Music therapy with cancer patients receiving post-hospital curative treatment: satisfaction, emotional perception, perceived effects and working elements

A longitudinal non-experimental mixed methods study

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ABSTRACT

Background
Numerous researchers have examined the benefits of music therapy within acute and palliative cancer care. Benefits of music therapy within post-hospital curative cancer treatment remain unclear, although benefits are expected. Whereas music therapy interventions for acute and palliative patients often focus on physiological and psychosomatic symptoms, music therapy with post-hospital curative treatment could have its main focus on psychological aspects. Due to a lack of studies, we examine the benefits of diverse music therapy interventions offered to post-hospital curative cancer patients. The patients' satisfaction with the interventions is assessed. As previous research found a negative correlation between cancer and emotional expressivity, we assess patients' ambivalence over emotional expressiveness (AE) before starting music therapy. We also assess patients' emotional perceptions during music therapy and which emotions help patients to handle their disease. Further, the patients' perceived effects and working elements of music therapy are assessed.

Methods
The study has a non-experimental, longitudinal design. Mixed methods (both qualitative and quantitative methods) are used. A total of 86 patients participated in the study, who either attended active music therapy (percussion or improvisation therapy) or receptive music therapy (sound meditation). Both standardized measurement instruments (burden of the disease and ambivalence over emotional expressiveness) and self-designed instruments (questionnaires and interview guideline) are used.

Results
The sample's mean age was 55 years (*SD*= 10). Most of the patients were female (81%) and diagnosed with breast cancer (53%). Most of the patients had no previous experience with music therapy (90%). Patients were satisfied about music therapy. Patients attending sound meditation had significantly lower scores on therapists' approach, music therapy modalities and total satisfaction. Compared to the norm group, patients had higher AE scores before music therapy started. Most of the patients had positive emotions; they were cheered up and relieved. As well the perception of positive emotions as negative cancer related emotions helped them handling their disease. Patients especially perceived psychological and psychosomatic effects. Perceived psychological and psychosomatic effects were similar within all the three offered music therapy treatments. Patients from all interventions perceived relaxation, rest and increased power and vitality. They also perceived mood improvement, release of positive emotions, distraction from stress and negative cancer-related emotions and an increased self-awareness. Active music therapy increased patients' self-confidence and stimulated patients to explore new behaviour. A total of 13 working elements were found. Exemplary elements within active music therapy were communication, analogy, freedom from judgement, (physical) activity and cognitive effort. Sound meditation included different elements, such as passivity and atmosphere.

Conclusion
The results indicate that music therapy can have positive influences on well-being of cancer patients in the post-hospital curative stage. The findings offer valuable information about patients' needs in this state of treatment and how effects can be addressed within music therapy. Our findings offer valuable guidelines for the implementation and optimization of music therapy within post-hospital curative treatment. The promising results of this study should be proven by future research.

CONTENTS

1. INTRODUCTION

1.1 Cancer

Cancer is the second leading cause of death in the United States, in Germany and in many other industrialized countries. In 2007, about 12 million people were diagnosed with cancer worldwide with a mortality rate of 7.6 million (American Cancer Society, 2007). According to the Robert Koch Institute and the Association of Population-based Cancer Registries in Germany (2008), the estimated annual cancer incidence rate in Germany is 436.500. In the industrial countries, the most commonly diagnosed cancers in men are prostate cancer, lung cancer and colorectal cancer. Women are most commonly diagnosed with breast cancer, gastric cancer and lung cancer.

The symptoms of cancer depend on the type of the disease, but there are common symptoms caused by cancer and/or by its medical treatment (e.g., chemotherapy and radiation). Common physical symptoms are pain, fatigue, sleep disturbances, loss of appetite, nausea (feeling sick, vomiting), dizziness, limited physical activity, hair loss, a sore mouth/throat and bowel problems. Cancer also often causes psychological problems such as depression, anxiety, mood disturbances, stress, insecurity, grief and decreased self-esteem. This, in turn, can implicate social consequences. Social isolation can occur due to physical or psychological symptoms (for example, feeling too tired to meet friends, cutting oneself off due to depressive complaints).

Besides conventional pharmacological treatments of cancer, there are treatments to meet psychological and physical needs of the patient. Psychological consequences of cancer, such as depression, anxiety or loss of control, can be counteracted by psychotherapy. For example, within cognitive therapy cancer patients may develop coping strategies to handle the disease. Research indicates that music therapy, which is a form of psychotherapy, can have positive effects on both physiological and psychological symptoms of cancer patients as well as in acute as in palliative situations. Results of studies about music therapy within oncology are presented in §1.3.

1.2 Music therapy

There are several definitions of music therapy. According to the World Federation of Music Therapy (WFMT, 1996) music therapy is: "…the use of music and/or its music elements (sound, rhythm, melody and harmony) by a qualified music therapist, with a client or group, in a process designed to facilitate and promote communication, relationship, learning, mobilization, expression, organization, and other relevant therapeutic objectives, in order to meet physical, emotional mental, social and cognitive needs".

The Dutch music therapy association 'Nederlandse Vereniging van Creatieve Therapie' (NVCT) defines music therapy in their occupation profile (NVCT, 1999) as "…a methodological form of assistance where musical means are used within a therapeutic relation to manage changes, developments, stabilisation or acceptance on the emotional, behavioural, cognitive, social or on the physical field". The German association 'Deutsche Musiktherapeutische Gesellschaft' (DMtG) gives a similar definition. According to the DMtG, music therapy is a practical orientated scientific discipline, which interacts with other sciences, especially with medical science, social sciences, psychology, musicology and with educational science.

Music therapy distinguishes between active and receptive music therapy. Within active music therapy, the patient himself plays the instrument. Receptive music therapy means that the patient listens to music played live by the music therapist or to recorded music. Music therapy can take place in groups or in an individual setting.

Music therapy can be based on different psychological and psychotherapeutic approaches. It can be based on the psychoanalytical, gestalt- or behavioural approach. Also, music therapy can be based on cognitive therapy, systemic therapy or client-centred psychotherapy (Rogers, 1959). Several music therapy models have resulted from these psychotherapeutic approaches and from practical music therapy. One of the most influential models (in the Netherlands and Germany) is the *Analogue Process Model* by Smeijsters (1995). The assumption is that the patient's musical behaviour conforms to his general behaviour. The starting points are the features of the patient's specific disorder or disease pattern. There is an analogy between (psychological) problems and musical behaviour, which means that emotions can be expressed musically. Because of the analogy between musical parameters and affections, the patient can reflect his or her actual mood by playing music. Someone who is angry may scream or throw dishes in daily life. Within music therapy he/she may express anger by playing the drums in a hard and wild way. An anxious patient may play in a cautious way. According to the *Analogue Process Model*, it is possible to influence the patient's problems by controlling musical processes. For patients who have difficulties in expressing emotions, music therapy can be a useful medium. As several studies indicate a positive relationship between breast cancer and emotional repression and rational thinking (Watson, Greer, Rowden, Gorman, Robertson, Bliss & Tunmore, 1991; Fernandez-Ballesteros, Ruiz & Garde, 1998; Lilja, Smith, Malmstom & Salford, 1998), music therapy might be a useful intervention for (breast) cancer patients in order to facilitate and enhance their emotional expressivity. Besides *analogy*, Smeijsters (1995; 2006) mentions further qualities of music that can be beneficial within therapeutic treatment. One of these qualities is *symbolism*: music can symbolize persons, objects, incidents, experiences or memories of daily life. Therefore, music

is a reality, which represents another reality. The symbolism of the 'musical reality' enables the patient to deal safely with the other reality. A further quality of music is *association*, in which music evokes memories about persons, objects or incidents. These associations can be perceived as positive or negative, so they release emotions in the patient. Music has *structure* concerning to its musical parameters, such as rhythm, melody and harmony. Time is structured by the bar, rhythmical and melodic motives and units, which are connected within the harmonic structure. The structuring quality of music can make an important contribution to treatments of people with attention, concentration and other cognitive deficits. Further, music provokes *physical activity*, such as dancing or clapping hands. Suppressed or blocked emotions and experiences can be provoked by physical movement, so that the patient can perceive them again. The last quality of music is *communication*. Within active music therapy, a dialogue with musical means takes place between two (or more) people. Music often is an interplay, whereby different patterns of interaction appear between the people playing music together. Behaviour is triggered by musical interaction. If a patient perceives verbal communication as threatening and evokes distrust, music therapy facilitates to get into contact in an indirect way.

