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ORIGINAL ARTICLE

Reminiscence Group Therapy on Depression and Apathy in Nursing Home Residents With Mild-to-moderate Dementia

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Background/Purpose: Individuals with mild-to-moderate dementia often exhibit depression and apathy as manifested by symptoms of negative affect. The purpose of this study was to determine whether or not reminiscence group therapy (RGT) reduces depression and improves symptoms of apathy.
Methods: The study was one of experimental design with a pre–post control group; 61 residents from two nursing homes were randomly distributed into two parallel groups. An RGT program consisting of 12 sessions, 40–50 minutes per week, was implemented for the residents in the experimental (intervention) group. The instruments used to collect data included the Clinical Dementia Rating Scale, the Geriatric Depression Scale, the Apathy Evaluation Scale, and the Neuropsychiatric Inventory. Statistical analysis was performed with SPSS 15.0.
Results: After 12 sessions, the residents in the intervention group reported a reduction in depressed mood ($Z=-2.99$, $p<0.05$), and showed specific improvements in their behavior score ($Z=-3.10$, $p<0.05$) and cognition apathy score ($Z=-1.95$, $p<0.05$). Neuropsychiatric Inventory depression scores had also decreased ($Z=-2.20$, $p<0.05$).
Conclusion: RGT has significant efficacy in the treatment of depressed mood and apathy in patients with mild-to-moderate stage dementia. This non-pharmacological intervention reduced emotional distress among nursing home residents with dementia.

1. Introduction

The elderly population of Taiwan is rapidly increasing, currently accounting for 10.4% of the population,[1] and has been predicted to increase to 20% of the population by the year 2025.[2] Dementia, a progressive and irreversible neurodegenerative disorder, is becoming an increasingly important health issue in countries with

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aging populations.[3] Worldwide, the number of individuals with dementia is expected to double every 20 years.[4] More than 115,000 Taiwanese have dementia, with the numbers expected to increase to more than 220,000 patients by the year 2026.[2] The prevalence of dementia among the elderly in Taiwan is 5.5%, but the prevalence among those in institutions providing long-term care and in nursing homes is over 60%.[5]

In the course of the disease, 80–90% of people with dementia will have neuropsychiatric symptoms.[6] Neuropsychiatric behaviors such as apathy, depressed affect, irritability and appetite changes are frequently observed in people with dementia.[7,8] Such symptoms may be a predictive factor used in deciding when to place an elderly person in a long-term care facility.[9] In the United States, approximately 26–43% of elderly nursing home residents suffer from mild-to-severe depression,[10,11] and have an apathy symptom point prevalence of 60.3%.[12]

Apathy is not depression.[12,13] Rather, apathy is defined as a lack of motivation not attributable to a diminished level of consciousness, cognitive impairment, and emotional distress related to daily life.[14,15] Apathy in patients with Alzheimer's disease has been consistently associated with relatively more severe cognitive deficits, more severe impairments in daily life activities, higher levels of burden and distress among caregivers, and increased resource use.[16,17] Apathy is also associated with reduced levels of functioning, decreased response to treatment, poor illness outcomes, and chronicity.[12] The need to provide high-quality mental health care for elders with dementia in nursing home settings is becoming a critical issue as the elderly population grows rapidly and institutional care becomes a necessity for some.

Recent research suggests that pharmacologic approaches are not effective and may cause harm,[4] while several studies have suggested that reminiscence therapy for elders is effective in addressing their psychological health.[18,19] Reminiscing is the process of thinking or telling others about one's past experiences. These studies show that purposeful reminiscence group therapy (RGT) results in reduced depressive symptoms,[20–22] maintaining or improving self-esteem[23,24] and life satisfaction.[24,25] RGT improves social interaction,[19,25,26] motivates people to explore life themes, and increases confidence about their past lives.[20,27] However, results have been inconsistent.[19,20,23] The reasons for this may include many factors such as the frequency of therapy administered, enjoyment of reminiscence and regrets, and psychological health.[18] Apart from the factors relating to the form of intervention, one possible explanation is that such studies did not control for demographic characteristics or illness status.[21,22,25]

In Taiwan, most studies of RGT have focused on elderly people living in long-term care facilities,[26] nursing homes,[23] or community settings,[28] and have rarely involved residents of institutions with dementia.[29] There have been no prior studies conducted of RGT for residents of institutions with mild-to-moderate stage dementia in Taiwan.

Therefore, we hypothesized that, relative to a control group at 3 months, residents in nursing homes who receive RGT intervention would show significantly different outcomes. We designed our study with the goal of developing an effective nursing strategy using non-pharmacological care for patients with dementia. The purpose of this study was to test the effectiveness of RGT for reducing depressed mood and improving symptoms of apathy in nursing home residents with mild-to-moderate stage dementia.

