Exploring Research Supported Strategies for Improving the Mental Health Outcomes of Caregivers of Alzheimer’s Disease: A Literature Review

Bonnie O’Connor

HPRB 5410W

***Research Question:*** What are research supported strategies for improving the mental health outcomes of adult caregivers of Alzheimer’s disease patients?

***Abstract:***

 Alzheimer’s disease is a degenerative disorder that requires great care and assistance from caregivers. The responsibilities of a caregiver produce large amounts of stress and burden that result in negative mental health outcomes. Because of the important role caregivers play in providing care for a disease with no treatment, it is crucial to explore the best research supported strategies for improving the mental health outcomes of these individuals. The databases used in the article selection process included PsycINFO and Public Health Database. Search terms included Alzheimer’s disease, mental health, caregiver, and effects. Inclusion criteria limited outcomes to peer-reviewed journal articles published between 2009-2019. The results of this review suggested 3 major findings of potential strategies to be utilized by caregivers. Caregivers should seek help from outside sources, acquire knowledge and be educated on the disease they are assisting with, and show greater compassion towards care recipients. Future research needs to be done on caregivers specifically, rather than the Alzheimer’s patients. This research could play a crucial role in improving the quality of life for Alzheimer’s patients because improving the mental health of caregivers could better the care they provide their patients with in return. Further, this research may aid clinicians and health care providers on how to better assist caregivers.

***Table of Contents***

**Introduction**………………………………………………………………………………………4

**Methods**…………………………………………………………………………………………..6

**Results**…………………………………………………………………………………………….9

 Utilizing Outside Resources……………………………………………………………….9

 Showing greater compassion…………………………....……………………………….11

 Addressing caregivers’ own mental health………………..……………………………..12

 *Table 1: Detailed Summary of Articles Reviewed*………………..……………………….15

**Discussion**……………………………………………………………………………………… 19

**References**……………………………………………………………………………………….23

***Introduction:***

 Alzheimer’s disease is an irreversible, progressive brain disorder that slowly destroys memory and thinking skills and, eventually, the ability to carry out the simplest tasks (National Institute of Aging, 2017). There are over 16 million people in the United states alone who are caregivers for individuals with dementia disorder (Robinson, Wayne, & Segal, 2019). When taking on a caregiving role, many, if not all, aspects of life change for a caregiver. Caregiving can become all- consuming as it involves looking after one’s cognitive, physical, and emotional abilities as well as their own (Robinson et al., 2019). As Alzheimer’s disease progresses, patients rely increasingly on their caregivers for assistance with both instrumental activities of daily living, such as managing finances and appointments, and basic activities of daily living, including bathing and feeding (Aging In Place, 2019). Being a caregiver means taking on the aspects of your life, as well as another human’s while helping to alleviate the conditions of the patients’ disease. Committing to this role is a commitment to a change in quality of life (Family Caregiver Alliance, 2019).

It is known today that 20% of caregivers suffer from depression, twice the rate of the general population (Family Caregiver Alliance, 2019). Depression is defined as a common and serious medical illness that negatively affects how you feel, the way you think and how you act (American Psychiatric Association, 2019). With this in mind, it is also known that caregiving does not directly cause this risk to mental health, but the circumstances and environment that come with being a caregiver do (Family Caregiver Alliance, 2019). Additionally, it has been shown that caregivers who do experience this depression and burden do not seek help out of feelings of weakness and embarrassment (Family Caregiver Alliance, 2019).

 Caring for an individual with Alzheimer’s is more stressful on caregivers than any other physical ailment and those who are responsible for caring for an Alzheimer’s patient are at a high risk of developing their own medical conditions (Aging In Place, 2019). While this job can be very rewarding and worthwhile, it is important to recognize and address the said problems mentioned above. Nearly all Alzheimer’s caregivers experience sadness, anxiety, loneliness and exhaustion at some point in their role (Aging In Place, 2019). Each year, 15 million Americans provide over 17 billion hours of care towards patients of Alzheimer’s disease (Centers for Disease Control and Prevention, 2019). The demands of giving such care can inhibit a caregiver from taking care of themselves resulting in negative mental health outcomes.

