

Research on Group-education Package For The Patients With Dementia in Nursing Home

Xueyan Chen^{1,a}, Beibei Miao^{1,b}

¹School of Nursing, Beihua University, Jilin City, Jilin, 132013, China

Keywords: Aged, Dementia, Rehabilitation Nursing, Group-education Package

Abstract: This article summarizes the practice of group-education package for patients with dementia. In addition to routine nursing care, the dementia patients participated in group-activity which included physical exercise, cognitive exercise and recreation activities. The group-activity focused on enhancing communication and emotional adjustment among patients and trainers, creating mutual helping atmosphere and stimulating patients' sense of self-value. The group-activity is more diverse than the routine nursing, and it can effectively improve the quality of nursing and maintain the cognitive function for patients with dementia.

1. Introduction

Alzheimer's disease (AD) is the most common degenerative disease of the central nervous system of senile dementia. Senile dementia refers to the long lasting intellectual impairment in the elderly (>60 years old), which is manifested as memory, calculation, thinking, language, orientation and emotional disorders as well as personality changes, as well as a decline in social activity ability and living ability [1]. At present, senile dementia is mainly divided into four types: Alzheimer's disease, vascular dementia, mixed dementia and dementia caused by other reasons [2]. With the aging of the population, the prevalence rate of senile dementia is increasing day by day, and the duration of senile dementia ranges from 5 to 20 years, the patients' social life function declines in an all-round way [1], which brings heavy economic burden to patients, families and society, thus becoming the main health care and social problem in many countries [3]. At present, the cause of senile dementia is not clear, although drug treatment may delay the development of senile dementia, but can not reverse the disease, so to maintain and promote the quality of life of patients, become the main task of dementia treatment and care. A foreign meta-analysis on the effect of exercise intervention on dementia patients in nursing homes shows that comprehensive intervention can produce better effects [4]. Some scholars also mentioned that, just like the chronic disease management model, the effectiveness of intervention for dementia patients is based on the comprehensiveness and comprehensiveness of intervention projects [5]. This study designed a group activity package project based on sports and exercise, supplemented by cognitive function training and recreational activities, and achieved certain results. Now the report is as follows.

2. Clinical Data

A total of 35 middle and early AD patients living in Jilin region in March 2018 were selected. Inclusion criteria: age ≥ 65 . Conforms to ccmd-3 Diagnostic criteria for Alzheimer's disease, 2 to 5 years. There are fixed care givers. (4) clinical symptoms confirmed dementia, psychological test in the simple mental state examination. The scale (MMSE) supported dementia; Unconscious disorder, can accompany spirit, behaviour. The Haehinski ischemia index scale (HIS) was used to identify AD and Vascular Properties Dementia (VAD). Patients with the following diseases or symptoms will be excluded: Parkinson's disease. (3) active epilepsy, Acute cerebrovascular disease within 3 months. Past delirium, schizophrenia, depression, mania, anxiety, history of drug dependence, personality disorders, and other mental illnesses. 6. Have serious or unstable others medical problems. Thirty cases were collected and randomly divided into study group and control group.

Among them, there were 15 cases in the study group, including 10 males and 5 females. Mean age (67.45 ± 2.24) years old; Mean course of disease (4.16 ± 0.72). The control group included 11 males and 4 females. Mean age (66.92 ± 1.64) years old, mean course of disease (4.17 ± 0.74). There was no significant difference in age, course of disease and gender between the two groups statistical and comparable.

2.1 The content of the Group-education Package

On the basis of reviewing domestic and foreign literatures and consulting experts, this project designed a group activity package project to maintain various functions of senile dementia patients and improve their quality of life. The project design mainly focuses on sports and exercises, supplemented by recreational activities and cognitive function training, and appropriate collocation is given in groups according to patients' conditions and intimate relationships. During the activity, attention should be paid to strengthening the communication and emotional regulation between patients, trainers and patients, actively creating a supportive atmosphere in group activities, stimulating patients' sense of self-worth, and reconstructing a rich activity atmosphere for patients with senile dementia. Specific content involves sports exercise, cognitive function training, recreational activities, communication and emotional regulation.

