

The Effect of Reminiscence on the Elderly Population: A Systematic Review

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Abstract Reminiscence therapy is an independent nursing intervention that may be helpful in maintaining or improving self-esteem and life satisfaction for the elderly, but the effects of reminiscence therapy are difficult to measure. For a greater understanding of reminiscence as a nursing therapeutic, this article reviewed the developmental history and theoretical basis of reminiscence and evaluated the empirical evidence concerning the use and effectiveness of reminiscence in the elderly. A lack of consist research findings resulted from selecting different therapeutic goals, different types of reminiscence, different dependent measures, different data collection tools, different sample populations, and small sample size. Future nursing research should redefine the concept and attempt to standardize the measurement of reminiscence and then forge ahead using rigorous research designs to develop a body of knowledge regarding reminiscence.

Key words: reminiscence, effects, elderly.

INTRODUCTION

With increases in the elderly population, reminiscence has become a popular technique for use in hospitals, day care, nursing homes, and other settings. Because reminiscence-based activities might play a positive role in enhancing the quality of life for people as they face the difficulties that older age can bring, the extent of reminiscence activities may be a significant predictor of an older person's ability to cope with difficulties. In dealing with the increasing numbers of elderly population, nurses need to perform a major role in the practice of reminiscence and thus need to be knowledgeable about reminiscence therapy and its relation to health promotion for the elderly.

Reminiscence therapy is an independent nursing intervention (McCloskey & Bulechek, 2000), but the discrepancy between anecdotal reports of the benefits of reminiscence for older people, produced by practitioners and proponents of reminiscence therapy, and any consistent hard evidence of these benefits is a striking feature of the literature on reminiscence (Buchanan & Middleton, 1994). To understand the reminiscence in therapeutic application, this article reviewed the developmental history and theoretical basis of reminiscence and evaluated the empirical evidence concerning the prevalence and function of reminiscence among the elderly.

DEVELOPMENTAL HISTORY OF REMINISCENCE

Before 1960, reminiscence was seen as a symptom or cause of mental deterioration and was actively discouraged by carers of older people (Buchanan & Middleton, 1994). After Butler's (1963) early work on life review,

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which described reminiscence as a universal and natural phenomenon for adults of all ages, people started to view reminiscence with different attitudes, and there was a growth in interest in reminiscence. Lewis (1971) reported the first experimental study of reminiscence. From 1971 to 1989, the literature largely considered the function of reminiscence started from "personal value, defense mechanism" to "social value as oral history." The Reminiscence Aids Project, funded by the Department of Health and Social Security between 1978 and 1979, provided a launching pad for a "social movement" (Bornat, 1989). During the mid-1980s, gerontological nurses, social workers, occupational therapists, and psychologists widely used reminiscence group therapy in caring for the elderly in and out of institutionalized settings (Baker, 1985). Since then, interest in reminiscence-based activities has continued to grow. Despite the paucity of empirical research on the subject, reminiscence-based activities have had a considerable effect on the enhancement of the status of old people in society (Bender, Bauckham & Norris, 1999).

DEFINITION AND CLASSIFICATION OF REMINISCENCE

Many different types and levels of reminiscence have been described in the literature. Merriam (1989) described the process of reminiscence as consisting of memory select, immersion, withdrawal, and closure. He considered reminiscence to involve individuals in an exploration of their past: significant events, people, and experiences. Kovach (1991) viewed reminiscence as a process of acquiring personal existential meaning and as a mechanism for adapting to stress. Burnside & Haight (1992) made an operational definition of reminiscence based on the dictionary: a process of recalling long-forgotten experiences and events that are memorable to the person. In the Nursing Intervention Classification (NIC), reminiscence therapy is defined as "using the recall of past events, feelings, and thoughts to facilitate pleasure, quality of life, or adaptation to present circumstances" (McCloskey & Bulechek, 2000). The definition includes the goal of reminiscence therapy and gives indicators for measuring its effect, but the contents and levels of reminiscence and its specific benefits for the elderly are not clear from the definitions.

