Advances in art therapy for patients with dementia

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Abstract

In this article, the theoretical basis and development status of art therapy are introduced, and the intervention methods and effectiveness of art therapy in patients with dementia are reviewed. To date, nursing intervention via art therapy with dementia patients in China has been rarely investigated, and the design of this type of investigation must be improved.

1. Introduction

Dementia has become a major cause of disability and dependence on caregivers and is exerting enormous pressure on caregivers, the patient’s family and society. As of March 2015, with 7.7 million new cases emerging each year, the number of dementia patients has reached 47.5 million worldwide and will reach 75.6 million in 2030; the majority of these cases can be attributed to the increase in dementia patients living in low- and middle-income countries. To date, under the “people-centered” idea of care, researchers around the world have carried out many investigations on how to improve the quality of life of dementia patients. Of these studies, those involving non-drug intervention have arisen due to the limitations of memory and cognitive training, and a diversification trend has included interventions dominated by psychosocial therapy, which allow these patients to live with dignity, albeit with a deteriorating cognitive dysfunction. In countries outside of China, in the late 1990s, art therapy as a psychosocial therapy that combines art and human elements was beginning to find application in the field of dementia research. In art therapy, through stimulating cognition with lines and colors, the patients are provided with a non-verbal channel of communication and are able to overcome inadequacies of self-expression due to impaired language ability and can vent negative emotions, thereby making significant achievements in improving attention and reducing behavioral and psychological symptoms; patient quality of life and social skills are also improved. Currently, nursing intervention with dementia patients in China is still limited to cognitive training, independent-living skills training and guiding family caregivers, and the application of art therapy requires further development. In this article, the applications of art therapy in patients with dementia worldwide are analyzed and summarized to provide a reference for future nursing care and research.

2. Definition and theoretical basis of art therapy

The American Art Therapy Association (AATA) defines art therapy as a mental health profession in which clients, facilitated by the art therapist, use artistic media, the creative process and the resulting artwork to explore their feelings, reconcile emotional conflicts, foster self-awareness, manage behavior and addictions, develop social skills, improve orientation in reality, reduce anxiety and increase self-esteem. The theoretical foundation of art therapy is mainly the theory of brain lateralization, which posits that the left brain is “the academic brain” and manages logic, language, writing and reasoning, while the right brain is “the art brain” and manages drawing, music, emotion, creativity, etc.; in processing sensory or emotional information, the right brain first creates an impression of imagery, processes the information and then...
transmits it to the left brain to generate verbalized thinking and memory. Dementia patients have impaired language abilities and are unable to verbalize thinking to express their feelings but retain basic visual and motor skills, which allow them to express emotions and gain comfort through lines, shapes and colors in art appreciation and creative activities. As the disease progresses, the patients’ capabilities of daily living and cognition gradually decline, and the existing language skills make it impossible for these patients to vent their negative emotions, thus leaving them prone to behavioral and psychological symptoms, such as anxiety, depression, etc., and leading to a reduced quality of life. Art therapy provides patients with a non-verbal mode of expression through an intuitive graphical visual presentation, which helps the patients vent negative emotions and alleviate behavioral and psychological symptoms, thereby improving the quality of life. In addition, the creation of art stimulates the temporal lobe, which affects object recognition and accurate expression using language, and the parietal lobe, which perceives the spatial position of objects and controls fine motor functions of the hand. Additionally, art therapy provides an effective way to train patients in the capacities of language and fine motor movement of the hand, in which the hand-brain interaction helps maintain and develop motor skills and coordination and improves the perception by the brain of color, shape, space, pattern, etc. This theory describes the mechanism of art therapy intervention and also provides an important theoretical background and support for the application of this therapy to the care of dementia patients.

4. Forms of art therapy intervention

Traditional therapies are mainly simple art activities such as drawing graffiti, painting, making collages and coloring, which are intended to guide the patients to create and express feelings and share stories through the artwork to help them vent emotions, ease stress and improve their physiological and mental state and mood during the treatment process. In the development of art therapy, the form of art therapy intervention has been continuously innovated, and art appreciation based on museums and art galleries is a new art intervention measure that has been developed over the past decade, primarily involving the introduction of classic works of art, art appreciation and the creation of art by the patients through recollection, to improve mood, self-esteem and reduce the burden of caregivers. This method has been widely applied in western countries, and the selected artworks have been mostly classical Western compositions. In China, artwork with Chinese characteristics in accord with the national standards should be selected to conduct art therapy activities.

