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Review

Effect of reminiscence therapy on depression in older adults: a systematic review

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Abstract

The objective of this systematic review is to provide healthcare professionals with information to assist in their decision to utilize reminiscence therapy for depression reduction in older adults outside of the primary care setting. Nine reviewed studies that were randomized controlled trials not only varied in person, outcome measurement, control, and exposure/intervention, the results of these studies were also diverse. About half of these studies showed that reminiscence therapy resulted in statistical significantly decrease in depression. Despite that reminiscence therapy requires further testing, it should be considered as a valuable intervention. Future directions of studies on reminiscence therapy are suggested.
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Keywords: Reminiscence therapy; Depression; Older adults; Systematic review

Contents

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1. Introduction

Elderly people are the fastest growing population around the world. According to estimates, between the year of 1990 and 2020, the population age between 65 and 74 will increase 74%, while the population under age 65 will increase 24% (Census Bureau, Economics and Statistic, 2001). With the increasing number and proportion of elders, their health problems can be significant, especially mental health problems. Among these mental health problems, depression is especially prevalent among older adults. In a large retrospective self-reported study, 17.8% of females and 9.4% of males who were older than 60 were diagnosed with lifetime depression based on the DSM-III-R criteria (Barry et al., 1998). In addition, epidemiological studies show that the death rates for individuals who are older than 55 and with a diagnosis of Major Depressive Disorder will increase four fold (DSM-IV-TRTM, 2000). Therefore, obtaining adequate health care resources in care of older adults is a challenge and critical issue in the 21st Century.

Derived from Erikson's theory, reminiscence therapy assists older adults to review their past, thus resulting in helping the resolution of the developmental stage known as ego integrity vs. despair (Taylor-Price, 1995). Researchers have tried to investigate the effect of reminiscence therapy on decreasing depression among older adults. Reminiscence therapy requires minimal resources and so is often considered cost-effective therapeutic intervention (Comana et al., 1998). This therapy is readily available anytime and anywhere for older adults. However, findings of studies varied from study to study. A systematic review of the effect of reminiscence is essential.

By appraising and synthesizing related studies, the purposes of this systematic review are:

- To determine the effectiveness of reminiscence therapy as an intervention for depression reduction in older adults outside of the primary care setting.
- To suggest approaches of reminiscence therapy that need to be changed or used in care of older adults.
- To identify further research needed.

2. Reminiscence therapy

The developmental-existential perspective of reminiscence in the elderly was first emphasized by Butler (1963). Reminiscence is a naturally occurring universal and spontaneous mental process in which past experiences, especially unresolved conflicts, are progressively returned to consciousness, and thus they can be reintegrated (Butler, 1963). Reminiscence is more than simply recalling the past. It is "a structured process of systematically reflecting on one's life" (Brady, 1999, p. 179). It is a reflexive process through which one can introspectively define or redefine oneself (Parker, 1995). Reminiscence therapy can be conducted either in individual (intrapersonally) or group (interpersonally) modality. Typically, reminiscence therapy starts with birth and then progresses through the decades of life with focus on significant events (Cook, 1998). Reminiscence should be sensitive to the different needs of individuals. Researchers have investigated the effect of reminiscence therapy on various cognitive, psychological, social, behavioral, and health outcome measures. These include depression, self-esteem, self-concept, self-assessment, self-acceptance, self-change ego integrity, ego strength, mood, anxiety, coping self-efficacy, social problem-solving ability, integration of life events, life satisfaction, physical activities, social behavior, cognitive status, health status, and well-being.

3. Process of locating the reviewed studies

The clinical question for this systematic review was "Does reminiscence therapy improve depression in older adults compared with placebo control or standard care?" Studies included in this review were selected on the basis of five categories of inclusion criteria suggested by Counsell (1998): type of persons, type of outcome measure, type of study design, type of control, and type of exposure. Inclusion criteria of studies were:

- *Type of person*. Studies with subjects who were older than age 55, both females and/or males, residing outside of the primary care setting were included in

this review. Type of disease or condition of subjects was not restricted.