2.1.1 Exercise

The exercise mainly consists of sitting exercises, which are completed twice each time. The whole body movement for the arm, leg as a warm-up activity; The range of motion of neck joint is forward bend, backward bend, left turn, right turn, left turn, right turn. The exercises of upper limbs include stretching the palm, clenching the fist, facing the palm, wrist flexion and extension, elbow flexion and extension, chest expansion, push and pull, and upward movement. The range of motion of waist joint is left, right curve, left turn, right turn. The lower extremity activity training is to rotate the ankle joint, lift the heel movement; The muscle strength training of lower extremity includes stationary step, one-leg forward extension recovery training and one-leg side stride training. Relaxation exercises mainly involve swinging the arms and slapping the legs.

2.1.2 Cognitive Function Training

Cognitive function training includes: (1) reality training: mainly training of time, space and character orientation and understanding of surrounding things; (2) memory training: training memory in patients with a content, patients with interval for a period of time to ask questions, such as success memories, time interval extension again after 1 times the recollection, let patients can not succeed, such as memory, the interval time shorten half again after questions or increase or decrease the quantity of training content, training again and again, until the victim can memorization, as remembered this day of all kinds of training activities there are several (origami, painting, singing, etc.); (3) calculation ability training: simple addition and subtraction calculation within 100; (4) structure imitation ability training: drawing or building blocks, to strengthen the patient's understanding of various structures; (5) language training: through retelling and questioning, patients can answer simple questions to train their language expression ability.

2.1.3 Entertainment Activities

Entertainment activities include playback of old songs and re-singing of old songs; Playing toy instruments at will and to the rhythm; Paper folding and coloring; Simple group dance, depending on the situation of the patient to decide whether to carry out, mainly including walking and clapping with music for the main dance or group dance, collective ring handle forward, backward, rhythmic exercise, etc.

2.1.4 Communication and Emotional Regulation

Communication and emotional regulation run through the whole process of the activity, the key points include: at the first activity, introduce the name and characteristics of each patient, and then selectively strengthen each activity. Assess the relationship between the patients, the relationship

between the better patients arranged together.(3) encourage patients to express, and as far as possible to let the ability of the patient to assist in hosting the event. When the intervention personnel and the patient communication, in addition to verbal communication, as much as possible to take the body language and touch non-verbal communication. (5) use as much as possible praise and appreciation of the use of eye contact and other methods to arouse the positive emotion of patients. During the activity interspersed stretch, soft music, can be arranged in the beginning of the activity phase and rest phase.

2.2 Implementation Plan of Group Activity Package Project

Specific implementation is 1 time/week, 1h/ time, in which, directional force training and exercise for a total of 30 minutes; Recreational activities or cognitive training, arranged according to the interests and hobbies of each patient, take 30 minutes.

2.3 Organization and Implementation of Group Activity Package Project

Group activity package project is jointly undertaken by nurses and carers, each group is equipped with 1 nurse and 3 carers. The nurse is responsible for the organization of the whole activity, the preparation of articles and the training contents. The nurse assists the nurse to guide and encourage patients to participate in the exercise and training, and is responsible for the safety of patients. Before the implementation of the project, the nurses and nurses are trained, and learning materials and exercise video CDS are distributed. The training content includes: introducing the purpose, time and content of the group activity package project. Explain and demonstrate the methods and skills of sports, cognitive training, recreational activities and emotional communication. Group exercise exercises.