The different operational definitions, functions, and conceptualizations of reminiscence across studies have made it difficult to interpret data from different studies regarding its value for the elderly. Since Butler (1963) used the terms reminiscence and life review in the title of his seminal article, they have been used interchangeably (Haight & Burnside, 1993). To distinguish between

reminiscence and life review, previous researchers presented an analysis of these two terms and explained their commonalities and differences from their goals, theory base, client role, nurse role, process, and outcome (Burnside & Haight, 1992; Haight & Burnside, 1993). Parker (1995) reviewed the literature and also suggested the importance of distinguishing different levels, context, and intra- and interpersonal reminiscence. LoGero (1980) outlined three basic types of reminiscence: information (storyteller), evaluation, and obsessive. The implications of these types of reminiscence were all different. Kovach (1991) classified reminiscence content as validating or lamenting. The different processes of reminiscence have also been divided into intrapersonal (cognitive) and interpersonal (conversational) reminiscence (Thornto & Brotchie, 1987) or individual based and group based. All of these differences may affect the therapeutic outcome and the results of its assessment, but researchers often test the therapeutic efficacy without thoroughly distinguishing these differences. Careful delineation of the link between reminiscence of various forms and their measurement is needed.

THEORETICAL BASIS OF REMINISCENCE

Having a strong theoretical basis for why a treatment method is chosen is essential for evidence-based medicine, but little attention has been paid to the theoretical basis of reminiscence research. Lack of established theory has led to a variety of study methodologies and measurement indicators.

Some researchers related their views of reminiscence to "disengagement theory" (Cumming & Henry, 1961), which presents successful aging as involving a process of withdrawal from social life in preparation for the ultimate separation of death. Some other reminiscence researchers have focused on what Erikson termed "ego-integrity" (Parker, 1995). A person who achieves ego-integrity in old age believes his or her life has significance and meaning and is fulfilled and does not fear death. Butler extended Erikson's theory and believed that ego integrity is attained through recalling one's past from an analytical and evaluative perspective (Kovach, 1989). However, there were some criticisms for the application of the theories because not all elderly experienced the same situations or needs. Attempting to ground reminiscence in theory, Parker (1995) represents theoretical underpinnings for reminiscence by reviewing and evaluating previous research and integrating it within a theoretical framework. Compared with Cumming and Henry's "disengagement theory" and Erikson's "ego-integrity" stage for the elderly, the "continuity theory" may offer more important insights in understanding the nature of remi-

niscence. According to Robert Atchley (1989), as individuals move from one stage to the next and encounter changes in their lives, they attempt to order and interpret changes by recalling their pasts. This provides an important sense of continuity and facilitates adaptation. Change is linked to the person's perceived past, producing continuity in inner psychological characteristics and in social behavior and social circumstances. Reminiscence can provide a mechanism by which individuals adapt to changes that occur throughout life.

The continuity theory approach is closely tied with memory processes. For an individual to maintain continuity, there must be a recall of what has happened before. The elderly use the familiar knowledge, skills, and strategies to develop stable patterns of activity and adapt to aging. Remote memory, within which reminiscence processes occur, is usually the last system to deteriorate in the elderly. Increased use of remote memory in older adults improves general cognitive function. Reminiscence group therapy may also provide an opportunity for individuals to review past experiences and stimulate a positive self-attitude for the sender and receiver. Personal interaction within groups may provide a means of precluding social isolation and improve psychological well-being of mentally impaired elderly individuals.

The variations in these theories suggest that the development of effective reminiscence protocols may depend on identification of different processes needed in different types of subjects. The outcome measurements must also be adapted based on the relevant theory to match the goals of the reminiscence with its underlying process.

PRELIMINARY MODEL OF REMINISCENCE

Several studies have demonstrated that using reminiscence groups can help older adults develop new relationships and meet psychosocial and developmental needs. Reminiscence therapy can be used to increase socialization, reduce isolation, increase self-esteem, prevent or reduce depression, increase life satisfaction, and improve social adjustment (Harrand & Bollstetter, 2000). Although reminiscence seems to provide these benefits, it may be underused, perhaps because of the lack of a standardized operational model. In 1995, Soltys & Coats (1995) provided the SolCos Reminiscence Model. The SolCos Reminiscence Model includes three major components: processes, items, and outcomes. The processes component includes interviewer skills, influencing factors, and the environment to which the reminiscence relates. The items component includes stimuli and responses. The outcomes component includes the individual's sense of