- *Type of outcome measure*. Depression was selected as an outcome measure in this review because it is most prevalent in older adults and can increase morbidity and mortality, and impair quality of life, thus depression is an important outcome measure.
- *Type of study design*. Studies included in this review were all randomized controlled trials.
- *Type of control*. Studies included in this review had at least one standard care or placebo control group.
- *Type of exposure*. Type of exposure in this review was reminiscence therapy. The only selected criterion in this exposure was that reminiscence therapy was the principle intervention. There was no limitation on specific types of reminiscence therapy.

Search strategy for identification of studies included:

- *Online databases*. Several online databases were investigated with three search terms to identify potential studies. These search terms were "reminiscence", "elderly (older adults)", and "depression". Document types were either research or trial. Online databases searched included MEDLINE 1965, CIHNAL 1982, PsycINFO 1967, Patient-Oriented Evidence that Matter (POEMs), Cochrane Library Systematic Reviews, and Dissertation Abstracts International 1961.
- *Internet Sites*. Internet sites, such as Mental Health Net and American Psychiatric Association were searched.
- *Hand-Searched Articles*. An additional hand search was guided by reference lists of research articles. Through the reference lists of studied articles, potential related studies were located and reviewed.

Methods of selecting studies were:

- *Selection of a trial*. A total of 24 related research articles were identified from the search. Then a reviewer with an eligibility form reviewed the studies. Studies were included if they met the inclusive criteria. Studies were excluded if they were case studies, and if they were single case experimental studies. Using this selection method, a total of nine studies were included in this review.
- *Data extraction*. Descriptive characteristics of the studies and variables of the reminiscence therapy were extracted to two data collecting forms. A separate form was used to categorize the statistical results of the studies. Then, the studies were analyzed and synthesized.

4. Description of the reviewed studies

All reviewed studies included in this review were randomized controlled trials. These studies varied in type of: person, control, outcome measurement tools, and specific methods of exposure/intervention. Table 1 summarizes these reviewed studies.

4.1. Type of person

In type of person, not only personal characteristics of the subjects were different between studies, but also the disease or condition of the subjects and the setting of the studies were not the same. The total numbers of subjects in these reviewed studies ranged from 21 to 162, with a mean sample size of 53 (standard deviation of 44). Age of the sample ranged from 55 to 97. Mean ages were between 66.5 and 82.3 (average 75.8, standard deviation of 6.0). All the reviewed studies except two (Taylor-Price, 1995; Youssef, 1990) included both females and males in the studies. Subjects in one of the reviewed studies had a diagnosis of depression (Arean et al., 1993), the rest of the reviewed studies used depression scales to measure depression symptoms. Subjects in one of the reviewed studies had clinical diagnosis of dementia (Goldwasser et al., 1987), while the rest had not. Settings for all the studies were long-term care facilities such as nursing homes and retirement apartments, and communities.

4.2. Type of outcome measures

The measurement scales used to measure depression and the timing of measurements varied from study to study. Measurement tools used include the Beck depression inventory (BDI), the geriatric depression scale (GDS), the Zung depression scale (ZDS), and the Hamilton rating scale for depression (HRSD). The BDI was the most frequently used tool in these studies, used by five of the studies (Arean et al., 1993; Fry, 1983; Goldwasser et al., 1987; Stevens-Ratchford, 1993; Youssef, 1990). The GDS was used in three of the reviewed studies (Arean et al., 1993; Cook, 1991; Taylor-Price, 1995). The ZDS was used in two studies (Perrotta and Meacham, 1981; Reddin, 1996). The HRSD was used in one study (Arean et al., 1993). All studies except one (Arean et al., 1993) used a single instrument to measure depression. These scales loaded toward measuring either somatic symptoms of depression or psychological and cognitive symptoms of depression.

