

## RESEARCH ARTICLE

# Perspectives of Medical Oncologists regarding Music Therapy for Patients with Cancer in Turkey - Can Musicology be Integrated into Psycho-oncology?

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### Abstract

**Background:** Music therapy is a common complementary and alternative therapy in addition to medical treatment for patients with cancer. If music therapy, which is known has a positive effect on human emotions and behaviors, is a useful additional therapy, it should be more integrated into psycho-oncology. In this study, we aimed to determine medical oncologist attitudes to music therapy for patients with cancer and knowledge about musicology and music therapy in Turkey. **Materials and Methods:** This survey study included questions about participant attitudes and knowledge regarding music therapy as well as demographic characteristics. The population of the study were 402 physicians working in medical oncology in Turkey and the sample covered 112 participants in the survey. For statistical analyses the chi-square test, Fischer exact test, and Mann-Whitney U analysis are applied. **Results:** In our study the rate for medical oncologists who were interested in music therapy was 28% (n=112). Some 30% (n=34) of medical oncologists recommended music therapy for their patients and 55% (n=61) recommended music therapy to prevent anxiety in patients with cancer. **Conclusions:** In this study, for more harmony with patients and in order to ensure management of adverse effect, it was concluded that music therapy should be regarded as an additional therapy in oncology clinics.

**Keywords:** Musicology - music therapy - complementary medicine - cancer - psycho-oncology - medical oncologists

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### Introduction

Since ancient times in history of humanity music is a therapy method which is really interested in. Nowadays, it is a part of non-drug complementary treatment like hypnosis, yoga, group and talking cure and religious inculcation for psychological assistance in patients (O'Callaghan et al., 2012; Archie et al., 2013; Toccafondi et al., 2013). Music therapy is described as interactions which have been occurred from different types of music, on human's emotions, behaviors and physiological properties (Covington and Crosby, 1997).

In previous studies, the positive effects of music and music sounds in patients with physiological disorders like anxiety, chronic and or geriatric diseases like coroner heart disease, cancer or chronic pain were researched (Zhang et al., 2012; Azoulay et al., 2013; Loewy et al., 2013; O'Callaghan et al., 2013). From the literature, most of those studies were observational studies which were done by doctors, nurses and music therapists. But there is no study that is managed by musicology and discussed with ethnographic perspective and musicology of music therapy in patients with cancer. The reason for this is ethnographic

view which is described the effects of music on human emotions and behaviors not known by world of medicine exactly.

Music is a compatible figure and motion of sounds which has an effect on emotions by auditory. Thus music describes all types of behaviors in humanity so it's not surprising that music effects the psychological status of human. Musicology is a discipline which researches music from theoretical, physical, psychological, aesthetic, sociologic and cultural ways. The important thing in music therapy is not any music or melody. To find most appropriate music and melody for therapeutic effect is important. And this is directly related to ethnographic view which describes musicology and music's effects as behavioral on social relations (Lloyd, 2011; Huron, 2012; Stevens 2012).

What is the importance of music therapy and degree of applicability in clinical practice applications today? In this study, we aimed to determine medical oncologists' attitudes for musicology, music and therapy in patients with cancer and knowledge about musicology in Turkey. Due to this aim, as basis psycho-oncology, musicology and music therapy's integration into psycho-oncology and palliative care treatment are discussed.

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**Materials and Methods**

This study has been planned as a survey study which aims to query perspective of medical oncologists to music therapy and knowledge about musicology and music therapy.

The study is planned with permission of academic board according to ethical rules. Participants who accepted to participate this survey answered the questions.

The population of the study is 402 doctor who work in medical oncology in Turkey and the sample of the study is 112 (28%) participants who participate the survey.

The survey form which has been prepared by the researchers has been sent via e-mail as internet link to medical oncologist who are the member of Turkish Society of Medical Oncology. The survey includes 20 questions which are about attitudes of music therapy in cancer and musicology and knowledge of participants' demographic, vocational and social properties. Likert type scale has been used in the questions which are prepared to define participants' knowledge and attitude. They have five type of answers (Strongly agree, agree, neither agree or disagree, disagree and strongly disagree). The answers are collected via internet between March-April 2013.

