

## Music Therapy on the Quality of Life in Cancer Patients

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### Abstract

World Health Organization has estimated that there are an increase number of cases deaths from cancer in the near future. Cancer has become one of the most discussed. In this study, we focus on the quality of life of the cancer patients, by using music therapy and to observe the difference between pre-test and post-test results with music treatment. This study was to examine the alternative therapies using of music to enhance, and quality of life, using the Thai Hospice Quality of Life Index (T-HQOLI), in cancer patients. The 11 cancer patients were divided into two different groups; the control (non-music) group followed their routine schedules; the music group received additional music therapy with a music leader. The results from both questionnaires, collected during 4<sup>th</sup>, 8<sup>th</sup> and 12<sup>th</sup> week, showed that music group is most significantly improved compared to the control (non-music) group. This suggested that the combination of music has the most potential to increase the quality of life for the cancer patients. It can conclude that the music treatment is a good model to improve both psychological and physiological conditions. The treatment can also be used in general clinics or hospitals as an alternative treatment for cancer patients.

**Keywords:** Music Therapy, Quality of life, Cancer patient

### 1. Introduction

Cancer is a term that encompasses a complex group of more than 100 different types of cancerous diseases. Cancer is a disease associated with mental health. Spiritual discipline and proactive positive thinking may aid in surviving the battle with cancer. Body tension, derived through anger, bitterness, worry and stress which are indicators, in the early stages of cancer, of non-acceptance of the disease, may in fact heighten and compound the problems. These initial concerns may be mitigated through acceptance, which may allow for some remission (Onnchomjun 2009). Cancer cells cannot grow in an environment that the organism has enough oxygen. Routine exercise and deep breaths help the body get oxygen up into the chest and into the cellular level (Mustian *et al.* 2004).

In Thailand, the trend of cancer is increasing in line with other countries around the world. According to statistics for 2007 from the Bureau of Policy and Strategies, Ministry of Health found that the mortality rate of patients with cancer is growing every year and the number one cause of death in Thailand since 2003. The National Cancer Institute in 2008 also estimates that Thailand will have 120,000 new cancer patients and will increase by another 50 percent in the next 10 years (National Cancer Institute 2008). Cancer is ranked among the top three causes of death in Thailand, with an estimated age adjusted incidence rate of 150.4 per 100,000 for males and 123.0 for females (Ministry of Public Health 1996).

Music therapy is an easy, inexpensive way to help cancer patients cope with the emotional upset often caused by high-dose chemotherapy and autologous stem cell transplantation. Patients who were visited by a trained music therapist reported less anxiety and better overall mood than patients who did not receive music therapy. According to Cassileth and his colleagues studied in 2003, 28% reduced anxiety and 37% reduced disturbance 69 of cancer patients, when p value is equaled to 0.01(Cassileth *et al.* 2003).

Quality of life (QOL) is used in multidimensional, intricate concept that synthesizes the unique physical, functional, spiritual, psychological, and social well-being of each individual (George & Clipp

2000; Mast 1995; Smith 1996). The aim of this study is therefore to examine the use of music to enhance the quality of life in cancer patients.

## 2. Material and Methods

Volunteer participants ( $n = 11$ ) were classified as stage 3 to 4 (terminal stage) of cancer patients who received hospice care. They were treated at the Arokhayasala Foundation, Sakonnakhon Province in Thailand. These patients were randomly assigned into 2 groups, control (non-music) group ( $n = 6$ ) and music group ( $n = 5$ ). The patients were treated with drug chemotherapy, radiation therapy or surgery before being treated at the Arokhayasala Foundation, Thailand. Upon admitted into the hospice program, the participants were evaluated by the nurses and medical doctors for this study qualification. All participants were assigned to one of the two study groups. The human right of participant protection of this study has been approved by Burapha University Ethics Committee, Thailand.

After all patients signed agreement to participate in the study, the participants were asked to conduct health assessments the Thai Hospice Quality of Life Index (T-HQOLI). Both control (non-music) group and music group were collected from all the participants every 4 weeks. Participants in music group were singing and praying activities for 30 minute, 5 days per week for music session. All of the data collected, including the results from questionnaires, were analyzed using the Software Package of Social Statistic/Personal Computer (SPSS / PC). Non-parametric scale was calculated with Kruskal Wallis Test and Friedman Test. The Mann-Whitney U test was also used when statistical analysis was significantly found. The statistical significance of this study was set at  $p$  value less than .05.