*Objectives:*

There is no current cure for Alzheimer’s disease and only limited treatments available for symptoms (Robinson et al., 2019). For this reason, caregiving serves as a crucial influence on a patient’s quality of life. Additionally, just as an individual with Alzheimer’s disease progresses differently, so too can the caregiving experience (Robinson et al., 2019). While there is an abundant amount of research done on the effects of Alzheimer’s disease on the patient themselves, there is limited research on what can be done to better the lives of caregivers. These individuals play a crucial role in the well-being of patients and for this reason, it is important to address what techniques can be utilized by those who are caregivers to reduce the strain on their mental health. Further, by addressing this issue, clinicians can better educate, support, and interact with caregivers. (National Institute of Aging, 2017).

The purpose of this literature review is to explore research supported strategies that can be utilized by caregivers of an individual with Alzheimer’s disease to reduce poor mental health outcomes associated with taking on said role. This paper aims to identify strategies that caregivers can use from outside resources as well as control themselves in addition to examining the importance of these strategies. Further, this paper aims to explain the need for implementing such strategies. This review will discuss the perspectives of familial/ spousal caregivers as well as general caregivers on what strategies have proven to be most effective.

***Methods:***

 This literature review consists of articles found from the databases PsychINFO and Public Health Database. PsychINFO proved to be an adequate source of research for the topic as they have a large variety of peer reviewed articles from the science world specifically related to mental health. Public Health Database also offered a large variety of potential articles of use as they have a large database on public health information and education. These two databases were used by searching key terms pertaining to the research question in order to choose the most adequate articles to serve as answers. The same key terms were utilized in searches for each database as well the same exclusion/ inclusion elements. At the end of my article exploration, 8 were chosen from PsychINFO while 3 were chosen from Public Health Database.

 As seen in *Figure 1: Process for Article Selection*, the first search conducted took place in the PsychINFO database. The first search began with “Alzheimer’s disease AND mental health AND caregiver” in the search bar. This yielded 2,014 results. To narrow down the results, search terms were changed to “Alzheimer’s disease AND mental health of caregiver AND effects.” This search yielded 475 results, which was then brought down to 49 when accounting only for articles from the years 2009-2010, that were full text, and had references available. After exploration of these results, 7 articles from peer-reviewed journals were chosen.

 Further seen in *Figure 1: Process for Article Selection,* the second search conducted took place on Public Health Database. After having condensed search terms on PsychINFO which resulted in more useful articles, the same protocol was used on Public Health Database. The search then began by entering “Alzheimer’s disease AND mental health of caregiver.” This search resulted in 163 possible options. The same exclusion and limitation devices were used. After limiting to only articles from 2010-2019 and only peer reviewed journals, and limiting document type to articles, 48 articles resulted. After examination of these search results, 3 articles were chosen.

*Figure 1: Process for Article Selection*





***Results:***

 The research question proposed asks which strategies can be used by caregivers of Alzheimer’s disease to alleviate their negative mental health outcomes. There is no one simple suggestion for this issue. Rather than one solution, alleviating the poor mental health outcomes of caregivers involves utilizing strategies addressing physical, mental, and emotional needs of both the caregiver and the patient. Research found that when patients improve, caregivers improve and vice versa. For this reason, these results represent what caregivers can do to improve their own health and therefore the health of the care recipient. Because of limited research on this subject, this literature review is generalized towards all caregivers of Alzheimer’s disease. See *Table 1: Detailed Summary of Articles Reviewed* for a detailed summary on each article reviewed and they health aspects of caregivers they address.