2. Methods

2.1. Subjects and study design

We used an experimental, pre–post control group design. We recruited subjects from two free-standing nursing homes. The two private nursing homes with 99 beds in northern Taiwan were purposely selected; then we randomly assigned each resident to the experimental or control group. Sample size was predicted with a power analysis of 0.8. The inclusion criteria were: ability to speak fluently in Chinese or Taiwanese; and no severely damaged sensory function (e.g., no loss of vision or hearing). Subjects were excluded if they were suffering from delirium. Data were collected from September 2005 to March 2006. Participants were assessed using a structured protocol. Physicians made the diagnoses of dementia based on criteria from the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition*, and reviewed patients' medical history, laboratory findings, and physical examination results. Treatment group participants received RGT, and all participants were reassessed at 3 months from baseline. We controlled for the severity of dementia using the Clinical Dementia Rating Scale to determine the degree of severity. This study was approved by the institutional human subjects committee of Taipei Medical University. Permission to conduct this study was given by the administration of the nursing home facilities, and written informed consent was obtained from the patients and their caregivers.

2.2. Instruments

2.2.1. Clinical Dementia Rating Scale

The severity of dementia was measured by the Clinical Dementia Rating Scale (CDR). The CDR is a five-point scale where a score of 1 indicates mild and a score of 2 indicates moderate dementia. In assigning CDR scores, the six domains that are used to construct the overall CDR tables are each scored individually. The six domains are memory, orientation, judgment and problem-solving,

community affairs, home and hobbies, and personal.[30] Interrater reliability and criterion validity for the global CDR score and the individual domain scores have been demonstrated.[31] The CDR has become widely accepted in the clinical setting as a reliable and valid global assessment measure for dementia of the Alzheimer type.[30,31]

2.2.2. Geriatric Depression Scale

The Geriatric Depression Scale (GDS) was developed as a basic screening measure for depression in older adults. There are 15 items.[32] The scale has been tested and used extensively with older populations. It is a brief questionnaire in which participants are asked to respond to 30 questions by answering yes or no in reference to how they felt on that day. The GDS represents a reliable and valid screening device for measuring depression in the elderly, with higher scores indicating higher levels of depression.[32]

2.2.3. Apathy Evaluation Scale, clinician-administered

We used the Apathy Evaluation Scale, clinician-administered (AES-C), to measure indicators of apathy in the previous 4 weeks.[15] It is a questionnaire that is used to evaluate behavior, cognition and emotion subscales. The items are rated on a four-point Likert scale from 1 (not at all characteristic) to 4 (very characteristic). The AES-C has multiple forms, which have been shown to have good reliability and validity.[33,34] Higher scores indicate higher levels of apathy, reflecting a lower level of motivation to get things done during the day.

2.2.4. Neuropsychiatric Inventory

The Neuropsychiatric Inventory (NPI) was developed to assess psychopathology in patients with dementia and other neuropsychiatric disorders. The NPI has 12 subareas, and we used the two subareas of apathy and depression.[35] Severity multiplied by frequency is calculated for each behavioral change during the previous month or since the last evaluation. Cronbach's α for overall reliability of the NPI was 0.88 and the concurrent validity was good, as shown by an acceptable correlation between NPI scores and other validated measurements.[35,36]

All the scales were administered by a single investigator to maintain uniformity across the two groups. Information on neuropsychiatric symptoms was obtained from the nursing home staff by using the NPI. The staff were asked to rate the frequency and severity of various disturbances on the NPI as noted in the preceding month.

2.3. RGT protocol

Research teams who specialized in geriatric psychiatric nursing served as leaders and co-leaders in the RGT. The topic of the RGT centered on life span issues, which was carefully designed for elders who were able to share their stories with other elderly people. The 12-session, 40–50 minutes/week RGT program was implemented for residents in the experimental group. The components of all the sessions had clear structures and guidelines for the leaders and co-leaders to facilitate the group interventions. The leader frequently encouraged participants to tell their stories and to gather old photos, albums, or meaningful materials to use when they shared their personal life experiences on, for example, friendships, work experience, and significant events. Residents were also encouraged to think of the group as an opportunity to have fun in life reviews. We designed the research protocol to include 18 activities suitable for all elderly patients residing in long-term care.[19,37] The principles used to design the intervention were derived inductively from nursing textbooks, care planning guides and nursing information systems.

We also created a safe and comfortable environment for the participants, which required a brightly lit, sizeable space with a quiet, warm and relaxed atmosphere. Being able to sit in a circle allowed participants to have eye contact, to hear and to communicate with the others in the group whenever they wanted. The group leader and co-leader were responsible for closely observing the participants for increased agitation and anxiety during the meeting. A week before and 3 months after the intervention, all participants were asked to complete questionnaires. The reason residents were observed for 3 months was because that was the average length of the intervention program.