## 3. Results and Discussion

The mean age of participants was 52.76 (range 40-72 years of age). The majority of study patients were classified as stage 3 (72.7%) with the rest at stage 4 (27.3%). Most of the patients were married ( $n = 8$ , 71.4%) and 6 out of them were primary school educated (55.5%). Their main occupations were farmer ( $n = 8$ , 72.7%). (See Table 1) The Kruskal Wallis test analyses to compare between control (non-music) and music groups were not significantly different each week as shown in table 2. During this experimental week (12<sup>th</sup>) the control (non-music) group (Mean =  $7.80 \pm 0.50$ ) was not statistically significant different from music group (Mean =  $7.62 \pm 0.48$ ). At the same time, the table 2 represents the comparison between groups of study at pre-test, 4<sup>th</sup>, and 8<sup>th</sup> weeks. During pre-test ( $p = 0.246$ ), 4<sup>th</sup> ( $p = 0.104$ ), 8<sup>th</sup> ( $p = 0.118$ ) and 12<sup>th</sup> ( $p = 0.199$ ) week, there was no significant improvement in quality of life in music groups ( $p > 0.05$ ). The mean differences of quality of life of control and music groups analyzed using Friedman test, between week 4, 8 and 12 after treatment shows significant differences when compared with pre-test ( $p = 0.000 - 0.002$ ). Being at Arokhayasala Foundation made cancer patients a better quality of life. All cancer patients' quality of life had been better since they were there. According to this study, the change of quality of life found in current study would reflect and document the efficiency of the traditional medication and well-being of the cancer patients. Our current study indicates that music therapy can enhance quality of life after 12<sup>th</sup> week of treatment and supports that the quality of life of cancer patients listening to music was higher and improved when compare to the previous experiment (Hilliard 2003). "Health Day" reported that music can improve the well-being of very sick patients, especially "life-limiting" diagnoses patients (Mozes 2011). Furthermore, the value of music therapy was recognized as a powerful anxiolytic treatment, in helping dying patients become more engaged with others (Kubler 1974). Listening to music can lower score on pain of the cancer patients (Pittman 2011). According to previous studies, the Stanford Hospital and Clinics offered music in the patient room, especially for end-of-life situations. The physicians of Stanford Hospital and Clinic believe that bedside music can provide healing value and comfort to both the patients and the visitors (Stanford Hospital and Clinics 2011). Higher means on quality of life of cancer patients in week 12<sup>th</sup> indicates that improving these cancer patients with music or typical treatment provided by Arokhayasala Foundation, Thailand. This study also indicates that every treatment provided show positive improvement across time, including typical treatment of Arokhayasala Foundation. Being at Arokhayasala Foundation has its own positive effects to their cancer patients.

#### 4. Conclusion

This study aimed to determine the effectiveness of music therapy on quality of life in cancer patients at Arokhayasala Foundation, Thailand. The music was simple and effective to undertaken by the cancer patients. The quality of life of cancer patients is better starting from week 12<sup>th</sup> after explosion to music. The Arokhayasala Foundation typical treatment by providing participation activities, cooking, and gardening, praying and listening to the monk with herbal medication shows more effectiveness on quality of life.

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Table 1. The characteristics of cancer patients (N = 11)

Characteristics	Study Groups			
	Control		Music	
	(N)	(%)	(N)	(%)
<b>Status</b>				
Single	-	-	2	40.0
Married	6	100	2	40.0
Divorce	-	-	1	20.0
<b>Education</b>				
Primary School	2	33.3	4	80.0
High School	4	66.7	1	20.0
Other	-	-	-	-
<b>Occupation</b>				
Merchandise	2	33.3	-	-
Business Owner	1	16.7	-	-
Farmer	3	50.0	5	100.0
<b>Cancer Stage</b>				
Stage Three	4	66.7	4	80.0
Stage Four	2	33.3	1	20.0

Table 2. Means and SD of QOL between Pre-test, 4<sup>th</sup>, 8<sup>th</sup> and 12<sup>th</sup> weeks

QOL	Pre-test	Week 4	Week 8	Week 12	$\chi^2$
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	p-value <sup>A</sup>
Control	4.67 (0.51)	6.04 (1.18)*	7.23 (0.86)*	7.80 (0.50)* <sup>‡</sup>	17.75 .000*
Music	4.35 (0.46)	5.81 (0.38)*	7.29 (0.58)*	7.62 (0.48)* <sup>‡</sup>	15.00 .002*
$\chi^2$	2.34	2.34	1.50	2.04	
p-value <sup>B</sup>	.246	.104	.118	.199	

\* = p value < .05 (Ranging from .027 to .048) (between pre- and post-test using Mann-Whitney U test)

p-values<sup>A</sup> from Friedman test

p-value<sup>B</sup> from Kruskal Wallis test (a, b Results with the same letter are not statistically different (between groups))

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