1.3 Music therapy with cancer patients

Music therapy both addresses physical and psychological needs of the patient. Numerous studies indicate that music therapy can be beneficial to both acute cancer patients and palliative cancer patients in the final stage of disease. Almost no studies examined the benefits of music therapy with cancer survivors.

Music therapy in the acute phase

Most research with acute cancer patients receiving chemotherapy, surgery or stem cell transplantation examined the effectiveness of receptive music therapy. Listening to music during chemotherapy, either played live by the music therapist or from tape has a positive effect on pain perception (Bailey, 1983; Zimmerman, Pozehl, Duncan & Schmitz, 1989; Beck, 1991), relaxation (Bailey, 1983; Beck, 1991; Hanser, Bauer-Wu, Kubicek, Healey, Manola, Hernandez et al., 2006), anxiety (Bailey, 1983; Standley, 1992; Sabo & Michael, 1996; Ferrer, 2007) and mood (Weber, Nuessler & Willmanns, 1997; Hanser et al., 2006). There was also found a decrease in diastolic blood pressure or heart rate (Hanser et al., 2006; Ferrer, 2007) and an improvement in fatigue (Ferrer, 2007). In a study by Bozcuc, Artac, Kra, Ozdogan, Sualp, Topcu et al. (2006), insomnia and appetite loss could be significantly decreased in patients older than 45 years. Further improvements by receptive music therapy were found for physical comfort (Hanser et al., 2006), vitality (Beck, 1991), dizziness

(Standley, 1992) and tolerability of the chemotherapy (Sabo & Michael, 1996). In a study with patients undergoing surgery, Cunningham, Monson and Bookbinder (1997) found that receptive music therapy led to decreased anxiety, stress and relaxation levels before, during and after surgery. Cassileth, Vickers and Magill (2003) examined the effectiveness of receptive music therapy (live music played by a trained music therapist) on mood disturbance in hospitalised cancer patients who underwent autologous stem cell transplantation. Patients in the music therapy group scored significantly lower on the combined Anxiety/Depression scale and on the total mood disturbance score compared with controls.

Music therapy in the palliative phase

Music therapy also can be applied in palliative situations, for example to patients with terminal cancer who live in hospices. Several studies with hospice cancer patients or patients in a palliative situation have found out that quality of life (Hilliard, 2003), pain control (Krout, 2001; Gallagher & Steele, 2001; Gallagher, Lagman, Walsh, Davis & LeGrand, 2006), physical well-being and relaxation (Krout, 2001) was improved by music therapy. Both active and receptive music therapy were offered in these studies. Gallagher et al. (2006) also found improvements in mood, facial expression, body-movement, verbalization and shortness of breath. In a study from Reinhardt (1999), palliative patients with chronic cancer received receptive music therapy (lullaby-like, rhythmically dominated music with gradually decreasing tempi). He found an increased synchronisation and coordination of heart rate and musical beat. The most synchronisation occurred in patients with higher relaxation rates. Patients also found it easier to fall asleep and there was a decrease in consumption of analgetics. Wlodarczyk (2007) offered cognitive-behavioural music therapy to hospice patients with cancer, which significantly improved spiritual well being.

Music therapy with cancer survivors

A few researchers examined the effectiveness of active music therapy within cancer patients being in diverse stages, including cancer survivors. With a quantitative research design, Waldon (2001) examined the effects on mood states and group cohesiveness in adult oncology patients. The patients were either in a music making therapy group or in a music responding therapy group. The results indicate that both interventions significantly improved self-reported mood states of the patients. In their qualitative research, Bunt and Marston-Wyld (1995) examined the effects of active group music therapy on oncology patients. Music therapy encouraged the patients to get into contact with feelings they had previously been unable to express. They also became more self-aware and were able to retrieve memories by making music or listening to sounds of instruments. Daykin, McClean and Bunt (2007) researched the effectiveness of music therapy, which was part of a programme of

complementary and alternative medicine (CAM) in supportive cancer care. 23 patients participated in the study and they were interviewed after the intervention. The results indicate that music therapy can improve identity problems. Also, music therapy released emotions, such as joy, power, freedom, but also negative feelings, such as loss, regret and isolation. Several qualities of music therapy were found: creativity, choice and enrichment, identity, individuality and group process.

Studies indicate that music therapy may be beneficial for cancer patients in acute and palliative situations, but the benefits of music therapy for convalescing cancer patients remain unclear. To our knowledge, music therapy is hardly offered within post-hospital curative treatment, although benefits are expected. Whereas music therapy interventions for acute and palliative patients often focus on physiological and psychosomatic symptoms, such as pain perception and reducing medical side-effects, music therapy with post-hospital curative treatment could have its main focus on psychological aspects. A cancer patient is not free from cancer until five years after the tumour ablation. The patient has to fear that the cancer has not been defeated. In this stage of the disease, patients frequently have fear, feel insecure, depressive and are emotionally unstable. Several studies with breast cancer patients indicated that depression and anxiety influenced the ability to deal with everyday life stressors negatively. In turn, this promoted feelings of anger, fear, guilt, and emotional repression (Glanz & Lerman, 1992; van der Pompe, Antoni, Visser, & Garssen, 1996; Tapper, 1999). Fernandez-Ballesteros et al. (1998) found out that women with breast cancer had significantly higher scores than healthy women in rationality and emotional defensiveness and need for harmony. How to handle irksome and negative emotions is an important issue for many oncology patients. As avoidance and repression of negative emotions is a common used coping strategy, patients at the same time wish to reintegrate their own neglected emotionality into their normal course of life in a constructive manner. After the difficult period of the medical treatment, which they often have overcome in a prosaic way by masking emotions, patients often express the wish to become aware of themselves again. They may wish to grapple with negative emotions due to their disease. Other patients wish to experience positive feelings, such as enjoyment and vitality, because joy of life and quality of life has been decreased by cancer. Smeijsters explains with his *Analogue Process Model* (1995), music therapy can be a useful medium for patients who have difficulties in expressing emotions. For cancer patients who have neglected their emotions in order to cope with the disease, music therapy may offer a range of practices to catalyze a helpful exposure to their current emotionality by advancing emotional expressivity. Several case studies indicate that both active and receptive music therapy promote emotional perception and expression in

cancer patients (Aldridge, 1996; Bailey, 1984; Clements-Cortes, 2004). However, the effects of music therapy as a medium for inducing emotions and emotional expressivity are not examined with validated test procedures within convalescing cancer patients.

Due to the lack of studies, this study aimed to explore the benefits of music therapy for cancer patients receiving post-hospital curative treatment. First of all, we examined how satisfied patients were with music therapy, including satisfaction with the modalities (e.g., group setting) and the therapist(s). Further, as research has indicated a positive relationship between cancer and emotional repression, we were interested in the patients' emotional expressivity before starting music therapy. We assessed *ambivalence over emotional expressiveness* (AE) levels to find out if our target group of cancer patients undergoing post-hospital curative treatment differed from standard values. AE reflects the conflict between one's need to express emotions and the desire not to display subjective emotions (King & Emmons, 1990). We also assessed the patients' perceived emotions during music therapy and which emotions helped patients to handle their disease. Further, we were interested in the patients' perceived effects and in working elements which might generate these effects. Research questions of the present study were:

1. **How satisfied are patients with music therapy?**
2. **Are cancer patients, choosing music therapy within post-hospital curative treatment, more ambivalent over emotional expressiveness than the norm group?**
3. **What kind of emotions and perceptions do patients have during the music therapy sessions?**
   a. **Do differences in emotional perception depend on patients' burden of the disease and their ambivalence over emotional expressiveness?**
4. **What are the perceived effects of music therapy?**
   a. **Do music therapy effects depend on patients' personal characteristics, burden of the disease and patients' ambivalence over emotional expressiveness?**
5. **Which perceived emotions help patients handling their disease?**
6. **Which working elements of music therapy generate achieved effects?**
   a. **Do working elements depend on patients' burden of the disease and their ambivalence over emotional expressiveness?**

Three different group music therapy interventions were examined and compared to each other: two active types of music therapy (improvisation music therapy and percussion music therapy) and one receptive type of music therapy (sound meditation with the monochord, gong and singing bowls played live by the music therapist).