Reddin (1996) administered a depression scale only at the beginning of the study, while the other studies administered the depression scales both before and after the intervention. However, the number and the timing of administration after the intervention differed. Five of the studies administered the scales once at the end of the

Table 1
Summary of description of the nine reviewed studies

Studies	Subjects	Psychological status of subjects	Setting	Groups of exposure	Outcomes measurement	
					Scales	Timing of measuring
Perrotta and Meacham (1981)	21 participants 45% female Age range unstated (mean age of 77.3)	Unstated	Community residents attending a senior center	1. Reminiscence 2. Placebo control (Current life events control) 3. Standard care control	Zung depression scale	Administered at the beginning and at the end of the study and 2 weeks after the study
Fry (1983)	162 participants 59.3% female Older than 65 (mean age of 68.5)	High depression based on Beck Depression Inventory	Communities	1. Structured reminiscence 2. Unstructured reminiscence 3. Placebo control	Beck depression inventory	Administered at the beginning of the study and two weeks and 17 weeks after the study
Goldwasser, Auerbach and Harkins (1987)	27 participants 74% female Age from 70 to 97 (mean age of 82.3)	1. Clinical diagnosis of dementia 2. Presence of symptoms associated with dementia	One nursing home	1. Reminiscence 2. Placebo control (Attention-pacebo support group) 3. Standard care control	Beck depression Inventory	Administered at the beginning, at the end of the study, and 6 weeks after the end of the study
Youssef (1990)	60 participants All female Older than 65 (mean age of 72.1)	No previous history of mental illness	Nursing homes	1. Reminiscence group 1(age from 65 to 74) 2. Reminiscence group 2 (older than 74) 3. Standard care control group	Beck depression inventory	Administered at the beginning and at the end of the study

Cook (1991)	41 participants 87.8% female Age from 65 to 96 years old (mean age of 81.3)	No diagnosed mental illness or organic brain impairment	3 Nursing homes	1. Reminiscence 2. Placebo control (current events) 3. Standard care control	Geriatric depression scale	Administered at the beginning and at the end of the study
Stevens-Ratchford (1992)	24 participant 66.7% female Age range from 69 to 91 (mean age of 79.8)	No diagnosis of depression	Own apartment in life time care retirement community	1. Reminiscence 2. Standard care control	Beck depression inventory	Administered at the beginning and at the end of the study
Arean et al. (1993)	75 participants 74.7% female Older than 55 years old (mean age of 66.5)	Diagnosed with unipolar, major depressive disorder	Community recruitment	1. Reminiscence 2. Placebo control (Problem-solving therapy) 3. Standard care control (Waiting-list control)	1. Beck depression inventory 2. Geriatric depression scale 3. Hamilton rating scale for depression	Administered at the beginning, at the end of the study and 3 months after the end of the study
Taylor-Price (1995)	34 participants All female Age range from 65 to 88 years (mean age of 78.2)	No diagnosis of major depression, mood disorder, schizophrenia	Nursing home	1. Structured reminiscence 2. Standard care control	Geriatric depression scale	Administered at the beginning and at the end of the study
Reddin (1996)	37 participants (mean age not provided) 97.3% female Age range from 70 to 94 (mean age not provided)	No diagnosis of active psychosis as defined by the DSM-III	8 intermediate-care nursing homes	1. Structured life review 2. Simple reminiscence (Unstructured) 3. Placebo control (Friendly visit)	Zung depression scale	Administered at the end of the study only

intervention (Cook, 1991; Perrotta and Meacham, 1981; Stevens-Ratchford, 1993; Taylor-Price, 1995; Youssef, 1990), while another three studies administered the scale(s) twice at the end of the study. The first post-study measure was administered right after or 2 weeks after the intervention, while the second post-study measure was administered either 6, 12, or 17 weeks after the end of the intervention to evaluate the long-term effect of the intervention (Arean et al., 1993; Fry, 1983; Goldwasser et al., 1987).

4.3. Type of control

Studies included in this review had at least a standard care control group or a placebo control group. The standard care control group merely received routine or usual standard care and did not use any additional interventions. The placebo control group used a different type of intervention as a placebo, such as current events and friendly visit. Three of the reviewed studies used a standard care control group (Stevens-Ratchford, 1993; Taylor-Price, 1995; Youssef, 1990), two used a placebo control group (Fry, 1983; Reddin, 1996); while the remainder of four studies used both types of control groups (Arean et al., 1993; Cook, 1991; Goldwasser et al., 1987; Perrotta and Meacham, 1981) to distinguish the effect of reminiscence therapy and the effect of being in a group.