identity; self-esteem; communication skills; and energizing, validating and continuing experiences. Although this model conceptualizes and visually articulates the process of reminiscence, the authors acknowledged that additional research is needed on the SolCos Reminiscence Model to ascertain its effectiveness in stabilizing functional levels. Kovach's model of reminiscence (1991) focused on self-esteem and proposed that reminiscence is a source of self-referent knowledge that influences a person's self-worth. It views reminiscence as a process of acquiring personal existential meaning and as a mechanism for adapting to stress. Kovach's model is a representation of the cognitive process, but the cognitive process of reminiscence under different conditions could change the therapy function. Study of the relationship between the categories of reminiscence and self-esteem, mood, life satisfaction, and behavior over time, as well as during periods of stability and transition, may enable further refining and expanding of this model.

FRAMEWORK OF REMINISCENCE

Based on previous review articles, a framework of reminiscence was developed and is shown in Fig. 1. There

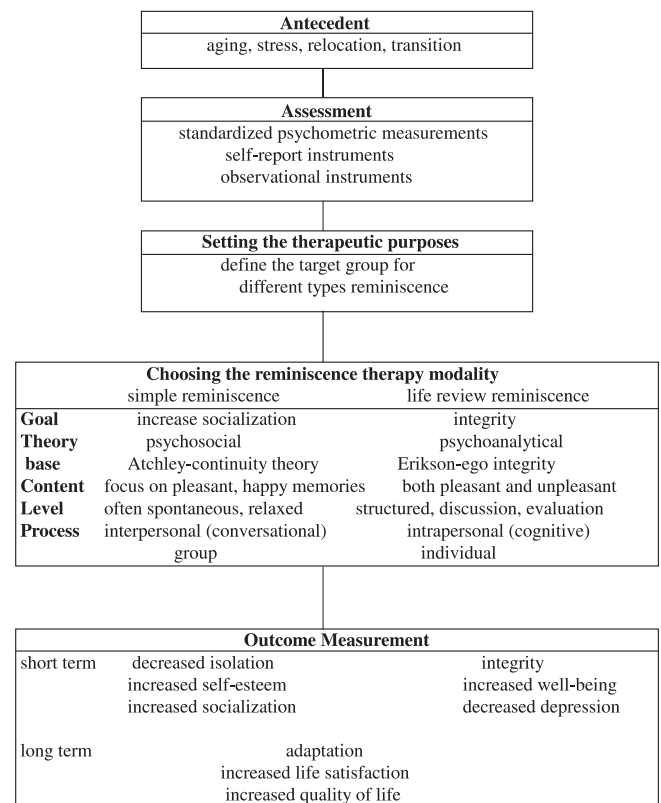


Figure 1. Framework of reminiscence.

are five stages of reminiscence therapy. The first stage is the antecedent. As a person experiences the aging process, stressful situations, relocation, or transition, the threat of maladjustment is also encountered. When nurses detect an antecedent situation, assessment may be initiated, which begins the second stage of the framework. Assessment tools may include standardized psychometric measurements, self-report instruments, or observational instruments. Of course, the assessment tools should be tested for reliability and validity.

The third stage is to establish therapeutic purposes for the patient. Assessment of the extent of social isolation, low self-esteem, and depression may allow specific therapeutic goals to be determined. Different reminiscence therapy protocols should be designed for people with different nursing diagnoses. Target groups for different types of reminiscence therapy need to be defined and established.

The fourth stage is choosing the reminiscence therapy modality. Instead of a bipolar therapy process, reminiscence should be treated as a continuum for elderly adults. Based on the situations of the elderly individuals, nurses could conduct the reminiscence activities in situations ranging from simple, relaxed social group activities to more-detailed life reviews for an individual. Each therapeutic purpose requires a different mix of the available modalities. The final stage is outcome assessment. The short-term and long-term effects are considered to be of similar importance.

