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Effectiveness of group reminiscence therapy for people living with dementia in a day care centers in Taiwan

Hui Chen Chang

University of Wollongong, hchang@uow.edu.au

Hui-Wen Chien

Asia University, Taiwan

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Abstract

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Method A unique pre-test-post-test, quasi-experimental design counterbalanced with a qualitative grounded theory video analysis of facial expression and behavior was used to measure the effects of group reminiscence therapy. The study recruited 21 participants in total from two dementia-specific day care centers.

Results The findings highlighted improvements in depression, communication, and positive mood after group reminiscence intervention. The results also showed that participants scored higher on average during the Chinese New Year and marriage reminiscence activities compared to the other activities, revealing the subject matters extraordinarily significance.

Conclusion This study provides evidence supporting the proposition that undertaking a cultural focus reminiscence therapy may produce significant psychosocial improvements for a person with dementia.

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Hui Chen (Rita) Chang

University of Wollongong, Australia

Hui-Wen Chien

University of Asia, Taiwan

Abstract

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Keywords

group reminiscence therapy, people living with dementia, depression

Corresponding author:

Hui Chen (Rita) Chang, School of Nursing, Northfields Avenue, University of Wollongong, NSW 2522, Australia.

Email: hchang@uow.edu.au

Introduction

In 1993, Taiwanese people aged 65 and older represented 7% of the population fulfilling the definition of an “aging society” (United Nations). The Ministry of the Interior Department of Statistics states that the ageing population in Taiwan has climbed to 12% in 2014, with a projected increase to 20% by the year 2025 (Ministry of the Interior and Statistics Department Taiwan, 1993). In 2015, a total of 2,938,579 Taiwanese were 65 and older with the prevalence of dementia numbering 237,652 (8.09%) (Taiwan Alzheimer’s Disease Association, 2015).

With the continued growth of a Taiwanese ageing population, their mental health becomes an issue of concern especially the high incidence of depression. Since depressive symptoms and depressed mood are common among elder people with dementia, an association between poor affect and cognitive decline has been identified in several studies (Bierman, Comijs, Jonker, & Beekman, 2005; Manthorpe & Liffé, 2006). Reported rates of depression of dementia people vary substantially with regard to the population sampled, the means of assessment and the definition of caseness. Well-conducted population-based studies report prevalence between 8% and 30% (Enache, Winblad, & Aarsland, 2011; Ministry of the Interior and Statistics Department Taiwan, 1993) compared to over 40% among hospitalized patients and residents of nursing home (Enache et al., 2011; Huang, Wang, Li, Xie, & Liu, 2011).

To reduce depression among elder people with dementia, various non-pharmacological approaches have been introduced, such as memory training, music/art therapy, validation therapy and behavioral therapy (Mastel-Smith et al., 2007; Ziv, Granot, Hai, Dassa, & Haimov, 2007). Although the effectiveness of these alternative approaches has not generally been established, reminiscence intervention is one of the approaches suggested in order to reduce depression, improve self-esteem and psychological well-being. There is some evidence to suggest that it is effective in improving mood among elder people without dementia (Bohlmeijer, Westerhof, & Emmerik-de Jong, 2008; Cappeliez, O’Rourke, & Charudhury, 2005; Feng, Chu, Chang, & Liang, 2010; Stinson & Kirk, 2006), although its effects upon mood, cognition and well-being with regard to dementia is less well understood.

According to the Nursing Interventions Classification (NIC) system (McCloskey & Bulechek, 2000), reminiscence therapy is an intervention using the recall of past events, feelings, and thoughts to facilitate pleasure, quality of life or adaption to the present, usually with the aid of tangible prompts such as photographs, household, and other familiar items from the past, music, and archive sound recordings (Stinson & Kirk, 2006). Several studies (Jones, 2003; Mackinlay & Trevitt, 2012; Park, Jun, & Park, 2014; Wang, 2004, 2007) have applied reminiscence therapy approaches for dementia in elder people to improve their daily functioning, cognition, depression, social disturbance, and personal interaction; however, there are few consistent affective outcome results with regard to depression for dementia in elderly people residing in day care centers. Woods, Spector, Jones, Orrell, and Davies (2005) systematically reviewed reminiscence therapy for dementia; the study extracted four randomized controlled trials involving a total of 144 participants and concluded that reminiscence therapy was effective for cognition and mood improvement during follow-up, but not at the end of the intervention period. Other study demonstrated the effectiveness of reminiscence group intervention in caring for elderly patients with dementia. The results of this study support the idea that reminiscence improves cognitive function and alleviates depressive symptoms of demented elderly (Haight, Gibson, & Michel, 2006; Morgan & Woods, 2010).