Reminiscence therapy is a nurse-initiated intervention that has the advantage of being cost-effective, therapeutic, social and recreational for the institutionalized older adult.[19] Reminiscence therapy has been shown to be a valuable intervention for elderly patients,[29] and the therapy may prove to be a beneficial alternative to more traditional treatment modalities for reducing the effects of depressive symptoms.[19] It is an attractive, nonstigmatizing and easy-to-administer intervention.[20]

2.4. Data analysis

We used the χ^2 and Mann-Whitney tests to compare the demographic characteristics of the experimental and control groups. We computed the means, standard deviations, and ranges for the outcome measures and treatment characteristics. Using the Wilcoxon signed-ranked test, we compared the effects of RGT in each group. The Wilcoxon signed-rank test is a nonparametric statistical hypothesis test for the case of two related samples or repeated measurements on a single sample. The data were analyzed using SPSS version 15.0 (SPSS Inc., Chicago, IL, USA) with a significance level of 0.05; all analyses were two-sided.

3. Results

There were 33 participants in each group at the beginning of the study, but four in the experimental group and one in the control group had withdrawn by the end of the study. One individual died in a manner unrelated to the project. The observed power for this study was 0.9.

Dementia patients were primarily male (59.0%) and had mild dementia (67.2%), with a mean age of 77.56 ± 8.46 years (Table 1). At the start of the RGT intervention program, there were no significant differences as measured by *t* test between the experimental and control groups with regard to demographic characteristics, illness stage, depression and behavior, such as cognitive and apathy symptoms.

3.1. Effects of RGT

After the 12-week RGT protocol was completed for the experimental group, the level of depression and the three dimensions of apathy symptoms were reevaluated for both groups of participants. As shown in Table 2, the depression score ($Z = -2.99$), and the behavior ($Z = -3.10$) and cognitive ($Z = -1.95$) apathy symptom groups all showed a marked improvement in the experimental group ($p < 0.05$). Only one variable, the emotional apathy symptom, showed no significant difference. NPI depression scores had also decreased ($Z = -2.20$, $p < 0.05$). In the control group, all variables showed no significant differences after statistical analysis.

4. Discussion

To our knowledge, this is the first study to report that RGT is associated with reduced symptoms of negative affect in institutionalized residents, after controlling for important confounding demographic variables. The results of this study support the hypothesis that RGT can improve depression and apathy symptoms in nursing home residents with mild-to-moderate stage dementia. The current findings are consistent with those of prior studies that showed reduced depression[20–22] and

Table 1 Demographic characteristics of the nursing home residents before reminiscence group therapy*

	Control group ($n=32$)	Experimental group ($n=29$)	Total ($n=61$)	Range	χ^2	Z^d	*p*
Age (yr)	77.25 ± 10.49	77.90 ± 5.60	77.56 ± 8.46	60.0–95.0		–0.49	0.62
Sex					0.34		0.56
Male	16 (55.2)	20 (62.5)	36 (59.0)				
Female	13 (44.7)	12 (37.5)	25 (41.0)				
Education					0.16		0.69
No	6 (20.7)	8 (25.0)	14 (23.0)				
Yes	23 (79.3)	24 (75.0)	47 (77.0)				
Marital status					1.17		0.76
Single	1 (3.4)	0 (0.0)	1 (1.6)				
Married	12 (41.4)	13 (40.6)	25 (41.0)				
Divorced	1 (3.4)	1 (3.1)	2 (3.3)				
Widowed	15 (51.7)	18 (56.2)	33 (54.1)				
Religious					0.55		0.46
No	5 (17.2)	8 (25.0)	13 (21.3)				
Yes	24 (82.8)	24 (75.0)	48 (78.7)				
Stage of illness					0.66		0.42
Mild	18 (62.1)	23 (71.9)	41 (67.2)				
Moderate	11 (37.9)	9 (28.1)	20 (32.8)				
Depression	7.41 ± 1.76	7.79 ± 1.83	7.58 ± 1.79	4.0–12.0		–0.09	0.36
Apathy							
Behavior	8.94 ± 2.50	9.55 ± 1.57	9.23 ± 2.11	4.0–14.0		–1.2	0.23
Emotion	4.00 ± 0.88	4.59 ± 1.05	4.28 ± 1.00	0.0–6.0		–2.0	0.04†
Cognition	16.19 ± 3.40	17.79 ± 2.38	16.93 ± 3.07	10.0–23.0		–1.5	0.13
NPI							
Depression	1.97 ± 3.83	2.83 ± 4.06	2.37 ± 3.93	0.0–12.0		–1.2	0.25
Apathy	2.25 ± 3.07	3.28 ± 3.89	2.74 ± 3.50	0.0–12.0		–1.2	0.23

*Data presented as mean ± standard deviation or *n* (%); †$p < 0.05$. Z^d = Mann-Whitney test; NPI = Neuropsychiatric Inventory.

changes in apathy symptoms. The changes were evident in activities that stimulated motivation in dementia residents[14,38] and improved social interaction.[19,25,26] The possible explanation for the meaning of past experiences to the program is that when experience/feeling is shared, the process of integration in their lives is improved.[21] The group situation is a powerful trigger for individuals to share their story. The group dynamic of catharsis may also have contributed to reducing negative affect.