Based on the patient’s creative form, art therapy can be divided into two forms: structural and non-structural. In structural art therapy, the interventionalist determines the theme and artistic tools, while the patients create using the tools according to the theme; this method, in which it is easier for the interventionalist to manage the intervention process, is good for beginners and those with severe dementia. In non-structural art therapy, the patients take the initiative to choose the theme and artistic tools to create spontaneously, which strengthens the feeling of self-control in the patients in choosing the painting materials based on different colors, shapes, etc. and stimulates creativity.

Art therapy is open regarding the form used and determines activities based on the severity of dementia, personal preferences and the cultural background of the patients. However, in the intervention process, the following aspects must be addressed: (1) close attention should be paid to the patients to provide them with opportunities for the stimulation of perception via various art forms and self-expression; (2) changes in the patients’ attention and mood, as well as the patients’ interpretation of artwork and interactions with others, should be monitored on a timely basis; (3) the artistic tools should be in line with the characteristics of the individual patients; for example, it is more appropriate for senior patients to have artistic tools that are made of soft materials and are easy to maneuver; and choosing colored brushes with a thin tip can give the brain an increased stimulus; and (4) the quality of the artwork by the patients can be ignored, and in the activities, the interventionalist should share feelings and mood with the patients.

5. Application of art therapy to the care of dementia patients

5.1. Improving cognition

The cognitive function of dementia patients declines progressively, but timely and effective interventions can delay further deterioration with this disease. Art therapy is a complex, multi-dimensional and vital intervention, and in the course of art therapy intervention, the effectiveness of art therapy is becoming increasingly diversified, not limited to traditional forms of art, such as painting, making collages and cutting shapes, but expanding to innovative interventions such as visual arts activities, appreciating the classic works of art in museums and art museum programs that combine art appreciation and the creation of art through recollection. This form of intervention combines the arts and the attributes of museums with educational practices and has a certain potential for development in promoting interaction between caregivers and patients.

3. History of art therapy

First proposed by Hill, an artist, art therapy originated from the arts and psychotherapy in the 1940s and was applied to enhance the well-being of tuberculosis patients during the course of treatment, with the aim of developing a psychotherapeutic relationship between the therapist and patient. During this period and the following 20 years, researchers primarily investigated the new concept and theory of art therapy, although there were few applications until 1969, when the AATA was established and the role of art therapy became widely recognized. In 1980, art therapy was applied to the care of dementia patients, mainly by observing the patients’ paintings. Wald et al. found that artwork by dementia patients featured repetitious, broken, split and twisted patterns and confused perspective angles, short and broken lines and missing details in the appearance of objects, etc. The Formal Elements Art Therapy Scale (FEATS), which was developed at that time, was used to assess the progression and outcome of the disease based on different pattern characteristics created by dementia patients during different stages of the disease. Since then, art therapy has been gradually developed in the field of dementia research. In the late 1990s, the effectiveness of art therapy intervention was eventually confirmed; Kahn-Denis et al. enhanced patients’ memories of past events, improved patients’ mood, decreased their behavioral and psychological symptoms and improved their verbal skills through pencil drawing, making collages, cutting shapes, etc. Although these studies were not rigorously designed, they promoted the application of art therapy in dementia research.

