health care professionals can offer a great service by finding ways to support self-management efforts and interventions that people can implement at home.

Another way to describe a person's ability to engage in self-management of his or her own health care is patient activation (Magnezi, Glasser, Shalev, Sheiber, & Reuvini, 2014). The measurement of patient activation "assesses patient knowledge, skill, and confidence for self-management" (Hibbard, Mahoney, Stockard, & Tusler, 2005). For chronic illness, which is long term, patient self-management is important. One way to increase patient self-management is through patient activation because patients with high levels of patient activation have better self-management skills. This study will assess levels of patient activation and propose they will increase with the intervention because depression is a barrier to patient activation (Goodworth et al., 2016; Hibbard, Mahoney, Stock, & Tusler, 2007) and the intervention is proposed to decrease depression as well as anxiety.

Intervention

Watkins (2009) argued that one method to decrease rumination was through a cognitive-behavioral method of increasing specificity of thinking and suggested a brief self-help intervention called concreteness training (CT) to do just that. The goal of CT it to target aspects of cognitive-behavioral theory onto the specific symptom of depressive rumination. CT involves

a guided imagery process where persons follow instructions to articulate specific information

regarding all sensory details of an imagined remembered event. With guidance, the goal is for

the person to become absorbed in the exercise and focus on describing all details of their event.

Watkins (2009) claims that research has suggested CT can reduce psychological distress. In

addition, CT specifically attempts to help persons counteract experiences of abstract rumination

(Di Schiena et al., 2013). Researchers have tested CT in primary care settings and found CT as

effective as relaxation training while having unique benefits on persons who use it, as evidenced

by slightly lower scores on depression instruments for those using CT compared to those using

relaxation training (Watkins et al., 2012).

Galfin, Watkins, and Harlow (2011) found that their CT intervention helped persons

receiving inpatient PCS in England reduce anxiety by moving away from abstract rumination

and increasing concrete thinking. The brief CT by Galfin et al. (2011) is based on research that

demonstrated improvement in mood after CT (Watkins, 2009; Watkins & Moberly, 2009;

Watkins et al., 2012).

The purpose of this quantitative study is to determine whether the CT intervention has a

significant effect on depression, anxiety, HRQOL, and patient activation. The study strives to

enrich the findings of Galfin et al. (2011) by adapting their intervention to an iOS application.

The hypotheses of this study are:

The CT intervention will decrease depression.

The CT intervention will decrease anxiety.

Spiritual well-being will make the CT intervention more effective.

The CT intervention will improve health-related quality of life.

The CT intervention will promote increased patient activation.

Chapter 2

Method

Participants

All participants endorsed the following criteria: adult, have access to an iOS device, such as an iPhone or iPad or iPod touch, have a chronic or incurable illness, and as a result of that illness, have been to the hospital two or more times within three months.

Materials

Generalized Anxiety Disorder (GAD-7). The GAD-7 (Spitzer, Kroenke, Williams, & Lowe, 2006) is a brief 7-item self-report measure of anxiety that uses diagnostic criteria for Generalized Anxiety Disorder from the *Diagnostic and Statistical Manual of Mental Health Disorders*, Fourth Edition, Text Revision (*DSM-IV-TR*; American Psychiatric Association [APA], 2000) for generalized anxiety disorder. The diagnostic criteria for the fifth edition (*DSM-5*; APA, 2013) are compatible and allow the GAD-7 to remain relevant. The GAD-7 asks, "Over the last 2 weeks, how often have you been bothered by the following problems?" and lists seven problems, such as, "feeling nervous, anxious, or on edge" and "worrying too much about different things." The test uses a forced choice format of four options ranging from *not sure at all* to *nearly every day*. Responses generate scores from 0 to 3 for each item, with a total possible score range of 0 to 21 and higher scores representing more distress. Scores of 10 or higher suggest the possible presence of an anxiety disorder. The test has high reliability with a sensitivity of 0.89 and a specificity of 0.82 (Kroenke, Spitzer, Williams, O'Monahan, & Lowe, 2007; Spitzer et al., 2006).

Patient Health Questionnaire-2 (PHQ-2). The PHQ-2 (Kroenke et al., 2010) is screener in the form of a brief 2-item self-report measure that uses the most salient criteria for major depressive episodes. Like the GAD-7, the PHQ-2 uses a forced choice format with four options. The test asks, "over the last two weeks, how often have you been bothered by any of the following problems?" and lists two problems addressing depressed mood and decreased interest in activity. Each item is score 0 to 3 with total score ranging from 0 to 6 and higher scores representing more distress. The test has a sensitivity of 0.86 and a specificity of 0.75 with a Cronbach alpha of 0.64 (Osorio, Carvalho, Fracalossi, Crippa, & Loureiro, 2012). It is shortened version of the PHQ-9, which has demonstrated validity and suitability for use with physically ill populations (Rayner et al., 2011).

Functional Assessment of Chronic Illness Therapy-Spiritual Well-Being Scale (FACIT-Sp). The FACIT-Sp (Peterman et al., 2002) is a brief 12-item self-report measure of the spiritual well-being dimension of quality of life with persons who have chronic or life-threatening illness. The test prompts participants to consider the past seven days and has two subscales: Meaning/Peace (items 1-8) and Faith (items 9-12). An example of a Meaning/Peace item is, "I feel peaceful" while an example of a Faith item is "I know that whatever happens with my illness, things will be okay." The FACIT-Sp uses a 5-point Likert scale, asking participants to score their response from *not at all* to *very much*. Each item is scored 0 to 4 with total scores ranging from 0 to 48. Higher scores are associated with great spiritual well-being. The test has overall internal consistency measured with a Cronbach's alpha of 0.87 (Peterman et al., 2002). The internal consistency for two subscales are as follows: Meaning/Peace = 0.81 and Faith = 0.88 (Brady, Peterman, Fitchett, Mod, & Cella, 1999; Peterman et al., 2002).

Medical Outcomes Study Short Form 12-Item Health Status Survey version 2 (SF-12v2). The SF-12v2 (Cheak-Zamora, Wyrwich, & McBride, 2009) is a shortened version of the revised SF-36 Health Survey, or the SF-36v2. The SF-12v2 is a 12-item self-report measure that assesses health-related quality of life (HRQOL) across eight domains. There are two component scores generated from the test: Mental Component Score (Mental CS) and Physical Component Score (Physical CS). The test attempts to account for both physical stressors and emotional stressors. For instance, some questions asks about problems during the past week at work or in regular daily activities as a result of physical health whereas other questions ask about problems at work and so forth as a result of emotional problems, such as feeling anxious or depressed. The test also assesses for physical health and emotional problems interfering with social activities. Responses are entered into a web-based scoring system by OptumInsight and generates a Mental CS and Physical CS score. Scores can range from 0 to 100 for each CS, with higher scores reflecting higher HRQOL. Scores below 40 are considered evidence of significant impairment. The internal consistency is good, with Cronbach's alphas of 0.87 for Mental CS and 0.91 for Physical CS (Ware et al., 2010). Cheak-Zamora et al. (2009) demonstrated that the test-retest reliability ranges from moderate (0.60 for Mental CS) to good (0.78 for Physical CS).

Patient Activation Measure (PAM). The PAM (Hibbard et al., 2005) is a 13-item self-report measurement of self-efficacy in self-management that takes into account patient knowledge, skill, and confidence. The test asks patients the extent they agree or disagree with each statement with options of *Disagree Strongly, Disagree, Agree, Agree Strongly*, or *N/A* if the statement does not apply. Example items include, "I am confident I can help prevent or reduce problems associated with my health" and "I know what treatments are available for my health problems). The 13-item PAM is a shortened version of a 22-item PAM and it retains similar

psychometric properties to its predecessor (Hibbard et al., 2005). Further, the PAM is found to be more reliable with persons who have chronic illness than with those who do not. The Rasch Person reliability range is 0.81 to 0.85, and construct validity was established by comparing it with the validated 22-item PAM (Hibbard et al., 2005).

Responses are scored via a formula that generates scores ranging from 0 (*low activation*) to 100 (*high activation*). Based on PAM score, a person can be categorized as having Level 1, 2, 3, or 4 of activation (Bartels et al., 2013). Level 1 is learning the patient role, Level 2 is building knowledge and confidence, Level 3 is early action, and Level 4 is maintaining behaviors. The higher the level, the more engaged a patient is in their health care and the better self-management behaviors they have.