The data are expressed as the mean±standard deviation or the median and interquartile range (25-75%). The distribution of variables was analysed with the Kolmogorov-Smirnov test. Quantitative variables with normal distributions were analysed with a two-tailed, independent Student's test. Nonparametric variables were analysed with the Mann-Whitney U test. However, qualitative parameters were analysed with the Chi-square test and Fisher's test.

A significance value of p<0.05 was accepted as statistically significant. All of the analyses were performed using the Statistical Program for Social Sciences (SPSS) version 15.

**Results**

Total 112 of 402 medical oncologist who are the member of Turkish Society of Medical Oncology, have received our survey via internet. On the basis of low participation, it has been thought that Turkish medical oncologist are not interested in music therapy and musicology exactly. Demographic and vocational properties of participants are given in Table 1.

The participants rate who have knowledge about music therapy is 57% (n=64), and only 23% (n=26) of them have an experience with music therapy. The rate of participants who know music therapy can be done active or passive is

46% (n=52). Whereas 60% (n=67) of them have positive attitude for music therapy in patients with cancer.

Only 21% (n=24) of them have been heard musicology term before, but 38% (n=42) of them know that musicology is a discipline. 60% (n=67) of participants want to listen music at clinics but in daily practice 48% (n=54) of medical oncologists work with music consistently for all day and 30% (n=34) of oncologists work at clinics which have music. 22% (n=25) of doctors are following the studies about music therapy and scientific and only 5% (n=5) of them have been a participant of scientific study about music therapy.

The participants' answers about music therapy and musicology discipline and their rates are given in Table 2. 91% (n=102) of Turkish medical oncologist state that they listen music in daily life and feel rested. The most listened music is Turkish Art Music with 45% (n=51), then 34% (n=38) Classical music and 19% (n=21) Turkish folk music. Additionally, 75% (n=84) of participants state that they would rather to use their favorite songs and music if they use music therapy. 12% (n=13) of medical oncologists can play a musical instrument. 57% (n=64) of participants think that Turkish art music and classical music are the most effective music which can affect the patients' blood pressure and pulse.

The connection of music therapy with knowledge and gender, age, academic title, and working place could not found (p=0.146, p=0.214, p=0.234, and p=0.134; respectively). There is no significant difference in gender, age, academic title, working place, between the participants who believe the positive effect of music therapy and do not believe it's effects (p=0.151, p=0.208, p=0.253, and p=0.114; respectively).

Only 6% (n=7) of participants have experienced working with a musicologist and 31% (n=35) of participants want to work with a musicologist. 55% (n=61)

**Table 1. Demographic Characterizations of all Participants in this Study**

Features	n	%
Participants	112	100
Gender		
Female	43	38
Male	69	62
Age (years)		
≤40	64	57
≥40	48	43
Positions		
Fellowship	46	41
Specialist	39	35
Academic degrees	27	24
Hospital		
State Hospital	15	13
Education and Research Hospital	31	28
University Hospital	61	55
Private Hospital	5	4

**Table 2. General Attitudes of Participants about Music Therapy and Musicology**

Questions	Strongly Agree n (%)	Agree n (%)	Neither agree or disagree n (%)	Disagree n (%)	Strongly Disagree n (%)
Music therapy is effective palliation of nausea and vomiting in cancer patients	11 (10)	32 (29)	18 (16)	45 (40)	6 (5)
Music therapy is effective in the palliation of pain in patients with cancer	14 (13)	28 (25)	11 (10)	46 (41)	13 (11)
Music therapy is effective in reducing anxiety in patients with cancer	29 (26)	47 (42)	16 (14)	14 (13)	6 (5)
Listening to music relaxes me	71 (63)	31 (28)	5 (5)	4 (3)	1 (1)
Cancer patients do not notice the music during treatment due to anxiety	11 (10)	18 (16)	29 (26)	29 (26)	25 (22)

of participants recommend music therapy for preventing anxiety. Generally 30% (n=34) of them recommend music therapy.

For vomiting and nausea palliation the recommendation rate is 30% (n=34) and for pain palliation the rate is 32% (n=36). 66% (n=75) of doctors think that music therapy has positive effect on anxiety in patients with cancer and 37% (n=41) of them think that music therapy is effectual for pain and vomiting and nausea palliation. 43% (n=48) of doctors think that music therapy is not unnecessary on anxiety, stress, pain, nausea etc. during chemotherapy.