Haight et al. (2006) assumed that the purpose of the reminiscence group satisfied the desire of elderly people in generating a sense of belongingness, particularly meaningful to those who are frequently isolated from their communities.

The study was conducted with a total of 62 patients (31 intervention groups and 31 control groups) in four home care in Ankara, Turkey. The standardized mini-mental state examination (MMSE) test cognitive levels score is 10 to 24 points. The study found reminiscence therapy to have a beneficial effect on the cognitive status and depression in institutionalized patients with mild and moderate Alzheimer's disease (AD) in our study (Asiret & Kapucu, 2016).

Studies on reminiscence and its effect on depression have differed widely in methodology or settings making it difficult to compare the results and to determine the feasibility of reminiscence as an effective intervention. In Taiwan, most of reminiscence therapies studies have been focused on elder people in nursing homes or community-based facilities; studies on elder people with dementia residing in day care centers are still rare. The purpose of this study is to fill this gap by developing a series reminiscence group therapy model and investigating its effects on dementia-specific day care center residents' depression and behavior. At the same time, the staff who would offer reminiscence therapy in Taiwan are different in terms of training to those in other countries; we don't have designated trained positions of recreation activity officers (RAOs) or diversional therapist as would be the case in Australia.

Reminiscence therapy had a positive effect on communication but a limited effect on collaboration, socialization, and restlessness. The positive effect of reminiscence therapy on the cognitive status, depression, and daily living activities in institutionalized patients with mild and moderate AD indicates a need for more widespread use of reminiscence therapy and training healthcare staff and especially nurses to support such activities, while the limited effect on daily living activities indicates the need to establish programs supporting any activities the individual cannot perform while developing those that can be performed.

We also found that few studies have used qualitative methods such as grounded theory to understand the interactive behavioral responses during those activities. In addition to that, the use of qualitative analysis via NVIVO is a novel characteristic of this study that may lead to better understanding (Gasson, 2004; Chiovitti & Piran, 2003).

Method

A unique pre-test-post-test, quasi-experimental design counterbalanced with a qualitative grounded theory video analysis of facial expression and behavior was used to measure the effects of group reminiscence therapy. Two researchers separately analyzed the data using NVIVO to identify and verify themes (Gasson, 2004; Glaser, 1992).

Three outcome measures were used: Cornell Scale for Depression in Dementia (CSDD), activity observation scale and MMSE. The research assistants also observed and video recorded each of the sections and completed a diary of non-verbal interactions and other issues or distractions experienced during each session.

Sample selection

The study used a purposive sample and recruited 21 participants from two dementia-specific day care centers in Taiwan. Inclusion criteria included: (1) the 65 years of age or more, (2) able to communicate in Mandarin or Taiwanese, (3) accessible by hearing, (4) excluding

bedridden elder people, (5) a score of 14 points or more on the mini-mental state examination MMSE (Folstein, Folstein, & McHugh, 1975) and (6) without physical discomfort or pain caused by disease or severely damaged sensory function. The MMSE of 14 and above was chosen as a score, from the literature, where meaningful participation in the reminiscence therapy and successful outcome has taken place.

The managers provided a name list of 25 potential participants who satisfied the above criteria. A total of 21 of the elders completed and only one elder did not complete the six sessions of group reminiscence. Each elder signed an informed consent form and a proxy signature was obtained from a family member. Before the study, the researcher interviewed elders and their families to understand individual life story (1 hour per week for one month) and past leisure experience such as popular folksongs, movie themes, childhood toys, special events happening in the life, and traditional festival.

