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Running head: Psychotherapy for Geriatric Depression

Psychotherapy as Treatment for Depression in an Aging Population
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Major Depressive Disorder is the most prevalent of all lifetime disorders (Kessler, Berglund, Demler, Jin, & Walters, 2005). Overall, the rate of clinical depression declines throughout most of adulthood. However, when the general trend is dissected; the highest rates of the disorder occur in early adolescents, but also in those over the age of 75 (Rothermund & Brandstater, 2003). Growing older is part of life, but the inevitability of old age does not make the process an easy one to cope with. Often in research, this aging population is underrepresented. Important differences between depressive episodes in middle adulthood versus depression in old age include the physical symptoms and illnesses that accompany the diagnosis, and the loss of autonomy due to cognitive and physical decline (Smyer & Qualls, 1999). Not only must older adults deal with bodily and cognitive deterioration, but they must also face bereavement as death of loved ones is unavoidable, and come to terms with a new sense of self that is different than the view they held in their youth. Some older adults are able to adapt to these challenges, but in the face of adversity, some will inescapably be faced with depression. Tragically, late-life depression is associated with poor health outcomes, and even with a significantly increased mortality rate (Cuijpers & Smit, 2002). With important differences such as these present, it is imperative that treatment for depression is examined specifically within the context of an aging population, in order to truly determine the best treatment modalities.

Although antidepressant medications are efficacious in the treatment of depression, many older adults do not want to add another drug to their prescription regime. A recent survey found that among 256 elderly home care patients, 18% would choose psychotherapy over all other options including antidepressants and religious or spiritual activities, as their first-choice treatment for depression (Raue, Weinberger, Sirey, Meyers, & Bruce, 2011). Much attention has been paid to psychotherapy research, but only a small proportion of trials focus specifically on

older adults. The point of this review is therefore to explore the various psychotherapy modalities available for older adults, and discuss their efficacy for reduction of depressive symptoms in this subgroup of the population.

Geriatric Depression Triggers

One of the largest phenomenological differences between experiencing depression in adulthood versus depression later in life is that depression in geriatric populations is often triggered by the onset of another health condition. One of the most studied and representative examples of health conditions that can lead to depression in elderly populations are strokes. According to Myint and colleagues, people over the age of 65 account for three quarters of all strokes (Myint, Sinha, Luben, Bingham, Wareham, & Khaw, 2008). With strokes occurring at such high rates in geriatric populations, many factors are associated with depression in this population including physical and psychological impairment, comorbid health problems and stresses, more negative attitudes, and impairment of cognitive abilities.

Physical impairments post-stroke may be the most easily recognizable symptom the geriatric population faces. When looking at 1259 stroke patients in the acute stage of recovery, Lawrence (2001) found that 77% were experiencing upper limb weakness, 72% were experiencing lower limb weakness, and 48% were experiencing urine incontinence. In addition, 65% of patients showed moderate to severe disability scores on the Barthel Index (Lawrence, Choshall, Dundas, Stewart, Rudd, Howard et al., 2001). Fatigue is also a problem plaguing stroke patients. According to a survey done by Winard, Sackley, Metha, and Rothwell (2009), 56% of stroke patients experience “significant fatigue” even six months post stroke. Taken together, these physical and psychological impairments restrict the independence of geriatric

populations. Feeling fatigued and weak make it difficult for patients to participate in activities that they got enjoyment from prior to the stroke. This poor physical functioning often leads to lower life satisfaction, and increases the risk of post stroke depression (Broomfield, Laidlaw, Hickabottom, Murray, Pendry, Whittick, & Gillespie, 2011).

Many comorbid health problems and stressors accompany stroke patients in addition to the physical and psychological impairments. Patients who suffer a stroke are more likely to also be living with health problems such as hypertension, heart failure, vision impairments, and hearing loss. Due to the frequency of strokes in persons of older age, this population is also likely to suffer from stressful life events post stroke. With strokes often leaving patients with muscle weakness, they become more prone to falls. Injuries resulting from falls may often force the elderly to move to a new house where they can receive assistance with daily living tasks they are no longer able to complete on their own. Older age is also associated with a higher probability of experiencing the death of a close friend or relative (Broomfield et al., 2011). These comorbid health problems and stressors make stroke patients and older adults with physical health issues more susceptible to depression.