4.4. Type of exposure/intervention

Type of exposure/intervention in this review was reminiscence therapy which was not limited to a specific type. Among the reviewed studies, seven studies used one experimental group design—one reminiscence intervention group (Arean et al., 1993; Cook, 1991; Goldwasser et al., 1987; Perrotta and Meacham, 1981; Reddin, 1996; Stevens-Ratchford, 1993; Taylor-Price, 1995). The remaining two studies each had two reminiscing groups based on the structure of reminiscence therapy (Fry, 1983) and age of the subjects (Youssef, 1990). Participants in Fry's study were randomly assigned into either structured or unstructured reminiscence training groups. In the structured reminiscence group, treatment procedure was outlined step-by-step. It was as structured as possible with a set of specific questions and followed an exact time schedule. In the unstructured reminiscence group, participants were asked to free recall the past with specific questions. The experimental participants in Youssef's (1990) study were divided into two groups based on their ages. Participants whose ages ranged from 65 to 74 were assigned to one treatment group, while those whose ages were older than 74 were assigned to the other treatment group.

In the type of exposure, the variables of reminiscence therapies were also diverse. Firstly, reminiscence therapy can be conducted in a group or individually. Two of the nine studies used the individual modality (Fry, 1983; Perrotta and Meacham, 1981), while the rest used a group modality. Next, the durations of reminiscence therapy varied. Reminiscence therapy was conducted once or twice a week, from 3 to 16 weeks, and from 30 to 90 min per session. Thirdly, the numbers of participants in a treatment group were 9 or 12 in most of the reviewed studies (Arean et al., 1993; Cook, 1991; Goldwasser et al., 1987; Stevens-Ratchford, 1993) except Youssef's (1990) and Taylor-Price's (1995) studies where the numbers of participants were 17–21 per group. Fourthly, some of the reviewed studies used more structured reminiscence therapy, while the rest used less structured reminiscence therapy. Two of the reviewed studies specified the types of reminiscing used in their study (Fry, 1983; Perrotta and Meacham, 1981). They were positive reminiscing, simple reminiscing, informative reminiscing, life review, structured reminiscence, and unstructured reminiscence. Meanwhile, the focus of reminiscence therapy was different. Subjects were encouraged to recall memories that were only pleasant and positive (Cook, 1991; Taylor-Price, 1995) that were both pleasant (positive) and unpleasant (negative) (Arean et al., 1993; Stevens-Ratchford, 1993), and those that were of the most negative and stressful events (Fry, 1983). Memory-evoking material, such as pictures, photographs, and old songs were used in some reminiscence therapy (Cook, 1991; Stevens-Ratchford, 1993; Youssef, 1990). Finally, the roles of group leaders or facilitators were different from study to study. Some group leaders encouraged subjects to speak at each session to promote interaction among subjects (Youssef, 1990), while the other group leaders participated as minimally as possible (Stevens-Ratchford, 1993). Table 2 summarizes the description of the interventions.

5. Methodological quality of the reviewed studies

Four types of methodological bias that include sample selection bias, performance bias, intervention bias, and attrition bias are discussed regarding methodological quality of the reviewed studies.

5.1. Sample selection bias

Although methods were not specified, some forms of random allocation were used by all the reviewed studies.

5.2. Performance bias

Types of performance bias include blindness and contamination. It is impractical to use a blind approach to subjects and researchers with a psychological

Table 2
Description of intervention

Studies	Variables of reminiscence therapy								
	Modality	Frequency			Number of subjects in each group	Type	Focus	Evocative materials	Assignment
		Length of intervention	Total sections	Minutes per section					
Perrotta and Meacham (1981)	Individual	5 consecutive weeks	5 sections (once a week)	30–45	Not Applicable	1. Positive reminiscing 2. Simple reminiscing 3. Informative reminiscing 4. Life review—Subjects self selected	Different types of reminiscing had different goals.	None	None
Fry (1983)	Individual	5 consecutive weeks	5 sessions (once a week)	90	Not Applicable	1. Structured reminiscence 2. Unstructured reminiscence	The most negative and stressful events	None	Writing diaries
Goldwasser, Auerbach and Harkins (1987)	Group	5 consecutive weeks	10 sessions (twice a week)	30	9	Not prescribed	Session by specific topic	None	None
Youssef (1990)	Group	5 consecutive weeks	6 sessions (twice at the first week, then once a week)	45	18 and 21	Not prescribed	Non-threatening topics at the beginning, personal topic later	Pictures, photographs, scrapbooks	None
Cook (1991)	Group	16 consecutive weeks	16 sections (once a week)	60	5 and 9	Not prescribed	positive aspect of past life, pleasant and happy memories	Old pictures, old songs	Journal keeping
Stevens-Ratchford (1992)	Group	3 consecutive weeks	6 sessions, (twice a week—two consecutive days)	120	12	Not prescribed	Both pleasant and unpleasant contents	Slide-tape of people, events and objects Music: classic and period	None
Arean et al. (1993)	Group	12 consecutive weeks	12 sessions (once a week)	90	9	Not prescribed	Both positive and negative events	None	None
Taylor-Price (1995)	Group	6 consecutive weeks	12 sessions (twice a week	60	17	Not prescribed	Positive personal memories	None	None
Reddin (1996)	Group	7 consecutive weeks	7 sessions (one a week)	60	Not specified	Not prescribed	Exploratory statements and questions	None	None

