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Influence of Caregiver Activation on Health of Informal Caregivers of persons with Alzheimer’s

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Influence of Caregiver Activation on Health of Informal Caregivers of persons with Alzheimer’s

by

Trinity R. Parker

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George Fox University
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Influence of Caregiver Activation on Health of Informal
Caregivers of persons with Alzheimer’s

by

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Graduate School of Clinical Psychology

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As a Dissertation for the PsyD Degree

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Influence of Caregiver Activation on Health of Informal Caregivers of persons with Alzheimer’s

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Abstract

Caregiver activation is related to a caregiver’s knowledge, skill and confidence to provide multiple levels of care of another individual. To date there is little research assessing caregiver activation within the population of informal caregivers of Alzheimer’s patients. Forty-four informal caregivers of persons with Alzheimer’s were recruited through caregiver resource centers and online communities in the state of Oregon, completed a self-report survey. The purpose of this study was to identify the predictive qualities and influence of caregiver activation on informal caregiver physiological and psychological health as well as positive health behaviors. General health, emotional wellbeing, self-efficacy, and caregiver characteristics were all significantly correlated with caregiver activation. Results of bivariate linear regression analysis indicate that caregiver activation is significantly related to a decrease in caregiver physiological and psychological health symptoms but not to an increase in positive health behaviors.
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Chapter 1

Introduction

As the geriatric population increases, caring for an aging or disabled relative is becoming more common in our society. The geriatric population comprises 13% of the total U.S. population and is projected to rise dramatically over the next ten years (Administration on Aging, 2011). Recent statistics indicate that 80% of care provided in an elder’s home is done so by a family member or friend (Alzheimer’s Association, 2011). For purposes of this study caregiving is defined as “the act of providing unpaid assistance and support to family members or acquaintances who have physical, psychological, or developmental needs” (Caregiving Definition(s) of, 2010). Caregivers who provide primary care for a friend or relative are faced with numerous responsibilities, changes in lifestyle, and burdens throughout the length of their caregiver role (Fortinsky, Kercher, & Burant, 2002). Informal caregivers of dementia patients in particular are faced with physical, emotional, social, and financial stresses (Gallant & Connell, 1997; Jansen et al., 2007; Miller et al., 2006). These stresses can lead to disruptions in the self-care of informal caregivers as well as increases in psychological and physiological health problems and symptoms (Sanders, Ott, Kelber, & Noonan, 2008; Schoenmakers, Buntinx, & Delepeleire, 2010).

Caregivers of Persons with Dementia

Dementia is a chronic illness common in the geriatric population, Alzheimer’s disease (AD) being the most common subtype of dementia (Alzheimer’s Association, 2011).
Approximately one in eight older Americans receives a diagnosis of AD. AD is unique to each patient and the rate of disease progression and specific symptoms is highly variable. On average a person with AD can live 4-8 years after diagnosis; however, some individuals live as long as 20 years after diagnosis (Alzheimer’s Association, 2011). The variability in the lifespan of persons with AD indicates the slow progression of the condition and the gradual decline of cognitive function and ability to perform activities of daily living (ADLs) independently.

As persons with AD experience the progression of their condition, they may rely largely on family members (e.g., spouse, children, and siblings) or friends for their caregiving needs prior to hiring professional caregivers or moving into a care facility. Providing care for another individual creates a certain amount of stress and burden of responsibility on the caregiver regardless of the degree of care needs (Schoenmakers et al., 2010). Caregiving for persons with Alzheimer’s Disease may be particularly stressful because caregiver duties and responsibilities increase in time requirements and difficulty as well as physical, emotional, social, and financial strain as the disease progresses (Clay, Roth, Wadley, & Haley, 2008; Neubauer, Holle, Menn, & Gräbel, 2009; Samuelsson, Annerstedt, Elmståhl, Samuelsson, & Grafström, 2001). Individuals in the later stages of AD may require assistance with a wide range of activities such as household duties, dressing, bathing, and toileting. Informal caregivers may also be responsible for scheduling and attending medical visits and managing the medical needs of their AD relative (Miller et al., 2006).

The slow progression of AD and gradual increase in responsibilities for caregivers can result in a wide range of negative physical and emotional health implications for AD informal caregivers (Schoenmakers et al., 2010; Zarit & Femia, 2008). The adverse consequences of dementia caregiving on the physical and psychological health of caregivers have been well-
Psychological distress is especially common and dementia caregivers report a greater number of depression and anxiety symptoms and demonstrate increased rates of depression and anxiety than caregivers of people with other chronic illnesses (Connor et al., 2008; Gallant & Connell, 1997; Schoenmakers et al., 2010). Psychological stress, variable emotional stress, and grief are also especially evident in AD informal caregivers due to their exposure to changes in cognitive function and alterations of their relative’s personality, memories, and emotions (Jansen et al., 2007; Monin & Schulz, 2009; Sanders et al., 2008; Schulz, O’Brien, Bookwala, & Fleissner, 1995). Furthermore, informal caregivers’ feelings of anxiety and stress are exacerbated by perceived lack of support or social understanding which may be associated with a decrease in social interaction due to caregiving responsibilities (Clay, Roth, Wadley, & Haley, 2008; Neufeld & Harrison, 2003).

In addition to psychological distress, AD informal caregivers experience an increase in health related concerns (e.g., hypertension, decreased immune functioning, cognitive decline, and cardiovascular disease) and a higher probability of mortality (Alzheimer’s Association, 2011; Connor et al., 2008; Gallant & Connell, 1997; Vitaliano et al., 2009; Vitaliano et al., 2003). These increased health risks may be related to the presence of chronic stressors. Informal caregivers may experience a unique form of grief or prolonged anticipatory bereavement also known as dual dying as a result of the slow progression of physical and cognitive deterioration of their AD relative (Pioli, 2009; Sanders et al., 2008). Previous research indicates that prolonged bereavement and depression are associated with physical illness, healthcare utilization, health risk behaviors, and mortality (Rabinowitz, Saenz, Thompson, & Gallagher-Thompson, 2011; Vitaliano, Zhang, & Scanlan, 2003).
These negative implications for informal caregivers not only impact the psychological, physical, and social health of the caregivers but also influence the quality of care for the AD patient and are strong predictors of early institutionalization (Connor et al., 2008; Vitaliano et al., 2003; Vitaliano et al., 2009). Various studies have provided evidence that the overall health of the informal caregiver directly influences the quality of care of an AD patient (Elliot, Burgio, & DeCoster, 2010). Additionally, caregivers can experience psychological distress similar to that experienced while in the caregiving role for up to several years after the AD patient is institutionalized (Boekhorst et al., 2008). Such findings indicate the severity and duration of the impact of psychological and physiological distress caregiving responsibilities can have on informal caregivers.

However, several variables are associated with improvements in caregivers’ reports of psychological and physiological distress. Research suggests that positive health behaviors (e.g. balanced nutritional meals and physical activity), effective social supports, and various caregiver characteristics mediate depression and anxiety in informal caregivers of persons with AD (Gallant & Connell, 1997; Gaugler et al., 2003; Jansen et al., 2007; Losada et al., 2010; Martin, Gilberts, McEwan, & Irons, 2006; Monin & Schulz, 2009; Schoenmakers et al., 2010). Other psychological variables such as self-efficacy have also been found to mediate caregiver distress. Self-efficacy research indicates that perceived control over negative appraisal of the caregiver role acts as a partial mediator between perceived caregiver physical health and depression (Au et al., 2010).

**Self-Efficacy**

Research on self-management and stress processing models indicate that self-efficacy affects the maintenance of caregiver physiological and psychological health and can promote
positive health behaviors (Fortinsky et al., 2002; Pearlin, Mullan, Semple, & Skaff, 1990; Rabinowitz, Mausbach, Thompson, & Gallagher-Thompson, 2007; Savundranayagam & Brintnall-Peterson, 2010). Fortinsky et al. (2002), found that higher levels of caregiver self-efficacy in management of dementia symptoms were associated with a decrease in depressive symptoms and an increase in utilization of community services to support caregiving needs. Improvements in self-efficacy are also linked to a reduction in health risk behaviors (e.g., unhealthy diet, sedentary lifestyle, smoking, & drinking), a decrease in negative psychological consequences (depression, anxiety, and anger), and an increase in stress management and relaxation activities (Au et al., 2009; Rabinowitz et al., 2011; Savundranayagam & Brintnall-Peterson, 2010). Interestingly, levels of self-efficacy in specific caregiving domains such as obtaining respite and controlling upsetting thoughts have been found to be closely related to caregivers’ cumulative health risk (Au et al., 2009). Rabinowitz et al. (2007), found that caregivers who felt more efficacious in their ability to separate themselves from the daily stresses were less likely to engage in risky health behaviors and were more likely to engage in beneficial health behaviors. Higher self-efficacy in caregivers has also been related to an overall perseverance in caregiver behaviors and may influence resiliency toward caregiver mortality (Rabinowitz et al., 2011). Although increased self-efficacy in caregivers is associated with improvements in stress management and a reduction in psychological distress and health risk behaviors, research has not fully addressed the influence of self-efficacy on caregiver health conditions or general health status (Rabinowitz et al., 2011). Higher levels of self-efficacy do not account for all changes or improvements in caregiver self-care, which may imply that there are other mechanisms or moderators, which contribute to improvements in overall caregiver self-care (Au et al., 2010; Savundranayagam & Brintnall-Peterson, 2010).
Caregiver Activation

The benefits of improved self-efficacy in caregivers is well supported. Mausbach et al. (2012), found a significant effect of combined self-efficacy and the related construct of mastery on caregiver intrapsychic distress, which suggests that integrating multiple moderators into interventions has a positive effect on caregiver stress. These recent findings have prompted the exploration of a new construct called caregiver activation. Caregiver activation is closely related to the construct of patient activation which Donald et al. (2011) defines as the ability of an individual to manage their own condition, maintain functioning, collaborate with health providers, and assess appropriate, high-quality care. Studies assessing patient activation have found that activated patients are more likely to have their health needs met, receive timely health care, and gain support from their providers (Donald et al., 2011). An increase in patient activation has a positive effect on the change of self-management behaviors and health outcomes (Hibbard, Mahoney, Stock, & Tusler, 2007). Unfortunately, studies also suggest there are factors and patient characteristics that bar improvement in levels of patient activation. For example, Hibbard et al. (2007) found that depressive symptoms negatively influence improvement in self-management behaviors and suggest that depressive symptoms can actually prevent activation.

Based on the common findings of patient activation research, it may be hypothesized that an increase in caregiver activation would lead to an increase in self-efficacy and may result in the reduction of physiological and psychological distress and an increase in positive health behaviors (Green et al., 2010). There is a growing amount of research investigating caregiver self-efficacy however, caregiver activation is a recent construct and has just begun to gain attention from the research community. Caregiver self-efficacy cannot account for all moderating effects of caregiver physical distress, however additional research in the area of caregiver activation may
provide insight into additional moderating effects. Given the population size of informal caregivers of persons with Alzheimer’s disease and the number of significant physiological and psychological health risks associated with the caregiver population, an increase in caregiver activation research would be beneficial (Vitaliano, Murphy, Young, Echeverria, & Borson, 2011). The purpose of this study was to assess levels of caregiver activation in informal caregivers of persons with AD. Specifically, this study sought to investigate the influence and moderating effects of caregiver activation on the general health (physical and psychological) and health behaviors of informal caregivers. The primary aim of this study was to evaluate the potential moderating properties of caregiver activation by assessing whether higher levels of caregiver activation are related to lower levels of psychological distress (e.g., depression and anxiety), fewer physical health symptoms, and an increase in positive health behaviors.

The following three hypotheses are presented: (a) Higher levels of caregiver activation will be related to lower levels of psychological distress; (b) higher levels of caregiver activation will be related to fewer reported physical health symptoms/concerns; (c) higher levels of caregiver activation will be related to an increase in positive health behaviors.
Chapter 2

Method

Participants

Participants in this study were 80 informal caregivers of persons with Dementia, Alzheimer’s subtype. All participants were residents of Oregon (USA). To be eligible to participate in this study, participants had to meet the following criteria: be at least 18 years of age, have a Flesch-Kincaid reading level of 4.9 or higher, identify as the primary caregiver and close friend or family member of the care recipient, and provide more than one hour of caregiving per week. A final sample of 44 participants met inclusion criteria and completed the survey. This study was approved by the institutional review board of George Fox University.