2. METHODS

2.1 Design and procedure

To study the above questions, a mixed method longitudinal design was used (figure 2.1). This study had a non-experimental design because the patients were not randomly assigned to a specific music therapy treatment. They could choose for the music therapy intervention they preferred in order to attune it to their therapy goals.

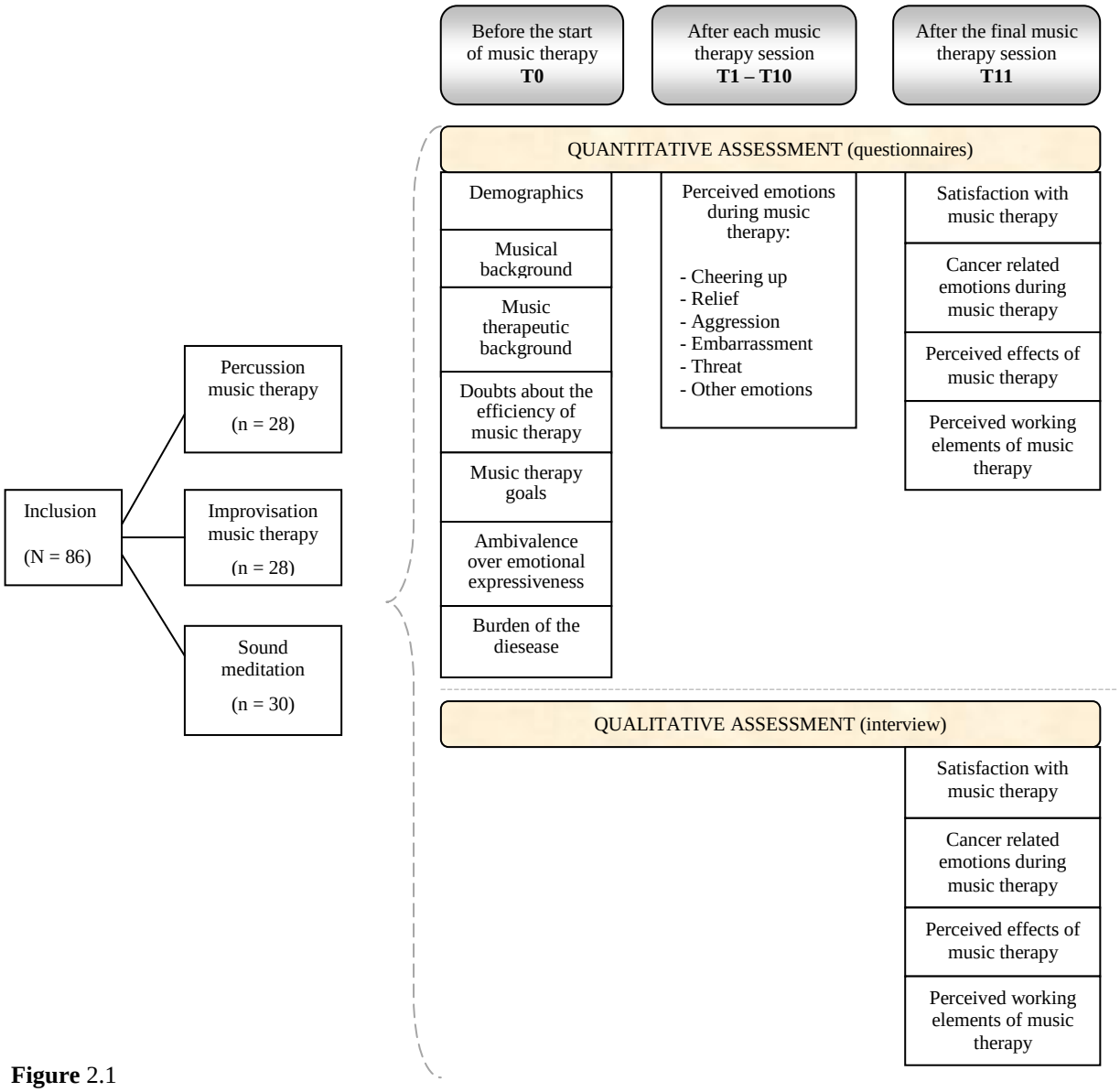

Figure 2.1
Research design

In an intake call, antecedent to the music therapy treatment, patients were informed about the goals, contents and procedure of the study and were asked to participate. Within a period of seven months, 115 patients were recruited for the study. 29 patients were excluded. Exclusion criteria were: attending less than four music therapy sessions, breaking off post-curative treatment or the music therapy, incomplete data acquisition. Several patients did not wish to participate in the study any more. 86 patients were included in the study, whereas 28 patients attended improvisational music therapy, 28 patients attended percussion music therapy and 30 patients attended sound meditation.

2.2 Music therapy interventions and the context in which it took place

The study has been accomplished at a cancer clinic in Freiburg, Germany (Klinik für Tumorbiologie). Generally, 1 to 4 weeks after their medical treatment (e.g., chemotherapy) the patients received post-hospital curative treatment which lasted between 3 and 5 weeks. With regard to the patients' therapy goals and their physical condition, the patients, psychologists and physicians together arranged the therapeutic program. First, the psychologist(s) informed patients about the offered therapies. Offered treatments were massage therapies, specific sport therapeutic interventions, physiotherapeutic interventions (e.g., perineal gymnastics, back pain treatment) relaxation interventions (e.g., autogenic training) and creative therapy interventions such as painting, dance or music therapy. There also was a psycho-educative verbal therapy group. In an intake call, the music therapist(s) informed those patients who had chosen music therapy about the different offered music therapy treatments in order to find out which therapy met patients' therapy goals best.

The patients could choose between improvisation music therapy, percussion music therapy and sound meditation music therapy. All music therapy interventions were offered twice a week. Altogether the patients received 4 to 10 music therapy units during a period of 3 to 5 weeks. The different music therapy interventions were offered by two different approved music therapists. The therapists employed different therapeutic approaches. Within the improvisation music therapy, resource- and goal-oriented music therapy was used, whereas the music therapeutic approach within the percussion music therapy was gestalt therapeutic and integrative. Improvisation music therapy had a more thematic approach; issues such as harmony and future plans were discussed. Verbal therapy parts were higher within the improvisation music therapy, also less musical instructions were given than within the percussion music therapy.

Indications for the improvisation music therapy were: internal strain, sleeping problems, fatigue, depression, cancer induced social isolation, emotional instability and making oneself high demands. Further indications were: need for communication/exchange with the group,

questions about shaping future life and questions about actual needs, wish for dissociation at home. Indications for the percussion music therapy were: anger, aggression, cancer-induced social isolation, lack of strength, and wish for playful activities in a group. The improvisational music therapy took 90 minutes and the percussion music therapy took 60 minutes per session.

Sound meditation music therapy was a receptive relaxation treatment, by which the music therapist played sounds with singing bowls, monochord, and the kantele. The monochord is about one meter long and consists of 30 strings, which are tuned on three different tones. This tuning produces a wide range of overtones, which aims to produce effects of relaxation. The kantele is a Finnish traditional plucked string instrument. The patients either lay on the ground on relaxation mats or sat in special relaxation chairs and listened to the sounds played for them. At the end of the session the patients had the possibility to refer their experiences. Each session took about 90 minutes.

