

Usefulness of Ikebana a Nursing Care Environment

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Abstract. Japanese society is aging rapidly and currently one in four people of the population are the elderly. Due to the increasing number of the elderly who need nursing care, improvement of their QOL is required. As a recreation activity of the nursing care for the elderly, I implemented Ikebana, an aspect of Japanese traditional culture of life. There was no change in the test subject's NPI score, but in the GBS scale, which measures an immediate change, improvement in emotional state of the subject was found. Compared to popular recreation activities such as karaoke or viewing of DVD video, the subject's mental state was maintained in good condition for a long period of time even after making ikebana. The result suggested that ikebana has a healing effect, especially for reducing the anxiety or for recovering calmness. Enjoying a sense of season through flower materials, use of five senses by touching or seeing, thinking for oneself, hand working with tools such as scissors and having a dialogue with people are possible contributing factors. It is likely that ikebana gives the elderly mental stability and that it is useful for keeping them stay in good mental health, making a great contribution for the QOL in aging society in the future.

Keywords: Nursing care · Health · Recreation activity · Dementia

1 Introduction

Japan's population continues to increase in age, and as of October 2012, the percentage of elderly people was 24.1 %, the highest it has ever been. 1) It is believed that this trend will continue in the future. As a result of this, it is also predicted that the number of nurses, a necessity to the elderly, will also increase, and methods to maintain and improve elderly people's QOL (Quality of Life) are sought after. Up to now, various programs have been implemented as recreation in caring for the elderly. Examples of these programs include music concerts, karaoke and growing vegetable gardens, as well as calisthenics and exercise programs. Among these programs are also programs that increase effectiveness. For example, it has been reported that color-by-number pictures that use colored calligraphy pens have a fixed effect on reducing the amount of times nurses are called and the number of times residents have fallen over. 2) Up to

now, a variety of programs have been introduced, yet due to management's desire for ease in caring for the elderly, using ikebana has been difficult. However, because the percentage of elderly ikebana teachers and students is large and examples of ikebana students staying healthy while maintaining their QOL during their elderly years have been observed, ikebana shows promise in maintaining and improving the QOL of elderly people. Ikebana uses different flower arranging materials in each of the four seasons. The students devise an arrangement and perform actions using their fingers, such as cutting and bending. It is also assumed that looking at the color and shapes of various plants, touching them with their hands, smelling them, and expressing using their five senses contribute to the benefits of ikebana.

In this paper we will report what effects ikebana activity had on residents of a nursing facility (Super Court Co., Ltd).

2 Methodology

2.1 Subjects

The two test subjects, neither of whom had previous experience with ikebana, included a woman aged 91 years (test subject 1) and a woman aged 86 years (test subject 2). Test subject one suffers from poriomania (the unconscious tendency to wander), and desired to go home. She would request that she be sent home up to 5 or 6 times a day. She has a short-term memory disorder and to stabilize her mood she is currently under psychiatric care. The second test subject has Alzheimer's disease and basically her mood is stable but she also has poriomania. Fantasizing and odd behavior occur sporadically (Table 1).

2.2 Experimental Protocol

We utilized ikebana as a part of recreation for two residents. Recreation at the facility includes many activities such as cards, karaoke, painting, ball-toss game, watching DVDs, calligraphy, Japanese karuta card game, tanka poetry, exercise, target-hitting game, collage of pieces of colored paper, bowling, and ikebana. 13 to 15 residents, including the 2 test subjects, participated in the recreation. The place for the experiment was a cafeteria, 5 m by 10 m in size. Two adjacent walls were completely white, and the other two were covered with large windows. A table and chairs were placed in the center of the room, and the experiment took place there from 2 pm to 3 pm. Ikebana

Table 1. Biological data of subjects

Subject	Age	Sex	Symptoms	Dominant-hand
Subject-1	91	Female	Poriomania, homesickness, short-term memory loss, currently receiving treatment at a department of psychosomatic medicine	Right
Subject-2	86	Female	Alzheimer's dementia	Right

was performed as part of recreational activity from January 2014 through December 2014, once a month. After the teacher explained the materials, the test subjects followed the teacher's example and arranged the flowers accordingly. The teacher and nursing care employee supported the effort. Each of the subjects engaged in ikebana gave positive feedback about the flowers e.g. "They're so pretty, it makes me happy," "I look forward to doing it once a month," and "It makes me happy having flowers I can decorate my room with. The exercise came to a close after the teacher made some adjustments to the subjects' arrangements. Nursing staff place the arrangements in the rooms of the subjects that were able to do the exercise and also tidies up afterwards. Furthermore, karaoke and watching DVDs, normal recreation that is conducted frequently, was used for comparison.