Demographics. Participants completed demographic questionnaire after completing the other assessments. Demographic data includes participant age, gender, race or ethnicity group identification, employment and average income, level of education, and health insurance.

Intervention

Concreteness Training Self-Help Absorption Exercise (CT). The CT exercise (Watkins & Moberly, 2008) is a guided intervention. For this study, the examiner modified the absorbing memory part of CT to help participants develop more concrete thought processes to ward off rumination and emotional reactivity (Watkins & Moberly, 2008).

The absorption exercise is a scripted guide that prompts participants to fully recreate a memory in their mind. Participants received prompts to vividly and concretely notice all details of a specific and positive memory. Then, prompts asked participants to describe what they are noticing, seeing, hearing, and experiencing while reminding them to be completely focused on, or absorbed in, the exercise. The exercise concludes with prompts for participants to notice and

process the activity. For example, "notice what is important to you...what motivates you...what draws your attention." Ultimately, the exercise has participants consider their personal values. In this study, the examiner modified previous versions of the absorption exercise so that it is much shortened to a 7-minute self-administration rather than recorded during a 45-minute individual session.

Procedure

Recruitment for the study was done through Internet postings advertising the study's purpose, inclusion criteria, and a Survey Monkey link to pretest measures. Upon agreement to participate in the study, participants completed the pretest measures and then received instructions via e-mail for downloading the iOS application. The application randomly assigned participants to the treatment group or control group.

The pretest included a demographics questionnaire and administration of the GAD-7, PHQ-2, FACIT-Sp, SF-12v2, and PAM for all participants (see Appendix C). All participants received instructions via e-mail to download the iOS application and be instructed to open the application once per day. All participants rated their mood upon starting the application. Then, based on random assignment, participants either listened to a concreteness training intervention play or had nothing further to complete. After 14 days, participants were invited to complete the posttest on Survey Monkey, which included the GAD-7, PHQ-2, FACIT-Sp, SF-12v2, and PAM again.

Chapter 3

Results

Sample Characteristics

Although 41 people completed the pretest measures, only 9 participants completed all parts of the study (see Figure 1), which included downloading an iOS application and completing posttest measures. As shown in Table 1, 31 out of all the participants who completed the pretest ($n = 41$) were women (75.61%) and 10 were men (24.39%). The sample ranged in ages from 18 to 66 years. Most of the sample identified as White/European American (70.73%), were college graduates with at least an Associate's degree (41.46%), were unemployed (41.51%), and were single (48.78%). The reported diagnoses were coded into 13 types: neurological (24.39%), degenerative (14.63%), autoimmune (12.20%), gastrointestinal (7.32%), other (7.32%), unreported (7.32%), cancer (4.88%), pulmonary (4.88%), cardiac (4.88%), metabolic (4.88%), infection (2.44%), renal (2.44%), and tumor (2.44%). Most had private health insurance (34.15%) or Medicare/Medicaid (19.51%). The most common range reported for duration of the illness was 4-10 years (36.59%).
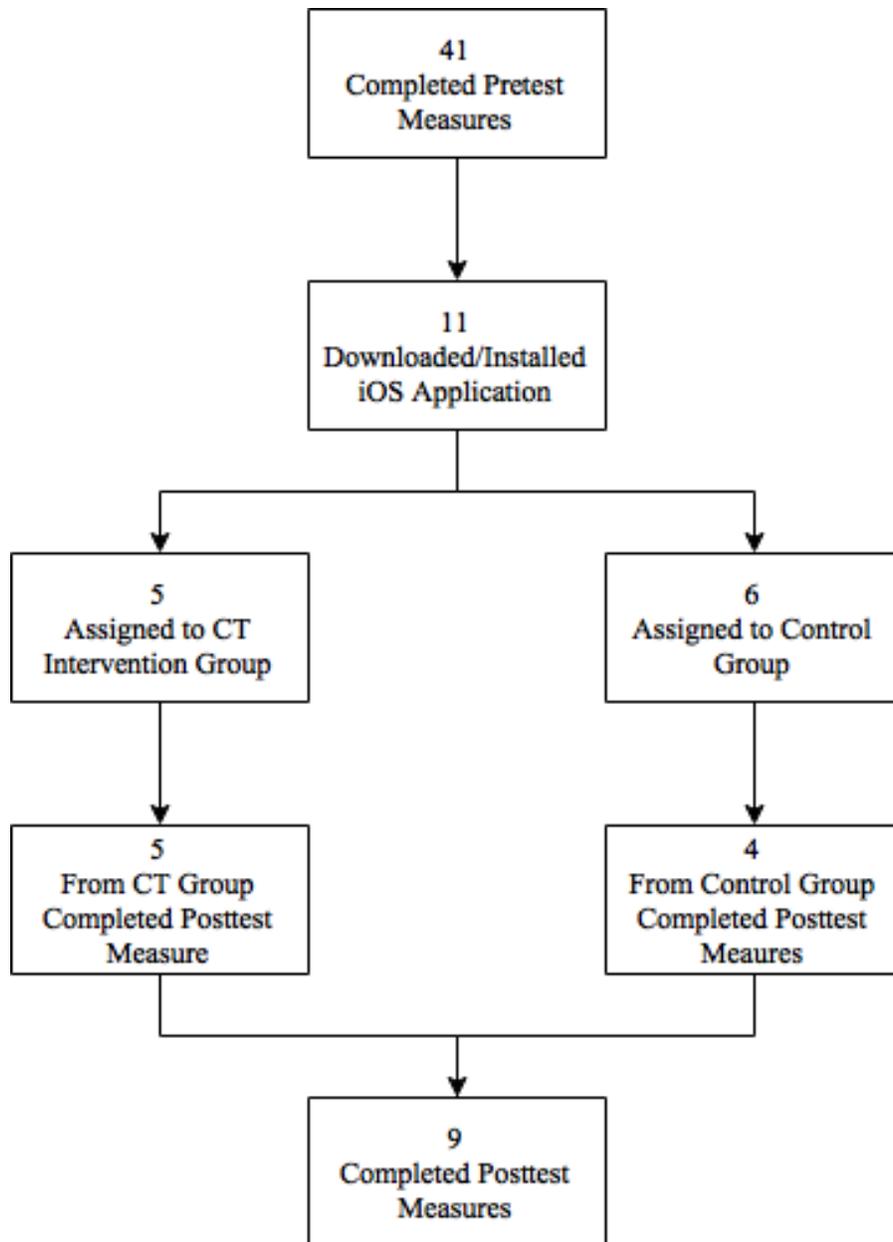
Figure 1

Participant Assignment

Table 1

Demographic and Clinical Characteristics of All Participants

Characteristic	*M*	*SD*	*n*	*%*
Age (years)	36.10	12.63	41	
Gender				
Men			10	24.39
Women			31	75.61
Race/Ethnicity				
Black/African American			2	4.88
Hispanic/Latino			7	17.07
Asian American			1	2.44
Native American/Alaskan			1	2.44
White/European American			29	70.73
Other			1	2.44
Marital Status				
Single, Never Married			20	48.78
Married			9	21.95
Living with Partner			4	9.76
Separated			2	4.88
Divorced			6	14.63
Employment Status				
Full time			8	19.51
Part time			6	14.63
Retired			2	4.88
On disability			8	19.51
Unemployed			17	41.46
Average Yearly Income				
Less than $10,000			17	41.46
$10,000 to $29, 999			15	36.59
$30,000 to $59,999			4	9.76
$60, 000 to$79,999			2	4.88
$80, 000 to $99,999			2	4.88
$100,000 or more			1	2.44

Demographic and Clinical Characteristics of All Participants (continued)

Education		
No high school	1	2.44
Some high school	1	2.44
High school graduate/GED	6	14.63
Some college	16	39.02
College graduate	17	41.46
Health Insurance		
None	5	12.20
Medicaid	7	17.07
Medicare/Medicaid	8	19.51
Medicare	5	12.20
Private	14	34.15
VA	2	4.88
Primary Diagnosis		
Cancer	2	4.88
Autoimmune	5	12.20
Gastrointestinal	3	7.32
Infection	1	2.44
Renal	1	2.44
Tumor	1	2.44
Pulmonary	2	4.88
Cardiac	2	4.88
Neurological	10	24.4
Degenerative	6	14.63
Metabolic	2	4.88
Other	3	7.32
Unknown	3	7.32
Duration of Illness		
0-3 years	10	24.39
4-10 years	15	36.59
11-19 years	10	24.39
20+ years	6	14.63

Sample Analysis of All Participants at Pretest

The average score for the 41 participants who completed the pretest on the PHQ-2 was

1.63 ($SD = 0.66$) and on the GAD-7 was 11.88 ($SD = 5.53$). Means for anxiety were elevated and

indicative of the possible presence of generalized anxiety in the sample. The average score for

FACIT-Sp was 20.14 ($SD = 10.33$). The average PAM score was 58.89 ($SD = 16.26$). The

average Mental CS was 33.12 (SD = 9.14), and the average Physical CS was 39.05 (SD = 8.76), both of which reflect lower HRQOL.