Date collection

A primary researcher, who specialized in dementia care and reminiscence therapy, conducted the intervention and led group activities. Two research assistants served as group co-leaders who observed interactions among group members, encourage group discussion, and protect participants from losing emotional control during activities and record participants' emotional and behavioral changes. In addition to the research assistants, two staff familiar to the participants from the day care center assisted with each section to facilitate discussion and help participants when needed. The sessions were conducted in a quiet and enclosed room without external interference, as elders with dementia are easily distracted. Small groups of four to five participants had a series of six group sessions of one hour each over a six-week period. The topics for the sessions were generated from Life Story interviews of 1–2 hours in length held once a week for a month prior to the commencement of the study.

The individual sessions were held once weekly for six weeks and lasted 1 hour, using a general reminiscence approach identical for individual and group sessions. This involved focusing on a particular life phase in each session and introducing objects for discussion relevant to that period. The six phases were: week 1, sharing childhood fun—toys; week 2, past time tunnel—marriage; week 3, Chinese New Year traditional festival; week 4, golden oldie music/songs; weeks 5–6, Taiwanese opera movie that were selected by the researcher after reviewing participant medical records and interviewing each participant, as well as their caregivers and their family members about elders' early lives and interests.

Instruments

The instruments include MMSE, CSDD, activity observation form and video record. Assessments were carried out immediately before and after the intervention.

1. Demographic variables included gender, age, educational level, marital status, family status, primary caregiver, the retirement age, pre-retirement job, and score of MMSE. The MMSE (Folstein et al., 1975) was used to assess subjects for cognitive changes. The Chinese version was modified based on the sociocultural and language characteristics of the Chinese population. Cut-off scores below 17 and 23 indicated cognitive impairment

for less educated and well-educated individuals, respectively. The psychometric properties of the MMSE have been tested globally.

2. The CSDD (Alexopoulos, Abrams, Young, & Shamoian, 1988) was specifically developed to assess signs and symptoms of major depression in patients with dementia. Each item is rated for severity on a scale of 0–2 (0 = absent, 1 = mild or intermittent, 2 = severe). Scores above 10 indicate a probable major depression. Scores above 18 indicate a definite major depression. Scores below 6 as a rule are associated with the absence of significant depressive symptoms. Its five-part content includes mood-related signs, behavioral disturbances, physical signs, cyclic functioning and the ideational disturbances.
3. Activity observation scale: In order to observe participant's status, activity observation form (Persoon, Banningh, Vrie, Olde Rikkert, & Achterberg, 2011) was modified to use in this study. The primary researcher trained the two research assistants to undertake the observations and score them. The goal of training was to reach a standard of reliability between the two observers where they recorded the same score for the same or similar events. The activity observation form included six items (Attention, Willingness to Attend, Memory, Interaction with Others, Participation, Enjoyment of Group Program) with responses from 0 (avoidance and not participation) to 3 (high participation) in the activity. Additionally, six active observation records were compared to individual records of each activity to understand whether there was gradual progress in the case.

Data analysis

The data were analyzed using SPSS software (SPSS, Inc., version 18, Chicago, IL, USA). Frequency and descriptive statistics were used to identify illegal entries and remaining ambiguously worded items that tend to yield missing data as well as to analyze data on: socio-demographic details of the sample, depression and activity observation scale. Inferential statistics were used to assess whether there were significant differences between dependent variables and socio-demographic characteristics. The differences in the background variables with depression and activity observation scale were studied using chi-square analysis, non-parametric procedures (Kruskal-Wallis test and Mann-Whitney U test), T-tests, one-way analysis of variance, Tukey honest significant difference test and Pearson correlations for comparing the mean values. The level of significance for all tests was $p < 0.05$. An analysis of each section video recording and assistant journal were undertaken using a grounded theory and phenomenological perspective (Strauss, 1987; Strauss & Corbin, 1998). Two researchers separately analyzed the data using NVIVO to identify and verify themes. The approach to maintain rigor and consistency is as follows: two researchers were looking at the video separately and using the same descriptors were used consistently, over the course of time, we developed the descriptors were agreed upon with definitions that strove for consistency.