*It is helpful for caregivers to utilize outside sources*

 Four of the journal articles provided evidence that utilizing help from outside sources such as clinicians and facilities can alleviate mental health outcomes of caregivers (Aboulafia-Brakha, Suchecki, Gouveia-Paulino, Nitrini, & Ptak, 2014; Klein & Silverman, 2012; Mausbach et al., 2014; Schiffczyk et al., 2013). The employment of such resources takes some of the responsibility off of the caregiver. Whether short or long term, care facilities take pressure off of the caregiver by providing assistance. Whether it be a family caregiver, or a caregiver within a facility, research suggests that it helps caregivers to not feel alone and take on full responsibility (Mausbach et al., 2014).

 For many Alzheimer’s disease caregivers, in-home caregiving is a chronically stressful experience, often resulting in elevated symptoms of depression (Mausbach et al., 2014). One study conducted by the American Psychological association found that placement in long-term care facilities of the care recipient was associated with significant reductions in depressive symptoms and activity restriction for the caregiver and was also associated with increased personal mastery (Mausbach et al., 2014). Lower activity restriction and higher personal mastery were associated with reduced depressive symptoms (Mausbach et al., 2014). Another study found the same to be true for short term rehabilitation facilities. Specifically, this article studied how a short-term rehabilitation program with psychosocial resources such as art or memory therapy could further benefit the caregiver. The study found that short term rehabilitation was effective for dementia patients and their caregivers, specifically males as they show more apathy and less emotional attachment compared to females (Schiffczyk et al., 2013). This is important because male caregivers comprise only a minority of total caregivers providing assistance to patients; therefore, it is important that they are educated on which strategies can best be of use to them.

 Additional research supported strategies using outside resources include cognitive based behavioral therapy and music therapy as adequate resources to improve poor mental health of caregivers (Aboulafia-Brakha et al., 2014; Klein & Silverman, 2012) One study found that a group of caregivers and their patients placed in music therapy saw better results than a group placed in a psychoeducational discussion. This result was due to the positive emotions and coping skills elicited through songwriting. This study mentions the importance of how treating the patient also treats the caregiver. Music therapy was classified as “fun” and “adequately distracting” from their responsibilities by caregivers, resulting in less mental burden (Klein & Silverman, 2012). Another study found that the use of cognitive behavioral therapy alleviates stress by decreasing cortisol levels in caregivers (Aboulafia-Brakha et al., 2014). Cortisol plays a role in metabolism during high strain situations, and this study explained that caregivers display larger amounts of cortisol compared to non-caregivers and that cortisol decreases immunologic activity, therefore contributing to chronic illness and stress on caregivers. This may interfere with the caregivers capacity to keep their caregiving role, and ,therefore, addressing the caregivers psychological and physiological burden may result in improved mental health outcomes (Aboulafia-Brakha et al., 2014) . Further, this study concluded that utilizing cognitive based therapy while educating caregivers contributes to a reduction in neuropsychiatric symptoms of patients with Alzheimer’s disease as well as their caregivers improving overall quality of life for both the caregiver and recipient (Aboulafia-Brakha et al., 2014).

*Caregivers own attitude and compassion improves experience and therefore mental health*

 Three articles discussed how the use of compassion and positive regard by caregivers shifts their attitudes towards their care recipient and ultimately alleviates burden and negative mental health outcomes (Harris, Adams, Zubatsky, & White, 2011; Lwi et al., 2018; Monin, Schulz, & Feeney, 2015). These articles focused specifically on spousal and familial caregivers as they comprise a large majority of health aids overall and the strategies they may find suitable to alleviate stress and burden. In a qualitative study researching the effect of Alzheimer’s disease on couple intimacy, it was found that all participants reported some strain in their relationship, with different aspects of the disease affecting closeness and connection within the couple. The quality of the marital relationship prior to diagnosis impacted every participant in some fashion and effected the way caregivers coped with the disease, further affecting mental health outcomes. The use of psychological coping skills including increased compassion by caregivers can decrease the risk of strain on marital relationships between spousal caregiver and care receiver; the better the relationship the less burden for the caregiver (Harris et al., 2011).