A simple linear regression was calculated to predict participant's anxiety levels (GAD-7) based on their spiritual well-being (FACIT-Sp). A significant regression equation was found (F(1, 39) = 11.002, p < .01), with an R^2 of .220. Participants' predicted anxiety is equal to 17.26 - .261 x Spiritual Well-being Score when spiritual well-being is measured by FACIT-Sp scores. In other words, participants' average anxiety score decreased .261 for each point on the FACIT-Sp. No significant regression equation was found for depression and spiritual well-being.

Characteristics of Pretest-Only Participants Versus Final Sample

Table 2 displays the demographic characteristics of the final sample (n = 9). All 9 participants were women (100.00%). The sample ranged in ages from 21 to 47 years. Most of the final sample (n = 9) identified as White/European American (89.89%), were college graduates with at least an Associate's degree (66.67%), were unemployed (44.44%), and were single (44.44%). The most common reported diagnoses were: neurological (22.22%), degenerative (22.22%), and gastrointestinal (22.22%). Participants mainly had private insurance (44.44%) or Medicare (33.33%). The most common ranges reported for duration of the illness were 4-10 years (33.33%) and 20+ years (33.33%).

Demographics of pretest-only participants (n = 30) are also found in Table 2. Twenty-one pretest-only participants were women (70.00%) and nine were men (30.00%). The sample ranged in ages from 18 to 66 years. As with the both sets of participants described above, most of the pretest-only sample (n = 9) identified as White/European American (63.33%), were unemployed (40.00%), and were single (46.67%). Unlike the participants described above, most

Table 2

Demographic and Clinical Characteristics of Final Sample

	Pretest-Only				*Final Sample*			
Characteristic	*M*	*SD*	*n*	%	*M*	*SD*	*n*	%
Age (years)	37.47	13.11	30		34.78	10.47	9	
Gender								
Men			9	30.00			0	0.00
Women			21	70.00			9	100.00
Race/Ethnicity								
Black/African American			2	6.67			0	0.00
Hispanic/Latino			6	20.00			1	11.11
Asian American			1	3.33			0	0.00
Native American			1	3.33			0	0.00
White/Euro American			19	63.33			8	88.89
Other			1	3.33			0	0.00
Marital Status								
Single, Never Married			14	46.67			4	44.44
Married			7	23.33			2	22.22
Living with Partner			2	6.67			2	22.22
Separated			2	6.67			0	0.00
Divorced			5	16.67			1	11.11
Employment Status								
Full time			6	20.00			1	11.11
Part time			3	10.00			3	33.33
Retired			2	6.67			0	0.00
On disability			7	23.33			1	11.11
Unemployed			12	40.00			4	44.44
Average Yearly Income								
Less than $10,000			13	43.33			3	33.33
$10,000 to $29, 999			13	43.33			2	22.22
$30,000 to $59,999			2	6.67			1	11.11
$60, 000 to$79,999			0	0.00			2	22.22
$80, 000 to $99,999			1	3.33			1	11.11
$100,000 or more			1	3.33			0	0.00

Demographic and Clinical Characteristics of Final Sample (continued)

Education				
No high school	1	3.33	0	0.00
Some high school	1	3.33	0	0.00
High school/GED	5	16.67	1	11.11
Some college	12	40.00	2	22.22
College graduate	11	36.67	6	66.67
Health Insurance				
None	5	16.67	0	0.00
Medicaid	6	20.00	1	11.11
Medicare/Medicaid	7	23.33	1	11.11
Medicare	2	6.67	3	33.33
Private	8	26.67	4	44.44
VA	2	6.67	0	0.00
Primary Diagnosis				
Cancer	2	6.67	0	0.00
Autoimmune	3	10.00	1	11.11
Gastrointestinal	0	0.00	2	22.2
Infection	1	3.33	0	0.00
Renal	1	3.33	0	0.00
Tumor	1	3.33	0	0.00
Pulmonary	1	3.33	1	11.11
Cardiac	2	6.67	0	0.00
Neurological	8	26.67	2	22.2
Degenerative	4	13.33	2	22.2
Metabolic	2	6.67	0	0.00
Other	3	10.00	0	0.00
Unknown	2	6.67	1	11.11
Duration of Illness				
0-3 years	6	20.00	2	22.22
4-10 years	12	40.00	3	33.33
11-19 years	8	26.67	2	22.22
20+ years	3	10.00	2	33.33

in the pretest-only group completed some college (40.00%) while 33.67% were college graduates

with at least an Associate's degree. Private insurance was most prevalent (26.67%) followed by

Medicare/Medicaid (23.33%). The most common reported diagnoses were: neurological

(26.67%), degenerative (13.33%), autoimmune (10.00%), and other (10.00%). The most

common ranges reported for duration of the illness was 4-10 years (40.00%).

The final sample was mostly White females. All but one person (11.11%) who completed

the study identified as White/European American whereas 36.66% of the pretest-only group

were non-White. The percentage of college graduates was higher for the final sample (66.67%)

than for the pretest-only participants (36.67%).

Sample Analysis of Pretest-Only Participants Versus Final Sample

A series of independent-samples *t* tests compared the means of those participants who did

not download the application, thereby only completing the pretest measures ($n = 30$) with those

who completed the study, or the final sample ($n = 9$; see Table 3). The two participants who

downloaded the application and did not complete the posttest were left out of this analysis. No

significant differences were found between the final sample and the pretest-only participants on

any of the variables. The final sample had lower depression and anxiety but more physical

stressors. Pretest-only participants had higher spiritual well-being, although not so much so that

the difference was significant. No significant differences were found for age, although the age

range for the final sample (21-47) was narrower than the age range for the pretest-only

participants (18-66).

Final Study Sample

The sample size of those who downloaded the iOS application and were subsequently

randomly assigned to a control group and an intervention group and completed both pre-test and

post-test measures is effectively only nine participants. Therefore, the results can only be

considered suggestive.

Table 3

Descriptive Statistics for Final Sample versus Pretest-Only

Variable	Final Sample ($n = 9$)		Pretest-Only ($n = 30$)	
	M	SD	M	SD
GAD-7	9.44	6.06	12.83	5.21
PHQ-2	1.33	0.71	1.73	0.64
FACIT-Sp	18.33	7.84	21.20	9.93
SF-12v2 Mental CS	33.14	7.13	32.46	9.55
SF-12v2 Physical CS	34.71	6.71	40.64	9.13
PAM	61.07	14.59	58.62	16.81

A series of independent-samples *t*-tests were run comparing the mean pretest scores of the CT group and the control groups for the nine participants who completed the study (see Table 4 for descriptive statistics). No significant differences were found for any of the variables.

Effect sizes were calculated for the pretest scores for the final sample ($n = 9$; see Table 5) since the final sample size was small. The effect size for the PHQ-2, SF-12v2 Physical CS, and the PAM were large. The effect size for the GAD-7, FACIT-Sp, and SF-12v2 Mental CS were small to medium. Therefore, the groups may have had notable differences at pretest.