It has also been observed that stroke patients experience lower self esteem and may therefore have more negative attitudes about the self. To examine this, Vickery, Sepheri, and Evans (2008) compared measures of self esteem and depression for stroke and non-stroke patients. Vickery and colleagues matched 80 patients within a stroke inpatient rehabilitation setting with non-stroke individuals based on factors such as age and education. The stroke patients reported significantly lower levels of self esteem than the non-stroke group, and rated themselves as “less intelligent” and “more depressed” than their non-stroke counterparts. Based on Beck’s cognitive theory, negative thoughts play a role in the development and maintenance of

depression. There appears to be a negative feedback loop such that a more negative affect can lead to increased negative thinking, which only serves to perpetuate a depressed mood if not addressed (Beck, 1987).

Finally, stroke patients are often at increased risk for developing depression due to post stroke impairments of their cognitive abilities. Common areas negatively affected by stroke include attention, memory, and difficulties in higher level functioning. Tatemichi, Desmond, Stern, Paik, Sano, and Bagiella (1994) estimate that 50-75% of all stroke survivors experience some cognitive impairment following a stroke. Particularly troublesome are strokes that result in damage to the prefrontal cortex as this is the part of the brain that controls executive functions such as problem solving and planning. Deficits in the prefrontal cortex may leave stroke patients with difficulty engaging in flexible thinking, making negative interpretation more likely, and thus linking these difficulties with higher likelihood of depression (Seibert & Ellis, 1991).

Meta-Analyses

With so many factors contributing to the prevalence of depression in geriatric populations, determining the efficacy of psychotherapy for the elderly is crucial. One such way to determine the overall effect psychotherapy has on depression in elderly populations is through the use of meta-analyses, such as the one done by Cuijpers in 2006. This meta-analysis focused specifically on randomized controlled trials of psychotherapy for treatment of geriatric depression. After an extensive literature search, Cuijpers identified 25 controlled and comparative studies to include in his analysis. From these studies there were 17 that compared a psychological treatment to a control group, 5 that compared a psychological treatment to antidepressant medications, and 8 that compared various psychotherapy modalities to one

another. The most highly represented forms of psychotherapy were cognitive behavioral therapy and behavioral therapy respectively. Overall, Cuijpers found a mean effect size of 0.72, indicating a moderate to large effect of psychotherapy in the treatment of geriatric depression. As far as comparisons between the various forms of psychotherapy, no significant differences were found. Psychotherapy as compared to antidepressant medication revealed an effect size of -0.01 suggesting no significant difference between treatment types. Finally, Cuijpers looked at the effect of combining psychotherapy and medications, and found an effect size of 0.5 in favor of the combined treatment. The authors concluded that “there is no doubt” that psychological treatments are effective at treating depression in older adults (Cuijpers et al., 2006).

Although showing evidence for efficacy, the above meta-analysis is limited in that it had a relatively small sample size. It may therefore be helpful to consider the results of the geriatric population within the literature on the efficacy of psychotherapy as a treatment for depression as a whole. In order to truly test the efficacy of psychotherapy, Spielmans, Berman and Usitalo (2001) directly compared it to one of the most effective treatments for depressive disorders, second-generation antidepressants (SGAs). The authors used a meta-analytic paradigm to compare the effects of SGAs versus psychotherapy in the short-term, and at follow-ups. After an extensive literature search, fifteen studies were identified that directly compared psychotherapy with SGAs and included 1975 participants. Of the psychotherapy modalities represented, the majority were cognitive and/or behavioral. Overall, Spielmans and colleagues determined that at post-treatment assessments, psychotherapy and pharmacotherapy were not significantly different in their effect on reducing depressive symptoms. Tolerance of the treatments as determined by drop-out rates was also comparable. Analyses of follow-up depression measures revealed a small, but nonetheless significant difference in favor of psychotherapy (Spielmans et al., 2001).

