# Practice and Evaluation of Art Workshops in Palliative Care

Application of 'Active Art': art that encourages the movement to touch

Kiyomi Yoshioka\*, Takashi Hasumi\*\*

\* University of Tsukuba, yoshioka.kiyomi.fu@u.tsukuba.ac.jp \*\* Sapporo City University, t.hasumi@scu.ac.jp

Abstract: The objectives of this study are to practice and evaluate palliative care techniques that can improve quality of life by making use of various effects that can be brought about through touch, with a focus on the effect of touching 'Active Art'. A workshop program with 'Active Art', intended to encourage art creation movement through the use of colors that draw the eye, and textures with an appealing feel to the hand, was developed. Evaluations of each patient's mood were made before and after each workshop with 'Active Art', and patient behavior was observed. Patient mood after the workshop was confirmed to have improved significantly in comparison with before the workshop. Patient interviews conducted after the workshop indicated that 'Active Art' was evaluated highly in the categories of 'fun', 'satisfaction' and 'refreshing'. Patients' families, medical staff, and volunteer gave similar evaluations.

Key words: Active Art, Touch Behavior Induced, Palliative Care

#### 1. Introduction

Art galleries and museums are increasingly offering participatory art appreciation and art workshops where visitors can touch or create art themselves. It is thought that touching and creating art in addition to visually appreciating art can further stimulate people's sensibility. After the Great East Japan Earthquake, seal robots, named Paro, were lent to older victims residing in shelters for their emotional care and contributed to reducing their stress. Paro can provide positive effects of animal therapy with its tactile feedback and other responses, and it has been shown to contribute toward improved mood, increased communication, more frequent smiles, and reduced stress in patients of medical institutions with dementia and in pediatric patients [Note 1-3].

"Active Art" which encourages touching the art and participating in creation of art, stimulates sensibility by inducing self-expression. Participation in "Active Art" that stimulates sensibility is a new field of study that seeks to improve QOL in a unique environment of palliative care. In this study, we define art works that encourage touching and creating art as "Active Art."

Art activities in a hospital include displaying art works and art creation workshops. The activities are aimed at psychological improvement of healthcare environment for patients and medical staff. However, there are only limited examples of studies that conducted quantitative analyses and evaluation of the effects of art activities in hospitals. This study explores the relationships between the visual elements of paintings displayed in a hospital and perception of those paintings by the patients to understand the specific aspects of a painting that can induce positive impression evaluations in patients [Note 4-9]. Appreciating paintings that give positive impressions can benefit patients psychologically and lead to an improved healthcare environment. The study also verified the

effectiveness of art works specifically created for display in hospitals [Note 10], and observing behavior of participants of art workshops held in hospitals [Note 11-12]

Positive psychological and rehabilitation impacts concerning encouragement of active movements, such as touching and creating art in conjunction with visual effects of appreciating art, need to be evaluated quantitatively and qualitatively to prove effectiveness before assuming appropriate roles in healthcare.

For this study, we created a workshop program that utilizes "Active Art" that encourages actions to create art by utilizing attention values of colors and tactile feedback. Seasonal activities are an important aspect in palliative units. As such, we created a Halloween Art Workshop Program in time for the Halloween season to be held in cooperating hospitals: the National Cancer Center Hospital East and the Higashi Sapporo Hospital Palliative Care Unit. The effects of workshops that utilize "Active Art" were evaluated by observing patients and rating patients' moods before and after the workshops.

There are 25 beds in the Palliative Care Unit of the National Cancer Center Hospital East, and average hospital stay is approximately 18 days. In comparison, there are 58 beds in the Palliative Care Unit in Higashi Sapporo Hospital, and the average stay in the unit is approximately 50 days.

## 2. Objectives

The objectives of this study are to practice and evaluate palliative care techniques that can improve quality of life (QOL) by making use of various effects that can be brought about through the touch of a hand, with a focus on the effect of touching "Active Art", which is defined as art works and art creation that encourage touching art. The quantitative analysis and evaluation were conducted by holding workshops involving "Active Art" that encourages touching art and creating art, and observing patients' behavior as well as rating mood changes before and after the "Active Art" workshops and interviewing the participants.