2.3 Measurement Instruments

For the measurement of **ambivalence over emotional expressiveness** (AE), we used the German version of the Ambivalence over emotional expressiveness Questionnaire AEQ-G18 (Traue, 1998). The construct reflects the conflict between one's need to express emotions and the desire not to display subjective emotions (King & Emmons, 1990). People with high AE-levels have difficulties in communicating their emotional needs, have more problems in relationships which in turn can implicate social consequences, e.g., getting less social support and decreased self-esteem (King & Emmons, 1990; Deighton & Traue, 2006). Traue developed a German short version with 18 items (1998). He found a two-factor structure. The first factor is *effect ambivalence*, which includes 10 items concerning prevalently negative emotions, such as anger, concern and fear. These feelings are not expressed because of expected negative consequences (e.g.: *'Often I'd like to show others how I feel, but something seems to be holding me back'*). The second factor *competence ambivalence* includes 8 items which concern prevalently positive emotions of affection and relationship. The items also include statements of whether one is able to express feelings (e.g.: *'I'd like to talk about my problems with others, but at times I just can't'*). The questionnaire also assesses the total score of all 18 items. The rating scale of the AEQ-G18 ranges from '0' (*never*) to '4' (*always*). A study by Albani, Blaser, Völker, Geyer et al. (2007) delivered satisfying results concerning reliability (internal consistency) and validity. They also assessed mean scores for both factors and for the total score. In our study, internal consistencies were also satisfying (N = 111): the first factor *effect ambivalence* had a Cronbach's α of 0.78, the internal consistency of the second factor *competence ambivalence* was α = 0.83. The internal consistency for the total

score of the AEQ-G18 was also high (Cronbach's $\alpha = 0.86$). We also achieved high test-retest reliabilities (Spearman correlation coefficient $\rho = 0.7$ after 3-5 weeks, N = 91).

For the assessment of patients' **burden of disease**, we used the FBK-R10. This is the short version (10 items) of the original version, the FBK-R23, which was developed in Germany by Herschbach, Marten-Mittag and Henrich (2003). It is a disease-specific questionnaire for the assessment of burden in cancer patients. The FBK-R23 has 6 scales: psychosomatic discomfort, anxiety, deficits in information, restrictions in everyday life, social impact and a total score of burden of the disease. The rating scale of the FBK-R10 ranges from '0' (*no stress*) to '5' (*high stress*). The internal consistency (Cronbach's α) of the FBK-R23 is between 0.65 and 0.80 for the sub dimensions and 0.89 for the total score. We also achieved high internal consistencies with the short version (FBK-R10) that we used in this study. The internal consistency of the total score was $\alpha = 0.83$ (N = 109).

Next to the used standardised tools, three self designed questionnaires were especially developed for this study by default of standardised tools: Before music therapy started (T0) the patients' **musical and music therapeutic background** was assessed (if they play an instrument, if they have previous experience with music therapy and if they have heard about music therapy before). Further, the patients' **doubts about the efficiency** of music therapy and **therapy goals** within music therapy were assessed. The questionnaire contained 6 items with nominal scales, under which one item had a multiple choice response option. Furthermore, it contained one rating-scale question with a four-point range and one open-ended question (*'What do you expect from the music therapy intervention and what are your therapy goals within music therapy?'*).

After each music therapy session (T1-T10) we assessed patients' **emotions** while playing music / listening to the meditation sounds. On a five-point scale (0 = 'no agreement', 4 = 'high agreement'), the patients' amount of experienced cheering up, aggression, relief, threat, and embarrassment was measured. Moreover, the patients had the possibility to refer to their own experiences and perceptions.

After the final music therapy session (T11) we assessed patients' **satisfaction** with the music therapy intervention, **cancer related emotions** during music therapy, **effects** and **working elements** of music therapy. **Satisfaction** consisted of the three sub dimensions general satisfaction with the intervention (four items, e.g.: *'I enjoyed music therapy'*) music therapist's approach / relationship with the music therapist (two items, e.g.: *'The music therapist(s) treated me and my problems with concern'*) and music therapy modalities (two items about group setting and one item about offered music instruments within active music therapy). In addition, patients were asked what patients liked most, what they liked less about music therapy and if they had suggestions for improvements (open-ended questions). Internal

consistencies were high for the dimension satisfaction (α = 0.83). Seven questions of the dimension satisfaction were adapted from the *Evaluation Tool* by Travis (2003) which had been designed for the evaluation of music therapy for psychiatric patients. Test results about the reliability and validity of the *Evaluation Tool* are not available, but in our opinion the non-specific questions that do not concern psychiatric aspects seem useful for the evaluation of any music therapy intervention. The dimension of **cancer related emotions** assessed if patients had emotions which had to deal with their disease; if they were oppressed by emotions they perceived and if music therapy distracted them from negative emotions. The internal consistency of this dimension was not satisfying (α = -0.07) so that the three items will be regarded as autonomous dimensions (cancer related emotions, stress by perceived emotions and distraction from negative emotions) for further analyses. **Perceived effects** of music therapy were measured by asking the patients to what extent music therapy helped them to reduce several social, psychosomatic and psychological symptoms of cancer (14 items, e.g.: *'Music therapy helped me to.. a) ...get out of social isolation which had been a result of cancer'*; *b) ...reduce sleeping problems'*; *c) ...improve my mood'*). The internal consistency of perceived effects was high. Alphas of the sub dimensions social, psychosomatic and psychological effects were between 0.70 and 0.89. The internal consistency of the total effect was α = 0.92. The dimension **working elements of music therapy** assessed helpfulness of discussions and emotional perception during music therapy. Additionally, the patients who attended active music therapy were also asked to what extent they could express emotions by the musical activity and if they could get into contact with other group members more easily by musical activities. All dimensions were measured on a five-point ranting scale from 0 ('no agreement') to 4 ('high agreement'). Alpha for this dimension was acceptable (α = 0.62).

Besides the quantitative data acquisition, the present study also included a qualitative section. Semi-structured interviews were conducted after the final music therapy session (T11) to assess the patients' experiences, perceived effects and working elements which generated these effects more detailed. By the interview, patients had the possibility to explain the answers they had given in the designed questionnaires. Typical questions of the interview were:

- *Did the music therapy proceed the way you expected?*
- *What did music therapy mean to you?*
- *Could you refer 3 terms you spontaneously associate with the music therapy intervention?*
- *Was there a music therapy session or a situation that exceedingly stayed in your mind?*
- *Did music therapy shed light on anything that you can adopt in your everyday life?*

2.4 Statistical analysis

Patients' ambivalence over emotional expressiveness was analysed by calculating mean scores and standard deviations of patients' ambivalence over emotional expressiveness. Results were compared to the norm scores of a representative sample of 2043 German citizens (Albani et al., 2007). Differences between groups (e.g., demographics, sort of music therapy intervention) were analysed by F-tests (One-way ANOVA). Spearman correlation analyses were accomplished to detect correlations between AEQ-scores and age and patients' stress level resulted by cancer.

The patients' perceived emotions within all music therapy sessions were calculated into mean scores. F-tests (One-way ANOVA) were used to analyse group differences. Spearman correlation analyses were accomplished in order to detect possible relationships, for example correlations between ambivalence over emotional expression and emotional expression within music therapy. Also, F-tests (One-way ANOVA) and Spearman correlation analyses were accomplished for patients' perceived effects and working elements of music therapy in order to assess group differences and relationships.

The recorded semi-structured interviews were analysed using grounded theory (Strauss, Corin & Corbin, 1998). Relevant categories and concepts were identified via an 'open coding process' of the transcripts. The identified concepts per participant were merged in tables. Thereupon, the tables were analysed in order to identify frequencies of the concepts and to detect and specify similarities and differences between the participants.