For those patients who prefer not to use antidepressant medication, meta analyses such as these prove that psychotherapy should be considered an equally efficacious treatment option.

Comparison Between Young and Old

Simply applying the results of psychotherapy research as a whole for geriatric populations may be misguided if a comparison between the younger adults and older adults is not done. Luckily, studies such as one done by Cuijpers et al. in 2009 address this specific issue. Cuijpers and colleagues conducted a comparison between the efficacy of psychotherapy for young adults and the efficacy of psychotherapy for older adults. They identified 112 studies looking at the efficacy of psychotherapy, 20 of which were aimed specifically at older adults. The mean age of participants in the young adult studies was 41.8 years old, while the mean age of participants in the older adult studies was 69.3 years old. Effectiveness of treatment was determined by changes in self-report depressive measures from pre to post study and the majority of studies used the Beck Depression Inventory. Of treatment modalities, cognitive behavioral therapy was the most frequently used. Overall, the effect sizes of younger adults versus older adults did not differ significantly with the effect size for younger adults being $d=0.67$, while the effect size for older adults was found to be $d=0.74$. The authors also conducted subgroup analyses and found that it did not matter if the measure used was the Beck Depression Inventory or the Hamilton Rating Scale, or whether or not they included or excluded studies that looked specifically at specific populations of younger adults including college females or participants with general medical disorders. Of all the analyses run, the only difference observed had to do with the type of control group used in the studies. In studies using wait-list controls the mean effect size for older adults was significantly lower than for younger adults, while in studies using care-as-usual control groups the effects for older adults were significantly larger than for

younger adults. A few limitations noted by the authors include that severely depressed participants were not represented, and that their population was a “younger” old with many studies reporting mean ages of 70 or younger, so research still needs to expand to older populations. Despite these limitations, there was no indication that psychotherapy for depression in older adults is any less effective than it is in younger adults.

Treatment Format

Psychotherapy for older adults with depression also seems to be efficacious when administered in a group format. Krishna, Jauhari, Lepping, Turner, Crossley, and Krishnamoorthy did a systematic review to determine how effective group psychotherapy is for older adults suffering from depressive disorders (2011). They were able to identify six randomized controlled trials that presented change in depression scores as continuous variables and compared group psychotherapy with either wait-list controls or another form of active treatment. Common measures employed by the six trials included the BDI and HDRS. Overall, their analyses showed that group psychotherapy is an effective intervention in older adults suffering from depression. Although the combined effect size was only moderate, group psychotherapy showed impressive maintenance effects at follow-ups. The authors argue that the maintenance benefits of group psychotherapy, and the cost effectiveness of the group format, justify it as a treatment option for elderly populations (Krishna et al., 2011).

Cognitive-Behavioral Therapy

Looking past psychotherapy as a whole and focusing on specific treatment modalities and their efficacy for the treatment of geriatric depression, cognitive behavioral therapy (CBT) has proven to be efficacious. Theoretically, this makes sense. CBT is designed to help patients

regulate emotion, increase activity, and optimistically yet realistically work towards an optimal level of functioning. This fits well with the needs of a geriatric population. Older adults may get stuck focusing on all the things they enjoyed doing at a younger age that they are no longer able to do. CBT addresses this maladaptive thinking by focusing on problem-solving that fits within their current situation (Laidlaw, 2008).

One such analysis of CBT giving evidence to its efficacy for geriatric depression was a review of meta-analyses done by Hofmann, Asnaani, Vonk, Sawyer, and Fang in 2012. Their review identified 269 meta-analytic studies of CBT, of which they analyzed a representative 106 studies. Within those 106 studies, older adults were one of only two subgroups specifically addressed in the literature. Depression was the most commonly studied disorder, and almost all meta-analyses showed that CBT was more effective than wait-list controls. CBT was shown to be equally as effective as other active treatment methods such as interpersonal therapy or life-review therapy. Overall effect sizes for CBT as treatment for depression in elderly populations proved to be in the medium-large range (Hoffmann et al., 2012).