Similarly, compassionate love from caregiver to Alzheimer’s care recipient results in positive appraisals from both parties. These appraisals make the caregiver feel more acknowledge and rewarded for their work (Monin et al., 2015). The study found that researched this effect concluded that showing compassionate love by the caregiver had more benefits on psychological health than receiving compassionate love. However, it was also concluded that compassionate love in one partner can facilitate compassionate love in the other partner, alleviating the mental health outcomes of both individuals (Monin et al., 2015). Comparable to showing compassionate love, showing smiles from both patients and caregivers alleviates poor caregiver health (Lwi et al., 2018). An observational study completed by the Department of Psychology at the University of California, Berkeley, examined this relationship and found that the behaviors of caregivers is directly correlated to behavior of care recipients. Specifically, researchers examined how smiles shown by caregivers would result in smiles shown by patients, alleviating burden of caregiving (Lwi et al., 2018). The attitudes and behaviors shown by caregivers directly affects Alzheimer’s patients and their resulting behavior, therefore affecting caregiver’s mental health outcomes as well.

*Acquiring Knowledge on the disease better prepares caregivers*

Throughout the articles selected, there was a large theme of a need for education of the caregiver. Articles selected demonstrated that by acquiring more knowledge on Alzheimer’s disease and its consequences, caregivers could better prepare for and improve their mental health outcomes (Czaja et al., 2018; Czekanski, 2017; García-Alberca et al., 2013). This theme was demonstrated in an empirical study of 80 familial caregivers of an individual with Alzheimer’s disease, which found that patients cared for by more depressed and more burdened caregivers or those using more disengaging coping strategies showed greater negative psychological and behavioral symptoms (García-Alberca et al., 2013). For this reason, it is important to utilize engaging, problem-solving coping strategies to create a positive feedback loop between patient and caregiver to improve experience (García-Alberca et al., 2013). It is important to address, however, that not all caregivers would have the knowledge of these correct coping skills and how to employ them. In a study done by the Gerontological Society of America, the effects of implementing a caregiver relief program on the overall health of a caregiver were observed and analyzed. Researchers applied the Community REACH program which aimed at providing knowledge to caregivers about the disease and caregiving, support, and skills to improve their ability to provide care (Czaja et al., 2018). Ninety-three percent of caregivers indicated that the program alleviated their mental burden and as a result made their life easier, helped them to better understand memory loss, and care for their loved one (Czaja et al., 2018). The caregivers also found the online support groups valuable, further reinforcing the fact that utilizing outside sources can be beneficial to mental health outcomes as well (Czaja et al., 2018).

A study utilizing interviews of individuals who had previously been long term caregivers of Alzheimer’s disease patients concluded that addressing the stress felt by caregivers through knowledge acquisition showed an approval in mental health outcomes for caregivers (Czekanski, 2017). This study revealed that caregivers had improved experiences when they read material on the disease and its effects as well as when they worked with health care providers and therapists in support groups to further their knowledge of the disease (Czekanski, 2017). Caregivers also reported the importance of addressing their need for individuality by participating in personal hobbies/activities to improve mental health (Czekanski, 2017). Overall, research found suggests that through strategies involving the acquisition of knowledge, caregivers can improve mental health outcomes by being better prepared for their role. Similarly, through utilizing these strategies, caregivers are better equipped to prevent poor mental health outcomes.