3. RESULTS

3.1 Description of the group

Patients' demographics, diagnoses, musical and music therapeutic background are presented in table 3.1. The sample had a mean age of 55 years. The majority of the sample was female and the most frequent diagnosis was breast cancer. Diagnoses of other patients were divers and included 16 different diagnoses (e.g., cancer of the colon, stomach cancer, leukaemia, lymphoma (Non-Hodgkin-Lymphoma) and bone-marrow cancer). With regard to personal characteristics, no significant differences were found between the groups. The majority had no previous experience with music therapy, but had heard about music therapy before. Most of the patients did not play an instrument, except patients who attended improvisation therapy. Almost no patients had doubts about the efficiency of music therapy. Patients had a

relatively low overall burden of disease level. Anxiety was the highest burden indicator and a deficit in information was the lowest burden indicator.

Table 3.1
Patients' characteristics (N = 86)

		Percussion therapy (n = 28)		**Improvisation therapy** (n = 28)		**Sound meditation** (n = 30)		**Total** (N = 86)	
		n	***%***	***n***	***(%)***	***n***	***(%)***	***n***	***(%)***
Gender	Male	4	14	6	21	6	20	16	19
	Female	24	86	22	79	24	80	70	81
Diagnosis	Breast cancer	16	57	19	68	18	60	53	62
	Other sort of cancer	12	43	9	32	12	40	33	38
Musical background	Play instrument(s)	11	39	15	54	10	33	35	41
Music therapeutic background	First attendance to music therapy	26	93	24	86	27	90	77	90
	Heard about music therapy before	21	75	20	71	24	80	65	76
Previous doubts about the efficiency of music therapy (0-3); *M (SD)*		0.3	0.5	0.5	0.7	0.4	0.6	0.4	0.6
Age; *M (SD)*		58	9	53	10	54	11	55	10
Burden of the disease; *M (SD)*	Psychosomatic discomfort (0-5)	2.1	1.3	2.3	1.0	2.1	1.3	2.2	1.2
	Anxiety (0-5)	2.5	1.7	3.4	1.6	2.9	1.8	2.9	1.7
	Deficits in information (0-5)	1.3	1.3	1.3	1.2	1.1	1.1	1.2	1.2
	Restrictions in everyday life (0-5)	1.8	1.4	2.3	1.2	1.9	1.5	2.0	1.4
	Social impact (0-5)	1.4	1.8	1.8	1.8	1.9	1.8	1.7	1.8
	Total stress (0-5)	1.9	1.1	2.1	0.9	1.9	1.1	2.0	1.0

3.2 Patients' arguments for attending music therapy and their music therapy goals

Patients' most frequent arguments for choosing music therapy (table 3.2) were their affinity to music and the belief that therapy goals could be achieved best within music therapy. Several patients had other arguments, such as curiosity and wanting to gain new experiences.

Table 3.2
Patients' arguments for choosing music therapy (N = 86)

	Percussion therapy (n = 28)		**Improvisation therapy** (n = 28)		**Sound meditation** (n = 30)		**Total** (N = 86)	
	n	***(%)***	***n***	***(%)***	***n***	***(%)***	***n***	***(%)***
I bear a relation to music	22	79	16	57	22	73	60	70
I think that I can achieve my therapy goals the best within music therapy	12	43	14	50	16	53	42	49
The other creative therapies (e.g., art, dance) are not attractive to me	4	14	9	32	11	37	24	28
The music therapist(s) are friendly	2	7	7	25	3	10	12	14
Other arguments	11	39	10	36	8	27	29	34

Patients' therapy goals are presented in table 3.3. Most frequent music therapy goals were relaxation and reducing stress/gaining peace of mind, whereas these goals were more frequently indicated by patients who attended sound meditation. Patients wanted to get access to their emotions, whereas patients who attended percussion and improvisation therapy especially wished to perceive positive emotions, such as satisfaction and joy of life. Numerous patients from improvisation therapy also wanted to let go of negative emotions, to make new experiences and to become more extroverted by music therapy.

Table 3.3
Patients' therapy goals within music therapy (N = 86)

	Percussion therapy (n = 28)		**Improvisation therapy** (n = 28)		**Sound meditation** (n = 30)		**Total** (N = 86)	
	n	***(%)***	***n***	***(%)***	***n***	***(%)***	***n***	***(%)***
Relaxation	5	18	7	25	15	50	27	31
Reducing stress & gaining peace of mind/ balance	5	18	8	29	11	37	24	28
Perceiving/getting access to emotions & expressing emotions	8	29	6	21	5	17	19	22
Perceiving particular positive emotions (e.g., fun, joy of life, satisfaction)	5	18	6	21	2	7	13	15
Improve self-awareness /self-attentiveness (including body awareness)	2	7	3	11	4	13	9	11
Mental stabilization & relief (e.g., handling fears or sadness)	2	7	2	7	4	13	8	9
Letting go negative thoughts and emotions	0	0	5	18	1	3	6	7
Making new experiences	2	7	4	14	0	0	6	7
Gaining strength/energy/courage to face life	1	4	2	7	2	7	5	6
Distraction from difficult situation	2	7	2	7	1	3	5	6
Becoming more extraverted	1	4	3	11	0	0	4	5
Improving power of concentration	1	4	0	0	0	0	1	1
Communication	1	4	0	0	0	0	1	1
Getting positive feedback	1	4	0	0	0	0	1	1
Physical activity	1	4	0	0	0	0	1	1
Desensibilization of hands and feet	1	4	0	0	0	0	1	1
Improving self-esteem	0	0	1	4	0	0	1	1
No therapy goal	6	21	4	14	3	10	13	15

3.3 Patients' satisfaction with music therapy

After the therapy was finished (T11), patients' g*eneral satisfaction*, *therapist's approach* and contentedness about *music therapy modalities* were assessed in order to detect how patients have perceived music therapy and how satisfied they were about it. Results are presented in table 3.4. Overall, patients were very satisfied on each dimension. There were significant differences between interventions on the dimension therapist's approach. As it could be expected, patients who attended sound meditation had lower scores, because the therapeutic relationship was inferior compared to the active music therapy interventions. Furthermore, there was also less interaction between the therapist and the patients due to the patients' passive role within sound meditation. Patients attending percussion therapy were more satisfied with music therapy modalities and had higher total satisfaction scores compared to patients of sound meditation.

Table 3.4
Evaluation of music therapy on the dimensions general satisfaction, therapist's approach and music therapy conditions (N = 86)

		Percussion therapy (n = 28)		**Improvisation therapy** (n = 28)		**Sound meditation** (n = 30)		
Dimension	**Variable**	***M***	***(SD)***	***M***	***(SD)***	***M***	***(SD)***	***p***
General satisfaction	I enjoyed music therapy	3.9	(.32)	3.8	(.52)	3.6	(.68)	
	I would want music therapy as part of any treatment I may receive in the future	3.6	(.79)	3.3	(.86)	3.5	(.90)	
	I would recommend music therapy to other cancer patients	3.8	(.42)	3.5	(.64)	3.5	(.73)	
	Music therapy was an important part of the whole treatment	3.5	(.88)	3.4	(.74)	3.2	(.96)	
	Total	3.7	(.53)	3.5	(.59)	3.5	(.71)	n.s.
Therapist's approach	I had a good therapeutic relationship with the therapist(s)	3.8	(.42)	3.5	(.64)	2.9	(1.2)	
	The music therapist(s) treated me and my problems with concern	3.6	(.68)	3.7	(.61)	3.1	(1.2)	
	Total (a, b)	3.7	(.52)	3.6	(.55)	3.0	(1.2)	.002
Music therapy modalities	I was comfortable with the offered music instruments	3.8	(.59)	3.6	(.62)	-	-	
	I would not have preferred individual music therapy instead of music therapy in a group	3.6	(.63)	3.3	(.89)	3.1	(1.2)	
	In the group I felt comfortable and in good hands	3.3	(.82)	3.2	(.91)	3.0	(.81)	
	Total (a)	3.5	(.45)	3.4	(.54)	3.1	(.88)	.018
Total satisfaction score (a)		3.6	(.33)	3.5	(.43)	3.2	(.77)	.004

Answer range: 0 = 'no agreement' to 4 = 'high agreement'
a) Differences between percussion music therapy and sound meditation are significant at the 0.05 level (two-tailed)
b) Differences between improvisation music therapy and sound meditation are significant at the 0.05 level (two-tailed)

The quantitative results were in line with the results of the qualitative interviews (T11). In the final interviews, patients mentioned positive experiences (see also §3.9 for further details). Most of them said that they would like to continue something comparable at home. They would like to attend a percussion group, to make music with friends and relatives, buy an African Drum or form a rock-band, respectively. Patients who attended sound meditation indicated that they would like to integrate sound meditation into their everyday life. Numerous patients also bought the sound meditation CD[1], in order to achieve similar effects.