Cognitive behavioral treatments have also begun to amass evidence that they are efficacious for those suffering from both depression and a chronic physical illness. Rizzo et al. (2011) identified 22 randomized controlled trials of psychotherapy for people with depression and chronic health issues, 17 of which were based on CBT. Analysis of both group and individual based cognitive and behavioral interventions for depressed people with chronic health problems showed a medium effect on reducing depression symptoms at end of treatment. Overall, Rizzo et al. found that results of their analyses were comparable to the efficacy of psychotherapy treatments for depressed populations without co-occurring chronic physical illness. Even though Rizzo and colleagues did not specifically target a geriatric population, their

results have merit for older adults due to the high prevalence of comorbid depression and physical illness in aging populations (Broomfield et al., 2011).

Although there is evidence for efficacy, there may be a need for certain accommodations within CBT in order to give elderly populations the full therapeutic benefit. In general, Bienenfeld (2009) suggests administering the material at a slower pace due to the fact that processing speed decrease from early adulthood on. If a therapist can limit the number of new ideas introduced each session it will most likely lengthen treatment time, but aid in the mastering of the new behavioral and cognitive techniques for the patient. Bienenfeld also suggests the use of memory aids such as handouts and session recordings the patient can take with him or her to help review between sessions. Finally, multimodal training is also encouraged by Bienenfeld. As opposed to using only verbal interventions, visual demonstrations and modeling can make CBT more effective for older adults (Bienenfeld, 2009). Also, to serve adults specifically coping with post stroke or other physical ailments, Broomfield et al. (2011) propose a need for an augmented CBT intervention that includes grief work to help patients accept their current physical state and role. Impairments brought on by physical ailments often leave a patient grieving the person they were and the things they could do at a younger age that they are no longer able to do. By incorporating grief work into traditional CBT, a patient is able to work through this type of bereavement as they are restructuring their sense of self (Broomfield et al., 2011).

Behavioral Activation

Beyond CBT, research is beginning to show that the behavioral activation piece is particularly pertinent to reducing depressive symptoms, especially among those with severe

depression. Behavioral activation focuses on the relationship between activity and mood, and is built on the premise that when depressed people become less engaged in activities, they have decreased access to natural reinforcers that may serve an antidepressant function. One randomized controlled trial that compared standard CBT, behavioral activation, and antidepressant medication was conducted by Dimidjian et al. in 2006. Participants ranged in age from 18 to 60 with 38 people completing the cognitive therapy condition, 36 completing the behavioral activation condition, 56 completing the medication condition, and 41 assigned to the placebo condition. Dimidjian and colleagues found that behavioral activation was comparable to antidepressant medication, and that it was even more effective than cognitive therapy among the subset of participants who met criteria for severe depression.

Shorter, simpler versions of behavioral activation therapy may be ideal for older adults, especially those with limited cognitive abilities. Versions such as those proposed by Hopko (2004) adhere to basic behavioral techniques, and may be easier for geriatric populations to understand. During behavioral activation sessions, patients are asked to rate their life goals and values, including things such as spirituality, physical health, volunteering, and family relationships on a chart. They then work with the therapist to create an activity hierarchy with 15 activities ranging from easiest to most difficult. The patient progresses through therapy by conquering first the easier tasks and then moving on to the more challenging ones. Ultimately, the goal is to see an increase in the frequency and duration of activities the patient is engaging in (Hopko, Lejuez, & Hopko, 2004).

Research on behavioral activation therapy in geriatric populations is still in the nascent stage with a 2011 meta-analysis done by Samad, Brealey, and Gilbody uncovering only four randomized controlled trials that met their inclusion criteria. It is often the case that behavioral

activation therapy is administered in conjunction with cognitive therapy elements, making it difficult to analyze the effects of the behavioral activation component alone. Three of the included studies were included in a comparison of behavioral therapy versus a wait list control. Although self-rated depression symptoms post-treatment did not reach statistical significance between behavioral therapy and wait list controls, post-treatment clinician rated depression showed a highly significant difference in favor of behavioral therapy. All four studies allowed for the comparison of behavioral therapy and cognitive therapy with the authors finding no significant differences between the modalities on self-rated depression symptoms or post-treatment clinician rated depression. Despite the limited number of studies available, this research holds promise that behavioral activation is equally efficacious as other psychotherapies for reducing depression in geriatric populations. (Samad et al., 2011).