In the 21st century, applications of art therapy in the assessment and intervention of dementia gradually increased. Regarding assessment, a greater number of systematic measurement tools, such as the Face Stimulus Assessment (FSA), emerged. Although these tools played a certain role in monitoring the disease, detecting changes in a patient’s condition and prognosis, there was a lack of universality, making it difficult for average family caregivers to comprehend the use of art therapy in dementia assessment without systematic education and training. Regarding intervention, the forms of art therapy are becoming increasingly diversified, not limited to traditional forms of art, such as painting, making collages and cutting shapes, but expanding to innovative interventions such as visual arts activities, appreciating the classic works of art in museums and art museum programs that combine art appreciation and the creation of art through recollection. This form of intervention combines the arts and the attributes of museums with educational practices and has a certain potential for development in promoting interaction between caregivers and patients.
therapy, the attention, verbal skills and orientation of patients can be improved because the patients immerse themselves into creating artwork. However, the effect of art therapy on cognitive function in patients with dementia has been rarely addressed. Eekelaar et al subjected dementia patients to a three-week course of art appreciation with 30 min of each session in art galleries and 60 min in art creation activities, primarily spent on creating portraits, landscapes and narrative paintings. During the sessions, the patients were encouraged to have discussions, and during the art creation process, the patients recollected works they admired; the results showed that the patients’ attention was enhanced, likely because the prompt feedback in art therapy compels patients to remain highly attentive. Furthermore, verbal fluency, which is related to episodic memory in patients, was increased from 7.3% to 25.9%, and semantic clustering was increased from 0 to 5.76%. However, the long-term effect was not significant, with much fluctuation, and even assumed a downward trend at the end of the intervention, which was likely associated with the progression of the disease and short-term changes in mood and state. In addition, Ellen et al showed that even patients with severe dementia could effectively improve their visual-spatial abilities and to a certain extent delay the deterioration from the disease after engaging in art activities such as painting. However, the evaluation of the effectiveness in this study was mainly from the observation and subjective feelings of the interveners and lacked support from objective data. Rusted et al subjected dementia patients to 40 weeks of art activities, such as painting, making collages, making ceramics, etc., and found that the cognition and short-term memory of the patients were not significantly improved; this result is likely associated with the intervention forms and methods and the sensitivity of the assessment tools.

In summary, art therapy helps improve cognitive functions, such as verbal skills, attention, orientation, etc., but has varying outcomes in overall cognitive improvement. In art activities, it is necessary to include more elements to comprehensively promote the improvement of cognitive ability. Moreover, targeted assessment tools are still lacking, and some existing results involve the use of remarkably subjective components. In the future, assessment tools and methods with greater sensitivity must be developed, and multiple evaluation methods, including subjective and objective methods, should be employed to assess the effectiveness of art therapy.

5.2. Improving behavioral and psychological symptoms and the happiness index

It has been shown that 70%–90% of patients with dementia manifest restlessness, anger, depression, anxiety, sadness and other behavioral and psychological symptoms as the disease progresses, resulting in reduced quality of life and an exacerbated burden for caregivers. Some researchers believe that the dysfunction of the right cerebral hemisphere may lead to abnormal emotional activity in patients, and art activities can regulate mood by affecting the right cerebral hemisphere. Additionally, if patients are able to vent negative emotions through verbal and non-verbal communications by having a safe and comfortable environment during the intervention, it would help them express themselves, and they could experience the joy of creation. In artistic activities, the negative emotions of the patients are significantly reduced when the patients have an increased interest and obtain a certain sense of accomplishment through completing artworks. Furthermore, the free-form creation strengthens the sense of self-control in the patients, meets their need to be respected and helps reduce the incidence of behavioral and psychological symptoms, improving their quality of life.

Hideyuki et al intervened with small groups of patients who had mild dementia, and the patients were asked to color rather than abstract pictures of cats, birds and fruits using coloring crayons or inks and were encouraged to recollect and paint pleasant scenes that they had experienced in the past; the control group was asked to perform computations as much as possible within the acceptable range. The results revealed that the approach significantly improved the symptom of indifference and mental health but did not improve cognitive ability or depression, probably due to the rather short period of intervention (only 12 weeks) and the limited number of intervention subjects. Shinichiro et al found that during a 12-week period of art coloring activities, five dementia patients had decreased scores evaluating wandering, excretion and calling for no reason and an increased daily average sleep time from 4.5 h to 7.9 h, alleviating caregivers’ burden. However, at the end of the intervention, the patients returned to their original sleep status. Although this temporary improvement was related to factors including the short intervention time and small sample size, this result also indicated the need for continued intervention with art therapy, which can be arranged as daily leisure activities for dementia patients.

In the 21st century, more scholars began to pay attention to the quality of life of dementia patients. During an intervention, Kinney et al encouraged patients with mild and moderate dementia to express themselves through artistic activities and provided sensory stimulation; the patients thus felt the joy of creation and gained satisfaction and a sense of self-worth in the challenging creative process, thereby enhancing their well-being and quality of life.