Procedure

Caregivers were recruited through three organizations: the Alzheimer’s Association, NorthWest Senior and Disability Services, and Craigslist.org online community. Participants associated with the Alzheimer’s Association were contacted through support group facilitators via email and phone with contact information provided by the Alzheimer’s Association. Approximately 31 support groups across 11 counties located in the state of Oregon were contacted. Facilitators interested in participating were mailed survey packets, one packet for each participating support group member. Each packet contained an informed consent indicating that participants consented to the study by completing the research packet, research measures, demographics form, and stamped return envelope. Participants associated with NorthWest Senior and Disability Services were mailed survey packets by the researcher. These survey packets
contained a disclaimer of participation by NorthWest Senior and Disability services, an informed consent indicating that participants consented to the study by completing the research packet, research measures, demographics form, and stamped return envelope.

Participants gathered via the internet resource, Craigslist.org, were individuals located in the state of Oregon within regions identified by craigslist.org as Portland (Multnomah, Washington, Yamhill, Clark/Cowlitz, and Clackamas counties; North Coast, and Columbia Gorge), Medford-Ashland, Bend, Eugene, Oregon Coast, Corvallis/Albany, Eastern Oregon, Klamath Falls, Roseburg, and Salem. An electronic version of the survey packet was created using Survey Monkey and posted in the “Volunteers” category of the “Community” section of Craigslist.org. A copy of the text provided in the craigslist.org posting can be found in Appendix A. Individuals willing to participate provided informed consent upon their decision to complete the electronic survey. No further data was collected from participants following their initial completion of the research measures and forms.

Measures

Demographics. Participants completed a thorough demographic questionnaire. Information gathered in the demographics included caregiver characteristics and general information regarding the health status (progression of Alzheimer’s) of the care recipient (see Appendix B). Specifically, demographic data included caregiver age, gender, race or ethnicity group identification, employment and average income, level of education, the caregiver’s relation to the care recipient, average number of hours of caregiving, caregiver responsibilities, years of caregiving, use of respite services, kind of respite services used, whether the caregiver and/or care recipient have insurance, current caregiver health concerns, residence with the caregiver, and religious affiliation/activity.
Caregiver activation. Caregiver activation was measured using a 10-question version of the Caregiver Activation Measure (CG-PAM; Insignia Health, LLC, 2011). The CG-PAM was administered to assess the current activation score of each caregiver (see Appendix C). The CG-PAM has a Flesch-Kincaid score of 78.3 or 4.9 grade level. The CG-PAM measures areas of knowledge and performance of caregiver responsibilities and care recipient health care needs which create a composite caregiver activation score. This composite score is then converted into an overall activation level ranging from one to four. The description of the four levels is as follows: Level 1 = May not yet believe that they play a role in managing the patient’s health – they may not believe their role is important (score ≤ 47); Level 2 = Lacks confidence and knowledge to take action on behalf of the patient (score 47.1-55.1); Level 3 = The caregiver is beginning to take action and feel confident they are in charge (score 55.2-67); Level 4 = The caregiver is confident, but may have difficulty maintaining their level of involvement over time (score ≥ 67.1). The CG-PAM is a self-administered assessment and consists of ten questions on a four-point Likert scale ranging from 1-4 where 1 = Disagree Strongly, 2 = Disagree, 3 = Agree and 4 = Strongly Agree. A fifth option is available as N/A if the specific question does not apply to the caregiver’s experience. Raw data collected from the CG-PAM was scored by Insignia Health. In this sample the reliability was Cronbach’s alpha = 0.92.

Self-Efficacy. A self-efficacy (SE) assessment was used to measure caregiver perceived self-efficacy in carrying out different responsibilities (Romero-Moreno et al., 2011). The Revised Scale for Caregiving Self-efficacy (CGSE; Steffen, McKibbin, Zeiss, Gallagher-Thompson, & Bandura, 2002) measures three domains of caregiver SE: obtaining respite (CGSE OR), responding to disruptive patient behaviors (CGSE DB), and controlling upsetting thoughts (CGSE CU; Appendix D). The interview format measure consisted of approximately fifteen
questions for which the caregiver was asked to rate their level of confidence to complete various tasks by placing a mark on a continuous scale ranging from 0 *Cannot Do At All* to 100 *Certain Can Do*, according to their current abilities. The following questions are examples of items for each of the CGSE domains: CGSE OR = *How confident are you that you can ask a friend/family member to stay with the care recipient for a day when you need to see the doctor yourself?*; CGSE DB = *When the care recipient forgets your daily routine and asks when lunch is right after you’ve eaten, how confident are you that you can answer him/her without raising your voice?*; CGSE CU = *How confident are you that you can control thinking about unpleasant aspects of taking care of the care recipient?* The SE domains of the measure indicate strong internal consistency and moderate test-retest reliability (CGSE OR: r = .76; CGSE DB: r = .70; CGSE CU: r = .76) as well as strong convergent and divergent validity (Steffen et al., 2002). The CGSE was administered as a means of comparison against the CG-PAM. The CGSE was altered into self-report format for purposes of this study. The CGSE has not been normed for administration in self-report format; therefore reliability data for this format is not available. The reliability for this sample for the CGSE subscales was CGSE OR Cronbach’s alpha = .95, CGSE DB Cronbach’s alpha = .97, CGSE CU Cronbach’s alpha = .92.

**Center for Epidemiologic Studies Depression Scale.** The *Center for Epidemiologic Studies Depression Scale* (CES-D) was used to assess the frequency with which caregivers may experience depressive symptoms (Appendix E). Four factors of depression are measured by the CES-D, these include depressive affect, absence of well-being, somatic symptoms, and interpersonal affect (O’Rourke, 2005). The assessment consists of 20 self-administered items, each with four response options: Rarely or none of the time (less than 1 day); some or a little of the time (1-2 days); occasionally or a moderate amount of time (3-4 days); and most or all of the
time (5-7 days). Some example items from this assessment include, “I was bothered by things that usually don’t bother me,” and “I felt that everything I did was an effort.” In regards to reliability, the measure demonstrates high internal consistency (coefficient alpha; general population = .85, patient population = .90) and moderate test-retest reliability (coefficient alpha = .54; Radloff, 1977). Due to error in administration, only half of the sample received a copy of the CESD. Therefore the data was not used in data analysis of this sample and reliability of the measure with this sample was not assessed.

**Health.** The *SF-36 Health Survey, Version 2.0* (SF-36; Ware, n.d.) was used to assess caregiver perspective of his or her physical and emotional well-being (Appendix F). The measure consists of 36 items and assesses eight health profiles and two summary scores: mental health and physiological health. Sample items include, “compared to one year ago, how would you rate your health in general now,” and “During the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbors, or groups?” There are 11 primary questions with some of these questions containing additional subsections. For example, question five asks, “during the past 4 weeks, how much of the time have you had any of the following problems with our work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)” and then presents additional questions concerning changes in activity level such as “cut down on the amount of time you spent on work or other activities”. The assessment uses a Likert-scale response style ranging from 1 to 6 with specific response options for each question. Question three uses a 3-item Likert scale. The measure assesses areas of physical functioning (PF), physical role functioning (RP), bodily pain (BP), general health (GH), vitality (V), social functioning (SF), emotional role functioning (RE), mental health (MH), and provides summary
scores of physical component summary (PCS), and mental component summary (MCS) compiled from the eight health profiles. All scales demonstrate moderately high to high reliability (coefficient alpha; PF = .93, RP = .89, BP = .90, GH = .81, V = .86, SF = .68, RE = .82, MH = .84, PCS = .92, MCS = .88; Ware, n.d.). The SF-36 was scored using QualityMetric Health Outcomes Scoring Software under a temporary licensing agreement with QualityMetric. The eight profile scales demonstrate moderate to high validity in measuring the physical and mental health component summaries. In this sample, all scales demonstrated moderately high to high reliability (coefficient alpha; PF = .90, RP = .92, BP = .87, GH = .89, VT = .87, SF = .90, RE = .90, MH = .86, PCS = .91, and MCS = .94).

Health behaviors. An adapted version of the Healthstyle: A Self-test (HSST), originally developed by the U.S. Department of Health and Human Services Public Health Service, Centers for Medicare & Medicaid Services, Qualis Health (n.d.), was used to assess the health lifestyle of caregivers (Appendix G). The measure consists of 24 questions on a three-point Likert scale that ranging from 0 (almost never) to 2 (Almost always). The health behavior questions assessed various activities that influence a person's health: cigarette smoking, alcohol and drugs, eating habits, exercise/fitness, stress control, and safety (Bobroff, 2013). Validity and reliability studies of this assessment were unavailable. In this sample reliability was Cronbach's Alpha = 0.82.
Chapter 3

Results

Sample Characteristics

Socio-demographics and characteristics of the 44 caregivers are summarized in Table 1.

Table 1

Demographics and Clinical Characteristics of Informal Caregivers of Persons with Alzheimer’s (N = 44)

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age Range</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-24</td>
<td>2</td>
<td>4.5</td>
</tr>
<tr>
<td>25-34</td>
<td>2</td>
<td>4.5</td>
</tr>
<tr>
<td>35-44</td>
<td>3</td>
<td>6.8</td>
</tr>
<tr>
<td>45-54</td>
<td>5</td>
<td>11.4</td>
</tr>
<tr>
<td>55-64</td>
<td>9</td>
<td>20.5</td>
</tr>
<tr>
<td>65-74</td>
<td>10</td>
<td>22.7</td>
</tr>
<tr>
<td>75 and above</td>
<td>13</td>
<td>29.5</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>11</td>
<td>25</td>
</tr>
<tr>
<td>Female</td>
<td>33</td>
<td>75</td>
</tr>
<tr>
<td>Race/ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian American</td>
<td>2</td>
<td>4.7</td>
</tr>
<tr>
<td>European American</td>
<td>34</td>
<td>79.1</td>
</tr>
<tr>
<td>Native American/Alaska Native</td>
<td>5</td>
<td>11.6</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>4.7</td>
</tr>
<tr>
<td>Relationship to care recipient</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spouse/Partner</td>
<td>24</td>
<td>54.5</td>
</tr>
<tr>
<td>Son/Daughter</td>
<td>10</td>
<td>22.7</td>
</tr>
<tr>
<td>Other</td>
<td>10</td>
<td>22.7</td>
</tr>
<tr>
<td>Level of education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GED/Diploma, some high school, No high school</td>
<td>11</td>
<td>25.6</td>
</tr>
<tr>
<td>College, no degree</td>
<td>16</td>
<td>37.2</td>
</tr>
<tr>
<td>College degree (2-yr or 4-yr)</td>
<td>10</td>
<td>23.3</td>
</tr>
<tr>
<td>Graduate degree</td>
<td>6</td>
<td>14.0</td>
</tr>
</tbody>
</table>
Caregivers in this sample ranged in age from 18-75+ years, with caregiver median age range 65-74 years. Informal caregivers were predominantly female (75%), European American (79.1%), had obtained a 2-yr college degree or higher (37.3%) and were married or living with a partner (75%). Approximately 50% of the sample reported being the spouse/partner of the person diagnosed with Alzheimer’s while adult children of individuals with Alzheimer’s accounted for 27.3% of the sample. Half of the sample reported being retired, among the caregivers who reported being gainfully employed (29.5%), 77% worked full time in addition to their caregiving responsibilities. On average, informal caregivers reported providing 78.75 hours of caregiving services per week. The average length of time informal caregivers reported providing care was 5.88 years ($SD = 5.81$). Clinical characteristics of persons with Alzheimer’s are summarized in Table 2. Caregivers reported a number of physical health concerns, with a mean of 2 concerns (of a possible 17). The majority of informal caregivers reported having health insurance (84.1%), however the average length of time in months since the caregivers’ last doctor’s appointment or physical exam was 5.91 months ($SD = 5.35$) and 18.79 months ($SD = 38.07$) respectively.
Clinical characteristics of informal caregivers of persons with Alzheimer’s (N = 44)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Response</th>
<th>M (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Care recipient resides with care recipient</td>
<td>29 (65.9)</td>
<td>15 (34.1)</td>
</tr>
<tr>
<td>Use of respite services</td>
<td>17 (38.6)</td>
<td>27 (61.4)</td>
</tr>
<tr>
<td>Attendance of caregiver support group</td>
<td>14 (31.8)</td>
<td>30 (68.2)</td>
</tr>
<tr>
<td>Hours per week of caregiving activities</td>
<td></td>
<td>78.75 (61.36)</td>
</tr>
<tr>
<td>Number of years providing informal care</td>
<td></td>
<td>5.88 (5.81)</td>
</tr>
<tr>
<td>Frequency of support group attendance per year</td>
<td></td>
<td>6.33 (11.55)</td>
</tr>
<tr>
<td>Total caregiver health concerns</td>
<td></td>
<td>2.09 (1.49)</td>
</tr>
</tbody>
</table>

Clinical characteristics of persons with Alzheimer’s are summarized in Table 3. The average duration of a care recipient’s Alzheimer’s diagnosis was 56.61 months and the informal caregiver’s average rating of the care recipient’s cognitive functioning was 3.37 of 10 and health was 5.42 of 10 on a scale of 0 to 10 with 0 being Poor and 10 being Excellent.