## 3. 'Practice of Art' Workshop Program

## 3.1. Halloween Art Workshop in National Cancer Center Hospital East

#### 3.1.1. Date of the Workshop

October 22, 2012

#### 3.1.2. Workshop Location

Day Room in the Palliative Care Unit of the National Cancer Center Hospital East

#### 3.1.3. Participants

One inpatient from the Palliative Care Unit, 3 family members of other inpatients, 3 nurses, 2 nutritionists, and 1 volunteer member participated in the workshop. We obtained 8 valid responses from the post-workshop interviews because the nutritionists were not available for interviews due to their work schedules. The art workshop staff members were the author and 2 students acting as assistants.



1. Grasp, squeeze, ball up, and wrap newspapers to form a pumpkin shape.



2. Tear various types of handmade Japanese paper, and glue the pieces onto the paper ball. Already torn pieces of Japanese paper are also available for use.



3. Select parts for the face, such as eyes and mouth, and glue them to the pumpkin.



4. Workshop staff apply varnish to complete the project.

Figure.1 Steps for making a pumpkin in the Halloween Art Workshop

#### 3.1.4. Methods

Make a pumpkin shape by balling up newspapers. Tear various types of handmade Japanese paper and glue the pieces onto the pumpkin shaped newspaper created in the previous step, and then attach facial parts such as eyes and mouth with glue. The pumpkin is finished after applying a coat of varnish (Figure 1). Four different programs according to participants' working level were set up. The programs are listed below from (I) through (IV) in order of difficulty, where (I) is the most difficult, and (IV) is the least difficult.

(I) Entire process (Steps 1 – 3 outlined in Figure 1)

(II) Tear Japanese papers, and glue the pieces onto the pumpkin shape, and then glue facial parts such as eyes and mouth. (Steps 2 and 3 outlined in Figure 1)

(III) Chose small pieces of Japanese paper and glue the pieces on a pre-shaped newspaper pumpkin, and glue facial parts such as eyes and mouth (part of Step 2 and Step 3 outlined in Figure 1)

(IV) Glue on facial parts such as eyes and mouth on a newspaper pumpkin with Japanese paper pieces already glued on (Step 3 outlined in Fig 1)

Have participants rate their moods from 1 to 7 (very good, good, somewhat good, normal, somewhat bad, bad, and very bad) before and after the workshop. Also observe participants' behavior.

In addition, ask all the participants to answer the following four 5-point scale questions after the workshop.

(i) How was the pumpkin activity?

Fun, somewhat fun, normal, not very fun, not fun

(ii) What do you think about the finished work?

Fond of it, somewhat fond of it, normal, not very fond of it, not fond of it

(iii) How easy were the steps?

Easy, somewhat easy, normal, somewhat difficult, difficult

(iv) Did it serve as a change of pace?

Yes, somewhat, no change, not really, no

Making Halloween pumpkins in the workshop is a creation of "Active Art" that involves visual elements of vivid warm colors of handmade Japanese paper in conjunction with unique tactile sensations offered by tearing and gluing different types of paper. The participants can also enjoy touching their own creation and holding it in their hands.

#### 3.1.5. Results

The patient from the Palliative Care Unit followed program (III) in the workshop. The self-mood rating of the patient improved from "bad" to "very good" (Patient A in Figure 3).

Figure 2 shows the interview results for the 4 questions related to the workshop. The answers highlights that all participants (patient, family members, nurses, and volunteer) enjoyed making the Halloween pumpkins, liked the pumpkins that they made, and thought that the workshop provided a good change of pace for them.



Figure.2 Interview results: National Cancer Center Hospital East



Figure.3 Evaluation of mood changes before and after the "Active Art" workshops

## 3.2. Halloween Art Workshop in the Higashi Sapporo Hospital

## 3.2.1. Date of Workshop

October 29, 2012

# 3.2.2. Workshop Location

Multipurpose room on the 4<sup>th</sup> floor of the West Unit of the Higashi Sapporo Hospital

# 3.2.3. Participants

Seven inpatients from the Palliative Care Unit, 3 inpatients from the general ward receiving palliative care, 1 nurse, and 1 occupational therapist attended the workshop. We received 8 valid responses for the interview from 10 participants, due to speech difficulty of one patient and another patient left early. The workshop staff members were the author and 2 students as assistants. Note that in the Higashi Sapporo Hospital, palliative care is practiced in the general ward in accordance with patient needs.