Table 3
Significantly statistical difference between groups

Studies	Treatment group vs. treatment group	Treatment group vs. placebo control group	Treatment group vs. Standard care control group
Perrotta and Meacham (1981)		NSSD	NSSD
Fry (1983)	SSD (Structure lower)	SSD	
Goldwasser et al. (1987)		SSD	SSD
Youssef (1990)	NSSD		SSD
Cook (1991)		NSSD	NSSD
Stevens-Ratchford (1992)			NSSD
Arean et al. (1993)		SSD (Placebo lower)	SSD
Taylor-Price (1995)			SSD
Reddin (1996)		NSSD	NSSD

NSSD: No significantly statistical difference between groups.
SSD: Significantly statistical difference between groups (treatment group had lower depression unless marked otherwise).

intervention such as reminiscence therapy (Spector et al., 2001). The reviewed studies used open (not blinded) trial rather than blindness, in which subjects and investigators were aware of whether the subjects were assigned into treatment or control groups.

There are two types of contamination—subject and experimenter contaminations. Since all the subjects of the reviewed studies lived in the same nursing homes, retirement community, or the same cities or attended the same senior center, it is more than likely that there was some participant interaction between groups, thus causing potential subject contamination between groups. If this occurred, then contamination would tend to impair the definite therapeutic protocols and to become an obstacle in distinguishing the therapeutic effect. Experimenter contamination happens when the same group facilitators conduct both the experimental and placebo control groups (Spector et al., 2001), thus group facilitators may act and behave differently in group process. In the reviewed studies, no detailed information was provided allowing evaluation of experimenter contamination.

5.3. Intervention bias

The time each subject actively participated in reminiscence therapy was not discussed. Given that the numbers of subjects in an experimental group varied, the time available for a subject to share his or her experience was not consistent. Even though the time for participation in the group was similar, there was no guarantee that every subject would use all the time they had.

5.4. Attrition bias

The dropout rates of these reviewed studies varied. Subject dropout was mainly due to illness, mortality, and relocation. Four of the studies had no dropouts (Arean et al., 1993; Fry, 1983; Perrotta and Meacham, 1981; Stevens-Ratchford, 1993), while three had dropout of 1–5 subjects in either experimental or control groups due to mortality (Cook, 1991; Goldwasser et al., 1987; Taylor-Price, 1995). The mortality rates in both experimental and control groups were about the same. Thus, reminiscence may be non-burdensome and user-friendly for subjects. Interestingly, in two studies (Reddin, 1996; Youssef, 1990), subjects were excluded from experimental groups due to missing two or more sessions (total 6 and 7 sessions) even though subjects were not excluded when missing up to 6 meetings in 16 weeks in the other study (Cook, 1991).

6. Results of the reviewed studies

Due to the major differences between these reviewed studies, it was impossible to compare the results directly. Meanwhile, because the data needed for a meta-analysis were not available in most of the reviewed studies, the narrative descriptive results were analyzed. The results of studies are classified according to three between-group comparisons—treatment group vs. treatment group, treatment group vs. placebo control group, and treatment group vs. standard care control group. Based on statistical analysis between groups, the results of these studies are divided by statistical significance (Table 3).