## Discussion

In this study from the musicology and psycho-oncology perspectives the importance of music therapy is researched in Turkish medical oncology clinics as practically. In this study, we aimed to determine medical oncologists' attitudes for musicology, music and therapy in patients with cancer and knowledge about musicology in Turkey. In our study, medical oncologists' rate who are interested in music therapy is 28% (n=112) and on the basis of low participation, it has been thought that relevance is not enough and familiarity.

Patients with cancer struggle with both diseases' symptoms and undesirable effects. All of pain, nausea, vomiting, anorexia, losing weight and fatigue/weakness, could not be recover and fear of death can impact life quality and compatibility with treatment. This status can cause a vicious cycle, and it is concluded by physical and psychological exhaustion (Tanriverdi, 2013).

Previous studies show that depression and anxiety rate is more in patients with cancer than normal population (Zhang et al., 2012). On the basis of psycho-oncology studies because of bad emotional status patients with cancer can effect negatively oncologists and relatives. So it very important to control both malignancy and mental health in patients with cancer appropriately.

Only giving drug treatment for all symptoms and psychological disorders can be thought more drug and more undesirable effect by patients. In such case, faith and compatibility to treatment decrease and lower life quality can be occurred so complementary treatment except drugs must be discussed. Therefore, most methods of alternative medicine and complementary treatments are not scientific. Patients can lose their faith to positive science and more money and be prevented to have therapy, this should be avoided. Music therapy is available easily, without adverse effects, not cost much, not inhibitive the medical therapy and scientifically complementary discipline.

From the previous studies, the rates of adoption to music therapy in patients with cancer and health professionals show variety like 5-90% (Wormit et al., 2012). And also same results are taken from pediatric intensive care patients, chronic other patients, hospice patients and their health professionals, too (Demmer and Sauer, 2002; Bouhairie et al., 2006; Mathur et al., 2008; Loewy et al., 2013). Chang et al. (2011) research complementary and alternative medicines in patients, healthy people and health professionals via a survey and this cohort study shows us that music therapy is not

preferable very much. Only 8% of participants refer music therapy in this study and more referable ones are more popular and expensive methods like natural supplements, green tea, massage, herbal remedies (Chang et al., 2011).

Whereas, in a study which carries out for evaluating attitudes to complementary and alternative therapies and consists of oncologist (n=147) and oncology nurses (n=183) and social workers (n=219) by Hann et al. (2004). They report that 92% of oncologists are familiarity and 90% of them recommend music therapy. In our study 32% of medical oncologists are familiarity and 43% of them recommend music therapy. In appropriate conditions 54% of them want to work with a musicologist. This situation shows us in our country musicology and music therapy don't have sufficient interest and it has been thought that psycho-oncology should be more integrated into clinic oncology.

Musicology is a discipline which researches music and the effect of music on human via sound and rhythms. Ethnomusicology is a sub-discipline which researches music's effect on human spirit and behavior as social, cultural and individually. If music therapy is researched in ethnographic basis, music types for individual patients and physical and spiritual effects of this music can be observed better and more individually. In previous studies, patients listened music which they choose and love and also this music was relaxing and be accepted, several authors recommend individual music therapy (Huang et al., 2010; Kwekkeboom et al., 2010; Li et al., 2012). Music's effects on endocrine system and neurotransmitters is known as a positively affect on heart rate, blood pressure, psychological and behavioral status (Bekiroglu et al., 2013; Rogue et al., 2013). To determine the most appropriate music type for patients with cancer and for their physical disorders due to symptoms cause of cancer/cancer treatment and also their choice is the basis of ethnographic level of complementary treatment. Unfortunately, musicology and ethnomusicology couldn't gain a place in medicine world and are not accepted in combination at clinic oncology yet.

In our study the rate of oncologists' knowledge about musicology and musicology discipline is very low. We believe that musicology and psycho-oncology should be more integrated into for supporting patients with cancer in physical and psychological way. As a result in Turkey we have a proverb such "music is the food of soul" and medical oncologist are not eager enough about recommending music therapy to patients with cancer. Whereas, psycho-oncology's integration into clinic oncology helps more conformity with patients and managing adverse effects and music therapy should be more interested in oncology clinics as a complementary therapy and it's so important because there is no cost to do this.