Table 4

Descriptive Statistics at Pre- and Post-Intervention for Final Sample

	Pre-Intervention				Post-Intervention			
	CT (n=5)		Control (n=4)		CT (n=5)		Control (n=4)	
Variable	M	SD	M	SD	M	SD	M	SD
GAD-7	9.80	5.50	9.00	7.57	8.4	5.32	7.75	7.54
PHQ-2	1.60	0.55	1.00	0.82	1.40	0.89	1.00	0.82
FACIT-Sp	20.40	3.78	15.75	11.35	19.00	6.04	17.00	14.09
SF-12v2 Mental CS	33.49	8.90	32.72	5.45	38.69	15.43	39.12	17.08
SF-12v2 Physical CS	37.31	3.27	31.47	8.97	33.55	6.15	34.88	4.06
PAM	67.28	13.34	53.30	13.61	67.08	10.75	55.30	17.46

Table 5

Effect Sizes of Final Sample

Variable	Pre-Intervention	
	Cohen's d	r
GAD-7	0.12	0.06
PHQ-2	0.86	0.82
FACIT-Sp	0.55	0.27
SF-12v2 Mental CS	0.10	0.05
SF-12v2 Physical CS	0.87	0.40
PAM	1.02	0.46
Activation Level	0.76	0.35

Psychological Symptoms

The study aimed to demonstrate that the shortened and mobile CT intervention would decrease depression and anxiety. An independent-samples *t*-test comparing the mean posttest depression scores for the CT group and the control group found no significant differences ($t(7) =$ -.69, p > .05). The mean for the CT group ($M = 1.40$, $SD = .89$) was not significantly different than the mean for the control group on depression ($M = 1.00$, $SD = .81$). An independent-samples *t* test comparing the mean posttest anxiety scores for the CT group and the control group also found no significant differences, $t(7) = -.15$, p > .05. The mean for the CT group ($M = 8.40$, $SD =$ 5.32) was not significantly different than the mean for the control group on anxiety ($M = 7.75$, $SD = 7.54$). The effect sizes were calculated using pairwise comparisons of standardized mean differences to negate the effect of small sample size using the d based statistic. Comparisons of the effect sizes of the treatment and the control groups at both pretest and posttest were calculated using the homogeneity of effect size test (see Table 6; Lambert & Flowers, 1998). This procedure was used because of the small nature of the sample size. The results indicate that there were no significant differences in change in effect size from pretest to posttest between the CT and the control group for anxiety, $z = -1.45$, p = .07 (one tailed). This means that anxiety did not change significantly from pre to post for either the intervention or the control group. The homogeneity of effect size test was conducted for depression. Since the effect size for the control group between pretest and posttest showed no difference, the homogeneity of effect size test was not calculable.

Table 6

Effect Sizes, Correlations, z Scores and Probability of Final Sample

Variable	Correlation		Effect Size		z	p
	CT r₁	*Control r₂*	*CT d'₁*	*Control d'₂*		
GAD-7	.81	.98	.42	1.0	-1.45	.07
PHQ-2	.92	--	.44	--	--	--
FACIT-Sp	.27	.98	.23	.34	-.61	.27
SF-12v2 Mental CS	.95	.24	.7	.39	.36	.36
SF-12v2 Physical CS	.94	.62	1.14	.48	.94	.17
PAM	.76	.98	.02	.43	-2.15	.01

Health-Related Quality of Life

The study aimed to demonstrate an effect on HRQOL. An independent-samples *t* test comparing the mean posttest SF-12v2 Mental CS scores for the CT group and the control group found no significant differences, $t(7) = .04$, p > .05. The mean for the CT group ($M = 38.69$, *SD* = 15.43) was not significantly different than the mean for the control group ($M = 39.12$, *SD* = 17.08). An independent-samples *t* test comparing the mean posttest SF-12v2 Physical CS scores for the CT group and the control group also found no significant differences, $t(7) = .37$, p > .05. The mean for the CT group ($M = 33.55$, *SD* = 6.15) was not significantly different than the mean for the control group ($M = 34.88$, *SD* = 4.06). The results of the homogeneity of effect size test indicate that there were no significant differences in change in effect size from pretest to posttest between the CT and the control group for Mental CS, $z = .36$, p = .36 (one tailed) or for Physical CS, $z = .94$, p = .17 (one tailed).

Spiritual Well-Being

An independent-samples *t*-test comparing the mean posttest FACIT-Sp scores of the CT and the control groups found no significant difference between the two groups, $t(7) = .14$, $p > .05$. The posttest mean of the CT group ($M = 19$, $SD = 6.04$) was not significantly different from the posttest mean of the control group ($M = 17$, $SD = 14.09$). The results of the homogeneity of effect size test indicate that there were no significant differences in change in effect size from pretest to posttest between the CT and the control group for FACIT-Sp, $z = .61$, $\underline{p} = .27$ (one tailed).

A simple linear regression was calculated to predict depression levels (PHQ-2) of the CT group ($n = 5$) based on their spiritual well-being (FACIT-Sp) at posttest. A significant regression equation was found, $F(1, 3) = 10.198$, $p = .05$, with an R^2 of .773. Participants' predicted depression is equal to 3.873 - .130 x Spiritual Well-being when spiritual well-being is measured by FACIT-Sp scores. Participants' average depression score decreased .130 for each point on the FACIT-Sp. No significant regression equation was found for anxiety and spiritual well-being. Additionally, for the control group, no significant regression equation was found for predicting either depression or anxiety levels based on spiritual well-being.

Patient Activation

Only seven of the participants had valid PAM scores at posttest that could be included in data analysis. An independent-samples *t* test comparing the mean posttest PAM scores of the CT and the control groups found no significant difference between the two groups, $t(7) = -1.26$, $p > .05$. The mean of the CT group ($M = 67.08$, $SD = 10.75$) was not significantly different from the mean of the control group ($M = 55.28$, $SD = 17.46$). An independent-samples *t* test comparing the mean posttest activation levels of the CT and control group found a significant difference

between the means of the two groups, $t(7) = -1.6$, p < .05. The results of the homogeneity of effect size test indicate that there were no significant differences in change in effect size from pretest to posttest between the CT and the control group for the PAM, $z = -2.15$, $\underline{p} = .01$ (one tailed).

Chapter 4

Discussion

This study aimed to pilot administration of a cognitive-behavioral based intervention, concreteness training, via an iOS application for persons qualifying for PCS. The effects of the CT intervention on depression, anxiety, HRQOL, and patient activation were assessed.

Feasibility of an Intervention Study in Palliative Care Sample

Although initial interest in the study provided 41 participants for the pretest, only 9 participants completed the study. Those who were most likely to become part of the final sample were White females who were college graduates and had some form of insurance. Further, those who were less depressed and less anxious were more likely to complete the study. This suggests that the intervention study may require a greater level of functioning than is accessible for many who qualify for PCS. Therefore, additional resources that are not online may be needed for non-White and/or male patients.

Those who completed the study and comprised the final sample ($n = 9$) reported lower spiritual well-being at pretest. If spiritual well-being is in fact a protective factor, perhaps this contributed to why the pretest-only participants did not complete study. This natural support may have been sufficient and made completing an intervention study less appealing.

Concreteness Training and Depression and Anxiety

The sample of all participants who complete the pretest ($n = 41$) demonstrated elevated levels of depression and anxiety. This supports research that has found increased levels of

depression and anxiety in persons receiving PCS (De Faye et al., 2006). Although previous research found a significant effect on CT reducing anxiety (Galfin et al., 2011), the current study found no significant effect. Previous research found that those with mild to moderate depression reported improvement after a CT intervention compared to controls (Watkins, Baeyens, & Read, 2008), but the current study found no significant differences. The current study used a different and shorter measure for depression than previous studies. The PHQ-2 is an effective tool for measuring depression, but may not have picked up on the ruminating qualities of depression, which are common among those qualifying for PCS (Galfin & Watkins, 2012). Since CT addresses abstract rumination, a different scale that specifically measures rumination may be more useful in assessing efficacy of the CT intervention.

Concreteness Training and Health-Related Quality of Life

A primary goal of palliative care is to improve quality of life (Sherman & Cheon, 2012). The current study aimed to contribute to this goal through the self-guided intervention. However, no significant effect was found. Previous research used a different measure for quality of life that was more general and less focused on health-related issues. Nonetheless, previous research also failed to demonstrate that the intervention had a significant effect on quality of life (Galfin et al., 2011). The differences between groups at pretest demonstrated a large effect size on the Physical CS, which suggest there may have been some differences in the physical component of quality of life between the two groups prior to completing the study.