This framework is intended to help the nursing profession to increase its theoretical understanding and utility of reminiscence. In this framework, reminiscence is not a single process. The five stages of the reminiscence framework are antecedent, individual assessment, establishing the therapeutic purposes, choosing a suitable reminiscence therapy modality, and outcome measurements. The framework may be useful for nurses to observe the reminiscence process, assess its essential factors, and predict the intervention's outcome. Nurse educators can use the framework to design training programs or teach nursing students. Nurse researchers can also use the framework to design reminiscence studies to find the best protocol of reminiscence to obtain maximal therapeutic effects. Although many relationships between each stage remain to be established, the theoretical framework allows the development of study designs to test these relationships.

CRITERIA FOR CONSIDERING STUDIES FOR REVIEW

To summarize the results of previously reported reminiscence studies, available research papers and abstracts were reviewed. Relevant reports were identified from databases

using the key word "reminiscence." The databases included Medline, CINAHL, PsycLIT, and the Cochrane Database of Systematic Review. Approximately 500 previous studies, including articles or abstracts were identified. The majority of the articles identified were descriptions of the concepts, functions, and implications of reminiscence. These studies collected data using questionnaires, interviews, or qualitative methods to investigate the definition and to classify the measure parameters associated with reminiscence. Studies that had few data on the effects of reminiscence were excluded. After preliminary screening and narrowing the search into "theoretical research," "experimental design," or "effect study," 13 research articles and abstracts were included. Among the research papers, those involving subjects with dementia, cerebrovascular accident, undergoing operation, staying in the ICU, having acute illness, or involving other family members were also excluded. The reminiscence research methodologies of these studies included qualitative investigation, descriptive correlation study or survey, and experimental studies. The inclusion criteria for experimental studies were that the participants be aged 65 and above or nursing home residents, reminiscence therapy be the study intervention, and outcome measures include depression, quality of life, self-esteem, and psychological well-being. The following paragraphs summarize the results of the studies and discuss their implications.

Qualitative Study

One reminiscence qualitative study is reviewed. McDougall, Blixen, and Suen (1997) conducted a study to examine the process and outcomes of life review therapy of 80 depressed, homebound, older adults. Using content analysis, the themes of life review were classified as empowerment (connection, coping, efficacy, hope, trust) or disempowerment (denial, despair, helplessness, isolation, loneliness, loss). The results showed that, after life review therapy, there was a significant decrease in total disempowerment themes. The study provided insight into the process and outcomes of life review, but because of the lack of a control group, the findings remain questionable. The outcome indicator used in the study assess the effect of life review is doubtful. Other measures such as a self-report depression scale or an observational scale may be useful in studies to confirm their findings.

Correlational Studies

Thornton and Brotchie (1987) reviewed correlational studies of reminiscence. They noted that a study by McMahon and Rhudick (1964) found no association between reminiscence and depression, cognitive function,

and survival. The lack of association was probably related to the measures and to the small number of depressed subjects included. Havighurst and Glasser (1972) showed a significant association between life satisfaction scores and positive effects of reminiscence, but the unusual sample limited the study, and the questionnaire was revised twice during the survey. Boylin, Gordon, and Nehrke (1976) found that ego integrity was positively correlated with the frequency of reminiscence, a negative effect of reminiscence and years of education. Fishman (1988) found that, controlling for age and sex, the amount and quality of life review, as measured by life review questionnaire, was significantly negatively related to death anxiety. Ego integrity was also found to be significantly negatively related to death anxiety, but life review was not significantly related to ego integrity. One limitation of both of these latter two studies was a failure to establish the construct validity and the reliability of ego integrity scale. Confirmatory studies using the same instrument are needed to confirm these findings.

In conclusion, two studies suggest different results in the relationship between ego integrity and life review or frequency of reminiscence. A significant association between life satisfaction scores and positive effect of reminiscence was supported, but weaknesses in methodology, lack of thorough testing of psychometric characteristics, and sample selection bias were all limitations of the studies.

Studies that Included Interacting Variables

To test hypotheses about the role of reminiscence or the interaction between types of reminiscence and other variables such as age, life change, social threat, or satisfaction with past life, Thornton & Brotchie (1987) reviewed four studies that included interacting variables, but these studies had discrepant findings regarding the importance of life change in influencing reminiscence activity and the possible value of some forms of life change in adapting to current circumstances. Therefore, the adaptive function of reminiscence remains unclear.