## References

- Archie P, Bruera E, Cohen L (2013). Music-based interventions in palliative care: a review of quantitative studies and neurobiological literature. *Support Care Cancer*, **21**, 2609-24.

- Azoulay E, Chaize M, Kentish-Barnes N (2013). Music therapy for reducing anxiety in critically ill patients. *JAMA*, **309**, 2386-7.
- Bekiroglu T, Ovayolu N, Ergün Y, Ekerbiçer HÇ (2013). Effect of Turkish classical music on blood pressure: a randomized controlled trial in hypertensive elderly patients. *Complement Ther Med*, **21**, 147-54.
- Bouhairie A, Kemper KJ, Martin K, Woods C (2006). Staff attitudes and expectations about music therapy: pediatric oncology versus neonatal intensive care unit. *J Soc Integr Oncol*, **4**, 71-4.
- Chang KH, Brodie R, Choong MA, Sweeney KJ, Kerin MJ (2011). Complementary and alternative medicine use in oncology: a questionnaire survey of patients and health care professionals. *BMC Cancer*, **11**, 196-204.
- Covington H, Crosby C (1997). Music therapy as a nursing intervention. *J Psychosoc Nurs Ment Health Serv*, **35**, 34-7.
- Demmer C, Sauer J (2002). Assessing complementary therapy services in a hospice program. *Am J Hosp Palliat Care*, **19**, 306-14.
- Hann DM, Baker F, Denniston MM, Winter K (2004). Oncology professionals' views of complementary therapies: a survey of physicians, nurses, and social workers. *Cancer Control*, **11**, 404-10.
- Huang S, Good M, Zauszniewski J (2010). The effectiveness of music in relieving pain in cancer patients: a randomized controlled trial. *Int J Nursing Studies*, **47**, 1354-62.
- Huron D. Two challenges in cognitive musicology (2012). *Top Cogn Sci*, **4**, 678-84.
- Kwekkeboom K, Cherwin C, Lee J, Wanta B (2010). Mind-body treatments for the pain-fatigue-sleep disturbance symptom cluster in persons with cancer. *J Pain and Symptom Management*, **39**, 126-38.
- Li XM, Zhou KN, Yan H, Wang DL, Zhang YP (2012). Effects of music therapy on anxiety of patients with breast cancer after radical mastectomy: a randomized clinical trial. *J Advanced Nursing*, **68**, 1145-55.
- Loewy J, Stewart K, Dassler AM, Telsey A, Homel P (2013). The effect of music therapy on vital signs, feeding, and sleep in premature infants. *Pediatrics*, **131**, 902-18.
- Lloyd D (2011). Mind as music. *Front Psychol*, **2**, 63.
- Mathur A, Duda L, Kamat DM (2008). Knowledge and use of music therapy among pediatric practitioners in Michigan. *Clin Pediatr (Phila)*, **47**, 155-9.
- O'Callaghan C (2012). Grounded theory in music therapy research. *J Music Ther*, **49**, 236-77.
- O'Callaghan C, Dun B, Baron A, Barry P (2013). Music's relevance for children with cancer: music therapists' qualitative clinical data-mining research. *Soc Work Health Care*, **52**, 125-43.
- Roque AL, Valenti VE, Guida HL, et al (2013). The effects of different styles of musical auditory stimulation on cardiac autonomic regulation in healthy women. *Noise Health*, **15**, 281-7.
- Stevens CJ (2012). Music perception and cognition: a review of recent cross-cultural research. *Top Cogn Sci*, **4**, 653-67.
- Tanriverdi O (2013). A medical oncologist's perspective on communication skills and burnout syndrome with psycho-oncological approach (To die with each patient one more time: the fate of the oncologists). *Med Oncol*, **30**, 530-42.
- Toccafondi A, Bonacchi A, Mambrini A, Cantore M (2013). Musing in oncology: when oncology meets music something special happens. *Oncologist*, **18**, 112-3.
- Wormit AF, Warth M, Koenig J, Hillecke TK, Bardenheuer HJ (2012). Evaluating a treatment manual for music therapy in adult outpatient oncology care. *Music and Medicine*, **42**, 65-73.
- Zhang JM, Wang P, Yao YX, et al (2012). Music interventions for psychological and physical outcomes in cancer: a systematic review and meta-analyses. *Support Care Cancer*, **20**, 3043-53.