Concreteness Training and Spiritual Well-Being

The results of all of the participants that completed the pretest in the study ($n = 41$) replicated previous research that showed an inverse relationship between anxiety and spiritual well-being (Peterman et al., 2002). As spiritual well-being scores increased, anxiety scores

decreased. For the CT group, as spiritual well-being scores increased, depression scores

decreased whereas the same was not true for the control group. The presence of spiritual well-

being with the CT intervention may have been more impactful than either alone, but the sample

size was too small to make any strong conclusions. Nonetheless, spiritual well-being could be a

protective factor against extreme levels of anxiety for persons with chronic illness who qualify

for PCS.

Concreteness Training and Patient Activation

Recent changes in health care reform have increased the demand for mental health

workers (Glied & Ma, 2015). One adjustment is the utilization of extenders and telehealth

services (Rutledge, Haney, Bordelon, Renaud, & Fowler, 2014). Another option is an increase in

self-management. For patients to benefit fully from their care, increased patient activation is

desirable (Magnezi et al., 2014). To fully benefit from the intervention study, participants would

need to be self-motivated and be able to engage in some level of mindfulness to direct their

thoughts as the prompts suggest. These abilities may also be essential to managing personal

health care. The CT intervention may still have an effect on activation but it is not possible to

demonstrate this at this time due to the small sample size.

Efficacy of Concreteness Training

Even though the results of group comparisons were not significant and the homogeneity

of effect size test were not significant, this may not mean that the CT intervention is ineffective.

The control group and CT group were different at pretest, as indicated by the large effect size on

various dependent variables. Therefore, even though the homogeneity of effect size test was run

to negate the small sample size, the reason for no effect may be due to differences at pretest

between the control group and the CT group. Therefore, any effect of the intervention was not possible to identify, even when using statistics to control for small sample size.

Implications

      With more people gaining access to services than ever before with the Affordable Health Care Act and the potential for more people to have access to PCS (Sherman & Cheon, 2012), greater understanding of the needs of those receiving PCS becomes important. Considering the low HRQOL scores for all 41 participants, providers should work toward finding ways to increase HRQOL, especially the mental components. The average anxiety of the 41 participants reached levels to suggest the presence of an anxiety disorder, which emphasize the importance of finding interventions to reduce anxiety. One factor related to lower anxiety prior to intervention was spiritual well-being. After the intervention, spiritual well-being was related to lower reported depression for the CT group. For this reason, maintaining the presence of chaplains on palliate care teams seems essential. Although the study did not attempt to increase spiritual well-being, it may be a helpful factor to assess. For instance, in future research, spiritual well-being may be an important factor to rule-out as being linked to patient's reported improvement in depression and anxiety.

      Although the use of technology is becoming more prevalent, it may be important to continue providing resources that are not in iOS format, as that may limit those who can benefit from resource. Additionally, providers may need to consider that different approaches may be warranted for different demographic groups. For instance, more understanding about the types of approaches that work best with non-White and non-female patients would be beneficial.

Limitations

The study sample was small, and therefore generalizations based on the study are difficult. The targeted population is difficult to access, so moving the study completely online was one method the examiner used to make the study more accessible. Nonetheless, few participants completed all aspects of the study and utilization and compliance of those who did download the application was low. Perhaps this was due to intervention not being as powerful as the disease process or perhaps those who initially expressed interest did not possess sufficient self-motivation to proceed with the study. Additionally, the shortened CT intervention in this study may not have been as potent as the longer version used in previous studies.

Another limitation was the use of a depression screener rather than a longer measure of depression. The PHQ-2 only has a score range from 0 to 6. An alternative measure with a greater range may better capture differences over time. Also, those who completed the study reported less depression and anxiety than those who did not download the application. As such, perhaps more personalized interventions are necessary to effectively work with persons who are more distressed. Further, implementation of the study completely through internet and an iOS application limited the pool of potential participants.

Suggestions for Future Research

A primary goal for future research would be to replicate with a larger sample size. Additionally, limiting diagnoses may be beneficial. There was a great diversity of diagnoses, and many participants reported neurological diagnoses that may or may not have interfered with their ability to complete the study. Replicating the study comparing diagnoses would enrich the research and help determine if some patients are more able to find benefit from the CT

intervention than others based on diagnosis. Further, a larger sample may eliminate differences between the CT and control groups at pretest that might have influenced the results.

Expanding the operating system to include the Android platform would open up administration to a greater portion of the population. Then, it would be beneficial to research the efficacy of a strictly mobile application administered interventions for persons reporting elevated levels of depression and anxiety compared to in-person administration of interventions. Researchers could assess whether a certain level of distress necessitates in-person intervention. Further, future research could identify trends of which approaches have the best efficacy based on various demographic factors. With expanding telehealth services, this would be imperative to ascertain.

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Appendix A

Invitation to Participate

Greetings!

I am seeking participants to for my study who are adults, have access to an iOS device, such as an iPhone or iPad or iPod touch, and have a chronic or incurable illness. If as a result of illness, you have been to a hospital two or more times within three months (whether recently or in the past), then you qualify for this study.

There will be a $50 gift card drawing for those who complete the study!!!

This study will require participation for approximately 16 days and includes completing an online survey and downloading a FREE iOS application. You will be encouraged to open the application daily for 14 days and follow the directions, which may or may not include listening to a recorded coping method that is less than 10 minutes. After you have opened the iOS application daily for 14 days, you will complete an additional online survey.

The goal of the research is to help identify ways to decrease distress and improve quality of life among persons with chronic or incurable illness. You may benefit from this study in that aspect or at least contribute to research that will potentially benefit others in the future.

This study has been approved by the Human Subjects Research Committee of George Fox University.

To begin, please click on the following link to start the survey:
https://www.surveymonkey.com/s/ReFocus2015

Thank you in advance for your support!

Diana S. H. Zarb, M.A.
Doctoral Candidate, Graduate Department of Clinical Psychology
George Fox University

Appendix B

Informed Consent

Purpose
The goal of the research is to help identify ways to decrease psychological distress and improve quality of life among persons qualifying for palliative care.

What to Expect
Your participation in this study will last 16 days. You will complete self-report tests to measure psychological distress, spiritual well-being, and quality of life 2 times throughout the course of the study. Also, you will be encouraged to practice the coping method daily on your own for 16 days.

Potential Risks/Discomforts
A risk of the study is simply completing the self-report questions may increase psychological distress. Further, there is a risk that the procedure would not make you feel better and could make you feel worse, meaning the time you give to the study will not benefit you.

Benefits
The benefits to this study include possible reduction of psychological distress and increase of quality of life. Further, the results of the study will contribute to research and potentially benefit others in the future.

Confidentiality
All of your responses and your participation in the study will be kept confidential. Data collected during the study will be kept separate from any identifying information and will be confidentially stored and double-locked.

Involvement is Voluntary
Your participation in this study is voluntary. You may decline participation at any time. There is no penalty for not participating or discontinuing participation.

Compensation
Those who complete both surveys will be entered into a random drawing for a $50 gift card.

Who to Contact with Questions
Please contact the primary researcher, Diana Zarb, MA, at dzarb@georgefox.edu or Luann Foster, PsyD at lfoster@georgefox.edu

Please confirm your consent to participate in this study by providing the e-mail address to which you would like to receive instructions for accessing the iOS application. **All responses will be kept confidential.**

Appendix C

Measures

Generalized Anxiety Disorder 7-item (GAD-7) scale

Over the last 2 weeks, how often have you been bothered by the following problems?	Not at all sure	Several days	Over half the days	Nearly every day
1. Feeling nervous, anxious, or on edge	0	1	2	3
2. Not being able to stop or control worrying	0	1	2	3
3. Worrying too much about different things	0	1	2	3
4. Trouble relaxing	0	1	2	3
5. Being so restless that it's hard to sit still	0	1	2	3
6. Becoming easily annoyed or irritable	0	1	2	3
7. Feeling afraid as if something awful might happen	0	1	2	3
Add the score for each column		+	+	+
Total Score *(add your column scores)* =				

If you checked off any problems, how difficult have these made it for you to do your work, take care of things at home, or get along with other people?

Not difficult at all _____
Somewhat difficult _____
Very difficult _____
Extremely difficult _____

Source: Spitzer RL, Kroenke K, Williams JBW, Lowe B. A brief measure for assessing generalized anxiety disorder. *Arch Inern Med.* 2006;166:1092-1097.