Studies that Used Reminiscence as a Therapy

Experimental or quasi-experimental studies are the most useful methods to determine the effects of intervention, but many factors can affect the results of such studies and seriously hamper comparisons among studies. Thornton and Brotchie (1987) reviewed nine experimental studies from 1979 to 1987. The summary is presented in the following paragraph.

Perrotta and Meacham (1981) reported that, in non-confused elderly persons, reminiscence has no effect on

depression and self-esteem, whereas Fallot (1980) found that reminiscence had a positive effect on depressed mood. None of the studies reviewed by Thornton and Brotchie (1987) found a significant effect of reminiscence on life satisfaction, but because all but one of the reviewed studies used the same instrument, it may be that it is an inappropriate or insensitive measure. Two of the studies reviewed by Thornton and Brotchie (1987) reported small positive improvements in some but not all measures of cognitive, social, and behavioral function, but their findings could not be definitely attributed to the specific features of reminiscence.

The studies reviewed by Thornton and Brotchie (1987) all had numerous design problems, including a lack of control group. They also had a large number of dropouts and doubtful validity of data analysis methods. Previous studies of reminiscence also had inconsistent results and were difficult to compare. The following section describes the designs and findings of experimental studies on reminiscence identified in our review.

Description of Studies

The characteristics of the studies are shown in Table 1. All of the studies were published or completed between 1986 and 1998. The majority of the first authors of the studies were nurses with a Ph.D. Seven of the studies' subjects were recruited from nursing homes. Half of the studies included only women. The sample size ranged from six to 83, and each experimental or control group ranged in size from six to 22. Only two studies used a one-group pre/post test design and a quasi-experimental posttest only design. Five of the studies used two control groups to compare the results of the outcome measurement. The total duration of the reminiscence therapy ranged from 6 to 24 hours. Four of the studies found a positive relationship between therapy and outcome, and two studies found partially positive results of therapy. In the 10 studies, eight outcome variables were involved. Depression was the most frequently used indicator and was included in the evaluation of outcome in six studies. Life satisfaction was measured in four studies. Self-esteem was measured in three studies. The strengths and limitations of the studies are shown in Table 1. The major study limitations were small sample size and doubtful validity and reliability of the dependent variable measures in the population.

DISCUSSION

Studies of the effects of reminiscence have differed widely in the procedure used. For example, Lappe (1987) used

TABLE 1. *Description of Studies*

Author(s)	Subjects	Research Design	Methodology	Outcome Indicators	Findings	Strength and Limitation
Parsons C. L. (1986) MSN	6 female nursing clinic elderly	One group pre-post test	Group reminiscence therapy (6 weeks)	Depression level (geriatric depression scale)	Significant decreased	<ul style="list-style-type: none"> • Small sample size and lot of dropout rate
Lappe, J. M. (1987) MS, RN	83 subjects were recruited from 4 long-term care institutions	Random assignment pretest-posttest design	<ul style="list-style-type: none"> • 4 reminiscence groups (2 groups once a week for 10 weeks, 2 groups twice a week for 10 weeks) • 4 Current events group (2 groups once a week for 10 weeks, 2 groups twice a week for 10 weeks) 	Self esteem	<ul style="list-style-type: none"> • Repeated measures analysis of variance disclosed a significant difference in the self-esteem scores between the two treatment groups • There was no significant interaction between time and frequency of session • There was a significant change in self-esteem scores of three groups – both reminiscing groups and the current events group that met once a week 	<ul style="list-style-type: none"> • Examined the therapeutic effects of time and frequency • Lack of no treatment control group
*Hewett L. J. (1989) PSY.D.	Nursing home residents	Pretest-posttest design	<ul style="list-style-type: none"> • Reminiscence group • Here-and-now group • No treatment group (twice weekly for six weeks) 	<ul style="list-style-type: none"> • MMSE • Depression and anxiety (Leeds scale) • MOSES self-care and withdrawal scales (observed by nursing aides) 	<ul style="list-style-type: none"> • Repeated measures ANOVA's showed no significant differences for three groups • Here and now group: depression decreased • A significant pre/post test effect across all groups was found on the MOSES disorientation score. 	<ul style="list-style-type: none"> • Data is not available from the abstract of dissertation
*Burnside, I. M. (1990) PhD	67 Elderly women living independently in apartment	Pretest and posttest design	Three groups: <ul style="list-style-type: none"> • Reminiscence group • Dear Abby treatment control group • No treatment control Group (8 meetings) 	<ul style="list-style-type: none"> • Subjective Fatigue Feeling Checklist • Affect Balance Scale 	<ul style="list-style-type: none"> • Analysis of covariance showed no significant differences between three groups 	<ul style="list-style-type: none"> • Have intervention control group • No random assignment • initial scores of outcome indicators may be the reason of changing limitation