2.3 Materials

The material used for ikebana in January was *yukiyanagi* (Thunberg spirea), tulip, sweet pea, dracaena, and peacock aster. In February it was peach blossom, wild daffodil, sweet pea, ageratum, and Osmond. In this way we chose 4 to 5 different types materials per month from the most beautiful materials of the current season.

2.4 Neuropsychiatric Inventory

We evaluated the recreational activities including ikebana (ikebana, karaoke, watching a DVD) based on the condition of the test subjects before, during, and after the activity in a GBS scale with 6 mental states, and a NPI scale. In the GBS, scale we evaluated six conditions (emotional lethargy, emotional instability, loss of motivation, insecurity, depression, and anxiety) on a scale of six, ranging from zero (normal) to five (very bad). These 6 mental states refer to the condition of the residents and are necessary for nursing staff in caring for the residents. They also reduce the workload of nursing staff that can evaluate them effectively (Tables 2 and 3).

Table 2. GBS

Outcome measure	Symptoms
Emotional lethargy	Is unable to respond appropriately to the situation
Emotional instability	Is unable to control their emotions normally
Loss of motivation	Has no motivation for activities and work
Insecurity	Embraces feelings of anxiety
Depression	Has abnormal emotional levels that show signs of being disheartened or depressed
Anxiety	Is unable to sit still and do normal activities; wanders about

Table 3. NPI

Outcome measure	Symptoms
Delusions	Firmly believes things they know not to be fact
Hallucinations	Sees and hears things that are not there
Agitation	Gets too worked up and is unable to control their emotions.
Depression	Is unable to fend off feelings of concern and feels depressed
Insecurity	Is unable to relax and is excessively nervous.
Euphoria	Is in an excessively good mood
Apathy	Is disinterested in everyday activities and other people.
Disinhibition	Talks to other people they have never seen or met before as if they were an acquaintance and says things that hurt others
Irritability	Instantly gets into a bad mood over trivial things, becomes agitated and gets angry
Abnormal behavior	Continually repeats the same meaningless actions, such as walking around their house and playing with buttons and strings
Sleep	Does not have enough sleep and is seen being active at night time
Eating behavior	Regularly has changes in their appetite and eating style, experiences changes in body weight or becomes unwell

3 Results and Considerations

3.1 Process Analysis

Figure 1 shows the results of the evaluation of the condition of the two test subjects before, during, and after the ikebana activity. Emotional instability, loss of motivation, insecurity, and anxiety were ameliorated during the ikebana activity. After the ikebana



Fig. 1. Experimental circumstance

activity, there was similar amelioration to that during the ikebana activity, but compared to during the activity the condition had worsened.

Results of the evaluation of the conditions of the test subjects in a GBS scale before, during, and after the recreational activities of karaoke and watching a DVD are shown in Figs. 2 and 3. Figure 2 shows the amelioration of emotional lethargy during karaoke, but after the karaoke emotional lethargy and anxiety worsened compared to before the activity. In Fig. 3 we see that during the activity of watching a DVD, all conditions in the GBS scale ameliorated, but after the activity emotional lethargy, emotional instability, loss of motivation, insecurity, and anxiety had worsened. From the information above, we have confirmed that ikebana has a tendency to stabilize emotions. From the NPI scale, no change was observed from the normal condition of both of the subjects, and there was also no change in the workload in caring for them (Figs. 4 and 5).