PHQ-2

Over the last 2 weeks, how often have you been bothered by any of the following problems? (Use "✔" to indicate your answer)	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3

SF-12v2

Your Health and Well-Being

This survey asks for your views about your health. This information will help keep track of how you feel and how well you are able to do your usual activities. *Thank you for completing this survey!*

For each of the following questions, please mark an ☒ in the one box that best describes your answer.

1. In general, would you say your health is:

Excellent	Very good	Good	Fair	Poor
▼	▼	▼	▼	▼
☐₁	☐₂	☐₃	☐₄	☐₅

2. The following questions are about activities you might do during a typical day. Does <u>your health now limit you</u> in these activities? If so, how much?

	Yes, limited a lot	Yes, limited a little	No, not limited at all
	▼	▼	▼
ₐ <u>Moderate activities</u>, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf..........................	☐₁	☐₂	☐₃
ᵦ Climbing <u>several</u> flights of stairs	☐₁	☐₂	☐₃

3. During the <u>past week,</u> how much of the time have you had any of the following problems with your work or other regular daily activities <u>as a result of your physical health</u>?

	All of the time ▼	Most of the time ▼	Some of the time ▼	A little of the time ▼	None of the time ▼
a. <u>Accomplished less</u> than you would like	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
b. Were limited in the <u>kind</u> of work or other activities	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

4. During the <u>past week,</u> how much of the time have you had any of the following problems with your work or other regular daily activities <u>as a result of any emotional problems</u> (such as feeling depressed or anxious)?

	All of the time ▼	Most of the time ▼	Some of the time ▼	A little of the time ▼	None of the time ▼
a. <u>Accomplished less</u> than you would like	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
b. Did work or other activities <u>less carefully than usual</u>	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

5. During the <u>past week,</u> how much did <u>pain</u> interfere with your normal work (including both work outside the home and housework)?

Not at all ▼	A little bit ▼	Moderately ▼	Quite a bit ▼	Extremely ▼
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

6. These questions are about how you feel and how things have been with you <u>during the past week</u>. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the <u>past week</u>…

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
	▼	▼	▼	▼	▼
a. Have you felt calm and peaceful?......................	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
b. Did you have a lot of energy?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
c. Have you felt downhearted and depressed?......................	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

7. During the <u>past week</u>, how much of the time has your <u>physical health or emotional problems</u> interfered with your social activities (like visiting with friends, relatives, etc.)?

All of the time	Most of the time	Some of the time	A little of the time	None of the time
▼	▼	▼	▼	▼
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

Thank you for completing these questions!

Insignia Health

Below are some statements that people sometimes make when they talk about their health. Please indicate how much you agree or disagree with each statement as it applies to you personally by circling your answer. Your answers should be what is true for you and not just what you think others want you to say.

If the statement does not apply to you, circle N/A.

1.	When all is said and done, I am the person who is responsible for taking care of my health	Disagree Strongly	Disagree	Agree	Agree Strongly	N/A
2.	Taking an active role in my own health care is the most important thing that affects my health	Disagree Strongly	Disagree	Agree	Agree Strongly	N/A
3.	I am confident I can help prevent or reduce problems associated with my health	Disagree Strongly	Disagree	Agree	Agree Strongly	N/A
4.	I know what each of my prescribed medications do	Disagree Strongly	Disagree	Agree	Agree Strongly	N/A
5.	I am confident that I can tell whether I need to go to the doctor or whether I can take care of a health problem myself	Disagree Strongly	Disagree	Agree	Agree Strongly	N/A
6.	I am confident that I can tell a doctor concerns I have even when he or she does not ask	Disagree Strongly	Disagree	Agree	Agree Strongly	N/A
7.	I am confident that I can follow through on medical treatments I may need to do at home	Disagree Strongly	Disagree	Agree	Agree Strongly	N/A
8.	I understand my health problems and what causes them	Disagree Strongly	Disagree	Agree	Agree Strongly	N/A
9.	I know what treatments are available for my health problems	Disagree Strongly	Disagree	Agree	Agree Strongly	N/A
10.	I have been able to maintain (keep up with) lifestyle changes, like eating right or exercising	Disagree Strongly	Disagree	Agree	Agree Strongly	N/A
11.	I know how to prevent problems with my health	Disagree Strongly	Disagree	Agree	Agree Strongly	N/A
12.	I am confident I can figure out solutions when new problems arise with my health	Disagree Strongly	Disagree	Agree	Agree Strongly	N/A
13.	I am confident that I can maintain lifestyle changes, like eating right and exercising, even during times of stress	Disagree Strongly	Disagree	Agree	Agree Strongly	N/A

Appendix D

Demographics Questionnaire

Please check the answer that best applies or fill in the corresponding empty space with the most appropriate answer. **All responses are confidential.**

1. What is your gender:

    ____Male

    ____Female

2. What is your age: _____

3. What is your race/Ethnicity (please check all that apply)

    ____Black/African American   ____Native American/Alaska Native

    ____Hispanic/Latino(a)   ____European American/Caucasian

    ____Asian American   ____Hawaiian/Pacific Islander

4. What is your current marital status?

    _____ Single, Never Married   _____ Separated

    _____ Married   _____ Divorced

    _____ Living with a partner   _____ Widowed

5. What is your employment status?

    _____ full time   _____ part time

    _____ unemployed   _____ on disability

    _____ retired

6. What is your average yearly income:

    ____Less than $10,000   ____$10,000-20,000

    ____$20,000-30,000   ____$30,000-40,000

    ____$40,000-50,000   ____$50,000-60,000

    ____$60,000-80,000   ____$80,000-100,000

_____$100,000 or more

7. What is the highest level of education that you have completed?

_____ No high school   _____ Some High School

_____ GED / High School Diploma   _____ Some College

_____ 2-yr college (Associates Degree)   _____ 4-year college (Bachelor's Degree)

_____ Masters Degree   _____ Doctoral Degree

_____ Professional Degree (MD or JD, etc.)

8. Type of health insurance?

_____ None   _____ Private

_____ Medicaid/OHP   _____ Other:_____

_____ Medicare/Medicaid

_____ Medicare

9. Current diagnosis _____

10.   Duration of illness _____

11.   Type of treatment(s)_____

12.   What represents your social support?

_____ Family   _____ Neighbors

_____ Friends   _____ Other:_____

_____ Community Groups   _____ None

_____ Spiritual/Religious Community

Appendix E

Intervention

The Absorption Exercise

"Ok, now, as best you can, just concentrate on following my instructions – keep focusing on what I am saying and on what you are imagining. It might help to close your eyes, so you can concentrate fully on the exercise.

"Ok, now identify a specific memory that involves an absorbing activity. This can included doing something creative, musical, artistic, athletic, focusing on the natural world, participating in sport or dance. Just something in which you can lose yourself in a *good* way and become fully absorbed in the activity. Focus on a memory of doing an absorbing activity that occurred at a specific place and at a specific time. Take time to imagine this situation as vividly and as concretely as you can ... and as best you can, imagine yourself doing this activity ... Go ahead and take a few moments to have a vivid and detailed image of becoming positively absorbed ... imagine that you are there right now, seeing through your own eyes ...experiencing the sensations of being in your own body… hearing ... feeling ... using all of your senses to become fully aware of your experience in the moment. ... And as you imagine this scene, fill it with rich and vivid details that make it more and more real and deep for you ...

"As you continue to visualize this event... focus your attention on any details, any information that was specific and particular to this activity as you recapture the sense of being deeply engaged and positively immersed in what you are doing. [8]

"Briefly and silently describe to yourself what you are noticing. [5] Describe what you are seeing… hearing… feeling… and experiencing. [8]

"Remember to focus on what you are doing and experiencing and nothing else. [8]

"Focus on the details of what you can see and hear – [5] focus your attention on the world around you, concentrating in a deep and relaxed way on the colors ... movements ... sounds... experience becoming more and more absorbed. [8] Focus on the sensations in your body ...concentrate on how your movements naturally follow each other, how they feel right and effortless. [8] Notice how you feel inside. ...Notice how you are attending to the situation - notice if your attention is narrowly focused on a specific detail or if your attention is loose, flexible, shifting easily from one thing to another. [5]

"Notice what you are paying attention to as you become more absorbed in this experience. [5]

"Concentrate on your experience of curiosity ... of creativity ... of playfulness ... of exploring ... of learning ...of connection... of enthusiasm... of warmth...of growth... and of peace...as you imagine doing this activity... let those feelings grow and expand [5]

"Focus your attention on the process of how you are doing the activity ... notice what your mind is focusing on ... little by little, each moment ... Notice what is important to you ... what motivates you ... what draws your attention ... as you become more and more absorbed [5] Focus on how the activity expresses your own personal values...how it reflects what is important and meaningful to you."

