

Effects of Music therapy on psychological aspects of family-caregivers and care staffs in palliative care ward as a pilot study

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Abstract

Objective: The present study examined effects of music therapy on mood and healing sense of family-caregivers and staffs in a palliative care ward and their relationships in order to elevate well-being.

Method: This study is a cross-sectional study. Participants were 25 family caregivers and staffs related to patients in a palliative care ward in Japan. The professional Jazz pianist played piano at live concert once and the audience sang in one session. Participants completed the Japanese UWIST Mood Adjective Check List (JUMACLE) consisted of Tension Arousal (TA) and Energetic Arousal (EA) pre and post music therapy, the Healing questions, and comments of this therapy only post.

Results: The TA score significantly decreased from 18.3 to 14.6 ($p < 0.05$), and the EA score significantly increased from 32.1 to 35.1 ($p < 0.05$). The mean healing questions scores was 4.5 point of total 5 point. The healing score significantly correlated with EA ($r = .46, p < .05$), but not with TA.

Conclusion: The music therapy focused on Jazz music decreased tension or anxiety and increased vigor or energy, and healing sense related to vigor. Music therapy in a palliative care for family-caregivers and staffs may be useful to promote their well-being.

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Introduction

Recently, the number of elders is increasing, and many elders will die in near future. Family members experience fatigue¹⁾, depression²⁾ and health effect³⁾.

Music therapy is one of the effective interventions to alleviate these sufferings, and it has been used in palliative care. The palliative care music therapy is described as "the professionally informed and creative use of music within a therapeutic relationship with people in life-threatening conditions who have been identified as needing psychosocial, physical, or spiritual help, or who desire further self-awareness, enabling increased life quality"⁴⁾.

A previous study showed the effects of music therapy. Krishnaswamy & Nair⁵⁾ showed the effects of music therapy on pain. Keenan & Keithley⁶⁾ also reported the effect on pain of patients. Nakayama, Kikuta, & Takeda⁷⁾ showed the effect of music therapy on cancer patients, which consisted of one live session of about 40 minutes. Music therapy was effective in reducing anxiety and depression, but not fatigue. Moreover, Doro, Neto, Cunha et al.⁸⁾ reported that music therapy improves psychological distress such as pain, anxiety or mood disorders of patients undergoing hematopoietic therapy. From other studies, music therapy was effective on comfort, relaxation, mood, confidence, resilience, quality of life, and well-being⁹⁾. Although these are studies for patients in palliative care, there are few studies for family caregivers or staff in palliative care wards.

For family caregivers, Choi¹⁰⁾ showed the effect of music and progressive muscle relaxation on anxiety and fatigue in family caregivers of hospice patients. Popkin, Levin, Lichtenthal, et al.¹¹⁾ showed a program, which was for nurses and ancillary staff working in cancer settings, to reduce grief. Although the effects of music therapy were about sedative aspects, it is not clear about the effect of vigor. A previous study

demonstrated that the music had effects both sedation and increasing vigor for ordinary people¹²⁾ however it was not clear whether family caregivers and medical staffs in palliative care. A mental or psychological therapy for them was required in order to keep intention to care for patients. This study aims to investigate whether music therapy will be effective on vigor for family care givers or staffs in palliative care, and whether there are additional effects on anxiety or depression.

Method

Participants: Participants were family-caregivers and medical staffs who took care of patients and staffs such as nurses or care nurses in a palliative care ward in a general hospital. This hospital was located at a region in Japan.

Procedure:

We conducted this study in a palliative ward in a general hospital in western Japan. The music concert was generally hold about two or three times in a year by a professional jazz pianist in the palliative ward. In this time, the patients, the family care givers of them, and staffs gathered in a hall in the palliative ward. The duration of the concert was about 60 minutes. Since the hospital stay duration has been shorten in Japan, participants attended this concert only once. The jazz pianist played some tunes focused on jazz music and the audience sang old songs afterwards at the palliative care ward. The researcher passed out questionnaires before the live concert, and audience members who had the intention to participate completed it before and after the concert. After the concert, they submitted it voluntarily to the collection box. Both the ethical committees of the researcher's college and the institute approved this study.

Questionnaires:

Mood: We used Japanese UWEST Mood Adjective

Check List (JUMACLE) by Shirasawa, Ishida, Hakoda, et al.¹³⁾. It consisted of two factors including 20 questions, TA (Tensions Arousal, which shows the level of tension or anxiety) and EA (Energetic Arousal, which shows the level of vigor or activity). Participants measure each item from 1- to 4-point on the Likert scale. This scale has 4-point Likert scale. The range of scores was 20-80 point. The high score show high arousal.

Healing sense: We used two questions "I have peace of mind" "My heart was cured." by Matsuda, Atsumi, Suzuki et al¹⁴⁾. Participants rated each item from 1- point "I did not feel it at all" to 5- point "I feel clearly." We used a mean score of two questions.

Results.

The TA score at the pre intervention was 18.0 point. Since the standard mean score of the TA¹³⁾ was 17.0 including 2 points SD, the score of tension level was standard. In order to examine the effects of music therapy, we conducted a statistic t-test on scores of pre and post. The TA score significantly decreased from 18.3 to 14.6 points ($p < 0.05$) (Figure 1).