<table>
<thead>
<tr>
<th>Variable</th>
<th></th>
<th>Scale Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rating of care recipient cognitive functioning</td>
<td>3.37 (1.63)</td>
<td>6.00</td>
</tr>
<tr>
<td>Rating of care recipient health</td>
<td>5.42 (1.94)</td>
<td>8.00</td>
</tr>
<tr>
<td>Length of care recipient Alzheimer’s Diagnosis (months)</td>
<td>56.61 (48.92)</td>
<td>238.00</td>
</tr>
</tbody>
</table>
Descriptive Statistics on Caregiver Activation, Health, Health Behaviors, and Self-Efficacy

Descriptive statistics were run on CG-PAM, SF-36, HSST, and CGSE. Means, standard deviations, and ranges for each measure can be found in Table 4. Caregivers in this sample were evenly distributed across all activation levels. Data from the CG-PAM, SF-36, CGSE, and HSST Eating Habits, Exercise/Fitness, and Stress Control scales were normally distributed. Results from the HSST Smoking, Alcohol/Drugs, and Safety scales were negatively skewed with a skewness value of -2.70, -2.40, and -2.54 respectively.

Table 4
Summary of Descriptive Statistics for Total Scores on the C-PAM, SF-36 PCS, SF-36 MCS, CGSE, and HSST

<table>
<thead>
<tr>
<th>Measure</th>
<th>Range</th>
<th>Min.</th>
<th>Max.</th>
<th>M (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C-PAM Activation total (n= 44)</td>
<td>73.80</td>
<td>26.20</td>
<td>100.00</td>
<td>58.69 (18.20)</td>
</tr>
<tr>
<td>C-PAM Activation Level (n=44)</td>
<td>3.00</td>
<td>1.00</td>
<td>4.00</td>
<td>2.50 (1.09)</td>
</tr>
<tr>
<td>SF-36 PCS (n=46)</td>
<td>37.46</td>
<td>25.63</td>
<td>63.09</td>
<td>49.29 (9.36)</td>
</tr>
<tr>
<td>SF-36 MCS (n=46)</td>
<td>52.70</td>
<td>8.98</td>
<td>61.68</td>
<td>42.13 (12.69)</td>
</tr>
<tr>
<td>CGSE for Obtaining Respite (n=43)</td>
<td>100.00</td>
<td>0.00</td>
<td>100.00</td>
<td>41.08 (34.32)</td>
</tr>
<tr>
<td>CGSE for Responding to Disruptive Behaviors (n=43)</td>
<td>100.00</td>
<td>0.00</td>
<td>100.00</td>
<td>72.84 (27.24)</td>
</tr>
<tr>
<td>CGSE for Controlling Upsetting Thoughts about Caregiving (n=43)</td>
<td>100.00</td>
<td>0.00</td>
<td>100.00</td>
<td>68.56 (26.14)</td>
</tr>
<tr>
<td>HSST- Cigarette Smoking (n=44)</td>
<td>9.00</td>
<td>1.00</td>
<td>10.00</td>
<td>9.23 (2.22)</td>
</tr>
<tr>
<td>HSST- Alcohol and Drugs (n=43)</td>
<td>10.00</td>
<td>0.00</td>
<td>10.00</td>
<td>8.77 (2.48)</td>
</tr>
<tr>
<td>HSST- Eating Habits (n=43)</td>
<td>10.00</td>
<td>0.00</td>
<td>10.00</td>
<td>6.53 (3.36)</td>
</tr>
</tbody>
</table>
Aggregate reports were run on SF-36 data for this sample, using *QualityMetric Health Outcomes Scoring Software* -4.5. When comparing data collected from this sample against data gathered from the general population, 48% of the sample scored similar to, 41% below and 11% above the general population on the Mental Health Component score. All of the subscales of the Mental Health Component score were below the general population. Additionally, 36% of the sample screened positive for symptoms of depression compared to 18% of the general population. The sample scored relatively similar to the general population on each subscale of the physical component score, except for the Role Physical subscale.

CG-PAM scores of this population were compared with populations of informal caregivers of persons with multiple sclerosis and an aggregate sample of caregivers across 24 countries (22 languages; n = 250,000) as presented in Table 5 (Goodworth, 2011; Insignia Health, 2011). The mean CG-PAM score of this population was 58.69 (SD = 18.20) and demonstrated normal distribution across the four levels of activation. This distribution was found to be similar to the distribution of the general population of informal caregivers as reported by Insignia Health (2014). The mean CG-PAM score of caregivers of persons with MS was 66.67 (SD = 16.79) with Cronbach’s alpha = .864 (Goodworth, 2011). A single-sample *t* test compared the mean activation score of the sample to an MS population score of 66.67. A significant
Table 5

Comparison of C-PAM in Sample of Caregivers of Persons with Alzheimer’s with the C-PAM of Caregivers of Persons with Multiple Sclerosis and Caregivers in the General Population

<table>
<thead>
<tr>
<th></th>
<th>CG-PAM, Alzheimer’s CG sample, (N =44)</th>
<th>CG-PAM from MS CG sample, (N = 67)</th>
<th>CG-PAM Aggregate Sample, (N = 250,00)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary Statistics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean score (SD)</td>
<td>58.69 (18.20)</td>
<td>66.67 (16.79)</td>
<td></td>
</tr>
<tr>
<td>Cronbach’s alpha</td>
<td>.92</td>
<td>.86</td>
<td></td>
</tr>
<tr>
<td>Activation level distributions, n (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 1: May not yet believe that they play a role in managing the patient’s health – they may not believe their role is important (score ≤ 47 )</td>
<td>10 (22.72)</td>
<td>12 (17.9)</td>
<td>(12-25)</td>
</tr>
<tr>
<td>Level 2: Lacks confidence and knowledge to take action on behalf of the patient ( score 47.1-55.1)</td>
<td>12 (27.27)</td>
<td>6 (8.95)</td>
<td>(20-25)</td>
</tr>
<tr>
<td>Level 3: The caregiver is beginning to take action and feel confident they are in charge (score 55.2-67)</td>
<td>12 (27.27)</td>
<td>15 (22.38)</td>
<td>(25-30)</td>
</tr>
<tr>
<td>Level 4: The caregiver is confident, but may have difficulty maintaining their level of involvement over time (score ≥ 67.1)</td>
<td>10 (22.72)</td>
<td>34 (50.74)</td>
<td>(20-25)</td>
</tr>
</tbody>
</table>
difference was found ($t(43) = -2.91, p < .01$). The sample mean of $58.69$ ($SD = 18.20$) was significantly less than the population mean of MS caregivers, with a medium effect size of Cohen’s $d = -0.569$.

Caregiver self-efficacy scores of this population had a mean of $41.08$ ($SD = 34.32$) for obtaining respite, $72.84$ ($SD = 27.24$) for responding to disruptive behaviors, and $68.56$ ($SD = 26.14$) for controlling upsetting thoughts about caregiving.

**Relationship between Caregiver Self-Efficacy, Health, and Health Behaviors**

Pearson correlation coefficients were calculated for the relationship between participants’ scores on the SF-36, HSST, and CGSE domains CGSE OR, CGSE DB, and CGSE CU. Moderate positive relationships were found between participants’ scores on CGSE domains, the SF-36, and the HSST, indicating a significant linear relationship between these variables within this sample. Results of these correlations can be found in Tables 6, 7, and 8.

**Relationship of Caregiver Characteristics to Caregiver Activation**

Pearson correlation coefficients were calculated to determine the relationship between demographic characteristics of participants and scores on the CG-PAM. Moderately strong positive correlations were found between the participants’ CG-PAM activation level and their total reported number of health concerns ($r(40) = .36, p < .05$) with medium effect size Cohen’s $d = .77$, and the caregivers’ relationship to the care recipient ($r(40) = .584, p < .01$) with large effect size of Cohen’s $d = 1.44$ (Cohen, 1992). Moderately strong negative correlations were found between the participants’ CG-PAM and the participants’ marital status ($rho(40) = -.34, p < .05$) and employment status ($r(40) = -.32, p < .05$) with a medium effect size Cohen’s $d = -.675$ (Cohen, 1992).
Table 6.

*Pearson Correlation Coefficient between CG-PAM and SF-36*

<table>
<thead>
<tr>
<th>Measures</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. SF-36 PF</td>
<td>1.00</td>
<td>.438**</td>
<td>.20</td>
<td>.295</td>
<td>.05</td>
<td>.451**</td>
<td>.385**</td>
<td>.18</td>
<td>.723**</td>
<td>.03</td>
<td>.23</td>
<td>74.89</td>
<td>23.93</td>
</tr>
<tr>
<td>2. SF-36 RP</td>
<td>.438**</td>
<td>1.00</td>
<td>.384**</td>
<td>.454**</td>
<td>.26</td>
<td>.420**</td>
<td>.405**</td>
<td>.27</td>
<td>.728**</td>
<td>.18</td>
<td>.24</td>
<td>63.77</td>
<td>27.56</td>
</tr>
<tr>
<td>3. SF-36 SF</td>
<td>0.20</td>
<td>.384**</td>
<td>1.00</td>
<td>.392**</td>
<td>.613**</td>
<td>.452**</td>
<td>.401**</td>
<td>.538**</td>
<td>.344*</td>
<td>.575**</td>
<td>0.12</td>
<td>65.13</td>
<td>25.94</td>
</tr>
<tr>
<td>4. SF-36 BP</td>
<td>.295*</td>
<td>.454**</td>
<td>.392**</td>
<td>1.00</td>
<td>.452**</td>
<td>.409**</td>
<td>.452**</td>
<td>0.28</td>
<td>.644**</td>
<td>0.26</td>
<td>0.27</td>
<td>66.54</td>
<td>21.02</td>
</tr>
<tr>
<td>5. SF-36 MH</td>
<td>0.05</td>
<td>0.26</td>
<td>.613**</td>
<td>.452**</td>
<td>1.00</td>
<td>.507**</td>
<td>.420**</td>
<td>.705**</td>
<td>0.08</td>
<td>.817**</td>
<td>0.10</td>
<td>56.22</td>
<td>22.97</td>
</tr>
<tr>
<td>6. SF-36 V</td>
<td>.451**</td>
<td>.420**</td>
<td>.452**</td>
<td>.409**</td>
<td>1.00</td>
<td>.507**</td>
<td>1.00</td>
<td>.566**</td>
<td>.517**</td>
<td>.367*</td>
<td>.654**</td>
<td>.377*</td>
<td>55.16</td>
</tr>
<tr>
<td>7. SF-36 GH</td>
<td>.385**</td>
<td>.405**</td>
<td>.401**</td>
<td>.452**</td>
<td>.420**</td>
<td>.566**</td>
<td>1.00</td>
<td>.594**</td>
<td>.386**</td>
<td>.593**</td>
<td>.350*</td>
<td>66.99</td>
<td>24.86</td>
</tr>
<tr>
<td>8. SF-36 RE</td>
<td>0.18</td>
<td>0.27</td>
<td>.538**</td>
<td>0.28</td>
<td>.705**</td>
<td>.517**</td>
<td>.594**</td>
<td>1.00</td>
<td>0.00</td>
<td>.890**</td>
<td>.441**</td>
<td>61.45</td>
<td>25.20</td>
</tr>
<tr>
<td>9. SF-36 PCS</td>
<td>.723**</td>
<td>.728**</td>
<td>.344*</td>
<td>.644**</td>
<td>0.08</td>
<td>.367*</td>
<td>.386**</td>
<td>0.00</td>
<td>1.00</td>
<td>0.14</td>
<td>0.16</td>
<td>49.29</td>
<td>9.36</td>
</tr>
<tr>
<td>10. SF-36 MCS</td>
<td>0.03</td>
<td>0.18</td>
<td>.575**</td>
<td>0.26</td>
<td>.817**</td>
<td>.654**</td>
<td>.593**</td>
<td>.890**</td>
<td>-0.14</td>
<td>1.00</td>
<td>.325*</td>
<td>42.13</td>
<td>12.69</td>
</tr>
<tr>
<td>11. C-PAM</td>
<td>0.23</td>
<td>0.24</td>
<td>0.12</td>
<td>0.27</td>
<td>0.10</td>
<td>.377*</td>
<td>.350*</td>
<td>.441**</td>
<td>0.16</td>
<td>.325*</td>
<td>1.00</td>
<td>58.69</td>
<td>18.20</td>
</tr>
<tr>
<td><em>M</em></td>
<td>74.89</td>
<td>63.77</td>
<td>65.13</td>
<td>66.54</td>
<td>56.22</td>
<td>55.16</td>
<td>66.99</td>
<td>61.45</td>
<td>49.29</td>
<td>42.13</td>
<td>58.69</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>SD</em></td>
<td>23.93</td>
<td>27.56</td>
<td>25.94</td>
<td>21.02</td>
<td>22.97</td>
<td>30.06</td>
<td>24.86</td>
<td>25.20</td>
<td>9.36</td>
<td>12.69</td>
<td>18.20</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* **Correlation is significant at the 0.01 level (2-tailed). *Correlation is significant at the 0.05 level (2-tailed).*
Table 7