Ethical considerations

Ethical approval was obtained from both the universities, with elders giving written and verbal information regarding the purpose of the study and its procedures before signing the consent form one week before the activities took place. Each elder signed an informed consent form and a proxy signature was obtained from a family member. The study used

questionnaire, video, and observation data collection methods, with the content and results confined to this study. Each elder was assigned an identification code and pseudonym known only to the author. During activities, if there were any instances of physical discomfort, or unwilling participation, participants could withdraw immediately.

Results

Characteristics of participants

Of the 22 elders recruited, only one did not complete the therapy and posttest because of a family issue. At the conclusion, 21 elders completed all therapy sessions with the data then analyzed, as shown in Table 1. In terms of variables, 52.4% of the elders were male. Ages of the cohort ranged between 65 and 87 years, with the mean age being 78 years. Most of the elders had been married (61.9%) and were main caregivers of their children (76.2%). More than half of them (57.2%) were native Taiwanese. Nearly half of them (47.6%) had

Table 1. Characteristics of participants (N = 21).

Characteristic	N	%
Gender		
Male	11	52.4
Female	10	47.6
Age		
65–70 Years old	5	23.8
70–75 Years old	12	57.2
+75 Years old	4	19.0
Marital status		
Unmarried	3	14.3
Married	13	61.9
Widowed	5	23.8
Hometown		
Taiwanese people	12	57.2
Mainlanders	6	28.5
Hakkas	3	14.3
Education		
Elementary school	10	47.6
Junior	8	38.1
High school/grade	3	14.3
Retirement age		
60 Years old	17	81.0
65 Years old	4	19.0
Primary caregivers		
Spouse	5	23.8
Child	16	76.2
MMSE scores		
24–30 Points	0	0
18–23 Points	16	76.2
0–17 Points	5	23.8

completed elementary schooling and over one-third (38.1%) of them had completed junior schooling. MMSE scores mostly ranged between 18 and 23 points (76.2%), others are between 0 and 17 points (23.8%).

Effects of reminiscence therapy on depression

At the completion of the six group reminiscence therapy sessions, the level of depression and activity observation scale were reevaluated and analyzed. As shown in Table 2, the mean score for the overall score on the pre-test of CSDD was 6.22 and post-test was 5.57 and showed significant improvement ($p = 0.018$). Before the group reminiscence therapy, the highest score of the items was “lack of reactivity to pleasant events,” followed by the “anxiety,” “irritability,” and “loss of interest”. After six sessions of group reminiscence therapy, analyses of each item showed that the mean scores of “loss of interest,” “multiple awakenings during sleep,” “lack of reactivity to pleasant events,” “lack of energy,” and “irritability” decreased after group therapy. The ranges of change were from -0.21 to -0.49 . Only “loss of interest” and “irritability” showed significant difference ($p = 0.014, 0.037$).

The activity behavior analysis during week 6 of reminiscence therapy activities took place with the co-leader using an activity observation scale to observe the behaviors of the elders. Table 3 shows the average behavior scores for the six activities; the total average for attention was 1.17 points, the total average for willingness to attend was 2.46 points, the total

Table 2. Effect of group reminiscence therapy on depression (N = 21).

Item	Pre-test, mean $\pm$ SD	Post-test, mean $\pm$ SD	t
Anxiety (<i>anxious expression, ruminations, worrying</i>)	1.15 $\pm$ 0.33	1.34 $\pm$ 0.70	0.22
Irritability (<i>easily annoyed, short tempered</i>)	1.14 $\pm$ 0.21	0.65 $\pm$ 0.33	3.45*
Lack of reactivity to pleasant events	1.17 $\pm$ 0.43	0.78 $\pm$ 0.00	1.13
Loss of interest (<i>less involved in usual activities</i>)	1.13 $\pm$ 0.18	0.66 $\pm$ 0.02	0.27*
Lack of energy (<i>fatigues easily, unable to sustain activities</i>)	1.12 $\pm$ 0.21	0.88 $\pm$ 0.12	0.32
Multiple awakenings during sleep	1.11 $\pm$ 0.12	0.90 $\pm$ 0.12	1.45
The average total score	6.22	5.57	1.68*

* $p < 0.05$.

Table 3. The activity behavior score.