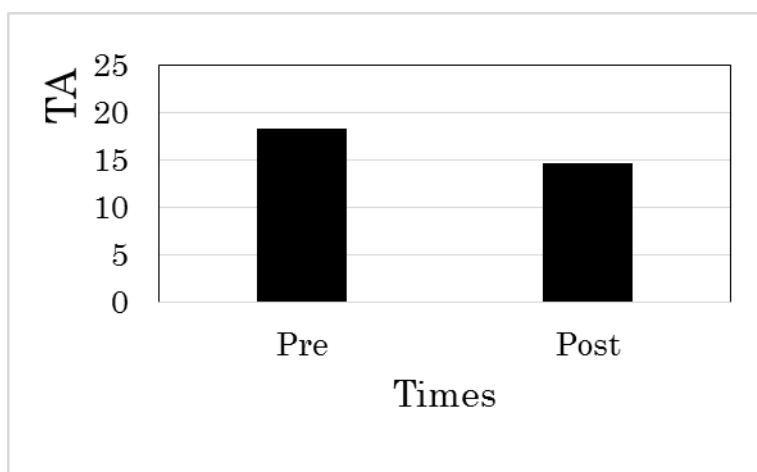


Figure 1: Changes of TA

Then the EA score at the pre intervention was 32.1 point in this study. Since the standard mean score was 24.0 point, the EA in this study was high. As for effects, the EA score significantly increased from 32.1 to 35.1 ($p < 0.05$) (Figure 2).

The mean healing score was 4.5 point of the

total 5.0. It may be a high score. To examine relationships between mood and healing, we conducted the "Pearson's correlational analysis". The healing score significantly correlated with the EA score ($r = .46$, $p < .05$), but not with the TA (Table 1).

We show some comments of participants (Table 2). The number of comments were small, we showed total comments which were summed up.

Discussion

The TA significant decrease shows that music therapy was useful to decrease tension or anxiety. It supports previous studies⁷⁾⁸⁾¹⁰⁾. Most research shows the effects of anxiety on patients, and we show the same effects on family-caregivers and staffs.

The EA significant increase shows that music therapy increases energy or vigor of family-caregivers in the palliative care ward. There are few studies about this kind of effect. Kinds of melody may affect people differently. In this study, the pianist played tunes based on jazz music. Previous studies show that humans feel vigor when they listened music with a fast tempo¹⁵⁾¹⁶⁾ and a complex melody¹⁵⁾. The jazz music in this study might include both a fast tempo and a complex melody, thus the EA might increase after the music therapy. Since mindfulness art therapy short version increase EA¹⁷⁾, the music therapy by jazz music may have the same kind of effect.

As for correlation analysis, the EA positively correlated with healing score. It means that a person feels the healing sense and gets high energy after music therapy. This result is a little different from a previous study. Naito¹⁸⁾ showed correlation between relaxation (healing sense) and inactive emotion. That is, there was not a correlation between vigor and healing. The reason of this difference was that, although the music was produced by a radio cassette in Naito¹⁸⁾, that in the present study was produced at a live concert by the professional pianist.

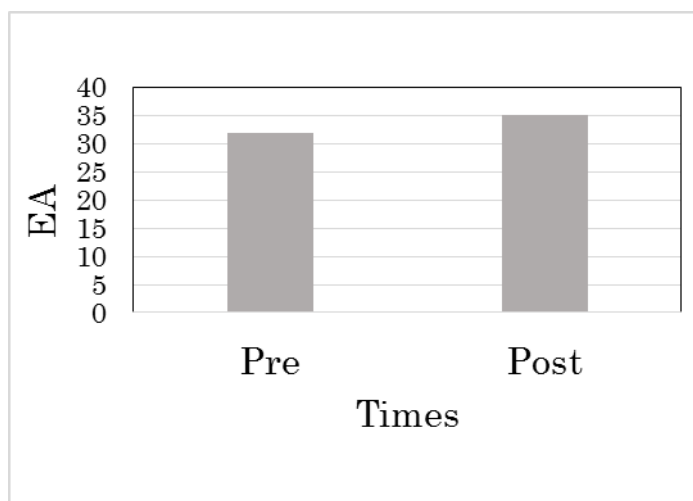


Figure 2: Change of EA

Table 1. Correlation coefficient between mood and healing

	r	p
TA	r=-.39	p=.06
EA	r=.46	p=.02*

* p<0.05

Table 2 . Samples of impression of the live concert

1. We could have an enjoyable time.
2. Music was comfortable even though patients have a disease.
3. Tears brought out naturally.
4. Continuous visiting is wonderful.
5. I heard music with my mother with the disease and my baby in pregnant.
6. I could forget everything and enjoyed.
7. The patients reacted with music who do not move in daily life.

The vibration of sound might influence of humans' heart, and intention or sympathy of player for audience might transmitted.

In the comments from the audience, there were some comments related to spirituality. A family member said, "Tears were brought out naturally" or "I heard music with my mother in the hospice together with my baby while I am pregnant (they seemed to feel transcendent like religion)." If spirituality is defined as "peace of mind" and "religion"¹⁹⁾, they felt spiritual sense. Music therapy might have an influence on spirituality. This fact supported the study by Burns, Perkins, Tong, et al.²⁰⁾ in which family perceived spiritual support in music therapy.

As a limitation, the number of participants were small, and it is hard to generalize with this result. In order to generalize, we need to include many more participants. And we need to examine nature or character of Jazz music. Moreover, we did not set a control group, we need to examine the effects of this therapy including the control group.

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