*Pearson Correlation Coefficient between CG-PAM and HSST*

<table>
<thead>
<tr>
<th>Measure</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. C-PAM</td>
<td>--</td>
<td>-.41**</td>
<td>-.23</td>
<td>.01</td>
<td>58.68</td>
<td>18.20</td>
</tr>
<tr>
<td>2. HSST Eating</td>
<td>-.41**</td>
<td>--</td>
<td>.45**</td>
<td>.36*</td>
<td>6.53</td>
<td>3.36</td>
</tr>
<tr>
<td>3. HSST Exercise</td>
<td>-.23</td>
<td>.45**</td>
<td>--</td>
<td>.31*</td>
<td>4.52</td>
<td>2.97</td>
</tr>
<tr>
<td>4. HSST Stress</td>
<td>.010</td>
<td>.36*</td>
<td>.31*</td>
<td>--</td>
<td>5.70</td>
<td>2.66</td>
</tr>
<tr>
<td>M</td>
<td>58.68</td>
<td>6.53</td>
<td>4.52</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>18.20</td>
<td>3.36</td>
<td>2.97</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. ** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).

Table 8.

*Spearman’s Rho Correlations between CG-PAM and HSST scales*

<table>
<thead>
<tr>
<th>Measure</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. CG-PAM</td>
<td>--</td>
<td>-.360*</td>
<td>.061</td>
<td>-.113</td>
<td>58.68</td>
<td>18.2</td>
</tr>
<tr>
<td>2. HSST Smoking</td>
<td>-.360*</td>
<td>--</td>
<td>-.080</td>
<td>.023</td>
<td>9.23</td>
<td>2.22</td>
</tr>
<tr>
<td>3. HSST Alcohol</td>
<td>.061</td>
<td>-.080</td>
<td>--</td>
<td>-.269</td>
<td>8.770</td>
<td>2.480</td>
</tr>
<tr>
<td>4. HSST Safety</td>
<td>-.113</td>
<td>.023</td>
<td>-.269</td>
<td>--</td>
<td>9.800</td>
<td>.510</td>
</tr>
<tr>
<td>M</td>
<td>58.68</td>
<td>9.23</td>
<td>8.770</td>
<td>9.800</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>SD</td>
<td>18.2</td>
<td>2.22</td>
<td>2.480</td>
<td>.510</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

An independent-samples *t*-test was calculated comparing the mean activation level of caregivers who identified as married/partnered to the mean activation level of caregivers who
identified as not currently married/partnered. No significant difference was found ($t(40) = 2.72, p > .05$). The mean activation level of married/partnered caregivers ($M = 53.86$, $SD = 15.31$) was not significantly different from the mean activation level of caregivers who were not currently married/partnered ($M = 69.32$, $SD = 18.62$).

An independent-samples $t$-test was calculated comparing the mean activation level of caregivers who identified as employed to the mean activation level of those who identified as unemployed or retired. No significant difference was found ($t(19) = -0.08, p > .05$). The mean activation level of employed caregivers ($M = 63.65$, $SD = 18.70$) was not significantly different from the mean activation level of caregivers who reported being unemployed or retired ($M = 64.39$, $SD = 18.07$).

A one-way ANOVA was computed comparing the caregiver activation level of participants who were the spouses or children of the care recipient to participants who were extended family/friends of the care recipient (“other”). A significant difference was found among the relationship between the caregiver and the care recipient regarding caregiver activation level ($F (2, 39) = 10.10, p < .001$) with a large effect size $\eta^2 = .341$ (Nandy, 2012). A Dunnet C was used to determine the nature of the differences between the relationships of the caregivers to the care recipients. This analysis revealed that spouses of care recipients had lower levels of activation ($M = 49.14$, $SD = 10.24$) than caregivers who identified as extended family/friends of the care recipient ($M = 73.42$, $SD = 17.11$). Activation levels of participants who identified as the children of the care recipient ($M = 61.70$, $SD = 19.31$) were not significantly different from the activation levels of participants identifying as spouses or extended family/friends of the care recipient.
No significant difference was found between caregiver activation and additional demographic characteristics such as caregiver education level, years in caregiver role, length of Alzheimer’s diagnosis for care recipient, or total number of caregiver responsibilities.

**Relationship between Caregiver Activation Level, Health, and Health Behaviors**

Pearson correlation coefficients were calculated on normally distributed variables to determine the relationship between participant scores on the CG-PAM, SF-36, and HSST Eating Habits, Exercise/Fitness, and Stress Control scales. A Spearman rho correlation coefficient was calculated on the HSST Smoking, Alcohol/Drugs, and Safety scales. Correlations between caregiver activation level and various caregiver outcome variables are presented in Table 6. Non normally distributed items of the HSST did not correlate with other measures of health or caregiver self-efficacy. Results of Spearman’s rho correlations between HSST Smoking, HSST Alcohol/Drugs, and HSST Safety with the CG-PAM can be found in Table 7. Moderate positive correlations were found between the participants’ CG-PAM activation total and SF-36 Vitality subtest \( r(42) = .377, p < .05 \) with a large effect size Cohen’s \( d = .81 \), SF-36 General Health subtest \( r(42) = .350, p < .05 \) with a medium effect size Cohen’s \( d = .747 \), SF-36 Role Emotional subtest \( r(42) = .441, p < .01 \) with a large effect size Cohen’s \( d = .983 \), and SF-36 Mental Component score \( r(42) = .325, p < .05 \) with a medium effect size Cohen’s \( d = .687 \) (Cohen, 1992). Moderate negative correlations were found between the participants’ CG-PAM activation total and the HSST cigarette smoking \( \rho (42) = -.360, p < .05 \) and the HSST eating habits \( r (39) = -.406, p < .01 \) with large effect size Cohen’s \( d = -.889 \). These correlations indicate there is a significant linear relationship between caregiver activation level and various elements of caregiver health and health behaviors.
No additional significant correlations were found between the CG-PAM and other health or health behavior variables in this sample. Based on these findings, caregiver activation level does not appear to be related to caregiver physical function, role physical, social function, body pain, mental health, physical component, use of alcohol or drugs, exercise/fitness behaviors, current level of stress, and safety behaviors.

**Relationship between Caregiver Activation and Self-Efficacy**

Pearson correlation coefficients were calculated to assess the relationship between participant scores on the CG-PAM and participant domain scores on the CGSE. No significant correlations were found between the CG-PAM and the CGSE OR domain. Moderately strong positive relationships were found between the CG-PAM and CGSE DB ($r(40) = .59$, $p < .01$) with a large effect size Cohen's $d = 1.428$ and CGSE CU ($r(40) = .44$, $p < .01$) with a large effect size Cohen's $d = .974$ (Cohen, 1992). These results indicate that within this sample, there is a significant relationship between caregiver activation and caregiver self-efficacy in areas of responding to care recipient behaviors and managing distressing thoughts about caregiving.
Chapter 4
Discussion

Caregiver activation is a relatively new construct that is becoming increasingly present in research literature. Caregiver activation has been operationalized based on patient activation and can be defined as an informal caregiver’s knowledge, skill, and confidence to provide multiple levels of care to another individual such as managing the physical health condition, collaborating with health providers, and assessing appropriate, high-quality care for a care recipient. This study aimed to assess levels of caregiver activation in informal caregivers of persons with Alzheimer’s disease and to investigate the moderating effects of caregiver activation on the general physiological and psychological health and health behaviors of informal caregivers.

Several interesting findings were identified regarding caregiver activation as related to caregiver characteristics and self-efficacy. Previous research and demographic studies have found that informal caregivers are most commonly middle-aged women who care for an elderly parent or close family member (Family Caregiver Alliance, 2012). Demographics of this sample mirrored the general caregiver population and results identified a significant relationship between caregiver activation and specific caregiver characteristics such as relationship to care recipient and perceived number of health concerns. Caregivers who are spouses are more likely to have lower levels of activation. Consistent with the patient activation literature marital status and employment were not related to levels of activation (Hibbard et al., 2007). The relationship between caregiver characteristics and activation level holds implications for the ability of
medical providers to easily identify caregivers who may be at greater risk for lower levels of activation and, based on the finding of this study, greater risk for physiological and psychological health concerns.

Hypotheses one and two, which postulated that higher levels of caregiver activation would be related to lower levels of psychological and physical distress, were supported by the findings of this study. Results identified significant positive relationships between caregiver activation and caregiver physical and psychological wellbeing, specifically indicated by reported general health and vitality scores of the SF-36. These findings would suggest that as caregiver activation increases so does caregiver general health and vitality. Previous validation studies found that the summary measure of vitality loads on both the physical and mental component scores of the SF-36 (Ware, n.d). Therefore, it can be inferred that the moderating effect of caregiver activation on caregivers’ vitality score will influence the overall physical and mental health scores of the caregiver. In addition results of this study suggest a relationship between caregiver activation and the role-emotional subtest of the SF-36. According to Ware (n.d.), the role-emotional score assesses the influence emotional distress has on an individual’s functioning in areas of work or activities of daily living with higher scores indicating greater level of functioning and fewer emotional problems. Taking this into consideration, these findings suggest that greater CG-PAM activation scores may indicate less influence of emotional role upset on overall caregiver functioning. These supported hypotheses are consistent with previous research involving patient activation, which suggests that greater patient activation is related to better physical and mental health, and lower physical and mental health morbidity (Green et al., 2010; Hibbard et al., 2007).
The third hypothesis, that increased caregiver activation would result in improvement in positive health behaviors in caregivers, was not supported. Data indicated inconsistent results that were contrary to previous research findings. For instance, a negative relationship was found between caregiver activation and caregiver eating behaviors. This differs from several previous studies which identify significant positive relationships between activation and improvements in health behaviors (Harvey, Briggs Fowles, Xi, & Terry, 2012; Hibbard & Mahoney, 2010). These finding were unexpected and suggest a negative influence of caregiver activation on the positive health behavior of healthy eating/diet which implies that there is a slight decrease in caregiver healthy eating habits as caregiver activation levels increase. These results may be related to research studies which associate caregiver distress with an increase in weight gain and prevalence of obesity in the caregiver population. It may be hypothesized that the change in eating habits found in this study are related to an increase in responsibility and stress associated with increased activation (Vitaliano, Russo, Scanlan, & Greeno, 1996). The only other health behavior found to be significantly related to caregiver activation was cigarette smoking. Descriptive analysis of the data identified that the sample for cigarette smoking was negatively skewed indicating that few participants engaged in smoking behaviors, therefore the influence of caregiver activation on this variable would likely be small and cannot be interpreted as supportive of the hypothesis that caregiver activation is related to improvements in positive health behaviors in caregivers such as decreased smoking behaviors.

**Limitations of the Study**

Several limitations of this study are acknowledged. First, the sample was relatively small which makes it difficult to generalize the findings of this study to the general population of informal caregivers of persons with Alzheimer’s despite similar CG-PAM scores to the general
population. Additionally, 60% of participants were gathered through social support networks for informal caregivers. There may be an influence of the use of social support networks on overall caregiver activation in that activation may change depending on the availability, feasibility, or caregiver knowledge of support based on previous research of regarding caregiving self-efficacy and mastery (Au et al., 2009; Conner et al., 2008; Fortinsky et al., 2002). It may be possible that participants gathered from social support networks would already have higher activation given their use of support resources. The remaining 40% of the sample was gathered via an internet community, Craigslist.org, which limits the generalizability of the sample to those who do not have internet access, are not proficient at utilizing internet resources, or are unfamiliar with Craigslist.org. Generalizability of results is further limited by the recruitment of participants only residing within the state of Oregon, primarily within the greater Portland-Metro area which influences demographic variables.