<div style="text-align:right">key: ... = 3 second pause   [n] = x second pause</div>

Appendix F

Curriculum Vitae

Diana Zarb

Education

Present	**Doctoral Student in Clinical Psychology (PsyD)** *Emphasis: Health Psychology* George Fox University, Graduate Department of Clinical Psychology: *APA Accredited* Newberg, Oregon **Doctoral Dissertation, Final Defended:** *Efficacy of Concreteness Training with*
Persons	*Qualifying for Palliative Care: Piloting an iOS Application* Doctorate Expected: 2016
2013	**Master of Arts, Clinical Psychology** **George Fox University** Graduate Department of Clinical Psychology: *APA Accredited* Newberg, Oregon Magna Cum Laude
2010	**Master of Arts, Counseling Psychology** **Moody Theological Seminary and Graduate School** Plymouth, Michigan Magna Cum Laude
2004	**Bachelor of Arts, American Culture** **University of Michigan** Ann Arbor, Michigan Cum Laude

Supervised Clinical Experience

2015 –2016 **Internship**
Philhaven, Mt. Gretna, Pennsylvania
Population: Various: psychiatric inpatient all ages, community mental health all ages.
- Provide outpatient therapy in Lancaster and Lebanon counties.
- Facilitate group therapy for partial hospitalization program and for Plain Communities clinic.
- Provide individual therapy to patients enrolled in inpatient or partial hospitalization programs.
- Conduct neuropsychological and psychological testing on adults from inpatient program or Plains Communities clinic.
- Participate in program evaluation, program development, and administration.

- Provide supervised supervision for bachelor-level clinicians.

Supervisors: Melanie Baer, PsyD, Meryl Reist Gibbel, PhD, Cary Habegger, PhD, Robert Justice, PsyD; weekly individual and group supervision.

2014 –2015   **Preinternship**
Preintern
Northwest Occupational Medicine Center, Beaverton, Oregon
Population: adults with chronic pain, public safety applicants.

- Co-therapist with licensed psychologist for individual therapy, group therapy, and biofeedback sessions.
- Develop skills in guided relaxation and functional biofeedback.
- Consult with interdisciplinary team on patients' treatment.
- Conduct outpatient individual therapy.
- Gain experience with law enforcement pre-employment evaluations.

Supervisor: Andrew Barnes, PhD, BCB; weekly individual and group supervision.

2013 –2014   **Program Development**
Palliative Care Consultant
Providence Newberg Medical Center, Newberg, Oregon
Population: ICU patients and families.

- Work with supervisors to further develop a palliative care consultation service for local hospital.
- Pilot service by responding to attending physicians' orders for a palliative care consultation.
- Meet with patients, families, nurse, chaplain, and others to consult patient and families about palliative care so they can make a decision as to whether they will begin palliative care services.

Supervisors: Marie-Christine Goodworth, PhD and Jeri Turgesen, PsyD.

2013 – 2014   **Practicum II**
Intern
Cedar Hills Hospital, Portland, Oregon
Population: Psychiatric inpatient adults.

- Facilitated daily therapy groups: rotated through groups on relapse prevention, general psychological topics, chemical dependency, and trauma-processing for women.
- Consulted with interdisciplinary team on patients' treatment, needs, and discharge planning.
- Engaged in individual treatment planning and milieu therapy with patients.
- Conducted risk assessments as needed and at discharge.
- Completed 1 comprehensive assessment on an active duty military patient.

Cedar Hills Outpatient Program, Portland, Oregon
Population: Psychiatric outpatient adults.

- Facilitated groups for intensive outpatient program.
- Utilized CBT, ACT, and Mindfulness interventions.

Supervisors: Jon Benson, PsyD, Michael Siegel, MS, MFT, NCC, LPC, and Joe Acciaioli, LCSW; weekly individual and group supervision.

2013 – 2014   **Supplemental Practicum**
Behavioral Health Intern, QMHP
Behavioral Health Consultation Crisis Team, Newberg, Oregon
Population: Various - community population of all ages.
- Provided after-hours behavioral health consultation services for emergency department, medical/surgical unit, and ICU approximately once every other week.
- Assessed patients for suicidality, homicidality, ability to care for self, and various other psychological factors affecting medical care.
- Assisted in securing recommended level of care: psychiatric beds, respite care, transportation, and outpatient referrals.
Supervisors: Mary Peterson, PhD, ABPP/CL, William Burhow, Jr, PsyD, and Joel Gregor, PsyD; weekly group supervision that included case presentation and case discussion.

2012 – 2013   **Practicum I**
Student Therapist
Chehalem Counseling Center, Newberg, Oregon
Population: Various - community population of all ages.
- Provided individual psychotherapy for members of the community without insurance coverage.
- Services included intake interviews, individual psychotherapy, diagnosis, and treatment planning.
- In coordination with local youth outreach group, co-facilitated parenting groups for young adults.
- Assisted in development of assessment program at Center.
- Co-led development of group protocol for local retirement community.
Chehalem Youth & Family Services, Newberg, Oregon
Population: Residential adolescents.
- Co-facilitated weekly groups with residential adolescents.
- Topics included: grief and loss, distress tolerance, and emotion regulation.
Supervisor: Holly Hetrick, PsyD; weekly individual and group supervision.

2012   **Supplemental Practicum**
Psychology Intern
Willamette Family Medical Center, Salem, Oregon
Population: Various - community population of all ages.
- Completed 4 comprehensive assessments on 1 child, 2 adolescents, and 1 adult.
- Provided short-term individual psychotherapy for adolescents and adults.
- Consulted with medical team regarding patients' treatment and diagnoses.
Supervisor: Joel Gregor, PsyD; weekly individual supervision.

2012   **Pre-Practicum**
Student Therapist
George Fox University, Newberg, Oregon
Population: Young adult: college students.
- Provided simulated psychotherapy for two undergraduate student volunteers.
- Services included intake interviews, individual psychotherapy, diagnosis, and treatment planning.

- Responsibilities included report writing, case presentations, and consultations with supervisors and clinical team.
- All sessions video recorded and reviewed by supervisors.

Supervisors: Mary Peterson, PhD, ABPP/CL and Jennifer Bearse, MA; weekly individual and group supervision.

2011 **Supplemental Practicum**
Depression Group Facilitator
Nedley Depression Recovery Group Program DVD Series, Newberg, Oregon
Population: Various - community population of adolescents and adults.
- Led a psycho-educational and process group that focused on symptom reduction for individuals with depression and chronic pain.
- Proposed evidenced-based recommendations in preventative mental health care.

Supervisors: Tami Rodgers, MD and Joel Simons, MA; weekly group supervision.

Supervised Clinical Experience/Terminal Masters Degree

2008 – 2010 **Practicum Placement**
Graduate Student Intern
InterSessions Psychological Services Clinic, Plymouth, Michigan
Population: Various - community population of adolescents and adults.
- Therapist for graduate school's outpatient psychological services clinic.
- Provide care for clients through various psychotherapeutic techniques addressing depression, anxiety, grief, family issues, etc.
- Completed 1 comprehensive assessment on an adolescent.
- Assist with overall operations of clinic, such as answering phones, accepting payment, scheduling appointments for other therapists, and maintaining a clean environment.

Supervisors: John Restum, PsyD and James Wood, PhD; weekly group supervision and individual as needed.

2010 **Practicum Placement**
Counselor
Active Faith Community Services, South Lyon, Michigan
Population: Various - community population of adults.
- Conduct counseling sessions for individuals and couples with low income using various psychotherapeutic techniques.
- Coordinate with case managers to schedule counseling appointments with clients.

Supervisor: James Wood, PhD; weekly group supervision.

2009 **Practicum Placement**
Psychology Intern
Wayne County Jail Mental Health Department, Detroit, Michigan
Population: Inpatient inmates with serious mental illness, almost exclusively male.
- Complete thorough mental status exams on inmates admitted to mental health floor.
- Work with mental health team to construct treatment plans for inmates.
- Daily assessment of suicidal and homicidal risk among inmates and implementation of crisis interventions as needed.