5.3. Promoting communication and improving social skills

During the art intervention process, caregivers are able to understand and clarify the status and the inner world of the patients or promote communication with the patients, based on which targeted care activities are provided. The patients are able to express and know themselves through interactions with caregivers and other patients in group art activities and thereby form good interpersonal relationships and reduce the sense of social isolation. It was found that even severe dementia patients could strengthen their sense of group belonging and enhance their social skills after they voluntarily performed coloring activities under the guidance of caregivers, and the patients became more focused on the exchange of body language and eye contact. Moreover, art materials that are soft and easy to hold could improve the flexibility of fingers and hand-eye coordination, which to some extent also create good conditions for the communication between caregivers and patients. In addition, dementia patients exhibited more active verbalization regarding art topics with which they were familiar because these topics stimulated the patients’ memories of the past, triggered their interest in art activities and thereby promoted the patients’ self-expression and social skills.

5.4. Alleviating the burden on caregivers

Currently, a textual description of the details for predicting the progression of dementia is not available, and it is very difficult for caregivers to examine subtle changes in the patients; moreover, caregivers also experience difficulties because the patients have a diminishing communication capability and have difficulty in describing their needs. Sohott thought that changes in the condition of patients could be understood by examining changes in their painting style; for example, an abrupt change in art style may signify the further progression of semantic dementia. The artwork by the patients may have chaotic lines, decreased accuracy and increased spatial asymmetry, for example, which to some extent could provide a reference for caregivers. Moreover, by conducting artistic activities, the incidence of behavioral and
psychiatric symptoms in the patients is reduced, which to a certain extent eases the burden on caregivers.\textsuperscript{14,29,30} In addition, if the caregivers also participate in the intervention process and exchange care experiences among themselves, the caregivers can also provide emotional support to each other and alleviate the pressures of caregiving.\textsuperscript{15,20} However, the majority of the studies investigated the care burden via an interview, which may be rather subjective; in future studies, it is necessary to use multiple methods, such as a quantitative method, qualitative method or a combination of the two, to perform in-depth analyses.

6. The advantages and disadvantages of art therapy

6.1. Advantages

The primary advantages of art therapy are as follows: art therapy is able to provide an alternative channel of communication for dementia patients with impaired language abilities so that they can have self-expression and a catharsis of negative emotions; by way of hand-brain coordination, this therapeutic approach is conducive to maintaining and developing a patient’s coordination and motor skills and strengthening their fine motor skills. The use of art therapy is unrelated to the severity of dementia and applicable to all disease stages; this method helps caregivers understand the status of the patient through the content, color and line of the painting, based on which targeted care can be provided. Through art therapy, the patients gain satisfaction through their artwork and a sense of accomplishment from their own work; during the process of a group intervention, communication among patients and caregivers is promoted, and a sense of belonging is strengthened.

6.2. Disadvantages

The primary disadvantages of art therapy are as follows: patients without an art background must learn starting from the basic skills of art, and some patients have difficulty in completing artwork; art therapy requires that patients have hand function and the ability to complete simple tasks; although this approach has been recognized to reduce the behavioral and psychological symptoms of patients, art therapy has had mixed outcomes in improving the patients’ cognitive abilities; finally, there are large variations regarding the period, frequency and duration of intervention, and the scales to measure indicators are not sensitive.

7. Conclusions

Art therapy has some effect in improving the attention and orientation of dementia patients, reducing behavioral and psychological symptoms of patients, improving the patients’ social skills and easing the burden of dementia patient caregivers. However, due to the limited number of related studies, there are variations regarding the duration, frequency and measuring tools of the intervention, which must be improved in future investigations. Compared with developed countries, China has a long artistic history, and in future studies, themes with Chinese characteristics, such as ink paintings and Spring Festival pictures, should be refined by combining the cultural background of patients with their hobbies. In this way, personalized intervention programs to improve the cognitive function of dementia patients, reduce their behavioral and psychological symptoms and ultimately improve the patients’ quality of life can be developed.

Conflicts of interest

All contributing authors declare no conflicts of interest.

References