6.1. Between-group comparison: treatment group vs. treatment group

Two of the reviewed studies had two treatment groups. Subjects in the structured reminiscence group had significantly lower depression scores than those in the unstructured reminiscence group at both 2 and 17

weeks after the study (Fry, 1983). On depression subscales, the reminiscence group with subjects who were older than 74 years old had higher social withdrawal, somatic preoccupation and loss of libido scores than the reminiscence group with subjects aged 65–74 at the end of the study (Youssef, 1990). However, the differences between these two age groups were not statistically significant.

6.2. Between-group comparison: treatment group vs. placebo control group

The results from the comparison of treatment group and placebo control group were widespread. In two of the reviewed studies, the treatment group had significantly lower depression scores compared with the placebo control group at the end of the study on BDI (Fry, 1983; Goldwasser et al., 1987). In one of the reviewed studies, placebo control group had significantly lower depression scores compared with the treatment group on GDS and HRSD, but not BDI (Arean et al., 1993). Furthermore, the results from the other three studies showed that there was no significant difference on depression between treatment and placebo control groups (Cook, 1991; Perrotta and Meacham, 1981; Reddin, 1996).

6.3. Between-group comparison: treatment group vs. standard care control group

Four of the reviewed studies demonstrated significant differences in depression between treatment groups and standard care control groups. Subjects in reminiscence groups had significantly lower depression scores than standard care control groups at the end of the study (Arean et al., 1993; Goldwasser et al., 1987; Taylor-Price, 1995). Reminiscence group subjects aged from 65 to 74 had significantly lower depression scores than the standard care control group at the end of the study, but the reminiscence group with subjects older than 74 years did not have significantly lower depression scores than standard care control group (Youssef, 1990). The results from the other four studies showed no significant difference in depression between groups at the end of the study (Cook, 1991; Perrotta and Meacham, 1981; Reddin, 1996; Stevens-Ratchford, 1993).

7. Discussion

The results of the reviewed studies may be confounded by issues related to methodology, characteristics of subjects, and intervention protocols. In order to distinguish the effect of being in the study and the effect of reminiscence therapy, six of the reviewed studies (Arean et al., 1993; Cook, 1991; Goldwasser et al., 1987; Perrotta and Meacham, 1981; Reddin, 1996; Youssef, 1990) used another type of intervention as a placebo control. Subjects in either experimental or placebo control groups had similar amounts of contact with investigators and received similar amounts of attention from investigators. When compared with placebo control groups, two of the six reviewed studies (33.3%) showed treatment groups had significantly lower scores on depression (Goldwasser et al., 1987; Youssef, 1990). When compared with standard care control groups, four out of the eight reviewed studies (50%) showed a significant decrease in depression in the treatment groups (Arean et al., 1993; Goldwasser et al., 1987; Taylor-Price, 1995; Youssef, 1990). In one reviewed study, the placebo control group had lower depression scores when compared with treatment group (Arean et al., 1993). Therefore, the decrease in depression in these reviewed studies does not seem to be dependent on the effect of reminiscence therapy.

The effects of reminiscence therapy on depression do not appear related to most of the intervention protocol. Neither type of modalities, nor number of participants per group was associated with outcomes. In addition, neither the focus of reminiscence therapy, nor the factor of whether or not evocative material was used to aid in recall, was associated with a decrease in depression in older adults. Most of the reviewed studies used a group modality of reminiscing rather than individual modality due to cost-effectiveness as well as the benefit of socializing which is often a barrier associated with old age (Baker, 1985; Hartford, 1980). However, using a group or individual modality does not change the impact of reminiscence therapy on depression. Reminiscence therapy decreased depression in both the group and individual modality. The effect of reminiscence therapy does not depend on being in a group or individual modality. However, the impact of length of reminiscence therapy on depression remains ambiguous. In the reviewed studies, reminiscence therapy was conducted from 3 to 16 consecutive weeks. Interestingly, three of the reviewed studies offered 10 and 12 sessions of reminiscing and showed significant decrease in depression (Arean et al., 1993; Goldwasser et al., 1987; Taylor-Price, 1995), but shorter or longer in length of time demonstrated no significant effects. Increasing the length of the reminiscence therapy does not increase its effectiveness on decreasing depression in older adults. There may be an optimal length for reminiscence therapy. Perhaps the necessary time for depression reduction may be different individually.