*Table 1. Detailed Summary of Articles Reviewed*

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Author(s) | Year | Article Title and Journal | Purpose of article | Sample info | Type of Research | Research Findings | Limitations of Article |
| 1 | Aboulafia-Brakha, T., Suchecki, D., Gouveia-Paulino, F., Nitrini, R., & Ptak, R. | 2018 | Cognitive–behavioural group therapy improves a psychop-hysiological marker of stress in caregivers of patients with Alzheimer’s disease. *Aging & Mental Health* | To compare the effects of a cognitive–behavioral group therapy (CBT) to a psychoeducation groupprogram (EDUC) on cortisol secretion in caregivers of patients with moderate Alzheimer’s disease (AD) | 26 caregivers of Alzheimer’s disease were semi-randomly assigned to CBT or EDUC groups both of which were observed and completed self-reported scales and questionnaires | Empirical Study  | Only in the CBT group did salivary cortisol levels significantly decrease after intervention, with a large effect sizeand high achieved power. Both groups reported a reduction of neuropsychiatric symptoms of their AD relative afterintervention | small sample size |
| 2 | Czaja, S. J., Lee, C. C., Perdomo, D., Loewenstein, D., Bravo, M., Moxley, P., Jerad H, & Schulz, R | 2018 | Community REACH: An Implementation of an Evidence-Based Caregiver Program. *The Gerontologist* | To present outcomes from Community REACH, a communityimplementation of the evidence-based Resources for Enhancing Alzheimer’s Caregiver Health (REACH) II program | 146 caregivers (76%) female of patients with Alzheimer’s disease  | Psycho-social intervention  | After 6 months, caregivers reported significant decreases in depression, burden, being and bothered by the care recipient’smemory problems. There was also a significant decrease for CG’s at risk for clinical depression | 16% of care-recipients died while study took place  |
| 3 | Czekanski, K. | 2017 | The Experience of Transitioning to a Caregiving Role for a Family Member with Alzheimer’s disease or Related Dementia. *The American Journal of Nursing* | To determine the best strategies to alleviate caregiver burden in experienced caregivers for patients with Alzheimer’s disease or related dementia | 8 women and 2 men mean age of 66.3 years old  | Interviews/ observational study  | Caregivers reported highest amount of reward for their work when they utilized support groups to gain insight and information and participated in leisure -time activity  | Participants were drawn from a research database, meaning they may possess certain qualities that prompted participation  |
| 4 | García-Alberca, J. M., Cruz, B., Lara, J. P., Garrido, V., Lara, A., Gris, E., & Gonzalez-Herero, V | 2013 | The experience of caregiving: The influence of coping strategies on behavioral and psychological symptoms in patients with Alzheimer's disease. *Aging & Mental Health* | To determine whether caregiver coping strategies are independently associated with behavioral and psychologicalSymptoms (NPI’s) in Alzheimer’s disease  | 80 familial caregivers (77% female, 33% male) of a patient with Alzheimer’s disease who live with and/or are directly involved in the patients care | Interviews/ empirical study | patients cared for by more depressed, more burdened,or those using more disengagement coping strategies showed higher NPI mean composite scores. Those who used more effective coping strategies showed improved mental health outcomes. | Measures were self- reported by caregivers  |
| 5 | Harris, S. M., Adams, M. S., Zubatsky, M., & White, M. | 2011 | A caregiver perspective of how Alzheimer's disease and related disorders affect couple intimacy. *Aging & Mental Health* | to understand the lived experiences ofindividuals with a spouse suffering from ADRD and how this diagnosis affects intimacy within these maritalrelationships | 10 interviews were conducted, with six participants recruited from a neurologyclinic and four participants drawn from support groups | Qualitative study  | All participants reported some degree of strain in the relationship with their spouse suffering from Alzheimer’s, with different aspects of the diseaseaffecting closeness and connection within the couple | there is little known regarding the issue ofconsensual sex in ADRD relationships |