3. Results

Six months into the program, group activity packages are available for patients with Alzheimer's disease in long-term care facilities. According to the participation of the patients, the evaluation was conducted with good, medium and poor. "Medium" means active participation for 20-40min or active participation for 40-60min but not active; "Poor" refers to the ability to actively participate in 0~ 20min or participate in 20~40min but not actively. "Participation" means that one is in a small area of activity. "Active participation" means that the patient is interested in the activity, and it can be seen from the facial expressions, expressions and movements that the patient is fully involved and enjoys it. If the patient met a certain level of time, but did not participate actively, the score was lowered by one level. The results showed that 28 patients (82.4%) had a good participation rate. The effectiveness of the project implementation plan was assessed by the simple intelligence state scale, the assessment of dementia mood in Chinese version and the revised life quality scale of senile dementia, and the cognitive function, mood state and life quality of the patients were evaluated respectively. The comparison of MMSE and ADL scores before and after intervention between the two groups of AD patients was shown in table 1, and the comparison of qol-ad scores before and after intervention between the two groups of AD patients was shown in table 2.

Table 1 MMSE ADL before and after intervention in two groups of AD patients (n=35, $\bar{x} \pm s$).

Groups	MMSE		ADL	
	Before	After	Before	After
Study group	14.98 ± 2.45	16.33 ± 2.66	14.47± 4.59	15.98 ± 3.88
Control group	14.88 ± 2.67	13.57 ± 2.45	14.21 ± 4.12	12.98 ± 3.16
t	0.3745	3.321	1.014	2.186
P	0.623	0.004	0.189	0.011

4. Conclusion

Lawton [6] believes that the quality of life of patients with dementia mainly includes four

dimensions: patients' behavioral ability, objective environment, mental health and perceived quality of life in specific fields. Based on Lawton's definition of quality of life for Alzheimer's patients, this study designed a variety of group activity packages. Such as the attention to exercise, in order to strengthen the physical health of patients; The comprehensive cognitive function training was conducted once a week, and the orientation of time, space and characters was strengthened in the training three times a week, so as to make up for the decreased quality of life caused by the impairment of various behavioral abilities of dementia patients. Due to the impact of the disease and the consideration of patient safety factors, currently, dementia patients are subject to more constraints, and there is generally a lack of appropriate stimulating environment and activity opportunities in institutions, and patients have less social activities [7].

The results of this study showed that there was a statistically significant difference in MMSE scores between the two groups after 8 weeks of intervention. The results of this study suggest that through the techniques of cognitive training, encouraging and rewarding patients during the training process and improving patients' subjective initiative, cognitive function of AD patients can be effectively improved and intellectual decline can be delayed. This study showed that the improvement of activity of daily living in the study group was significantly better than that in the control group after 8 weeks of intervention. Based on physical exercise, this study emphasizes the importance of exercise, which can promote individual happiness through the secretion of endorphins [8]. This research divides into the daily life activities, family, family members, you can do to assist do command to do, 3 levels, according to the level of training, training after giving positive feedback, and set a timetable, maintain good habits and customs, also can let patients participate in the plan, reflect the existence of feeling and sense of worth, patients daily life ability constantly improve, to stimulate the brain, delayed brain recession. The results of this study indicated that the improvement of quality of life in the study group was significantly better than that in the control group after 8 weeks of intervention. Mood, life status and marital status had significant statistical significance. There were statistically significant differences in such dimensions as personal energy, memory, friendship, personal experience and feeling, ability to maintain housework, personal interest and overall living standard. Research results show that the most important factors affecting the quality of life of dementia patients are their cognitive level, marital relationship, participation in community welfare activities and mood. This suggests that caregivers nursing skills increase, more is good at communicating with the patient, respect patients, when patients with bad mood can use communication skills to reassure patients and make them feel psychological security, at the same time create a safe living environment for patients, reduce accident and body complications, improve the patient's body and mental health, make its can be more actively involved in cognitive function training and daily life, thus improve the quality of life. Group intervention can maintain cognitive function of Alzheimer's patients and improve their mood and quality of life, indicating positive experience of group activities, atmosphere of mutual learning, strong sense of belonging and emotional support. The sample size of this study is small, which may have an impact on the research results. It needs to be expanded for the further research.