Personal characteristics of the subjects may have an impact on the outcomes. The results from two of the reviewed studies included participants who were diagnosed with major depressive disorder or had a high level of depression, showed that reminiscence therapy significantly decreased depression (Arean et al., 1993;

Fry, 1983), while the results from the rest of the reviewed studies included participants who were not diagnosed with depression and did not have high levels of depression showed that reminiscence therapy yielded conflicting effects on depression. Perhaps reminiscence therapy was more effective on subjects with severe and diagnosable depression but not for those with mild or no depression (Perrotta and Meacham, 1981). Age is related to the severity of depression. The older the individual, the more likely he or she is to have depression (Youssef, 1990). Therefore, reminiscence therapy may be more effective in decreasing depression in the old older adults than the young older adults. Furthermore, the settings where participants were recruited from did not affect the effect of reminiscence therapy on decrease in depression.

In this systematic review, only the effect of reminiscence therapy on depression among the elderly was considered. Yet, reminiscence therapy has other positive outcome measures other than depression, such as self-esteem, social behaviors, ego integrity, and life satisfaction. The effect of reminiscence therapy on these outcome measures requires a detailed systematic reviewed as well.

8. Conclusion

8.1. Implications for practice

Depending on the statistical analysis used, reminiscence therapy has varying effects on depression reduction for the elderly. Even though results showed that the decrease in depression in treatment group was not consistently significant compared with control groups, any intervention that can possibly decrease depression to some extent in older adults has its clinical significance. Thus, the intervention of reminiscence therapy needs to be taken into account. Before reminiscence therapy can be further tested, it should be considered as a viable, valuable and useful intervention to potentially reduce depression in older adults.

8.2. Suggestions for future studies

Future research on reminiscence needs to use different approaches to study its effect. First, a qualitative approach needs to be applied in studying the effects of reminiscence therapy on depression. Individual interviews with the elderly subjects on their personal feelings and thinking can provide in-depth understanding of the effect of reminiscence therapy.

Next, there is a need for further analysis of the contribution of personal characteristics on the effect of reminiscence therapy. Questions such as whose depression can be reduced by reminiscence therapy should be answered. Research needs to focus on the impact of personal characteristics, such as gender, age, relationship with others, and levels of depression, on the depression reduction. It has been suggested that the type of reminiscence therapy should be congruent with a developmental stage (Kovach, 1990). Meanwhile, the preferences of individual older adults in participating in reminiscence therapy should be taken into account. Some older adults may not want to share the past life experiences in a group.

Thirdly, intervention protocols of reminiscence therapy require more clear definition to determine what aspects of reminiscence therapy contribute the most to depression reduction. Questions such as how many persons a reminiscing group includes, how many sessions the reminiscence therapy should be, how much a person should participate, whether reminiscence therapy should consist of negative or positive memories should be answered. Varied in the implementation of reminiscence therapy may be necessary to meet the needs of diversity of target participants.

The effect of reminiscence therapy on depression needs to be assessed at different points in time. At the end of group participation, the effects of reminiscence therapy on depression are likely to be confounded by the experience of separation with the researchers. The effect of reminiscence therapy some time during therapy process needs to be investigated. Meanwhile, different depression scales have advantages and limitations (Brink et al., 1982). Based on characteristics, researchers need to select the most appropriate depression scale for use in their study population.

Reminiscence therapy may not only affect participants, but also their family members and friends. One study investigated the effect of reminiscence therapy on family coping and found that reminiscence therapy had a positive effect on family coping for elderly subjects and their significant others (Comana et al., 1998). Participating in reminiscence therapy may potentially increase interaction between subjects and significant others. Thus, family members and friends of the participants can benefit from reminiscence therapy. Studies need to include family members and friends as subjects in outcome assessment. Finally, there is a need to investigate any possible harmful, negative or painful effects of reminiscence therapy. Costs of training and time required for training should be scrutinized as well.

In summary, this review on reminiscence therapy has probably answered fewer questions than it has raised. Rather than discouraging, it is hoped that this systematic review can provides some directions and guidelines for future study researchers in conducting researches and clinical providers in implementing interventions. Through refining the intervention, this systematic review presents a state of science on reminiscence therapy.

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