| 6 | Klein, C. M., & Silverman, M. J. | 2012 | With love from me to me: Using songwriting to teach coping skills to caregivers of those with Alzheimer's and other dementias. *Journal of Creativity in Mental Health* | To compare the responses of caregivers to songwriting and discussionas methods for teaching self-care as coping skills to caregivers of those withdementia | 114 participants were recruited from a family-centered care programaffiliated with a large comprehensive university in the Midwest for those withAOD and their caregivers ranging from 19-75 years old | Empirical Study  | Music therapy is a viable option for helping to treat patient with AD and therefore elicit positive responses in the caregiver improving their mindset as well | Participants were not blind to the conditions |
| 7 | Lwi, S. J., Casey, J. J., Verstaen, A., Connelly, D. E., Merrilees, J., & Levenson, R. W | 2018 | Genuine Smiles by Patients During Marital Interactions are Associated with Better Caregiver Mental Health. *The Journals of Gerontology* | To determinewhether the vulnerability of caregivers developing poor mental health is related to the expression of positive emotion | 57 patients and their spouses with Alzheimer’s disease | observational study  | Smiles expressed by patients was associated with greater caregiver health suggesting environment set by caregivers plays a large role in perceived well-being | Using a cross- sectional rather than longitudinal design  |
| 8 | Mausbach, B. T., Chattillion, E. A., Ho, J., Flynn, L. M., Tiznado, D., von Känel, R., . . . Grant, I. | 2014 | Why does placement of persons with Alzheimer’s disease into long-term care improve caregivers’ well-being? Examination of psychological mediators. *Psychology and Aging* | To evaluate placement related changes in depressive symptoms, activity restriction, and personal mastery in 44 caregivers of patients with Alzheimer’s disease | 44 spousal Alzheimer’s disease caregivers who placed their spouses in long-term care facilities | Longitudinal study | Placement of spouse accounted for a significant decrease in feelings of depressive symptoms, activity restriction and personal mastery compared to those who did not place a spouse in long-term care | Small sample size, study did not take into account marital quality, and it is unclear if depression improves immediately or with time following placement of spouse |
| 9 | Monin, J. K., Schulz, R., & Feeney, B. C. | 2015 | Compassionate love in individuals with Alzheimer's disease and their spousal caregivers: Associations with caregivers' psychological health. *The Gerontologist* | To examine whether compassionate love in both individuals withAlzheimer’s disease and their spousal caregivers related to less caregiving burden,more positive caregiving appraisals, and less depressive symptoms for caregivers. | Fifty-eight individuals with AD and their spousal caregivers  | Qualitative interviews in which both partners reported their compassion-ate love fortheir partner, and caregivers self-reported burden, positive appraisals of caregiving, anddepressive symptoms. | both AD individuals’ and caregivers’ compassionate lovewere associated with less burden and more positive appraisals of caregiving. Positive appraisals from caregivers was also associated with less depressive symptoms | Limited research on relation-ships between AD patients and their spousal caregivers; Cross-sectional so could not detect causality of effects |
| 10 | Schiffczyk, C., Romero, B., Jonas, C., Lahmeyer, C., Müller, F., & Riepe, M. W. | 2013 | Efficacy of short-term inpatient rehabilitation for dementia patients and caregivers: Prospective cohort study. *Dementia and Geriatric Cognitive Disorders* | to assess the effects of a short-term rehabilitativetreatment of the patient-caregiver dyad on patients with dementia | 194 dyads of dementia patients and their caregivers | Longitudinal study  | Placement of dementia patient in a short-term care facility decreased caregiver burden and improved cognitive performance of patient  | Sample was collected from a database of caregivers who asked for information about care facilities  |