Youssef, F. A. (1990) DNS	60 female nursing home residents	Random assignment Pre-post test design	<ul style="list-style-type: none"> Two experimental group (65-74 years and over 74 years) One control group (6weeks) 	Beck's depression inventory	significant differences in younger subjects (65-74 years) and insignificant in the older subjects (over 74 years) ANOVA showed no significant differences on the post test measurements	<ul style="list-style-type: none"> small sample size and based on volunteers
Cook E. A. (1991) PhD	54 nursing home residents	Random assignment pretest-posttest two control group design	<ul style="list-style-type: none"> Reminiscing group Current event control group No treatment control group (1hr*16 week) 	<ul style="list-style-type: none"> Life satisfaction, depression Self esteem 	ANOVA showed no significant differences on the post test measurements	<ul style="list-style-type: none"> Weak treatment Instruments inappropriate Small sample size Doubtful data analysis methods High initial measures in both groups Small sample size, especially the male subjects
Stevens-Ratchford R. G. (1993) PhD, OT	24 well older adults living a retirement community	Randomly assigned, Pre- post test design	<ul style="list-style-type: none"> Reminiscence experimental group (2 hours, twice a week for 6 weeks) No treatment group 	<ul style="list-style-type: none"> Beck Depression Inventory Rosenberg self esteem survey 	No significant differences	<ul style="list-style-type: none"> High initial measures in both groups Small sample size, especially the male subjects
*Taylor-Price C. (1995) PhD	34 female nursing home residents (age 65-88)	Randomly assigned, control group pre-posttest design	<ul style="list-style-type: none"> Experimental group participated in structured reminiscence group psychotherapy twice a week for 60 mins persession over 6 week period Control group continued with the ongoing nursing home therapy 	<ul style="list-style-type: none"> Geriatric Depression Scale (GDS) Affect Balance Scale (ABS) 	<ul style="list-style-type: none"> Experimental group showed a significant decrease in affective symptoms of depression A significant increase in psychological wellbeing as measured by the ABS 	Data is not available from the abstract of dissertation
*Reddin M. K. (1996) Ed.D	Nursing home residents (age: 57-95)	Randomly assigned, quasi-experimental design of posttest only	<ul style="list-style-type: none"> Structured life review Simple reminiscence Friendly visit group intervention (1hr once a week for 7 session) 	<ul style="list-style-type: none"> Life satisfaction (LSIA) Psychological well-being (ABS) Depression 	No significant differences	<ul style="list-style-type: none"> weak treatment Small sample size Doubtful validity and reliability of the dependent variable measures with this population
Cook C.A. (1998) PhD	36 female nursing home residents	Pretest and posttest design	<ul style="list-style-type: none"> Reminiscence group Current event control group No treatment control group (1 hr*16 weeks) 	Life Satisfaction Index A	ANCOVA showed a significant difference in life satisfaction	<ul style="list-style-type: none"> Small sample size Generalization limitation Does not measure long-term effects

*The original dissertation is not available. Information was cited from the abstract.

simple reminiscing, and each session, except for the first one, was based on a specific theme determined by the group members. Cook (1991) used structured reminiscence and centered on pleasant, happy memories. Important events such as childhood experiences, marriage, family life, and jobs were included. Stevens-Ratchford (1993) used life review reminiscence activities including 15-minute slide-tape presentations of the 1920s, 1930s, and 1940s; pleasant and unpleasant content was depicted. Comparisons of the results obtained using these different therapeutic constructs are difficult. Because differences in the content and level of reminiscence may affect the therapeutic outcome, the researchers need to carefully design and select the different types of reminiscence they are using and clearly distinguish between them when they assess what factors are responsible for the different measurement results. Lack of such clear distinction makes it difficult to generalize about the nature and functions of the various types of reminiscence and to compare different studies.