In addition to sample limitations, this study utilized a brief, 10-item version of the CG-PAM which may influence the calculated activation level of the participants by having fewer items and less specificity than the 13-item version of the CG-PAM. This shorter version of the CG-PAM may also influence the relationship between the CG-PAM and the CGSE, due to the CGSE having 5 additional questions then the CG-PAM. The limited specificity of the CG-PAM may influence the extent to which the variables of caregiver activation and caregiver self-efficacy can be differentiated.

Lastly, this study provides limited data on the overall psychological symptoms and wellbeing of informal caregivers. Previous research indicates strong correlations between a person’s role as a caregiver and overall reported symptom of depression, anxiety, and stress (Caspar & O’Rourke, 2009; Elliott et al., 2010; O’Rourke, 2005). Unfortunately, this study was unable to
gather additional information regarding caregiver mental health due to a limited number of caregivers completing the CES-D assessment. This is a standard measure used in the caregiver literature to measure depression and would have been ideal to compare symptoms of depression in this sample to other samples of caregivers of persons with Alzheimer’s. Instead, this sample’s depression was measured uniquely by the Mental Component summary on the SF-36, and specific SF-36 subscales: Vitality, Social Functioning, Role-Emotional, and Mental health.

**Summary and Suggestions for Future Research Opportunities**

Caregiver activation was found to be related to caregiver self-efficacy. Caregiver self-efficacy is differentiated from traditional definitions of self-efficacy in that it is measured in three primary domains, self-efficacy for obtaining respite (CGSE OR), responding to disruptive behaviors of care recipient (CGSE DB) and controlling upsetting thoughts about caregiving (CGSE CU). Previous research assessing caregiver self-efficacy suggests that low self-efficacy in domains of OR, DB, and CU influences caregiver initiation of or persistence in use of coping strategies to manage physiological and psychological distress (Steffen et al., 2002). The relationship between caregiver activation and domains of caregiver self-efficacy may have implications for overall caregiver physiological and psychological health as previous research has found a close relationship between caregiver self-efficacy as correlated with caregiver’s cumulative health risk (Au et al., 2009; Au et al., 2011). Future research opportunities may be found in the assessment of the covariance of caregiver activation and caregiver self-efficacy in relation to caregiver health and health behaviors.

Additionally, there was limited demographic information collected regarding the characteristics of the care recipients. It may be beneficial to identify the specific influence of care
recipient health, functioning, and overall level of needed care on the caregiver activation level of informal caregivers.

**Implications**

Stress associated with providing care for an older individual diagnosed with Alzheimer’s disease often has adverse influences on the physiological and psychological health of informal caregivers (Elliott et al., 2010; Mausbach et al., 2012; Vitaliano et al., 2003). Findings of this study identify some of the health consequences of the caregiver role in relationship to caregiver activation and holds implications for identification of variables which may moderate these health consequences.

Research related to a similar construct, Patient Activation, has found that higher levels of activation are related to positive influences in self-management behaviors and health (Green & Hibbard, 2011). In this study, caregiver activation levels were found to be related to physical and mental health measures on the SF-36 and health behavior measures of the HSST. Specifically higher levels of caregiver activation were related to higher scores on participant vitality, general health, mental component, and role emotional scores on the SF-36. Additionally, higher levels of caregiver activation were related to lower scores on healthy eating behaviors as reported on the HSST. These findings may hold implications for the use of interventions to increase caregiver activation as a means of moderating the influence of caregiver stress on overall caregiver health. Physicians and professionals associated with informal caregivers may be able to use caregiver activation as a means of identifying caregivers at greater risk for consequences of caregiver stress, with the understanding that caregivers with a lower activation level may also indicate greater physical and mental health concerns (e.g., lower general health scores, greater emotional distress). Physicians of care recipients may have the greatest impact on interventions for informal
caregivers given their interaction with the care recipient and consequently the informal caregiver as well. Additionally, physicians may already be involved in interventions to increase caregiver activation (e.g., providing information regarding care recipient needs, psychoeducation of progress of Alzheimer’s), have a greater understanding of the unique experiences of caregivers of persons with Alzheimer’s and may therefore be able to monitor overall caregiver activation to a greater extent (Brodaty & Green, 2002; Dern & Heath, 2003). For instance, physicians of care recipients may request the CG-PAM be completed by the caregiver at each care recipient appointment as a means of monitoring changes in activation and determining interventions specific to the caregiver activation level. This would allow for flexibility and tailoring of interventions (type and duration needed) based on the specific activation level of the caregiver.

An unexpected finding of this study was the negative relationship between healthy eating behaviors and caregiver activation. This may be related to previous research findings indicating a relationship between caregiver responsibility and burden and caregivers’ attendance to personal health care (Elliott et al., 2010; Gallant & Connell, 1997; Schulz et al., 1995). The limited ability of caregivers to attend to their own self-care or self-management of health care may further support the idea that health professionals associated with the care of persons with Alzheimer’s may be the best candidates for implementing interventions on caregivers’ behalf. Studies have indicated that interventions on behalf of the caregivers (e.g., psychoeducation, counseling, increased awareness of resources, management of care recipient behavior) may prevent the progression of depression and improve quality of health and rate of psychological distress in caregivers as Alzheimer’s progresses (de Rotrou et al., 2011; Martín-Carrasco et al., 2009). Studies regarding the use of interventions to address caregiver distress and burden have been conducted in association with memory clinics or support associations (e.g., Alzheimer’s
Association) where caregiver-health professional interactions are common. Findings of these studies support and emphasize the need for development of collaboration and consultation between physicians, providers, and support agencies in order to offer psychosocial and psychoeducation interventions for caregivers (Mittleman, Roth, Haley, & Zarit, 2004).

An additional implication of this research is the accessibility of this specific caregiver population. Half of the participants for this study were gathered from support agencies (e.g. Alzheimer’s Association support group and NorthWest Senior and Disability Services) and were receiving support or resources from these agencies while the remaining half of the sample were gathered via Craigslist.org and reported no participation in support resources. Additional demographic information assessing difference between these groups may hold implications for the efficacy and feasibility of interventions for caregivers of persons with Alzheimer’s who are not already connected with support resources or who have limited access to resources.

Overall these findings provide a starting point for additional research regarding the moderating effects of caregiver activation on the physical and psychological health and health behaviors of informal caregivers of persons with Alzheimer’s and may hold implications for identifying at-risk populations of informal caregivers, identifying the accessibility and feasibility of interventions for caregivers not associated with support resources, and aid in the decision making process for interventions on behalf of caregivers of persons with Alzheimer’s.
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Rabinowitz, Y. G., Saenz, E. C., Thompson, L. W., & Gallagher-Thompson, D. (2011). Understanding caregiver health behaviors: Depressive symptoms mediate caregiver self-


Appendix A

Volunteers Needed for Research Regarding Caregiving for Alzheimer's

Hello, my name is Trinity Parker. I am a graduate student in clinical psychology at George Fox University. I am currently conducting research for my dissertation regarding the health and well-being of informal caregivers for persons with Alzheimer's disease.

I am looking for persons to participate in a survey that explores the roles of caregivers and caregiver health behaviors and beliefs. I am looking specifically for participants who provide caregiver services for family members or friends who have been diagnosed with Alzheimer's disease. There is no harm or distress associated with completing the survey. No personal identification information will be collected. Data gathered from this survey will provide beneficial information regarding the unique needs and experiences of caregivers for future application.

The survey takes between 15-25 minutes to complete based on your unique reading speed or the detail of your responses.

If you would like to participate in this survey please click the link below. Thank you for your time and consideration!

Click here to take survey
Appendix B

Demographics

Please check the answer that best applies or fill in the corresponding empty space with the most appropriate answer.

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
   ___ European American/Caucasian
   ___ Hawaiian/Pacific Islander

4. What is your current marital status?
   ___ Single, Never Married
   ___ Married
   ___ Separated
   ___ 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
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. What is your relationship to the patient? (i.e. Are you the patient’s spouse, relative, adult child, parent, friend?) ________________________________

9. How many hours a week do you spend in caregiving related activities? _______ hours

10. How many years have you been caregiving for the care recipient? _________________

11. Do you use of respite services?
   _____ No
   _____ Yes
   If yes, how many hours per week and type of respite services used?
   ________________________________________________________________

12. Does the care recipient live with you?
   _____ Yes
   _____ No

13. Who currently lives with you? Check all that apply.
   _____ Parent (not care recipient)
   _____ Partner/spouse (not care recipient)
   _____ Children (not care recipient)
   _____ Other (not care recipient) ________________

14. Do you have health insurance?
   _____ Yes
   _____ No
15. How long has the care recipient been diagnosed with Alzheimer’s dementia? _____ (Months)

16. Please rate the care recipient’s current level of cognitive functioning by marking your answer on the line in the corresponding place.

<table>
<thead>
<tr>
<th>0</th>
<th>5</th>
<th>10</th>
</tr>
</thead>
</table>

(Poor) (Excellent)

17. Please rate the care recipient’s health by marking on the line in the corresponding place:

<table>
<thead>
<tr>
<th>0</th>
<th>5</th>
<th>10</th>
</tr>
</thead>
</table>

(Poor) (Excellent)

18. When was the last time you had a doctor’s appointment? __________

19. When was your last physical examination? ______________

20. Do you have or have you had any of the following health concerns? Please check all that apply.

- [ ] Anemia  
- [ ] Arthritis  
- [ ] Asthma  
- [ ] Blood disease  
- [ ] Cancer  
- [ ] Diabetes  
- [ ] Epilepsy/Seizures  
- [ ] Fainting/Dizziness  
- [ ] Headaches  
- [ ] Heart/Cardiovascular Disease  
- [ ] Lung/Respiratory Disease  
- [ ] Stomach Disease/Ulcers  
- [ ] Unexplained Weight Loss/gain  
- [ ] Blood pressure High/Low (circle one)  
- [ ] High Cholesterol  
- [ ] Sinus problems  
- [ ] Hay Fever

21. Do you attend a caregiver support group?

- [ ] No  
- [ ] Yes. How often? _______________________

22. Do you consider yourself a religious person?

- [ ] No  
- [ ] Yes. What is your faith preference? ____________________________
23. Please indicate on the line below how often you participate in faith based activities (Example: attending church, religious studies)?

| Never | Rarely | Sometimes | Frequently | Always |

24. Are there others who support you as a caregiver?
   ___ No
   ___ Yes. How many people support you? ________________________________

25. How do others support you? Please check all that apply.
   ___ encourage your self-care  ___ Think your caregiving is valuable
   ___ Watch your children    ___ Listen to your needs
   ___ Watch care recipient when needed
   List any other: ________________________________

26. What are your primary caregiving responsibilities? Please check all that apply.
   ___ dispensing medication  ___ cleaning the house
   ___ preparing meals  ___ drive care recipient to appointments
   ___ assisting care recipient with personal hygiene
   List any others:
   ________________________________

27. What kinds of formal services are you receiving?
   ___ Nursing assistance  ___ household help
   ___ cleaning services  ___ delivery services
   List any others:
   ________________________________

Thank you for completing this survey packet!

Your participation is greatly appreciated.
Appendix C

Caregiver Activation Scale (CG-PAM) (U.S. Department of Health and Human Services, n.d.).

Please circle how much you agree or disagree with each statement as it applies to you personally as the caregiver. *There are no right or wrong answers.* It is important that you answer the way you really think and feel. Please give an answer for every statement.