Interpersonal Psychotherapy

Interpersonal psychotherapy (IPT) has also proven to be efficacious in the treatment of depression. Cuijpers et al. conducted a meta-analysis in 2011 proving its efficacy in comparison to other psychological treatments. The authors identified 38 studies that included 4,356 participants and they were able to analyze the effects of IPT compared to control conditions, other psychotherapies, and pharmacotherapy treatments. When comparing IPT to wait list, usual care, or placebo control conditions, the authors found a significant mean effect size of $d=0.52$ which corresponds to a number needed to treat of 3.5 patients. A mean effect size of only $d=0.04$ was found when comparing IPT with other psychotherapies, indicating no significant difference between the modalities. Finally, comparing IPT with pharmacotherapy showed a mean effect size of $d=-0.19$ which was significant in favor of pharmacotherapy. When the authors investigated this relationship further, subgroup analyses revealed that selective serotonin

reuptake inhibitors were significantly more effective than IPT, however, tricyclic antidepressants were not. Overall, Cuijpers and colleagues determined that IPT has a moderate to large effect when compared to controls, and should be considered an empirically valid treatment for depression.

Particularly for those who experience depression later in life, the illness is often coupled with memory impairment. This can make traditional psychotherapy difficult due to the patient's limited ability to build on their work from session to session, and a lesser capacity for insight. Despite these challenges, many older adults with comorbid depression and cognitive impairment still desire the chance to strengthen their coping skills through psychotherapy. In an attempt to better serve this population, Miller and Reynolds (2007) considered modifications to traditional IPT that take into account cognitive impairment (IPT-CI). Miller and Reynolds chose to focus on IPT because the extensive psychoeducational components help elderly patients begin to comprehend depression, and the focus IPT places on role transitions is beneficial for a population struggling to accept a role that is different from the one they played in middle adulthood. The authors used their collaborative late life research lab to obtain feedback regarding potential IPT modifications, and found that the most significant modification of IPT necessary was integrating the caregiver into the psychotherapeutic process. Not only are patients experiencing role-transitions to less functionality, but caregivers are also experiencing role-transitions and may feel ambivalent as to their new role. By treating the patient and caregiver as a dyad and having the traditional IPT one-on-one therapy become flexible to joint sessions, the caregiver and patient can problem solve with therapeutic guidance, and the caregiver can enhance gains made during sessions by reviewing them with the patient between sessions (Miller & Reynolds, 2007). Although randomized controlled trials are necessary to test how beneficial

the modifications involved in IPT-CI are, involving a caregiver in psychotherapy is appearing to be beneficial for the patient.

Mindfulness

Mindfulness based cognitive therapy is an area of research that has recently begun to gain popularity in the treatment of depression. Mindfulness is a topic with roots in Eastern Buddhist meditation, and can be defined as “paying attention in a particular way: on purpose, in the present moment, and nonjudgmentally” (Kabat-Zin, 1994). In general, mindfulness is about learning to focus on the experience of the present moment and being aware of one’s present thoughts and emotions without judging them. An analogy used by practitioners illustrating how one becomes an observer of their own stream of consciousness is “... one may observe thoughts coming and going like clouds in the sky” (Marchand, 2012, 234). The particular definition quoted above comes from Dr. John Kabat-Zinn who first applied the concepts inherent in mindfulness in the form of a mindfulness-based stress reduction (MBSR) program (Kabat-Zinn, 1990). MBSR includes training in coping strategies combined with mindfulness strategies such as meditation, yoga, and body scans. A body scan is when participants pay attention to sensations in certain regions of the body starting in one area and moving across their entire body. The program is administered in a group therapy format, and generally follows an eight-session timeline (Kabat-Zinn, 1990). There is a large amount of scientific literature supporting the efficacy of MBSR for participants suffering from physical and/or psychological distress, and also subjectively healthy participants. Some areas that have been examined include pain tolerance, insomnia, general mental health, and depression and anxiety symptoms, all of which have some support for MBSR (Marchand, 2012).