### 3.2.4. Methods

The same methods outlined in 3.1.4. in the National Cancer Center Hospital East were used.

# 3.2.5. Results

From the workshop participants, 1 patient followed program (I), 5 patients followed program (II), 3 patients followed program (III), and 1 patient followed program (IV). In each of the programs of various difficulties, participants began conducting tasks that became more difficult as the workshop proceeded. For instance, a patient that was only watching a staff member making a pumpkin for that patient started requesting particular colors of Japanese papers and then began selecting small pieces of Japanese paper and gluing them, and then eventually started tearing the Japanese paper. The patient became a more active participant, and started focusing on the work at hand. Other observations include increased conversation between patients, workshop staff, and medical staff, and changes in language and behavior, and emotions such as softening of facial expressions with more smiles.

After completing the work, all participants were photographed with their pumpkin on their lap, with smiles on their faces. Details of the behavioral observations are shown in Table 1.

In Table 1, Patient J was unable to answer interview questions due to speech difficulties, and Patient K left the workshop early and was not available to answer the questions.

All patients experienced improved moods. Seven patients improved from "good" to "very good" and 1 patient improved from "normal" to "good" (Patients B to I in Figure 3).

Figure 4 shows the answers to 4 questions about the workshop. It highlights that all the participants, the patients, nurses, and the occupational therapist enjoyed making the Halloween pumpkins, liked the pumpkins that they made, and thought that the workshop provided a good change of pace.



How easy were the steps?

Did it serve as a change of pace?

Figure.4 Interview results: Higashi Sapporo Hospital

Table1. Behavio	r observation	and medical	staff interview re	sults
-----------------	---------------	-------------	--------------------	-------

Patient	Behavior Observations (From medical staff interview)
Α	This patient is in a wheel chair. The state of wakefulness and sleep was unclear at the beginning of
	the workshop, but the patient started to speak more, and proactively participated by gluing the
	Japanese paper pieces and completed the work. (PCU <sup>*1</sup> patient, compromised cognitive function Said
	that "It was very fun" after returning to the room, and was in good physical condition.)
В	In a wheel chair. Selected preferred already-torn Japanese paper pieces by color and shape, and
	glued to complete the work. (PCU patient)
С	In a wheel chair. Likes to make handicrafts and give them out to staff on a routine basis. Selected
	preferred Japanese paper, tore them, and then glued the pieces to complete the work. Experienced
	some pain before the workshop, and a nurse checked on the patient's condition, but the patient
	answered "It doesn't hurt." Mentioned that the workshop "was fun" repeatedly after the workshop.
	(PCU patient may have had positive impact on subjective perception of pain.)
D	This patient walks independently. Chose preferred Japanese papers, tore them, and glued them to
	complete the work. Mentioned that it was a "good change of pace" and that the patient "felt good."
	Stayed in the room even after completing the work to speak to other patients and to view others'
	pumpkins. After returning to the patient's ward, went to the nurse station and showed the pumpkin to
	the nurses and spoke about it. (Scheduled to become an outpatient.)