<table>
<thead>
<tr>
<th></th>
<th>I am confident that I can follow through on all care and treatment this person needs at home.</th>
<th>Disagree Strongly</th>
<th>Disagree</th>
<th>Agree</th>
<th>Agree Strongly</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I understand this person’s health problems and what causes them.</td>
<td>Disagree Strongly</td>
<td>Disagree</td>
<td>Agree</td>
<td>Agree Strongly</td>
<td>N/A</td>
</tr>
<tr>
<td>2.</td>
<td>I am confident I can help prevent or reduce problems associated with this person’s health.</td>
<td>Disagree Strongly</td>
<td>Disagree</td>
<td>Agree</td>
<td>Agree Strongly</td>
<td>N/A</td>
</tr>
<tr>
<td>3.</td>
<td>I know what treatments are available for this person’s health problems.</td>
<td>Disagree Strongly</td>
<td>Disagree</td>
<td>Agree</td>
<td>Agree Strongly</td>
<td>N/A</td>
</tr>
<tr>
<td>4.</td>
<td>I know what each of this person’s prescribed medications do, and how and when each should be taken.</td>
<td>Disagree Strongly</td>
<td>Disagree</td>
<td>Agree</td>
<td>Agree Strongly</td>
<td>N/A</td>
</tr>
<tr>
<td>5.</td>
<td>I know what red flags to watch for that may mean this person is becoming ill.</td>
<td>Disagree Strongly</td>
<td>Disagree</td>
<td>Agree</td>
<td>Agree Strongly</td>
<td>N/A</td>
</tr>
<tr>
<td>6.</td>
<td>I know what to do if red flags, signs that may mean this person is becoming ill, occur.</td>
<td>Disagree Strongly</td>
<td>Disagree</td>
<td>Agree</td>
<td>Agree Strongly</td>
<td>N/A</td>
</tr>
<tr>
<td>7.</td>
<td>I am confident that I will be able to tell when this person needs to be seen by the doctor.</td>
<td>Disagree Strongly</td>
<td>Disagree</td>
<td>Agree</td>
<td>Agree Strongly</td>
<td>N/A</td>
</tr>
<tr>
<td>8.</td>
<td>I am confident I can tell a doctor any concerns I have about this person’s health even if the doctor does not ask or may not agree with me.</td>
<td>Disagree Strongly</td>
<td>Disagree</td>
<td>Agree</td>
<td>Agree Strongly</td>
<td>N/A</td>
</tr>
<tr>
<td>9.</td>
<td>I am confident that I can care for this person’s needs even during times of stress.</td>
<td>Disagree Strongly</td>
<td>Disagree</td>
<td>Agree</td>
<td>Agree Strongly</td>
<td>N/A</td>
</tr>
</tbody>
</table>
Appendix D

The Revised Scale for Caregiving Self-Efficacy (Steffen et al., 2002).

Instructions: Please mark your response on the scale below each question.

1. I am confident that I can ask a friend/family member to stay with the care recipient for a day when I need to see the doctor.

2. I am confident that I can ask a friend/family member to stay with the care recipient for a day when I have errands to be done.

3. I am confident that I can ask a friend or family member to do errands for me.

4. I am confident that I can ask a friend/family member to stay with the care recipient for a day when I feel the need for a break.

5. I am confident that I can ask a friend/family member to stay with the care recipient for a week when I need time for myself.

6. When the care recipient forgets our daily routine and asks when lunch is right after we’ve eaten, I am confident that I can answer him/her without raising my voice.
7. When I get angry because the care recipient repeats the same question over and over, I am confident that I can say things to myself that calm me down.

8. When the care recipient complains to me about how I’m treating him/her, I am confident that I can respond without arguing back (Ex: reassuring or distracting him/her).

9. When the care recipient asks me 4 times in the first one hour after lunch when lunch is, I am confident that I can answer him/her without raising my voice.

10. When the care recipient interrupts me for the fourth time while I am making dinner, I am confident that I can respond without raising my voice.

11. I am confident that I can control thinking about unpleasant aspects of taking care of the care recipient.

12. I am confident that I can control thinking how unfair it is that I have to put up with this situation (taking care of the care recipient).

13. I am confident that I can control thinking about what a good life I had before the care recipient’s illness and how much I lost.
14. I am confident that I can control thinking about what I am missing or giving up because of the care recipient.

15. I am confident that I can control worrying about future problems that might come up with the care recipient.

# Appendix E

## Center for Epidemiologic Studies Depression Scale (CES-D), NIMH

Below is a list of the ways you might have felt or behaved. Please tell me how often you have felt this way during the past week.

<table>
<thead>
<tr>
<th>Week</th>
<th>During the Past</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rarely or none of the time (less than 1 day)</td>
</tr>
<tr>
<td>1. I was bothered by things that usually don't bother me.</td>
<td>[ ]</td>
</tr>
<tr>
<td>2. I did not feel like eating; my appetite was poor.</td>
<td>[ ]</td>
</tr>
<tr>
<td>3. I felt that I could not shake off the blues even with help from my family or friends.</td>
<td>[ ]</td>
</tr>
<tr>
<td>4. I felt just as good as other people.</td>
<td>[ ]</td>
</tr>
<tr>
<td>5. I had trouble keeping my mind on what I was doing.</td>
<td>[ ]</td>
</tr>
<tr>
<td>6. I felt depressed.</td>
<td>[ ]</td>
</tr>
<tr>
<td>7. I felt that everything I did was an effort.</td>
<td>[ ]</td>
</tr>
<tr>
<td>8. I felt hopeful about the future.</td>
<td>[ ]</td>
</tr>
<tr>
<td>9. I thought my life had been a failure.</td>
<td>[ ]</td>
</tr>
<tr>
<td>10. I felt fearful.</td>
<td>[ ]</td>
</tr>
<tr>
<td>11. My sleep was restless.</td>
<td>[ ]</td>
</tr>
<tr>
<td>12. I was happy.</td>
<td>[ ]</td>
</tr>
<tr>
<td>13. I talked less than usual.</td>
<td>[ ]</td>
</tr>
<tr>
<td>14. I felt lonely.</td>
<td>[ ]</td>
</tr>
<tr>
<td>15. People were unfriendly.</td>
<td>[ ]</td>
</tr>
<tr>
<td>16. I enjoyed life.</td>
<td>[ ]</td>
</tr>
<tr>
<td>17. I had crying spells.</td>
<td>[ ]</td>
</tr>
<tr>
<td>18. I felt sad.</td>
<td>[ ]</td>
</tr>
<tr>
<td>19. I felt that people dislike me.</td>
<td>[ ]</td>
</tr>
<tr>
<td>20. I could not get “going.”</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

**SCORING:** Zero for answers in the first column, 1 for answers in the second column, 2 for answers in the third column, 3 for answers in the fourth column. The scoring of positive items is reversed. Possible range of scores is zero to 60, with the higher scores indicating the presence of more symptomatology.
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:

<table>
<thead>
<tr>
<th>Excellent</th>
<th>Very good</th>
<th>Good</th>
<th>Fair</th>
<th>Poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>▼</td>
<td>▼</td>
<td>▼</td>
<td>▼</td>
<td>▼</td>
</tr>
<tr>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
<td>□ 5</td>
</tr>
</tbody>
</table>

2. Compared to one year ago, how would you rate your health in general now?

<table>
<thead>
<tr>
<th>Much better now than one year ago</th>
<th>Somewhat better now than one year ago</th>
<th>About the same as one year ago</th>
<th>Somewhat worse now than one year ago</th>
<th>Much worse now than one year ago</th>
</tr>
</thead>
<tbody>
<tr>
<td>▼</td>
<td>▼</td>
<td>▼</td>
<td>▼</td>
<td>▼</td>
</tr>
<tr>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
<td>□ 5</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Yes, limited a lot</th>
<th>Yes, limited a little</th>
<th>No, not limited at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
</tr>
</tbody>
</table>

   a. Vigorous activities, such as running, lifting heavy objects, participating in strenuous sports
   b. Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf
   c. Lifting or carrying groceries
   d. Climbing several flights of stairs
   e. Climbing one flight of stairs
4. During the past 4 weeks, how much of the time have you had any of the following problems with your work or other regular daily activities as a result of your physical health?

<table>
<thead>
<tr>
<th></th>
<th>All of the time</th>
<th>Most of the time</th>
<th>Some of the time</th>
<th>A little of the time</th>
<th>None of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Cut down on the amount of time you spent on work or other activities</td>
<td>▼</td>
<td>▼</td>
<td>▼</td>
<td>▼</td>
<td>▼</td>
</tr>
<tr>
<td>b) Accomplished less than you would like</td>
<td>▼</td>
<td>▼</td>
<td>▼</td>
<td>▼</td>
<td>▼</td>
</tr>
<tr>
<td>c) Were limited in the kind of work or other activities</td>
<td>▼</td>
<td>▼</td>
<td>▼</td>
<td>▼</td>
<td>▼</td>
</tr>
<tr>
<td>d) Had difficulty performing the work or other activities (for example, it took extra effort)</td>
<td>▼</td>
<td>▼</td>
<td>▼</td>
<td>▼</td>
<td>▼</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th></th>
<th>All of the time</th>
<th>Most of the time</th>
<th>Some of the time</th>
<th>A little of the time</th>
<th>None of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Cut down on the amount of time you spent on work or other activities</td>
<td>▼</td>
<td>▼</td>
<td>▼</td>
<td>▼</td>
<td>▼</td>
</tr>
</tbody>
</table>
b. Accomplished less than you would like ........................................ 
5

c. Did work or other activities less carefully than usual ................ 
5

6. During the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbors, or groups?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>Slightly</th>
<th>Moderately</th>
<th>Quite a bit</th>
<th>Extremely</th>
</tr>
</thead>
<tbody>
<tr>
<td>▼</td>
<td>▼</td>
<td>▼</td>
<td>▼</td>
<td>▼</td>
</tr>
<tr>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
<td>□ 5</td>
</tr>
</tbody>
</table>

7. How much bodily pain have you had during the past 4 weeks?

<table>
<thead>
<tr>
<th>None</th>
<th>Very mild</th>
<th>Mild</th>
<th>Moderate</th>
<th>Severe</th>
<th>Very severe</th>
</tr>
</thead>
<tbody>
<tr>
<td>▼</td>
<td>▼</td>
<td>▼</td>
<td>▼</td>
<td>▼</td>
<td>▼</td>
</tr>
<tr>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
<td>□ 5</td>
<td>□ 6</td>
</tr>
</tbody>
</table>

8. During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>A little bit</th>
<th>Moderately</th>
<th>Quite a bit</th>
<th>Extremely</th>
</tr>
</thead>
<tbody>
<tr>
<td>▼</td>
<td>▼</td>
<td>▼</td>
<td>▼</td>
<td>▼</td>
</tr>
<tr>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
<td>□ 5</td>
</tr>
</tbody>
</table>

9. These questions are about how you feel and how things have been with you during the past 4 weeks. 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 past 4 weeks…

<table>
<thead>
<tr>
<th>All of the time</th>
<th>Most of the time</th>
<th>Some of the time</th>
<th>A little of the time</th>
<th>None of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>▼</td>
<td>▼</td>
<td>▼</td>
<td>▼</td>
<td>▼</td>
</tr>
</tbody>
</table>

a. Did you feel full of life? .................. □ 1 ............ □ 2 ............ □ 3 ............ □ 4 ............ □ 5

b. Have you been very nervous? .......... □ 1 ............ □ 2 ............ □ 3 ............ □ 4 ............ □ 5
10. **During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting with friends, relatives, etc.)?**

<table>
<thead>
<tr>
<th>All of the time</th>
<th>Most of the time</th>
<th>Some of the time</th>
<th>A little of the time</th>
<th>None of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>▼</td>
<td>▼</td>
<td>▼</td>
<td>▼</td>
<td>▼</td>
</tr>
<tr>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
<td>□ 5</td>
</tr>
</tbody>
</table>

- Have you felt so down in the dumps that nothing could cheer you up? ........................................... □ 1 ........... □ 2 ........... □ 3 ........... □ 4 ........... □
- Have you felt calm and peaceful? ........................................... □ 1 ........... □ 2 ........... □ 3 ........... □ 4 ........... □
- Did you have a lot of energy? ........................................... □ 1 ........... □ 2 ........... □ 3 ........... □ 4 ........... □
- Have you felt downhearted and depressed? ........................................... □ 1 ........... □ 2 ........... □ 3 ........... □ 4 ........... □
- Did you feel worn out? ........................................... □ 1 ........... □ 2 ........... □ 3 ........... □ 4 ........... □
- Have you been happy? ........................................... □ 1 ........... □ 2 ........... □ 3 ........... □ 4 ........... □
- Did you feel tired? ........................................... □ 1 ........... □ 2 ........... □ 3 ........... □ 4 ........... □
11. How TRUE or FALSE is each of the following statements for you?

<table>
<thead>
<tr>
<th>Definitely true</th>
<th>Mostly true</th>
<th>Don’t know</th>
<th>Mostly false</th>
<th>Definitely false</th>
</tr>
</thead>
<tbody>
<tr>
<td>▼</td>
<td>▼</td>
<td>▼</td>
<td>▼</td>
<td>▼</td>
</tr>
</tbody>
</table>

a. I seem to get sick a little easier than other people .................. [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 

b. I am as healthy as anybody I know .................................. [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 

c. I expect my health to get worse ....................................... [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 

d. My health is excellent .................................................. [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 

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SF-36® is a registered trademark of Medical Outcomes Trust.

(SF-36® Health Survey Standard, United States (English))
Instructions: Please place an “X” in the column that best applies to you.