Supervisor: John Restum, PsyD; weekly group supervision and individual as needed.

Relevant Teaching & Academic Experience

2014 – Present **Adjunct Faculty:** George Fox University Graduate School of Counseling, Tigard, Oregon
Graduate Level Course: Test and Measurement

2014 – Present **Teaching Assistant:** George Fox University, Newberg, Oregon
Undergraduate Level Course: Culture and Psychology
Professor: Winston Seegobin, PsyD

2012 – Present **Graduate Assistant:** George Fox University, Newberg, Oregon
Assistant to Director of Diversity
Supervisor: Winston Seegobin, PsyD

2014 **Teaching Assistant:** George Fox University, Newberg, Oregon
Graduate Level Course: Learning, Cognition, and Emotion
Professor: Marie-Christine Goodworth, PhD

2012 – 2013 **Teaching Assistant:** George Fox University, Newberg, Oregon
Graduate Level Course: Psychometrics
Professor: Mark McMinn, PhD, ABPP/CL

2013 **Guest Lecturer:** George Fox University, Newberg, Oregon
Graduate Level Course: Psychometrics
Topic: *Intellectual and Ability Testing*
Professor: Mark McMinn, PhD, ABPP/CL

2013 **Guest Lecturer:** George Fox University, Newberg, Oregon
Undergraduate Level Course: General Psychology
Topic: *Psychodynamic Theory of Personality*
Professor: Kelly Chang, PhD

Professional Presentations

Zarb, D. S. H., Houlbjerg, C., Blake, A., Parker, T., Goodworth, M. & Foster, L. (2013, May). *Psychology in palliative care: A literature review*. Poster presented at the annual meeting of the Oregon Psychological Association, Eugene, OR.

Zarb, D. S. H., Birch, R., Gleave, D., Seegobin, W., & Perez, J. (2013, July). *Graduate students' perceptions of ethnic and gender diversity*. Poster presented at the annual meeting of the American Psychological Association, Honolulu, HI.

Goodworth, M., Zarb, D., Houlbjerg, C., Blake, A., Parker, T., & Foster, L. (2013, August). *Development of a palliative care consultation service*. Poster presented at the annual meeting of the American Psychological Association, Honolulu, HI.

Condrey, K., Jasper, L., Zarb, D., & Gathercoal, K. (2014, May). *Patient satisfaction: Does staffing matter?* Poster presented at the annual meeting of the Oregon Psychological Association, Portland, OR.

Parker, T., **Zarb, D. S. H.**, Blake, A., & Goodworth, M. (2014, May). *Understanding caregiver activation in informal caregivers of persons with Alzheimer's Disease*. Poster presented at the annual meeting of the Oregon Psychological Association, Portland, OR.

Seegobin, W., Taloyo, C. & **Zarb, D. S. H.** (2014, August). *Students' perceptions of racial and ethnic diversity in a clinical psychology graduate program*. Poster presented at the annual meeting of the American Psychological Association, Washington, D.C.

Research Experience

2013 – 2016 *Doctoral Dissertation, Defended: Efficacy of Concreteness Training with Persons Qualifying for Palliative Care: Piloting and iOS Application*. George Fox University, Newberg, Oregon.
Committee Members: Marie-Christine Goodworth, PhD (Chair), Mary Peterson, PhD, ABPP/CL, and Mark McMinn, PhD, ABPP/CL.

Final Oral Defense Passed: February 12, 2016
- An empirical study examining the effectiveness of a self-management intervention administered via an iOS application for persons qualifying for palliative care, who most likely are facing chronic/life-threatening illness.

2013 – 2015 **Supplemental Research Projects:** George Fox University, Newberg, Oregon
- Seek out opportunities to generate research in addition to dissertation requirement.
- Work in teams to produce posters for presentation at professional organization meetings. (see above section for presentations)
- Past projects include palliative care and multicultural topics.

2012 – 2015 **Research Team Member:** George Fox University, Newberg, Oregon
Chair: Marie-Christine Goodworth, PhD
- Meet twice per month to discuss and evaluate progress, methodology, and design of group and individual research projects.
- Assist team members in research design, data collection, data analysis, and editing.
- Areas of team focus: Health Psychology, caregiver support, palliative care, assessment, multicultural care.

2013 – 2014 **Research Committee:** Transitions Professional Center, Portland, Oregon
- Assist center in development of non-profit research department and serve on research committee.
- Utilize center as hub for dissertation research on persons receiving palliative care.
- Conduct at least two didactic trainings per school year for local professional community.

2010 **Theoretical Thesis: Social Identity Theory and Black-White Interracial Marriage, with a Christian Emphasis**
Moody Theological Seminary & Graduate School, Plymouth, Michigan

Academic Service

2012 –2015 **Multicultural Committee Administration Member:** George Fox University, Newberg, Oregon
- Support students in the PsyD program with diversity training by assisting in the coordination of multicultural committee meetings and events.
- Speak on interview day to applicants regarding the committee and opportunities at George Fox University.

2013 **Student Interviewer:** George Fox University, Newberg, Oregon
- With faculty, co-conduct interviews of applicants to the PsyD program.

2012 – 2013 **Peer Mentor:** George Fox University, Newberg, Oregon
- Assist first year PsyD student in transition to graduate school by providing academic and professional guidance and support.

Leadership Experience

2013 **Administrative Committee Liaison,** Multicultural Committee, George Fox University, Newberg, Oregon

2009 – 2011 **Co-Founder, Officer, and Teacher,** The Relational Church, Novi, Michigan

2008 – 2010 **Officer,** Sisters in Training at Moody Theological Seminary, Plymouth, Michigan
2007 – 2008 **Co-Founder and Teacher,** The Gathering, First Baptist Church, Plymouth, Michigan

2003 – 2004 **President,** Students for Life at University of Michigan, Ann Arbor, Michigan

2003 **Intern,** Leadership Training Program, Great Commission Ministries, Orlando, Florida

2002 – 2003 **Vice President,** Students for Life at University of Michigan, Ann Arbor, Michigan

2002 – 2004 **Captain,** Fortitude, Dance group at University of Michigan, Ann Arbor, Michigan

2001 – 2004 **Small Group Leader,** New Life Church, Ann Arbor, Michigan

1999 **Captain,** Color Guard of Plymouth-Canton Marching Band, Canton, Michigan

1997 – 2000 **Student Council Member,** Salem High School, Canton, Michigan

Honors and Awards

2014 **Special Commendation,** George Fox University

2014 **Research Award,** Oregon Psychological Association

2013 **Health Professions Scholarship Program,** United States Air Force

2013 **Special Commendation,** George Fox University

2013 **Research Award,** Oregon Psychological Association

2010   **Magna Cum Laude,** Moody Theological Seminary and Graduate School

2008   **Seminary Cup Scholarship Award,** Moody Theological Seminary and Graduate School

2005   **James B. Angell Scholar,** University of Michigan

2004   **Cum Laude,** University of Michigan

2001 – 2004   **University Honors,** University of Michigan

2000 – 2004   **Scholar Recognition Award,** University of Michigan

Professional Memberships

2010 – present   **American Psychological Association,** Student Affiliate
Division 19: Military Psychology
Division 38: Health Psychology
Division 45: Society for the Psychological Study of Culture, Ethnicity, and Race

Selected Professional Trainings

Mar 2014   **Evidence-Based Treatments for PTSD in Veteran Populations: Clinical and Integrative Perspectives**
David Beil-Adaskin, PsyD

Jan 2014   **Lessons of Loss: Grief and Narrative Disruption**
Robert A. Neimeyer, PhD

Sep 2013   **Integrated Primary Care**
Brian Sandoval, PsyD & Juliette Cutts, PsyD

Mar 2013   **Toward a New View of Intergenerational Trauma**
Eduardo Duran, PhD

Jan 2013   **African-American History, Culture, and Addictions & Mental Health Treatment**
Danette C. Haynes, LCSW & Marcus Sharp, PsyD

Nov 2012   **Sexual Identity**
Erica Tan, PsyD

Jun 2012   **Assessment and Treatment of Anger, Aggression, & Bullying in Children and Adults**
Ray DiGiuseppe, PhD

Mar 2012   **Mindfulness and Christian Integration**
Erica Tan, PsyD