The desire to offer a psychotherapeutic form of maintenance for patients who had recovered from depression was the inspiration for Segal, Williams, and Teasdale's 2002 creation of mindfulness-based cognitive therapy (MBCT). MBCT combines elements of MBSR such as sitting meditations, body scans and yoga, with principles of cognitive therapy in order to prevent relapse of depression. The conception of MBCT was anchored in a model of cognitive vulnerability that assumes individuals who have previously experienced depressive episodes differ from those who have not in terms of their cognitions associated with a dysphoric mood. Targeting this cognitive-vulnerability is what makes MBCT so effective for those who suffer from treatment-resistant depression as characterized by the experience of three or more depressive episodes. By teaching individuals to become aware of their thoughts and to relate to them as "mental events" rather than accurate reflections of the self, MBCT provides the skills necessary to prevent the negative thought patterns triggered by dysphoria from escalating to a depressive episode. Risk of relapse can be reduced if individuals are able to disengage from ruminative depressive processing (Segal et al., 2002).

As more and more trials of MBCT have amassed, meta-analyses have been conducted in an attempt to synthesize all of the emerging research, and estimate an overall effect size for MBCT on depressive symptoms. One particularly sound example of a MBCT meta-analysis was done by Hofmann, Sawyer, Witt, and Oh in 2010. After an extensive search of the literature the authors found 36 studies including roughly 1140 participants that met their inclusion criteria for mindfulness based therapies that targeted depressive symptoms. The authors calculated effect sizes across the thirty-six studies using pre-post differences based on measures such as the BDI and HRSD. They used Hedges's g , a variation of the common effect size measure Cohen's d that takes into account smaller sample sizes, but can be interpreted in the same way. Hofmann

and colleagues found that the average pre-post effect size based on the combined 36 studies was 0.59 for reducing depression, indicating a significant symptom reduction (Hofmann et al. 2010).

Although only a fraction of MBCT research has focused on older adults, the initial research is promising. One qualitative study found that of the 30 elderly participants who took part in MBCT, 90% found the treatment to be 'helpful' or 'very helpful' (Smith, Graham, & Senthinathan, 2007). Not only does the treatment appeal to older adults, but quantitative studies specifically focusing on MBCT for older adults are reporting efficacy for reducing symptoms of depression. Splevins, Smith, and Simpson (2009) used a randomized controlled trial in order to investigate whether increases in mindfulness following an MBCT course correlated with decreased depressive symptoms. Their study included twenty-two participants with a mean age of sixty five who attended a manualized MBCT course. The authors used the Depression, Anxiety and Stress Scales (DASS21) to measure severity of depression, and the Kentucky Inventory of Mindfulness Skills (KIMS) to assess mindfulness. Pre to post analyses showed a significant drop in participants' mean levels of depression and anxiety. There was a large effect present with pre scores rating in the moderate range while post scores fell within the mild range. Also observed was a significant increase in total mindfulness scores following the MBCT course. The correlation between change scores of depression and mindfulness was 0.59, indicating a strong relationship between the variables. Overall, the authors concluded that correlation between increased mindfulness and decreased depressive symptoms indicates that emotional wellbeing improves following an MBCT treatment (Splevins et al., 2009). Although correlational, the study offers further support for the continued research and use of MBCT in elderly populations suffering from depressive symptoms.

Life-Review Therapy

Life-Review therapy is an intervention engineered specifically for use in aging populations. It is a more structured version of reminiscence that has been used by therapists since the early seventies. As opposed to solely having older adults recall memories as is common in reminiscence, life-review therapy focuses on the balance of positive and negative reminiscences when a person thinks about their life, and the client and therapist work together to redefine the negative experiences in a person's past (Bohlmeijer, Smit & Cuijpers, 2003). Whereas younger, non-depressed individuals are able to remember specific events, a person suffering from depression and also older adults, tend to over generalize memories. To address this, one main goal of life-review therapy is for the individual to gain a balanced view of their past (Preschl et al., 2012).