### A. Cigarette Smoking

*If you never smoke, enter a score of 10 for this section and go to the next section on Alcohol and Drugs.*

<table>
<thead>
<tr>
<th>Activity</th>
<th>Almost Always</th>
<th>Sometimes</th>
<th>Almost Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I avoid smoking cigarettes</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>2. I smoke only low tar and nicotine cigarettes or I smoke a pipe or cigars</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Smoking Score

### B. Alcohol and Drugs

<table>
<thead>
<tr>
<th>Activity</th>
<th>Almost Always</th>
<th>Sometimes</th>
<th>Almost Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I avoid drinking alcoholic beverages or I drink no more than 1 or 2 drinks a day.</td>
<td>4</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>2. I avoid using alcohol or other drugs (especially illegal drugs) as a way of handling stressful situations or the problems in my life.</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>3. I am careful not to drink alcohol when taking certain medicines (for example, medicine for sleeping, pain, colds, and allergies), or when pregnant</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>4. I read and follow the label directions when using prescribed over-the-counter drugs.</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Alcohol and Drugs Score

### C. Eating Habits

<table>
<thead>
<tr>
<th>Activity</th>
<th>Almost Always</th>
<th>Sometimes</th>
<th>Almost Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I eat a variety of foods each day, such as fruits and vegetables, whole grain breads and cereals, lean meats, dairy products, dry peas and beans, and nuts and seeds.</td>
<td>4</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>2. I limit the amount of fat, saturated fat, and cholesterol I eat (including fat on meats, eggs, butter, cream, and organ meats such as liver).</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>3. I limit the amount of salt I eat by coking with only small amounts, not adding salt at the table, and avoiding salty snacks.</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>4. I avoid eating too much sugar (especially frequent snacks or sticky candy or soft drinks.)</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Eating Habits Score
### D. Exercise/Fitness

<table>
<thead>
<tr>
<th>Activity</th>
<th>Almost Always</th>
<th>Sometimes</th>
<th>Almost Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I maintain a desired weight, avoiding overweight and underweight</td>
<td>3</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>2. I do vigorous exercises for 15-30 minutes at least 3 times a week (examples include running, swimming, brisk walking)</td>
<td>3</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>3. I do exercises that enhance my muscle tone for 15-30 minutes at least 3 times a week (examples include yoga and calisthenics).</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>4. I use part of my leisure time participating in individual, family, or team activities that increase my level of fitness (such as gardening, bowling, golf, and baseball).</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

**Exercise/Fitness Score**

### E. Stress Control

<table>
<thead>
<tr>
<th>Activity</th>
<th>Almost Always</th>
<th>Sometimes</th>
<th>Almost Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I have a job or do other work that I enjoy</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>2. I find it easy to relax and express my feelings freely</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>3. I recognize early, and prepare for, events or situations likely to be stressful for me.</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>4. I have close friends, relatives, or others whom I can talk to about personal matters and call on for help when needed.</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>5. I participate in group activities (such as church and community organizations) or hobbies that I enjoy.</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

**Stress Control Score**

### F. Safety

<table>
<thead>
<tr>
<th>Activity</th>
<th>Almost Always</th>
<th>Sometimes</th>
<th>Almost Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I wear a seat belt while riding in a car</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>2. I avoid driving while under the influence of alcohol and other drugs</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>3. I obey traffic rules and the speed limit when driving</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>4. I am careful when using potentially harmful products or substances (such as household cleaners, poisons, and electrical devices).</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>5. I avoid smoking in bed.</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

**Safety Score**
Appendix H

Curriculum Vitae

Trinity Rose Parker, M.A., LT, USN
Curriculum Vitae

309 Navajo Trail
Portsmouth, VA 23701
907-518-0163
trinityrparker@gmail.com

EDUCATION

8.2010 to Present
Student of Doctor of Psychology, Clinical Psychology
George Fox University, Newberg, Oregon
Graduate Department of Clinical Psychology: APA Accredited
Doctor of Psychology, Clinical Psychology (Expected May 2015)
Master of Arts, Clinical Psychology (May 2012)

9.2007 to 5.2010
Bachelor of Arts, Psychology
University of Alaska Anchorage, Anchorage, Alaska
Magna cum laude

HONORS AND AWARDS

9.2011  Armed Forces Health Professionals Scholarship, United States Navy Component

SUPERVISED CLINICAL EXPERIENCE

8.2014 to Present  Internship – (40 hours per week)
Navy Medical Center Portsmouth
Portsmouth, Virginia
Populations Served: Active duty, reserve and retired military service members and dependent family members (ages 18-68).
Duties: Provided individual and group therapy in inpatient and outpatient medical and operational settings. Served as behavioral health consultant for primary care staff and United States Navy Command. Maintained four transrotational patients throughout internship year. Performed evidence based practices including cognitive behavioral therapy, dialectical behavioral therapy, prolonged exposure therapy, cognitive processing therapy, acceptance and commitment therapy, and supportive therapy. Completed fitness for duty evaluations, security clearance evaluations, command-directed mental health evaluations, and administrative separations. Weekly clinical writing/chart notes, intake reports, administrative documentation, and evaluation reports. Including two hours of individual and group supervision weekly.
Supervisors: Michael Franks, Psy.D., CDR, USN, Director of Clinical Training; Mary Brinkmeyer, Ph.D. Psychology Assistant Training Director
5.2012 to 5.2014

**Practicum II** - (17 hours a week)
Providence Medical Group - Sherwood
Sherwood, Oregon

*Populations Served:* Children (6-12), Adolescents (13-17), Adults (18-64), and Geriatrics (65+)

*Duties:* Behavioral Health Consultant to Providence physicians, staff, and patients. Perform Cognitive Behavioral therapy and solution focused short-term therapy with emphasis on integrated care model in individual therapy and consultation formats. Provide long term Relational Dynamic and interpersonal therapy to two patients over the course of 2 years. Completion of assessments for depression, anxiety, bipolar disorder, substance abuse, cognitive functioning, neurological functioning, and ADHD screening. Conduct comprehensive assessments upon request by Providence psychiatrist. Weekly chart notes, intake reports, and assessment reports. Including one hour of individual and group supervision weekly.

*Individual Supervisor:* Marie-Christine Goodworth, Ph.D.

*Group Supervisors:* Marie-Christine Goodworth, Ph.D., Mary Peterson, Ph.D., & Carlos Taloyo, Ph.D.


**Clinical Clerkship** - (36 hours a week)
Naval Medical Center San Diego - OASIS Program
Naval Base Point Loma, San Diego, California

*Populations Served:* Active duty Marine Corps and Navy service members diagnosed with Chronic PTSD comorbid with depression, anxiety, substance abuse, TBI, sleep disorders, and/or personality disorders

*Duties:* Observed and engaged in weekly Cognitive Processing therapy (CPT), Stress Management Skills Reinforcement, Vocational Rehabilitation, and Substance Abuse Recovery in individual and group settings. Received one-on-one weekly training in CPT techniques in an individual therapy setting. Participated in weekly integrated care team treatment planning for selected service members. Accompanied service members in integrative treatment activities (e.g. recreation therapy and art therapy) and community outreach requirements. Including one hour of individual supervision and attendance of weekly staff meetings.

*Supervisor:* Amy Amidon, Ph.D.


**Practicum I** - (15 hours a week)
Archer Glen Elementary School
Sherwood, Oregon

*Populations Served:* Children, ages five to twelve years

*Duties:* Performed Cognitive Behavioral therapy and solution focused short-term therapy. Individual and group therapy. Weekly chart notes and intake reports. Including two hours individual supervision weekly.

*Supervisor:* Hannah Stere, Psy.D.
Pre-Practicum- (5 hours a week)
George Fox University, Graduate Department of Clinical Psychology
Newberg, Oregon
*Populations Served:* College Students
*Duties:* Therapist for two college students.
*Supervisors:* Mary Peterson, Ph.D., Sarah Vasiliaskas, M.A.

Intern- (30 hours a week)
Petersburg Mental Health Services Inc.
Petersburg, Alaska
*Populations Served:* Chronically mentally ill clients
*Duties:* Psychosocial Rehabilitation Counselor, individual therapy and group therapy, clients seen twice a week, with particular focus on social skills, social integration, and emotion regulation. Weekly chart notes. Received one hour individual and one hour of group supervision weekly.
*Supervisor:* Susan Ohmer, LCSW, CDCI

**TOTAL CLINICAL INTERVENTION, ASSESSMENT AND SUPERVISION HOURS**

<table>
<thead>
<tr>
<th>Hours</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1017</td>
<td>Clinical Intervention Hours</td>
</tr>
<tr>
<td>495</td>
<td>Supervision Hours</td>
</tr>
<tr>
<td>75</td>
<td>Assessment Hours</td>
</tr>
</tbody>
</table>

**PROFESSIONAL AND EDUCATIONAL EXPERIENCE**

**MILITARY PSYCHOLOGY**

12.2014  
*Topics in Military and Deployment Psychology*
Center for Deployment Psychology
5-Day Seminar
*Presenters:* Center for Deployment Psychology Staff

1.2014  
*Sleep Disturbance: Assessment and Evidence-based Clinical Interventions in the Active-duty and Veteran Populations*
Defense Centers of Excellence
Webinar session

1.2014  
*State of the Science: Clinical, Metabolic and Pathologic Effects of Multiple Concussions*
Defense Centers of Excellence
Webinar session
*Presenters:* Steven T. DeKosky, M.D., FAAN, FACP, FANA, J. Clay Goodman, M.D., FAAN, and David A. Hovda, Ph.D.
6.2013 Improving Violence Risk Assessment Among Service Members and Veterans
Defense Centers of Excellence
Webinar session
Presenter: Eric B. Elbogen, Ph.D.

4.2013 Military Families and Coping with Reintegration Challenges
Defense Centers of Excellence
Webinar session
Presenter: Kelly A. Blasko, Ph.D.

4.2012 Two War-Torn Soldiers: An Intersubjective Psychoanalytic Treatment for Combat PTSD
Oregon Health and Science University, Portland Oregon
Full day conference
Presenter: Russell Carr, MD

3.2011 Neurobiological Effects of Trauma
George Fox University, Newberg, Oregon
Half-day training session
Presenter: Anna Berardi, Ph.D.

CLINICAL PSYCHOLOGY

1.2015 to 4.2015 Cognitive Behavioral Therapy
Navy Medical Center Portsmouth, Portsmouth, Virginia
Didactic training – 6 part training series
Presenter: Barbara Cubic, Ph.D.

12.2014 Cognitive Processing Therapy
Uniformed Services University of the Health Sciences, Bethesda, Maryland
Three Day training session
Presenters: Laura Copeland, MA, LMHC & Carin Lefkowitz, Psy.D.

12.2014 Cognitive Behavioral Therapy for Depression
Navy Medical Center Portsmouth, Portsmouth, Virginia
Two Day training session
Presenters: Marjorie Weinstock, Ph.D. & Holly O’Reilly, Ph.D.

11.2014 Prolonged Exposure
Navy Medical Center Portsmouth, Portsmouth, Virginia
Two Day training session
Presenter: Kevin Holloway, Ph.D.

10.2014 Dialectical Behavior Therapy Training
Navy Medical Center Portsmouth, Portsmouth, Virginia
Two Day training session
Presenters: Stephanie Eppinger, Ph.D. & Hilary Harding, Ph.D.
9.2014  
**Using Acceptance and Commitment Therapy (ACT) to Improve Integrated Psychological and Spiritual Care**  
Navy Medical Center Portsmouth, Portsmouth, Virginia  
Full Day training session  
*Presenter:* Jason Nieuwsma, Ph.D.

**HEALTH PSYCHOLOGY**

1.2014  
**DSM-IV**  
George Fox University, Newberg, Oregon  
Half day training session  
*Presenters:* Jeri Turgesen, Psy.D., and Mary Peterson, Ph.D.

9.2013  
**Integrated Primary Care**  
George Fox University, Newberg, Oregon  
Full day training session  
*Presenter:* Brian Sandoval, Psy.D., and Juliette Cutts, Psy.D.

2.2013  
**Chronic Pain: The Biopsychosocial Approach**  
Defense Centers of Excellence  
Webinar Session  
*Presenters:* COL Steven P. Cohen, M.D. and Robert D. Kerns, Ph.D.

11.2012  
**Clinical Use of Mobile Apps in Behavioral Health Treatment**  
Defense Centers of Excellence  
Webinar session  
*Presenter:* Julie Kinn, Ph.D.