Although the patients' overall evaluation was positive, several patients referred to things they did not like regarding the content and organization of music therapy. With regard to contents, several patients mentioned that the level was too high and that they had difficulties with defaulted rhythms and exercises. A few patients did not like the extent of discussions, they did not like detailed explanations of other group members and did not wish to express their feelings verbally. Other patients who attended percussion or improvisation therapy wished to have clearer instructions and defaults. Concerning organizational aspects, some patients did not like the large size of the group, the fluctuation of patients within the group and the scheduling conflict with other therapies. Some patients who attended sound meditation did not like the side noise of other patients and the side noise outside the room. Several patients perceived the relaxation chairs as uncomfortable, whereas others did not like to lie on the ground.

3.4 Patients' Ambivalence over Emotional Expressiveness (AE)

Patients' ambivalence over emotional expressiveness (AE) is shown in table 3.5. In comparison to the results of the study from Albani et al. (2007), the cancer patients of our study were more ambivalent over emotional expressiveness. Differences were significant for all factors ($p \leq .001$). However, there were no differences in ambivalence over emotional expressiveness between the three intervention groups, nor did ambivalence over emotional expressiveness correlate significantly with any of the demographic variables.

[1] A sound meditation CD was recorded by the music therapist who offers the sound meditation therapy and sold at the clinic shop

Table 3.5
Patients' scores of ambivalence over emotional expressiveness (N = 86)

	Percussion therapy (n = 28)		**Improvisation therapy** (n = 28)		**Sound meditation** (n = 30)		**Total** (N = 86)		**Norm group*** (N = 2043)		
	M	***(SD)***	***M***	***(SD)***	***M***	***(SD)***	***M***	***(SD)***	***M***	***(SD)***	***p***
Effect ambivalence	1.8	(.6)	1.6	(.6)	1.5	(.7)	1.7	(.6)	1.3	(.6)	.000
Competence ambivalence	1.5	(.7)	1.7	(.7)	1.4	(.6)	1.6	(.7)	1.3	(.7)	.001
Total ambivalence over emotional expressiveness	1.7	(.5)	1.7	(.6)	1.5	(.5)	1.6	(.6)	1.3	(.6)	.000

Answer range: 0= 'low' to 4= 'high'
*Data retrieved from Albani et al. (2007)

3.5 Patients' perceived emotions within music therapy

After each music therapy session, patients were asked what emotions and perceptions they had during the session. Mean scores of all sessions are shown in table 3.6. Positive perceptions prevailed, patients were cheered up and relieved during the sessions and mostly did not perceive aggression, embarrassment or threat. Although positive emotions prevailed within all three interventions, significant group differences were found. Patients who attended an active form of music therapy were more cheered up and more embarrassed during the sessions than patients who attended sound meditation. Patients from improvisation therapy perceived more aggression than patients from sound meditation.

Table 3.6
Perceived emotions during the music therapy sessions (N = 86)

	Percussion therapy (n = 28)		**Improvisation therapy** (n = 28)		**Sound meditation** (n = 30)		
	M	***(SD)***	***M***	***(SD)***	***M***	***(SD)***	***p***
During the session I perceived…							
Cheering up* (a, b)	3.3	(.48)	3.0	(.45)	2.3	(.94)	.000
Relief*	2.9	(.59)	2.5	(.82)	2.9	(.78)	.057
Aggression* (b)	0.3	(.44)	0.4	(.50)	0.1	(.27)	.017
Embarrassment* (a, b)	0.4	(.61)	0.5	(.43)	0.1	(.21)	.001
Threat*	0.1	(.28)	0.1	(.25)	0.1	(.28)	.962

Answer range: 0 = 'no agreement' to 4 = 'high agreement'
*) Mean score of all music therapy sessions
a) Differences between percussion music therapy and sound meditation are significant at the 0.05 level (two-tailed)
b) Differences between improvisation music therapy and sound meditation are significant at the 0.05 level (two-tailed)

A Spearman correlation analysis was accomplished to investigate if burden of the disease (at T0) and ambivalence over emotional expressiveness (at T0) influenced emotional perception

during the sessions (table 3.7). The results indicate that patients with a higher burden of the disease and those who felt less capable to express emotions perceived less relieve. Further, patients who were less able to express emotions perceived more aggression during the sessions.

Table 3.7
Correlations between perceived emotions during the sessions and burden of the disease (T0) on the one hand and ambivalence over emotional expressiveness (T0) on the other hand (N = 86)

	Cheering up	**Relief**	**Aggression**	**Embarrassment**	**Threat**
	ρ	***ρ***	***ρ***	***ρ***	***ρ***
Psychosomatic discomfort	-.18	**-.28***	.13	.11	-.04
Anxiety	-.08	-.16	.09	.19	.17
Deficits in information	-.03	-.09	.21	.14	**.22***
Restrictions in everyday	-.21	-.16	.10	.20	.12
Social impact	**-.22***	-.13	.09	.13	.15
Total burden of the disease	-.17	**-.28***	.20	.20	.15
Effect ambivalence	-.09	-.03	.04	.06	.05
Competence ambivalence	-.04	**-.22***	**.22***	.09	.12
Total ambivalence over emotional expressiveness	-.09	-.18	.15	.08	.11

**. The correlation is significant at the 0.01 level (two-tailed) ρ = Spearman's correlation coefficient
*. The correlation is significant at the 0.05 level (two-tailed)

The patients' indications in the open ended questions (T1-T10) and references of the interviews confirmed the ascendance of positive emotions and perceptions. Patients of all the three interventions had similar emotions. The most frequent mentioned emotions were enjoyment, happiness, fun, joy of life and satisfaction. Next to emotions, patients also had similar positive psychological perceptions, such as a feeling of security, serenity, release and freedom. Patients from the improvisation therapy and the sound meditation also perceived confidence during the sessions. Further sensations within sound meditation were mental balance, peace of mind and the feeling of being sheltered.

Most of the patients neither had emotions which had to deal with their disease, nor were oppressed by their emotions during the sessions (table 3.8).

Table 3.8
Cancer related emotions, oppression by perceived emotions and distraction from negative emotions during music therapy (N = 86)

	Percussion therapy (n = 28)		**Improvisation therapy** (n = 28)		**Sound meditation** (n = 30)		
	M	***(SD)***	***M***	***(SD)***	***M***	***(SD)***	***p***
The emotions I had during music therapy mostly had to deal with my cancer disease	0.6	(.84)	0.5	(.74)	0.7	(.75)	n.s.
Music therapy was a welcome distraction from negative emotions and sorrows	3.0	(1.2)	2.5	(1.4)	2.6	(1.3)	n.s.
The emotions I had during music therapy oppressed me	0.3	(.72)	0.3	(.61)	0.4	(.90)	n.s.