Fig. 2. Floral materials

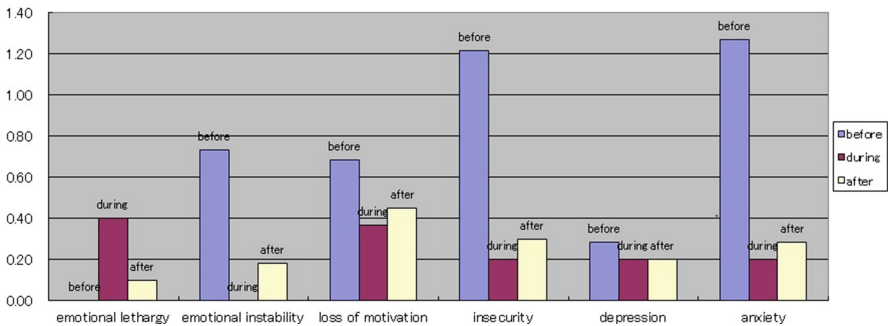


Fig. 3. GBS scale of Ikebana

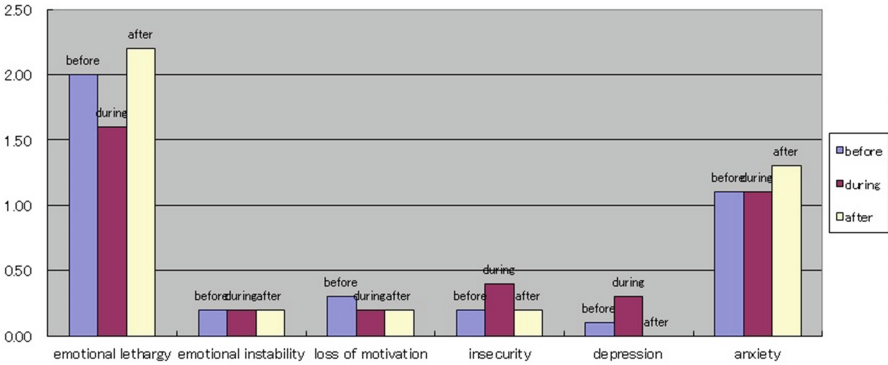


Fig. 4. GBS scale of Karaoke

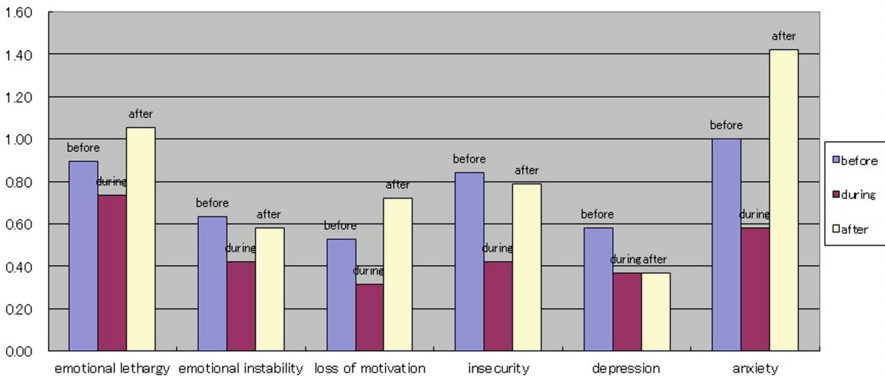


Fig. 5. GBS scale of watching DVDs

4 Conclusions

The activities of ikebana, karaoke, and watching a DVD all showed on the GBS scale an amelioration of all six conditions during the activity. With karaoke and watching a DVD, after the recreation the ameliorated conditions were not maintained and worsened to the state prior to the activity or even worse. A similar tendency was seen to a degree in ikebana, but the degree of exacerbation was smaller, and the emotional amelioration was clearer compared to karaoke and watching a DVD. In caring for the elderly, we need to maintain their current mental and physical condition. Recreation in nursing care has the effect of ameliorating emotions during the activity. In this experiment, we can observe that ikebana, compared to other forms of recreation (karaoke, watching DVDs), has a greater effect of ameliorating emotions during the activity and also can maintain the amelioration to a greater degree. We believe the reason to be that ikebana involves handling plants that differ according to season, using scissors and other tools, and communicating with others during the process. From this

experiment we can expect that ikebana can be useful for the amelioration of the emotions of elderly people in need of nursing care, and can possibly ease the burden of the caregiver. From here on we would like to focus on and examine the utility of ikebana in a nursing care environment and the differences between ikebana and other forms of recreation. In the future, we would like to investigate what changes occur in the condition of the subjects through the continual engagement in ikebana, and how these changes correlate to the length the length it continues.

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