1.2013  
**Substance Abuse and TBI: Magnitude, Manifestations, Myths and Management**  
Defense Centers of Excellence  
Webinar session  
*Presenter:* Charles H. Bombardier, Ph.D.

10.2012  
**Understanding Psychopharmacology Polypharmacy in Service Member and Veteran Populations**  
Defense Centers of Excellence  
Webinar session  
*Presenter:* Matthew J. Friedman, M.D., Ph.D.

10.2011  
**Motivational Interviewing, A Work in Progress: What It Is & Why We Use It**  
George Fox University, Newberg, Oregon  
Half-day training session  
*Presenter:* Michael Fulop, Psy.D.

7.2010 - 8.2010  
**Substance Abuse Training**  
Petersburg, Alaska, Petersburg Mental Health Services  
Weekly presentation and training session,  
*Presenter:* Kimberly Kilkenny, MSW
ASSESSMENT

1.2015  
**MCMI-III**  
Navy Medical Center Portsmouth, Portsmouth, Virginia  
Didactic Training  
*Presenter:* Robert Archer, Ph.D.

12.2014  
**Evaluating Therapeutic Outcomes**  
Navy Medical Center Portsmouth, Portsmouth, Virginia  
Didactic Training  
*Presenter:* Michael Franks, CDR, Psy.D.

11.2014  
**MMPI-2-RF**  
Navy Medical Center Portsmouth, Portsmouth, Virginia  
Didactic Training  
*Presenter:* Robert Archer, Ph.D.

10.2014  
**Assessment of Chronic Pain**  
Navy Medical Center Portsmouth, Portsmouth, Virginia  
Didactic Training  
*Presenter:* Mary Brinkmeyer, Ph.D.

9.2014  
**Mental Health Status**  
Navy Medical Center Portsmouth, Portsmouth, Virginia  
Didactic Training – 4 hours  
*Presenter:* Gregory Caron, CDR, Psy.D., ABPP

9.2013  
**Traumatic Brain Injury 101: Screening and Assessment Methodology**  
Defense Centers of Excellence  
Webinar session  
*Presenter:* Sherray Holland, PA-C

6.2012  
**Assessment and Treatment of Anger, Aggression & Bullying in Children and Adults**  
George Fox University, Newberg, Oregon  
Full day training session  
*Presenter:* Ray DiGiuseppe, Ph.D.

6.2012  
**The Mini-Mental State Examination – 2nd Edition**  
George Fox University, Newberg, Oregon  
Half-day training session  
*Presenter:* Joel Gregor, Psy.D.

11.2011  
**Cross-Cultural Psychological Assessment**  
George Fox University, Newberg, Oregon  
Full day training session  
*Presenter:* Tedd Judd, Ph.D., ABPP-CN
<table>
<thead>
<tr>
<th>Date</th>
<th>Title</th>
<th>Location</th>
<th>Format</th>
<th>Presenter(s)</th>
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</thead>
<tbody>
<tr>
<td>6.2011</td>
<td>Assessment of ADHD in Children and Adults</td>
<td>George Fox University, Newberg, Oregon</td>
<td>Full day training session</td>
<td>Steve Hughes, Ph.D., LP, ABPdN</td>
</tr>
<tr>
<td>3.2011</td>
<td>Challenges and Opportunities in Child Custody: Assessment and Guidelines for Interviewing Children</td>
<td>George Fox University, Newberg, Oregon</td>
<td>Half-day training session</td>
<td>Wendy Bourg-Ransford, Ph.D. and Todd Ransford, Ph.D.</td>
</tr>
<tr>
<td>9.2014</td>
<td>Guidelines on Multi-Cultural Education Training, Research, Practice, and Organizational Charge for Psychologists</td>
<td>Navy Medical Center Portsmouth, Virginia</td>
<td>Didactic Training</td>
<td>Michelle Sampson-Spencer, Psy.D.</td>
</tr>
<tr>
<td>3.2013</td>
<td>The Person of the Therapist: How Spiritual Practice Weaves with Therapeutic Encounter</td>
<td>George Fox University, Newberg, Oregon</td>
<td>Half-day training session</td>
<td>Brooke Kuhnhausen, Ph.D.</td>
</tr>
<tr>
<td>1.2013</td>
<td>African American History, Culture and Addictions &amp; Mental Health Treatment</td>
<td>George Fox University, Newberg, Oregon</td>
<td></td>
<td>Danette C. Haynes, LCSW and Marcus Sharpe, Psy.D.</td>
</tr>
<tr>
<td>11.2012</td>
<td>Sexual Identity</td>
<td>George Fox University, Newberg, Oregon</td>
<td></td>
<td>Erica Tan, Psy.D.</td>
</tr>
<tr>
<td>10.2012</td>
<td>Treating Gender Variant Clients: Christian Integration</td>
<td>George Fox University, Newberg, Oregon</td>
<td></td>
<td>Erica Tan, Psy.D.</td>
</tr>
<tr>
<td>3.2012</td>
<td>Mindfulness and Christian Integration</td>
<td>George Fox University, Newberg, Oregon</td>
<td>Half-day training session</td>
<td>Erica Tan, Ph.D.</td>
</tr>
</tbody>
</table>
2.2011  

Best Practices for Treatment When Working with Lesbian, Gay, Bisexual, and Transgendered Populations  
George Fox University, Newberg, Oregon  
Multicultural Presentation  
Presenter: Jennifer Bearse, M.A.

PROFESSIONAL AFFILIATIONS

2015 to Present  
Psychopharmacology and Substance Abuse, APA Division 28

2013 to Present  
Society for Military Psychology, APA Division 19

2010 to Present  
American Psychological Association, Student Affiliate

2008 to Present  
Psi Chi - The International Honor Society in Psychology, Member

RESEARCH EXPERIENCE

10.2013 to 03.2014  
Research Assistant  
George Fox University, Newberg, Oregon  
Duties: Administration and scoring of the WRAML-2, a standardized cognitive measure, to adult volunteers as part of data collection for a dissertation assessing the memory implication from mild to moderate hearing loss.  
Supervisor: Heather Paige-Deming, M.A.

2.2011 to Present  
Research Vertical Team Member  
George Fox University, Newberg, Oregon  
Advisor: Marie-Christine Goodworth, Ph.D.

2.2011 to 2.2015  
Dissertation title: “Influence of Caregiver Activation on Health of Informal Caregivers of persons with Alzheimer’s”  
Defended: 5.2014  
George Fox University, Newberg, Oregon  
Dissertation Chair: Marie-Christine Goodworth, Ph.D.

1.2010 to 11.2010  
Research Assistant: Exploring the Cognitive Difference between Understanding and Agreeing.  
University of Alaska Anchorage, Anchorage, Alaska  
Researcher: Yasuhiro Ozuru, Ph.D.
RESEARCH PRESENTATIONS


PROFESSIONAL PRESENTATIONS


TEACHING AND LEADERSHIP EXPERIENCE

9.2013 to 5.2014  **Teaching Assistant:** Clinical Foundations  
Graduate Department of Clinical Psychology, George Fox University  
Newberg, Oregon  
**Duties:** Lead group of four first year clinical psychology students in instruction of foundational clinical counseling skills with emphasis on Rogerian approach. Perform administrative and operational responsibilities of teaching counseling techniques, giving and receiving constructive feedback, facilitating interpersonally oriented group activities, reviewing and evaluating video student training videos, grading course assignments, and providing student supervision. Additional responsibilities include 1.5 hours of student group supervision, 1 hour of individual student supervision, and participating in 1.5 hours of faculty group supervision per week.  
*Professor:* Carlos Taloyo, Ph.D.

9.2013 to 5.2014  **Student Supervisor**  
Course: Supervision and Management of Psychological Services (PsyD 593)  
Graduate Department of Clinical Psychology, George Fox University  
Newberg, OR  
**Duties:** Provide 1.0 hours of weekly individual supervision to a second year graduate student of clinical psychology in areas of personal and career counseling, maintaining clinical records, and assessment. Provide instruction and supervision in use of Cognitive Behavioral therapy techniques. Establish supervision model and contract and maintain weekly supervision notes.  
*Professor:* Rodger Bufford, Ph.D.

8.2013 to 5.2014  **Student Leader: Military Interest Group, Division 19 Chapter**  
Graduate Department of Clinical Psychology, George Fox University  
Newberg, Oregon  
*Faculty Advisor:* Mary Peterson, Ph.D.

2.2013  **Lecture:** “Integrated Health Care: Assessments and Professionalism in an Integrated Care Model”  
Course: Health Psychology (PsyD 585)  
Graduate Department of Clinical Psychology, George Fox University  
Newberg, Oregon  
*Professor:* Marie-Christine Goodworth, Ph.D.

10.2012  **Lectures:** “Delirium, Dementia, Amnesic, and Other Cognitive Disorders”, “Sleep Disorders”, and “Eating Disorders”  
Course: Psychopathology (PsyD 502)  
Graduate Department of Clinical Psychology, George Fox University  
Newberg, Oregon  
*Professor:* Nancy Thurston, Psy.D.

9.2012 to 5.2014  **Teaching Assistant:** Community Worship Team  
Graduate Department of Clinical Psychology, George Fox University
Newberg, Oregon  
Duties: Organize and schedule monthly Chapel worship events and bimonthly Community Worship Team meetings.  
Professor: Mark McMinn, Ph.D.

**Treasurer: Student Council**  
Graduate Department of Clinical Psychology, George Fox University  
Newberg, Oregon

**Student Representative: Student Council**  
Graduate Department of Clinical Psychology, George Fox University  
Newberg, Oregon

9.2012 to 5.2013  
**Student Mentor**  
Graduate Department of Clinical Psychology, George Fox University  
Newberg, Oregon  
Duties: Provide mentorship, guidance, and friendship to a first year Psy.D. student. Supply available textbooks and reading materials as needed. Assist with studying for coursework. Assist in navigating Psy.D. program by discussing RVT, course sequences, cohort model, etc.

**Teaching Assistant:** Course: Psychopathology (PsyD 502)  
Graduate Department of Clinical Psychology, George Fox University  
Newberg, Oregon  
Duties: Collect and grade course reports and assignments. Provide mentorship and assistance to students regarding learning DSM-IV-TR diagnosis. Lead lectures on topics related to diagnosis of psychopathology and assist in developing course assignments and grading rubrics.  
Professor: Nancy Thurston, Psy.D.

1.2010 to 5.2010  
**Teaching Assistant:** Course: General Psychology (PSY 111, Sec 001)  
Department of Psychology, University of Alaska Anchorage  
Anchorage, Alaska

**RELATED TRAINING AND EXPERIENCE**

3.2013  
**Co-Leader: Chronic Pain Group**  
George Fox University, Newberg, Oregon  
*Populations Served:* Adult and Geriatric chronic pain patients referred by mental health providers, Providence primary care physicians, and physical therapists  
*Duties:* Assisted in research, development and implementation of a 6-week Chronic Pain psychoeducation group. Led psychoeducation group in topics related to chronic pain, relaxation, Biopsychosocial model, and substance abuse.  
*Supervisor:* Marie-Christine Goodworth, Ph.D.
Volunteer: Art Venture: Creative Arts Therapy
Providence Medical Center: Cancer Resource Center, Anchorage, Alaska
*Populations Served:* Adult and geriatric patients currently undergoing cancer treatment or whose cancer was currently in remission
*Duties:* Provided creative arts therapy and weekly art instruction
*Supervisor:* Barbara Mossakowski, BA

Volunteer: American Cancer Society
Anchorage, Alaska
*Populations Served:* Cancer patients (stages I-IV and terminal) and related family
*Duties:* Provided social support and creative therapy activities to cancer patients undergoing treatment, assisted in in-coming volunteer training, assisted in organization activities such as “Open House” and “Relay for Life”
*Supervisor:* Lea Anne McWhorter (retired)

REFERENCES

Michael J. Franks, Psy.D.
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Clinical Psychology Internship Training Program
Navy Medical Center Portsmouth
Portsmouth, VA
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Mary Brinkmeyer, Ph.D.
Psychology Assistant Training Director
Clinical Psychology Internship Training Program
Navy Medical Center Portsmouth
Portsmouth, VA
757-953-0504
mary.y.brinkmeyer2.civ@mail.mil

Marie-Christine Goodworth, Ph.D.
Assistant Professor of Clinical Psychology
Graduate Department of Clinical Psychology
George Fox University
Newberg, OR
503-554-2382
mrutter@georgefox.edu

Carlos Taloyo, Ph.D.
Director of Clinical Training
Graduate Department of Clinical Psychology
George Fox University
Newberg, OR
503-554-2383
ctaloyo@georgefox.edu