One randomized controlled trial of life-review therapy done by Preschl et al. in 2002 combined the face-to-face intervention with e-mental health components from the Butler system. One component highlighted in the current study was the use of the 'Book of Life,' a 3-D adaptation of scrapbook. Users can customize the book with text, pictures, and audio, giving them an outlet to recall positive events in one's life (Botella et al., 2009). Participants were older adults aged sixty-five and older who met criteria for mild to moderate depression as indicated by scores on the Beck Depression Inventory. After an initial assessment determining eligibility for inclusion, participants were randomly assigned to either the intervention group or a wait-list control. The treatment consisted of one 1-1.5 hour life-review therapy session per week for six weeks. The majority of the session time was spent on the face-to-face interaction between the participant and therapist, while about one third of the time was spent with the participant working on the e-health computer components. During the face-to-face aspects, the therapist

guided participants through both positive and negative experiences with a particular focus on restructuring negative biographical memories. The computer interventions had participants recall one especially positive event from childhood until old age each session and describe it in detail, augmenting the memory with pictures and audio if the participant so chose. During the computer sessions, therapists were there for support and guidance if a participant had trouble recalling a positive event. Upon completion of the life-review therapy, each participant got his or her 'Book of Life' (Preschl et al., 2012).

Depression symptom assessments were done pre and post treatment, and at a three month follow-up. Analyses revealed that symptoms decreased significantly more for those in the intervention group than for those in the control group during the six-week period. Further, depression scores decreased even more significantly for the intervention group than the control group if comparing pre-intervention scores to scores at the three month follow-up. Overall effect size for pre to three-month follow-up were $d=1.27$, a large effect. In line with other studies, the results show a significant decrease in depressive symptoms over time in the intervention group as compared to the control group, indicating that life-review therapy is an efficacious intervention for older adults suffering from depression. Most interestingly, the depression scores for those in the intervention treatment decreased further from post-treatment to the three-month follow-up. The authors suggest that individuals in the intervention group most likely continued mastering the strategies the life-review therapy had introduced them to, thus allowing them to better cope with the problems that arise in their life (Preschl et al., 2012).

As noted above, the results obtained by Preschl and colleagues (2012) align with the prevailing research on life-review therapy. One meta-analysis looking at reminiscence and life-review therapy was done by Bohlmeijer et al. in 2003. The authors identified twenty controlled

studies, nine of which focused specifically on life-review therapy and included over 500 participants. Depression scores were assessed using measures such as the BDI and HDRS, and an overall effect size for all twenty studies was found to be 0.84. This represents a highly significant, large effect size that is comparable to the effect sizes found for well-established treatments such as CBT. When looking solely at the nine studies focusing on life-review, the effect size was even greater at 0.92. The authors also calculated an overall effect size for the seven studies that specifically targeted participants with high depressive symptoms. Within this subgroup, the overall effect was 1.23. Despite the small number of studies included in the analyses, the authors interpret their results as an indication that reminiscence and life-review therapy may be efficacious treatments for depression in older adults (Bohlmeijer et al, 2003).

Objectively, psychotherapy is an efficacious treatment option for older adults faced with depression. Many of the same modalities such as CBT, IPT, or MBCT that are used in adult populations have proven effective in geriatric populations as well. Although certain accommodations may be necessary with traditional modalities in order to best serve an elderly patient, those modifications are a necessity in order to give the growing number of depressed older adults options for treatment. Future research needs to continue focusing on the application of psychotherapy specifically to those aged over sixty-five. Also, researchers should look further into group versus individual formats and the potential benefits of computer supplements in order to develop cost-efficient treatments. As the above research shows, the experience of depression for an older adult is phenomenologically different from someone experiencing depression during middle adulthood. Therefore, as a society, we need to ensure that the mental health of our geriatric population does not go ignored.

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