RGT is an important non-pharmacological intervention that is associated with improvement in affect, and may thus help to quickly reduce the emotions and behavior that are associated with depression, and improve apathy symptoms. It has been pointed out that participating in RGT allows patients more chances to interact with their environments and, by inducing autobiographic memory, RGT can play a role in reconstructing memory throughout life in addition to its stabilizing role.[39] During each RGT session, residents were stimulated to recall past events over the course of their whole life experience and to talk with others, sharing their opinions. Reminiscing is about remembering, putting things together again, seeking, recovering and communicating meaning. When they expressed and released emotions, the participants experienced the supportive atmosphere of the group, which created a sense of being accepted and valued as a group member, a finding congruent with those of previous studies.[20–23] We put every session of life review into a life span perspective. The systematic program could help us identify the developmental precursors and antecedent conditions for elderly people's expression. Life review is an adaptive response to aging for those who have encountered marked difficulties in life.[20,39] No residents showed increased agitation or anxiety during the intervention. Instead, some reported experiencing pleasure. It is useful to apply RGT in the early treatment of depression,[21–40] as one of the functions of reminiscing is to foster interpersonal relationships that could increase motivation to respond to life situations.[41]

Other non-pharmacologic interventions to reduce negative affect, such as exercise intervention, rarely involve recalling memories or verbal training.[42] Providing optimal care for individuals with dementia is a significant challenge in long-term institutional care. In the West, recent studies on lives disrupted by the events of World War II illustrate how such historical events interfere with normal life processes and the potential outcome of such experiences for appreciating, thinking, and communicating new insights and values.[20,41,42] Emphasizing cultural heritage is helpful and can raise very important issues when we arrange interventions that deal with aging and personal meaning. Healthy psychological functioning is beneficial not only to the individual

Table 2 Effect of reminiscence group therapy on depression

Item	Group							
	Control ($n=32$)				Experimental ($n=29$)			
	Mean	SD	Z	p	Mean	SD	Z	p
Depression			−0.68	0.49			−2.99	0.003*
Pre-test	7.41	1.78			7.79	1.83		
Post-test	7.66	2.06			6.41	1.43		
Apathy: Behavior			−1.26	0.21			−3.10	0.002*
Pre-test	8.94	2.50			9.55	1.57		
Post-test	8.40	3.77			8.14	1.57		
Apathy: Emotion			−0.91	0.37			−0.69	0.490
Pre-test	4.00	0.88			4.59	1.05		
Post-test	3.81	1.40			4.45	0.95		
Apathy: Cognition			0.82	0.42			−1.95	0.050*
Pre-test	16.19	3.44			17.79	2.38		
Post-test	16.41	4.43			17.24	2.76		
NPI: Depression			−1.34	0.18			−2.20	0.028*
Pre-test	1.97	3.83			2.83	4.06		
Post-test	2.06	3.86			1.11	1.78		
NPI: Apathy			−1.34	0.18			−1.74	0.082
Pre-test	2.25	3.07			3.28	3.89		
Post-test	2.61	3.28			1.90	3.03		

*$p<0.05$. NPI = Neuropsychiatric Inventory; Z = Wilcoxon signed-rank test.

but also to society and to future generations.[41] For an aging society, it is important to coherently integrate individuals' daily lives with their prior experience and present environment.

4.1. Limitations

There were several limitations in this study. First, the study did not use a double-blinded randomized design, which prevented us from determining whether or not the effects noted would have occurred in the absence of RGT. Second, we did not evaluate the long-term effects of the RGT intervention, and so have only shown the short-term benefits of RGT.

5. Conclusion

The results of our study indicate that RGT significantly improved depression and apathy symptoms in nursing home residents with dementia. This study controlled for the cognitive function of each dementia patient, and then tested the effect of RGT. Reminiscence has become an increasingly popular approach to promoting the mental health of the elderly. Reminiscence intervention supports Erikson's original insight into the dynamics of integrity in late life.[42]

We believe that our findings may be useful for designing elderly care programs because dementia is one of the most feared illnesses of aging and is frequently cited as a reason for renewed life meaning in positive aging. The RGT protocol used in this study can serve as a reference for future studies developing non-pharmacological intervention for elderly in institutional care.

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