***Discussion:***

 The topic of this literature review evaluated the research-supported strategies that can be used by caregivers of Alzheimer’s disease to improve mental health outcomes. This research is important because it can help clinicians and health care providers better be better equipped to educate caregivers. There is no current cure for Alzheimer’s disease (Robinson et al., 2019), so the role of a caregiver is vital in improving quality of life for a patient. The overarching findings concluded that because of the amount of stress and burden caregivers of Alzheimer’s disease may feel, caregivers should utilize outside resources, acquire knowledge to prepare for their role, and show compassion towards the care recipient in order to reduce these feelings and improve mental health outcomes.

 The responsibility of being a caregiver can be daunting, specifically for a dementia disorder such as Alzheimer’s disease. Due to the circumstances of having to look after another individual as well as one’s self, research suggests utilizing outside resources can alleviate caregiver stress and prevent caregiver burnout, resulting in better mental health outcomes for the caregiver (Aboulafia-Brakha et al., 2014; Klein & Silverman, 2012; Mausbach et al., 2014; Schiffczyk et al., 2013). Specifically, it has been suggested to utilize care facilities to decrease activity restriction, and increase personal mastery in caregivers (Mausbach et al., 2014). Placement-related reductions in activity restriction and increases in personal mastery are important psychological factors that help explain postplacement reductions in depressive symptoms (Mausbach et al., 2014). Additional research supported strategies of outside resources include utilizing various kinds of therapy as well. Music therapy and cognitive-behavioral therapy have been shown to elicit positive emotion in the caregiver and the care recipient resulting in improved experiences for the caregiver as the patient is easier to comply with (Aboulafia-Brakha et al., 2014; Klein & Silverman, 2012).

 The display of compassion by a caregiver to a care recipient has been shown to reduce burden and improve the overall experience of a caregiver (Lwi et al., 2018). With this in mind, a caregiver may be more likely to feel compassionate love for care recipients when care recipients also feel compassion for them (Monin et al., 2015). Further, it was shown that caregivers’ and Alzheimer’s disease individuals’ compassionate love were highly related to each other. Further, this relationship suggested that caregivers who were high in compassionate love were likely to have partners who were also high in compassionate love (Monin et al., 2015). This shows that compassionate love can be mutually reinforced, resulting in constructive behaviors, improving the health outcomes of both parties. This finding is important for spousal caregivers in particular whereas it is important to remember that although the caregiving role can be difficult for a spouse, it does not mean that the need for care has to effect the marriage relationship (Harris et al., 2011). Pointedly, compassionate love from caregivers can be displayed through genuine smiles. Smiles may display affiliation, warmth, and affection while eliciting more positive judgements and cooperation from others being the care recipient (Lwi et al., 2018). These functions may be particularly important in late life, because older adults, of which most Alzheimer’s patients categorize as, have been found to appraise social rejection more negatively than younger adults, and a lack of affiliation has been linked with greater cognitive decline and dementia in late life (Monin et al., 2015). Not only can compassion by the caregiver improve their own mental health outcomes, but the mental health outcomes of patients as well.

 Due to the high stress environment that being a caregiver comes with, caregivers must be educationally prepared for the duties of their role in order to avoid negative mental health consequences. As Alzheimer’s disease patients’ dementia progresses, problematic behaviors such as anger and aggression become increasingly difficult to manage, leading to worse mental health in caregivers (Czekanski, 2017). If caregivers cannot properly address their own anger and negative emotions, they cannot help patients address their own anger in return. Research proposes the use of caregiver education programs to aid in alleviating this issue (Czaja et al., 2018). Such programs improve mental health outcomes through increasing the caregivers preparation, and therefore, confidence in providing aid (Czaja et al., 2018).

 There are many limitations to this literature review. Firstly, the sample sizes utilized by a majority of studies in articles found were relatively small. Some of these articles also focus on the care recipient as well as the caregiver, limiting research towards caregivers specifically. Finally, many population samples were pulled from existing databases or utilized individuals who were already interested in this research question.

 A very important implication of this review is the significant need for further research on caregivers rather than the Alzheimer’s patients themselves. While there is great information for patients, research on caregivers is especially limited. Further research is needed to more accurately mentally arrange a caregiver for their role in order to improve mental health outcomes. Research would help not only the caregivers, but the patients as well. Ample preparation of caregivers allows for more adequate care overall.

 With the world population aging and the older populations living longer, Alzheimer’s disease is likely to increase in both prevalence and incidence. For this reason, combined with their being no cure for Alzheimer’s disease, it is crucial that caregivers be able to perform their responsibilities adequately. Being a caregiver produces a great amount of strain and burden for the individual, making it important to implement research supported strategies to improve mental health outcomes of caregivers.