The optimal duration of therapy, including the length and frequency of sessions, remains unclear, as do indications for discontinuation of participation. In addition, when researchers should start to measure outcomes and evaluate the effects of the therapy remains unclear. All of the differences are likely to affect the results. Previous reminiscence studies used various numbers of sessions, including 1 hour per week for 16 weeks (Cook, 1991; Cook, 1998), 2 hours twice per week for 3 weeks (Stevens-Ratchford, 1993), twice per week for 6 weeks (Hewett, 1989), and 1 hour per week for 7 weeks (Reddin, 1996). Although the results of these studies did not show a correlation between longer or more-intense sessions and positive results, they did not provide adequate data for assessing the idea of the effect time and suitable frequency of therapy. Howard, Kopta, Kraus, and Orlinsky (1986) used the term "dose-effect" to describe length of treatment and patient benefit of reminiscence therapy. Based on 30 years of research, they found that, within eight sessions, approximately 50% of patients showed measurable improvement, and approximately 75% showed improvement within 26 sessions. Crits-Christoph (1992) did a meta-analysis of dynamic psychotherapy and found that at least 12 sessions were needed for efficacious results. Lappe (1987) conducted a reminiscence study to compare the effects of meeting frequency between once a week and twice a week. The results showed that the group that met twice a week did not show a significantly different increase in self-esteem from the group that met once a week. Both of Cook's studies (1998, 1991) used the same meeting frequency and same reminiscence therapy procedure but showed different results in life satisfaction. The optimal frequency and duration of

reminiscence therapy thus remain unclear, and more studies are needed to confirm the different results of previous research.

Whether a linear relationship exists between reminiscence and chronological age remains unclear. Furthermore, few studies explored differences in the occurrence and uses of reminiscence by race, sex, and age group (Merriam, 1993), so the specific target populations for different types of reminiscence therapy still needed to be defined. Seven of the studies identified in our review had been restricted to older nursing home residents (Table 1). Small sample size and the differences in the outcome measurements may have also played a role in discrepancies between studies. Five of the studies identified in our review included only female subjects (Table 1). The findings of these studies did not all support a positive effect of reminiscence in females. Target groups need to be carefully selected based on similar initial levels of life satisfaction, depression, and self-esteem according to careful definitions.

Previous studies have used many different indicators to measure the outcome of reminiscence therapy, but the therapeutic outcomes associated with specific reminiscence processes were frequently not considered. How to choose a sensitive outcome indicator that can more clearly assess the effect of reminiscence therapy remains an important issue. Furthermore, the use of measurement tools that have adequate validity or reliability also has an important effect on the results of studies. Cook (1991) considered that the use of observational instruments might be more appropriate than self-report instruments for capturing the effects of the intervention. Stevens-Ratchford (1993) also emphasized the need for the development of an instrument that identifies the consequences of reminiscence. Therefore, when using the standardized psychometric measures of depression, life satisfaction, or self-esteem, researchers should carefully determine the most suitable tool for the target group.

CONCLUSIONS

There is a need for the development of nursing interventions to help maintain quality of life for the growing elderly population. Reminiscence therapy may be helpful in maintaining or improving mood, cognitive functioning, life satisfaction, and self-esteem in the elderly. Practical applications of reminiscence therapy may involve healthy older adults, persons who are depressed or bereaved, and persons with cognitive impairment, but the effects of reminiscence therapy remain poorly understood. The inconsistent results in reminiscence research appear to be due to many factors,

such as the different types of reminiscence used, different outcome measures, and the use of small convenience samples in local settings (nursing homes, hospitals, senior centers). The substantial differences between the studies limit the ability to make direct comparisons of results. Future research is needed to redefine the concept and measurement of reminiscence as used in nursing and to employ more-standardized designs to develop a body of knowledge regarding reminiscence. The knowledge of reminiscence may be able to give nurses confidence in their ability to successfully use these interventions at the right time and in the right setting. The nursing educators can apply the knowledge of reminiscence to design the training programs for students or staff. The nursing researchers could also use the knowledge of reminiscence to analyze and compare studies to further revise our understanding of reminiscence processes and the effect of therapy.

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