Answer range: 0 = 'no agreement' to 4 = 'high agreement'

Some significant correlations were found for cancer related emotions, oppression by perceived emotions and distraction from negative emotions during music therapy (table 3.9). Patients with a higher burden of the disease (at T0) perceived more emotions which had to deal with their disease and were more oppressed by emotions they had during the sessions. Ambivalence over emotional expressiveness did not correlate significantly with cancer related emotions, oppression by perceived emotions and distraction from negative emotions during music therapy.

Table 3.9
Correlations between cancer related emotions/oppression by perceived emotions/distraction from negative emotions during music therapy and burden of the disease (T0) on the one hand and ambivalence over emotional expressiveness (T0) on the other hand (N = 86)

	The emotions I had during music therapy mostly had to deal with my cancer disease	**Music therapy was a welcome distraction from negative emotions and sorrows**	**The emotions I had during music therapy oppressed me**
	ρ	***ρ***	***ρ***
Psychosomatic discomfort	**.24***	**.22***	.13
Anxiety	**.31****	.13	.21
Deficits in information	**.30****	.15	.21
Restrictions in everyday	.19	.13	**.22***
Social impact	.10	.08	.16
Total burden of the disease	**.30****	.21	**.24***
Effect ambivalence	.09	.13	.13
Competence ambivalence	-.07	-.01	.10
Total ambivalence over emotional expressiveness	-.02	.07	.12

**. The correlation is significant at the 0.01 level (two-tailed)
*. The correlation is significant at the 0.05 level (two-tailed)
ρ = Spearman's correlation coefficient

The qualitative results from the interviews confirmed the quantitative results of the measurements at T1 to T11. Most of the interviewed patients indicated that they did not have negative cancer related emotions during the music therapy sessions. They either felt emotionally stable or did not wish to deal with negative feelings resulting from cancer, such as fear and sorrows. Patients who attended improvisation music therapy, said: *"I left my negative feelings in front of the music therapy room. Music therapy is just good for me!"*; *"I wanted to have fun, joy and distraction. I'm quite anxious and concerned, because I will get chemotherapy with irradiation after this curative treatment. This had negative effects on my zest for living. But I didn't want to discuss my problems in music therapy or any other therapy I attended. It was good for me to be distracted from anxiety"*. Another patient who attended percussion music therapy said: *"Drumming is not music which initiates negative emotions in me. Far from it! It really cheered me up".* One patient who attended sound meditation, mentioned that she once perceived negative emotions which were partly related to cancer. She perceived fear, particularly fear of loss during one session: *"... a feeling I couldn't interpret and I hardly could endure. The feeling had to deal with my life story, with the loss of my parents. My father died when I was seventeen. When I was eighteen my mother became ill and I attended her for about 25 years. Therefore, fear and fear of loss have always been present in my life. And when I got cancer I thought – Now I am the same age my father was when he died and my mother became very ill. (...) Although I felt very bad in this particular session, it was positive afterwards, because it clarified that there's still something I have to work on".* Negative emotions or sensations which were not related to the disease also were hardly mentioned. A few patients who attended percussion therapy indicated that they felt tensed in the first session, were afraid not to manage the rhythm, were nervous because of time interference with another therapy or perceived sorrow. Negative emotions and perceptions within improvisation therapy were tension in the first session, discontent about own behaviour within the musical improvisations, resignation, restlessness and uncertainness. One interviewed patient, attending improvisation therapy, occasionally felt inhibited during the improvisations, which had to do with his musical background as a trumpeter in an orchestra: *"Sometimes I found it hard to play instruments I haven't learned. I'm used to playing notes from sheet music. As a musician you want to play the correct notes, but within music therapy it's different. I could not always detach from my musical demands"*. Few patients from sound meditation indicated that they either felt tensed, impatient or agitated at most during one session. One patient had negative emotions because the relaxation chair reminded her of a gynaecological examination chair. Another patient perceived compulsion during one session. Two interviewed patients perceived negative emotions, which were not related to the disease, even though their total experience with the sound meditation therapy was positive.

Occasionally, boredom came up due to the long and monotonous monochord section and recurring thoughts, respectively. Another patient quit with the sound meditation therapy after three sessions because of the *"…boring and monotonous monochord sounds. It was always the same over such a long time. I found it boring. I hoped that the therapist would play something different, a note higher or something. But it didn't change, that made me somehow impatient and aggressive".* Another patient also had negative emotions and quit with the meditation after two sessions. Positive emotions and sensations at the beginning of the session turned into threat and aggression when the monochord was played louder. This sound reminded her of incidences in World War II: *"I enjoyed the quiet sounds at the beginning. I was very relaxed. I imagined lying on the beach and hearing the waves of the ocean. But later on, I subliminally heard alarm bells like those in the war. I experienced very bad things during the war. I was only five years old when we had to escape. (…) And by the monochord sounds, all these negative emotions from the past came up. It was frightening and I got very impatient and agitated. There was just aggression".* The remaining interviewed patients did not have any negative emotions during the sessions, which most of them appreciated (e.g.: *"If I had perceived negative emotions, I'd probably have quit the therapy. I only want to experience good things, because I have already experienced enough bad things".*).

3.6 Perceived effects of music therapy: quantitative results

Patients' perceived effects of music therapy are presented in table 3.10. Patients achieved more general psychological effects and psychological effects compared to social effects and advancements in handling negative emotions. Mood improvement was the highest perceived effect within general psychological effects. Patients' indications from the interviews confirmed these results. Patients indicated that their mood had increased by positive emotions and sensations they had experienced during the sessions (see §3.5). Concerning psychosomatic effects, patients indicated to feel more relaxed and stronger. There were no significant differences between the three music therapy interventions in perceived psychological and psychosomatic effects. Differences in perceived social effects were significant (p = .05, two-tailed), whereby patients of sound meditation perceived less social effects than patients who attended percussion or improvisation therapy.

Table 3.10
Patients' perceived effects of music therapy on psychological, psychosomatic and social well-being (N = 85)

		Percussion therapy (n = 28)		**Improvisation therapy** (n = 28)		**Sound meditation** (n = 29)		
Dimension	Music therapy helped me (to)…	***M***	***(SD)***	***M***	***(SD)***	***M***	***(SD)***	***p***
PSYCHO-LOGICAL								
General psycho-logical well-being	improve my mood	2.9	(1.0)	3.0	(1.1)	2.6	(1.3)	
	feel less depressive	2.9	(1.1)	2.2	(1.5)	2.4	(1.5)	
	perceive my emotions better	2.7	(1.0)	2.5	(.9)	2.2	(1.2)	
	see new perspectives of shaping my life	2.4	(1.2)	2.6	(1.1)	2.2	(1.5)	
	look ahead in a more carefree way	1.9	(1.3)	2.2	(1.1)	1.9	(1.3)	
	reduce fear	1.6	(1.2)	2.0	(1.2)	1.8	(1.2)	
	Total	2.4	(.8)	2.4	(.9)	2.2	(1.1)	n.s.
Dealing with negative emotions	handle negative emotions caused by cancer better	2.0	(1.2)	1.9	(1.1)	1.5	(1.2)	
	allow negative emotions caused by cancer more easily	1.7	(.9)	1.6	(1.1)	1.2	(1.1)	
	Total	1.9	(1.0)	1.7	(1.0)	1.3	(1.0)	n.s.
PSYCHO-SOMATIC	feel more relaxed	3.3	(.8)	3.3	(.9)	3.3	(.8)	
	feel stronger	3.2	(.8)	2.9	(1.0)	2.9	(1.2)	
	be less tired	2.0	(1.4)	1.8	(1.2)	1.9	(1.2)	
	reduce sleeping problems	1.6	(1.3)	1.2	(.8)	1.6	(1.1)	
	Total	2.5	(.8)	2.3	(.6)	2.4	(.8)	n.s.
SOCIAL	get into contact with other people less inhibited again	2.1	(1.1)	2.3	(1.2)	1.3	(1.2)	
	get out of social isolation which had been a result by cancer	1.8	(1.2)	1.6	(1.3)	1.4	(1.2)	
	Total	2.0	(1.0)	2.0	(1.1)	1.4	(1.2)	.05
Total effect score		2.3	(.7)	2.2	(.8)	2.0	(.9)	n.s.