Е	Seemed irritable at the start of the workshop, but calmed down considerably and the patient's
	movements slowed down. (Being administered anticancer drug for breast cancer. Limited cognition.)
F	In a wheel chair. At the beginning of the workshop, the patient lacked facial expressions and stayed
	motionless, but as a staff member was making the pumpkin while asking for the patient's preference,
	the patient started to glue the Japanese paper. Facial expression softened, and held up the pumpkin
	and smiled for a photo. (Developed depression after being treated for ovarian cancer. Repeatedly
	treated for aspiration pneumonia. Normally does not show any eagerness or willingness, and thus
	gluing Japanese paper on her own would normally be unthinkable. She was basically immobile in the
	morning song and exercise session which she attended earlier in the day.)
G	Uses a walker. Completed all the work. The patient said "I didn't want to come, but I was
	encouraged to participate by a nurse. Now that I came, it was quite fun." The patient was selecting the
	color of the Japanese paper intently. The patient talked about the patient's family and himself. A staff
	member walked the patient to the patient's ward. Then the patient walked the staff member back to
	the elevator. (PCU patient)
Н	In a wheel chair. Was not active at the start of the workshop, but started to speak up for his favorite
	color and size of Japanese papers, and then began gluing the paper pieces. Eventually the patient
	started selecting papers to tear and glue the torn pieces to complete the pumpkin. The patient adjusted
	himself on his wheelchair to be better able to make the pumpkin. Requested a paper hat, which was
	not a part of the program, and so a staff member made a hat for him to wear. He said "it was the most
	fun I've had" and seemed very satisfied. (PCU patient)
Ι	Walks independently. Participated his on own accord. Selected preferred Japanese papers, tore
	them, and glued them to complete a pumpkin. (PCU patient)
J	In a wheel chair. Has difficulty in speaking, expressionless, and not much body movement. Sleepy
	at the start of the workshop. As a staff member kept speaking to the patient and making a pumpkin in
	front of the patient, the patient started to nod when asked about paper preference. Towards the end of
	the workshop, started to take the facial parts for the pumpkin to put them against the pumpkin. Was
	photographed with the pumpkin on his lap, and with a smile. (PCU patient)
K	In a wheel chair. Was not actively participating at the start of the workshop (has edema on left
	hand). Eventually started to participate by gluing Japanese papers on the pumpkin. Stopped active
	participation because of fatigue after completing the paper gluing portion of the work, which took
	approximately 30 minutes because of fatigue. Watched other participants working on their works
	while waiting to be picked up. (PCU patient. Was half sleeping in the song and exercise session held
	in the morning of the same day, but was active in the workshop with a clear sensorium, and tried to
	interact with others.)

\*1: PCU (Palliative Care Unit):

Hospital wards that have been registered with prefectural governors to provide palliative care



Figure.5 State of the work of the Halloween art workshop



Figure.6 Analysis of variance of mean evaluation of mood before and after the "Active Art" workshops

# 3.3. Discussion

The average value of mood rating by the patients who participated in the Halloween Workshops at the National Cancer Center Hospital East and the Higashi Sapporo Hospital were determined. Using 1) cause, and 2) variance analysis, it was determined that there was significant difference between the average rating before and after the workshops (F(1,5)=12.25, p<.01). It was shown that the self-rating of mood improved significantly after the workshops (Figure 6). All participants experienced improved mood after participating in the workshops (Figure 3), and as such, utilizing "Active Art" in workshops can improve patients' moods.

Observing patients revealed that patients had a tendency to become more active participants later into the workshops, and concentrated more on the work. Using Japanese papers in warm colors that have high attention values, such as red, vermilion, orange, and yellow, was one of the important factors in inducing attention of

patients with a low level of wakefulness and cognition. It can also be thought that the texture unique to handmade Japanese paper, work such as tearing and gluing of the paper pieces, touching and holding the finished pumpkins, and holding them in their hands induced active movements of the patients. Selecting preferred types of Japanese paper, and choosing specific shapes and colors of facial parts such as eyes and mouth would have been a contributing factor to gaining the interests of the participants. In addition, communication that happened between the patients and staff would have led to improved moods of the patients and induced active movements.

According to the nurses who responded to the interview questions, palliative care patients have difficulties sitting still for 30 minutes even in popular programs like concerts, and they would leave early citing pain in their buttocks. However, the nurses have indicated that the patients were so focused on their tasks in the Halloween Art Workshops that they were not complaining about their physical ailments. From this, we can deduct that activeness inherent in creating art is more effective in inducing concentration compared to passively appreciating an art work.

The interview responses highlighted that all the workshop participants felt that the pumpkin making was fun, they liked the pumpkins that they made, and that it was a good change of pace. One occupational therapist responded that the pumpkin making was "somewhat fun" and this may have been because the therapist needed to assist the patients with their tasks, instead of being able to focus on making the pumpkin. Feedback from the Higashi Sapporo Hospital workshop, where a large number of patients participated, was that half of the participants felt that the work was somewhat difficult, indicating that when such a program is conducted for patients, the difficulty level of the work should be easier than that used in these workshops.

## 4. Conclusion

Quantitative analysis and evaluation of QOL improvement in the palliative care environment were conducted by holding "Active Art" workshops in two Palliative Care Units and then interviewing participants before and after the workshops, observing the participant behaviors, and rating participants' moods before and after the workshops.

From the patients' mood ratings before and after the workshops, it was found that participating in the workshops significantly improved the patients' mood. From this, we can deduce that participating in "Active Art" workshops can improve moods of the patients.