Table 2 Comparison before and after intervention between two groups of AD patients (n=35, $\bar{x} \pm s$).

Groups	Times	Marital status	Dating situation	Experiences/feelings	Housework ability	Interests	Living level	Family situation
Study group	Before	2.35 ± 0.72	2.11 ± 0.52	2.23 ± 0.62	2.36 ± 0.70	2.25 ± 0.51	2.62 ± 0.72	2.79 ± 0.81
	After	2.83 ± 0.89	2.46 ± 0.66	2.66 ± 0.81	2.55 ± 0.73	2.68 ± 0.77	2.92 ± 0.83	2.86 ± 0.90
Control group	Before	2.17 ± 0.60	2.12 ± 0.52	2.22 ± 0.69	2.39 ± 0.65	2.24 ± 0.52	2.61 ± 0.70	2.78 ± 0.80
	After	2.18 ± 0.61	2.11 ± 0.50	2.20 ± 0.65	2.30 ± 0.59	2.20 ± 0.52	2.41 ± 0.57	2.69 ± 0.74
t		6.040	4.380	4.600	4.070	4.290	4.700	1.890

P		0.003	0.028	0.036	0.021	0.024	0.041	0.365
Groups	Times	Health	Heart feeling	Personal energy	Memory	Finances	Living conditions	Scale scores
Study group	Before	2.18 ± 0.26	2.05 ± 0.75	2.23 ± 0.70	1.18 ± 0.57	2.18 ± 0.71	2.41 ± 0.26	28.90 ± 4.63
	After	2.20 ± 0.70	2.64 ± 0.85	2.43 ± 0.89	1.38 ± 0.64	2.18 ± 0.70	2.74 ± 0.65	32.54 ± 4.98
Control group	Before	2.17 ± 0.60	2.08 ± 0.77	2.24 ± 0.73	1.16 ± 0.58	2.17 ± 0.73	2.43 ± 0.59	28.98 ± 4.64
	After	2.18 ± 0.26	2.18 ± 0.26	2.18 ± 0.26	1.14 ± 0.54	2.18 ± 0.72	2.41 ± 0.57	28.53 ± 4.51
t		1.030	6.880	4.900	4.840	1.210	5.260	4.640
P		0.295	0.001	0.049	0.047	0.324	0.006	0.038

Acknowledgements

This work was financially supported by the Jilin Science and Technology Bureau (201737139).

References

- [1] Sheng shuli. Senile dementia and related diseases [M]. Beijing: science and technology academic press, 2006:4.
- [2] Xie ruiman. Practical alzheimer's disease [M]. Shanghai: Shanghai science and technology academic press, 2010:231.
- [3] Association As. 2009 Alzheimer's disease facts and figures [J] Alzheimer & Dementia, 2009, 5:234-270.
- [4] Heyn P, AbreuBC, Ottenbacher KJ. The effects of exercise training on elderly persons with cognitive impairment and dementia: ameta-analysis [J]. Arch PhysMed Rehabil, 2004, 85:1694-1704.
- [5] Callahan CM, Boustani MA, Unverzagt FW. Effectiveness of collaborative care for older adults with Alzheimer disease in primary care: a controlled trial [J]. JAMA, 2006,295 (18): 2148-2157.
- [6] Lawton MP. Quality of life in alzheimer's disease [J]. Alzheimer Dis Assoc Disord, 1994, 8:138-150.
- [7] Ballard C, Fossey J, ChithramohanR, et al. The Quality of care in private sector and the NHS facilities for people with dementia: a cross sectional survey [J]. BMJ, 2001323:426-427.
- [8] Knechtle b. Influence of physical activity on mental well-being and psychiatric disorders [J]. Schweiz Rundsch Med Prax, 2004, 93:1403-1411.