***References:***

Aboulafia-Brakha, T., Suchecki, D., Gouveia-Paulino, F., Nitrini, R., & Ptak, R. (2014). Cognitive–behavioural group therapy improves a psychophysiological marker of stress in caregivers of patients with Alzheimer’s disease. *Aging & Mental Health, 18*(6), 801-808. doi:10.1080/13607863.2014.880406

Aging In Place. (2019). Caregiver Burnout. Retrieved from <https://www.aginginplace.org/caregiver-burnout/>

American Psychiatric Association. (2019). What is depression? . Retrieved from <https://www.psychiatry.org/patients-families/depression/what-is-depression>

Centers for Disease Control and Prevention. (2019). Caregiving for person with Alzheimer's disease or a related dementia. Retrieved from <https://www.cdc.gov/aging/caregiving/alzheimer.htm>

Czaja, S. J., Lee, C. C., Perdomo, D., Loewenstein, D., Bravo, M., Moxley, P., Jerad H, & Schulz, R. (2018). Community REACH: an implementation of an evidence-based caregiver program. *The Gerontologist, 58*(2), e130-e137. doi:10.1093/geront/gny001

Czekanski, K. (2017). CE: original research: the experience of transitioning to a caregiving role for a family member with Alzheimer's disease or related dementia. *American Journal of Nursing, 117*(9), 24-32. doi:10.1097/01.NAJ.0000524517.60352.84

Family Caregiver Alliance. (2019). Caregiver depression: a silent health crisis. Retrieved from <https://www.caregiver.org/caregiver-depression-silent-health-crisis>

García-Alberca, J. M., Cruz, B., Lara, J. P., Garrido, V., Lara, A., Gris, E., & Gonzalez-Herero, V. (2013). The experience of caregiving: The influence of coping strategies on behavioral and psychological symptoms in patients with Alzheimer's disease. *Aging & Mental Health, 17*(5), 615-622. doi:10.1080/13607863.2013.765833

Harris, S. M., Adams, M. S., Zubatsky, M., & White, M. (2011). A caregiver perspective of how Alzheimer's disease and related disorders affect couple intimacy. *Aging & Mental Health, 15*(8), 950-960. doi:10.1080/13607863.2011.583629

Klein, C. M., & Silverman, M. J. (2012). With love from me to me: Using songwriting to teach coping skills to caregivers of those with Alzheimer's and other dementias. *Journal of Creativity in Mental Health, 7*(2), 153-164. doi:10.1080/15401383.2012.685010

Lwi, S. J., Casey, J. J., Verstaen, A., Connelly, D. E., Merrilees, J., & Levenson, R. W. (2018). Genuine Smiles by Patients During Marital Interactions are Associated with Better Caregiver Mental Health. *The Journals of Gerontology: Series B, 74*(6), 975-987. doi:10.1093/geronb/gbx157

Mausbach, B. T., Chattillion, E. A., Ho, J., Flynn, L. M., Tiznado, D., von Känel, R., . . . Grant, I. (2014). Why does placement of persons with Alzheimer’s disease into long-term care improve caregivers’ well-being? Examination of psychological mediators. *Psychology and Aging, 29*(4), 776-786. doi:10.1037/a0037626

Monin, J. K., Schulz, R., & Feeney, B. C. (2015). Compassionate love in individuals with Alzheimer's disease and their spousal caregivers: Associations with caregivers' psychological health. *The Gerontologist, 55*(6), 981-989. doi:10.1093/geront/gnu001

National Institute of Aging. (2017). What is Alzheimer’s disease? Retrieved from <https://www.nia.nih.gov/health/what-alzheimers-disease>

Robinson, L., Wayne, M. S., & Segal, J. (2019). Tips for Alzheimer’s & dementia caregivers. Retrieved from <https://www.helpguide.org/articles/alzheimers-dementia-aging/tips-for-alzheimers-caregivers.htm>

Schiffczyk, C., Romero, B., Jonas, C., Lahmeyer, C., Müller, F., & Riepe, M. W. (2013). Efficacy of short-term inpatient rehabilitation for dementia patients and caregivers: Prospective cohort study. *Dementia and Geriatric Cognitive Disorders, 35*(5-6), 300-312. doi:10.1159/000348357