Item	Week 1 average	Week 2 average	Week 3 average	Week 4 average	Week 5 average	Week 6 average	Total average
Attention	1.00	1.29	1.22	1.00	1.23	1.25	1.17
Willingness to attend	2.17	2.71	2.44	2.33	2.54	2.54	2.46
Memory	2.00	2.00	1.67	1.50	1.89	2.05	1.85
Willingness to interact with people	1.83	2.29	1.56	1.17	2.08	2.11	1.84
Degree of participation	1.50	2.29	1.78	1.33	2.05	2.22	1.86
Enjoy group program	1.67	1.57	1.22	0.50	1.89	1.91	1.46
Average	1.70	2.03	1.65	1.30	1.95	2.01	

average for memory was 1.85 points, the total average for willingness to interact with people was 1.84 points, the total average for the degree of participation was 1.86 points, and the total average for enjoy group program was 1.46 points. During the activities at weeks 2 and 6, the averages of behavior scores were above 2.0 which were higher than the averages for the other four weeks.

Results of activity behavior observations

The six phases were: week 1, sharing childhood fun—toys; week 2, past time tunnel—marriage; week 3, Chinese New Year traditional festival; week 4, golden oldie music/songs; weeks 5–6, Taiwanese opera movie.

Childhood fun—Sharing toys. On the first week “childhood fun—sharing toys,” the elders interacted with the leaders with the majority of them proactively answering questions raised by speakers giving detailed memories of their childhood games. For example, in terms of language expression, Yue (case code) could describe ways to play with toys and games played with neighbors. Su could answer that she used to play with dolls and like Cui with a bamboo dragonfly. They also had good non-verbal responses; for example, Jian widened his eyes when the speaker talked about sausages and Hong often smiled and nodded when he saw the actual toys. When asked how to play with sand foot bags, Yue demonstrated their use and, with guidance, described and showed how to open marble soda bottles. When poking paper holes was introduced, Jian was very curious and he as well as others poked their own paper holes. Participants in this activity had positive reactions to childhood toys and had pleasant expressions.

Past time tunnel. On weeks 2–3, “past time tunnel” focused upon the theme of marriage and Chinese New Year, being two major events often holding profound memories for elders which we hoped would evoke those memories and construed meaning of life. Most of the participants could answer questions raised by leaders and conversed with other participants. Some participants explained the contents of old photos in detail and from the results of the observations, Chinese New Year and marriage were deemed very important and meaningful for the elders. In terms of language expression, Su actively answered that one needed to write couplets during Chinese New Year and the Chinese characters for “spring” and “fortune” were to be hung upside down. Zhou answered that one needed to make steamed cakes, pay respects to the ancestors while enjoying lots of food and a variety of sweets. Cui spoke of eating gluttonous rice cakes and jokingly asked for a red envelope. Cui and Zhou often talked to each other during the course of the activity and discussed the contents of their red envelopes. When the leaders handed out red envelopes, Jian immediately put the red envelopes inside his jacket. When discussing marriage, older women displayed shy expressions, which conveyed to the researcher that marriage held many wonderful and sweet memories to them. In terms of expressions, when the leaders asked Cui about lifting the veil of a wedding bonnet, she smiled shyly, while Zhou also showed a very shy expression and even said her husband was very handsome. Su also nodded shyly.

Lingering music. At week 4, “lingering music” utilized five old songs that were played to elders to encourage them sing along with in order to evoke past memories. Observations recorded participants clapping and singing along and in terms of language (after encouragement);

most participants said the names of the songs, sang or hummed along and enjoyed the music. For example, Zhou named the songs and sang along loudly, with Su followed the music and singing along to “Momotaro.” In terms of expression, elders appeared very content; for example, Hu smiled throughout the entire activity. In terms of physical reaction, all of the elders clapped with the music or moved their hands during the songs, fully immersing themselves within the songs.