It was observed that patients participated more actively as the time passed in the workshops, and they focused on their work more as the workshops proceeded. The effect of high visual attention values from warm colors, tactile effect of unique material, touching, holding and playing with the finished work induced active movements in patients. In workshops in palliative care units that utilize "Active Art" it is important to carefully select materials with visual and tactile effects, and to give consideration to the difficulty level of the work involved. Increased conversations between patients, workshop staff, and medical staff, changes in language and behavior such as softening of facial expressions and more smiles were also observed. This is an indication that the workshops were catalytic in increased communication between the patients and the staff.

Interview responses highlighted that all the workshop participants thought that the Halloween Art Workshop was fun, and they liked the completed pumpkins, and thought that the workshops provided a good change of pace. It is important to consider offering programs with work with ranging difficulties to accommodate patients and other participants.

Palliative care units in different hospitals provide different services. For instance, the National Cancer Center Hospital East has more acutely-ill patients, whereas the Higashi Sapporo Hospital has more chronically-ill patients. It was difficult to get patient participation in the National Cancer Center Hospital East, and thus developing programs geared toward families of the patients and medical staff would lead to improved QOL in such environments. In the Higashi Sapporo Hospital, developing programs with various difficulty levels suitable for different patients would lead to improved QOL in palliative care. Hereafter, it would be prudent to develop programs that can be adjusted to various participants and can improve QOL in different palliative care units by holding "Active Art" workshops. Finally, I'd like to thank the National Cancer Center Hospital East and Higashi Sapporo Hospital for their cooperation and consideration.

This work was supported by JSPS KAKENHI Great Number 24603001, and the Sasakawa Memorial Health Foundation.

## 5. Examples Citations

- [1] Shibata, T. (2003) Therapeutic Robot -Paro, Healthcare Engineering Association of Japan, 45, 1, pp51-56.
- [2] Wada, K., Shibata, T., Tanie, K. (2005) Robot Therapy at a Health Service Facility for the Age Evaluation of Psychological Effect of one Year Experiment, Transactions of the Society of Instrument and Control Engineers, 42, 4, pp386-392.
- [3] Wada, K., Shibata, K., Saito, T., Tanie, K., (2003) Psychological and Social Effects of Robot- assisted Activity iv the Elderly Robot- assisted at Health Service Facilities, Journal of Advanced Computational Intelligence, 7, 2, pp130-138.
- [4] Yoshioka, K. (2008) Impression and Space Evaluation of Abstract Paintings in Hospital, Japan Society of Basic Design and Art, 017, pp67-74.
- [5] Yoshioka, K. (2009) *Relevance to Impression Evaluation by Elements Constituting Abstract Paintings*, Tsukuba Studies in Art and Design, 13, pp171-180.
- [6] Yoshioka, K. (2010) Relation between Impression Evaluation and Straight Line Elements in Abstract Paintings, Bulletin of Japanese Society for the Science of Design, 57, 2, pp39-46.
- [7] Yoshioka, K. (2011) Impression Evaluation and Eye Movement Related to the Characteristic Expression as Elements in Abstract Paintings: MONDRIAN, MALEWITSCH and ROTHKO, International Journal of Affective Engineering, 10, 1, pp89-97.
- [8] Yoshioka, K. (2011) A Study on Impression Evaluation of Paintings as Hospital Art Focus on the Analysis of Visual Components -, Doctoral Dissertation of University of Tsukuba
- [9] Yoshioka, K. (2012) *Examination of Components of Required Painting as Hospital Art*, Japan Society of Basic Design and Art, 020, pp51-56.
- [10] Yoshioka, K. (2012) Evaluation of Hospital Art in Outpatient Impression and Appreciation Behavior -Examination of Waiting Room and Access Passageway, Bulletin of Japanese Society for the Science of Design, 59, 3, pp31-38.
- [11] Yoshioka K., Hasumi, T. (2011) *Behavior Observed during Workshop in Hospital*, Japanese Society for the Science of Design 58, pp106-107.

[12] Yoshioka K., Hasumi, T. (2012) Evaluation of Mood in Hands-off and Hands-on Art Experience -Examination of hospitable art for medical environment improvement, Japanese Society for the Science of Design 59, 8-14(CD-R).