Taiwanese opera. Film appreciation was the focus of the final two weeks, primarily showing the story of the “Butterfly Lovers.” This movie was chosen not only for its thrilling story but also because it is a historical story that has been passed down from generation to generation. This was a must-see movie, and it was hoped that the film would evoke memories from the participants. Participants correctly described the story and remembered the content of the film vividly. In terms of language, Zhao explained the contents of the film and answered, “changed into a butterfly,” “for love,” “died for love,” etc. The moods of the participants changed with the film, evoking deep memories. In terms of affectionate expressions, Hong clearly raised his head and stared directly at the film, while Tai frowned and looked wistfully. In terms of emotions, moods changing with the content of the film indicated that the participants understood the film. For example, when Hong was watching the speaker’s performance, he laughed at the appropriate humorous sequences demonstrating his understanding. Tai shook his head when the speakers asked questions, looking very sad with moist eyes and nose; during the scene when the movie characters Ying and Tai were crying at the tomb, he also picked up a tissue to wipe his eyes and nose.

Discussion and conclusion

The results indicated that participant’s depression score diminished following the intervention. This was similar to the research results of Morgan and Woods (2010), Karimi et al. (2010), and Wu (2011) who found that the degree of geriatric depression significantly lowered after older adults participated in the reminiscence therapy. From the reminiscence therapy activities and activity observation scale, it could be seen that elders scored higher on average during the Chinese New Year and marriage reminiscence therapy activities in week 2 and week 6 compared to the other three weeks. Their memory, willingness to interact with people, degree of participation, willingness to attend also scored higher than the other four weeks. The majority of the elders actively answered questions and conversed with each other. Female participants showed shyness during certain discussion topics and male older adults talked extensively about past marriage customs; their interactions with leaders were better than the other three weeks as well. It was found from observations and recordings that participants were particularly responsive to this activity, which was consistent with the activity observation scale. From this, we extrapolated that Chinese New Year and marriage were extraordinarily significant to the elders. Therefore, reminiscence activities like this could have positive influences on their memories. Qualitative results also suggest such activities could achieve similar effects to those of the reminiscence therapy. From the observation results, we discovered that the majority of participants could answer simple questions in activities such as “childhood fun—sharing toys,” “lingering music,” and “Taiwanese opera.” Although some of the participants reacted slower and were less interested, they were still able to answer questions and speak of their experiences after encouragement and guidance. Facial expressions also changed along with the different themes. Most

reminiscence therapy research explored whether reminiscence therapy increased the attention and memory of the elders. Li (2009) discovered that participants exhibited attention and memory improvement. The current studies included three other studies (Haight et al., 2006; Haslam et al., 2010; Politis et al., 2004) that employed pre- and post-intervention measurements, without a follow-up assessment. Future studies should carefully consider the time scale of improvements, both in the immediate and longer term.

Another point of consideration, as mentioned previously, is that few studies have used qualitative methods such as grounded theory to understand the interactive behavioral responses during the activities while combining that with the analysis of those insights with NVIVO to identify and verify themes that we believe are of value. Although the evidence base for the effectiveness of reminiscence therapy continues to rest largely on descriptive and observational studies, given its popularity with staff and participants, there is no reason not to continue with its further development and evaluation. The need for training, support and supervision for staff carrying out this work is emphasized.

Key issues

- Reminiscence work is a popular psychosocial intervention in dementia care, which uses a variety of memory triggers to stimulate past memories.
- Reminiscence intervention is one of the approaches suggested in order to reduce depression, improve self-esteem and psychological well-being.
- The results support the importance of person-centered care, where interventions are individualized and the importance of the person's biography is recognized.
- This study provides evidence supporting the proposition that undertaking a cultural focus reminiscence therapy may produce significant psychosocial improvements for a person with dementia.

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Hui Chen (Rita) Chang is a course coordinator of the Postgraduate Certificates and Masters of Science in Gerontology and Dementia Care at Wollongong University Australia. She had acted as accreditation advisor and appraiser of residential aged care facility, member of committee of dementia and age-friendly City Promotion, members of Committee of long-term care development panel, by government invitation, to the Department of Social Affairs and Department of Health and Aging. The focus of her research is on improving dementia care services including reminiscence therapy, aged friendly environment, evidence-based nursing implementation and dementia education training.

Hui-Wen Chien received her Master of Gerontology and PhD from the University of Sydney. She currently lectures at Asia University, Taiwan, Department of Nursing. Her key research interests focus upon the design of accompany robots for the elderly with dementia and selecting appropriate personalized reminiscence therapy content (videos and images) based upon research for use in day care centers in Taiwan.