Answer range: 0 = 'no agreement' to 4 = 'high agreement'

In order to establish predictors for effects of therapy, the correlations between the effects (on the 4 sub dimensions) and personal characteristics on the one hand and as well ambivalence over emotional expressiveness as burden of the disease on the other hand, were compared to each other. Results (table 3.11) reveal that gender, age, musical and previous experience with music therapy had no influence on effects. Rather, the patients' previous estimation of the efficiency of music therapy was negatively related to several dimensions of effect which means that patients who had doubts about the efficiency of music therapy also had lower effects. Patients' burden of the disease at the beginning of the intervention also had influence

on perceived effects of music therapy. Patients with information deficits about their disease and treatment achieved more psychological benefits (general psychological effects and advancement in handling negative emotions) by music therapy. Patients with more social impact rather perceived less social and psychosomatic effects.

Table 3.11
Correlation between perceived effects and as well personal characteristics, burden of the disease (T0) and ambivalence over emotional expressiveness (T0) (N = 85)

	General psychological effects	**Improvement in handling negative emotions**	**Psychosomatic effects**	**Social effects**	**Total effect score**
	ρ	***ρ***	***ρ***	***ρ***	***ρ***
Gender	.08	.00	.17	.02	.09
Age	-.11	.12	-.02	.12	-.01
Musical background (play an instrument)	.06	-.11	.07	.06	.06
Previous experience with music therapy	-.08	-.06	-.12	-.02	-.10
Previous doubts about efficiency of music therapy	**-.28***	-.15	**-.29****	-.10	**-.27***
Psychosomatic discomfort	.11	.16	-.00	.07	.08
Anxiety	.06	.20	-.12	.16	.07
Deficits in information	**.25***	**.36***	.16	.09	**.25***
Restrictions in everyday life	.17	.08	-.07	.09	.10
Social impact	-.21	.03	**-.23***	**-.24***	**-.22***
Total burden of the disease	.16	**.23***	-.02	.13	.12
Effect ambivalence	.02	.07	-.06	.10	.01
Competence ambivalence	.02	.08	-.04	.13	.01
Total ambivalence over emotional expressiveness	.01	.07	-.08	.11	-.01

**. The correlation is significant at the 0.01 level (two-tailed) ρ = Spearman's correlation coefficient
*. The correlation is significant at the 0.05 level (two-tailed)

3.7 Perceived effects of music therapy: qualitative results

The results from final interviews confirmed the aforementioned effects. However, also additional effects were mentioned. An overview of relevant effects that emerged from the interviews is provided below.

Distraction from stress and negative emotions

As patients indicated that music therapy was a welcome distraction from negative emotions and sorrows (§3.5, table 3.8), this was confirmed by the interviewed patients. Patients felt relief and considered the therapy as a good form to escape from stress and negative emotions. One patient who attended percussion therapy said: *"Percussion music therapy has distracted me from my difficult situation. I played myself free and while playing. I didn't think about all*

the irksome things and I was happy about this". Furthermore, most of the patients had chosen the percussion group because they wanted to perceive joy and distraction from their disease (e.g.: *"No, I didn't consider music therapy so psychologically. I just did it for the sheer fun of it"*). Patients who attended sound meditation also could let go negative emotions, such as fear: *"I know that I am not in another world, but all my problems are so far away"; "I was surprised and very glad that I responded to the sounds so positively and that I really could get away from stress"* and *"Music therapy means very much to me, because I've found a new way to handle fear".* One patient said that distraction was the only possibility for her to handle negative emotions because of a physical impairment: *"In the past, I used to let my feelings go and crying gave me relief. Unfortunately, I cannot cry anymore because I can't produce tear fluid anymore. Distraction is the most common strategy to handle negative emotions. In this regard, sound meditation helped me".*

Exploring new behaviour

Both percussion and improvisation music therapy also had the effect that patients could express behaviour musically which they had neglected or which was unusual and new for them. One patient who attended percussion therapy enjoyed being loud without any negative consequences: *"In the percussion group I was free to be loud without chaos arising. At home I am calm because my children are very loud and argue a lot. So I am calm, otherwise it would be even more chaotic. But I exhausted the volume within the percussion group. I played the bass until the ceiling light oscillated. That was fun! At home, I have to brace myself, but in the percussion group I could react as I wanted. And I surely will miss the percussion group. I hope to find one near to my home, because it would be a good counterbalance to the situation at home".* For three patients of the improvisation music therapy, music therapy initiated the wish to become more active and adventurous in the near future. Exemplary statements were: *"Because I felt so vital by doing something active within music therapy, I want to change my habits. I want to become more active, get up earlier, for example. It will be a big change for my husband, but I want to announce this change via my action"*; *"I'm going to find a group to make music together. I realized that making music is good for me and that it doesn't help to shut yourself away".* For one patient, music therapy clarified the importance to set clear limits: *"One session I was really annoyed, because another patient played very loud and obtrusive without respect for the other group members. That's like normal life: there are annoying people who ruin other people's whole day. But nobody says anything, you just let it happen. Actually, you should say 'stop' much earlier. And I'm willing to do that, especially in working life. I won't agree to everything, I will set limits earlier. I've also become more sensitive and less resilient because of the disease. So I will stop earlier and lash about. I*

intended to do that before music therapy, but by music therapy it became clear again". One patient's personal topic within improvisation music therapy was 'dominance versus self-effacement'. In the interview she said: *"I wanted to wind down. So I wanted to play music more quietly, not so hectically, but more relaxed and slowly. It was very interesting to transfer it into the music and it worked quite well – from fast to slow and from loud to quiet, just these opposites. I practised to be reserved like I never did before in my life. Music therapy was a big experimental field for me. It was exciting to see how I felt about it and how I'd react when other patients played loud. I hadn't expected to stand it so well. It was really good to play quiet sounds. For sure, I want to bring this side of me more to home. I constantly annoy myself and others with my noisy behaviour. I won't change completely, but if something bothers me, I can say it in another tone. I don't have to get so loud all the time".* Another patient's main topic was 'harmony versus conflict': *"In the last session, we discussed the topic harmony. I need harmony, I'm almost addicted to harmony and I don't like conflicts. But other patients said that harmony can also be boring. And funnily enough, the harmonious music we played also sounded boring to me! And I tried to bring in some counterpoints to break the harmony. It does not always have to be hunky-dory. If something bothers me I want to thump the table. I could express that in the music therapy quite well and I want to adopt it at home, as well".* Three patients who attended improvisation therapy and one patient who attended percussion therapy characterised themselves as cautious, calm and controlled in contact with others. Within the musical improvisations, they could get over inhibitions and be more extroverted. One woman said: *"I detected new characteristics of myself. I realized that I can be much louder and that I don't want to be so predictable to others. Within music therapy, I realized that I am free and that I can do what I want. I suddenly realized that it was fun to dominate the group, to set the pace and to play loud. Actually, this was not my purpose when I entered music therapy. But I had fun smashing on the instruments and playing the last tone. And I also realized that I'm not a team player, I just did what I wanted".* Another woman said: *"Within music therapy, I didn't hide the covert side of my personality. I pressed ahead and I exhausted the volume and intensity of the music. The main topic for me was to show power, because I really am not powerful. But I wanted to find out how far I could go".* The patient of the percussion therapy mentioned: *"Actually, I am anxious and I don't like to talk in front of others. My heart beats very fast. In the first session, I also was very excited. But I realized quite quickly that you have to confront with these tasks. It will get better automatically and the tension will decrease gradually. And it's also helpful not to think so much, but just do it. And I adapt that for my life, because I think much too much – 'what do other people think of me, or that I could do something wrong' and so on. So I want to think less and just do things in the here and now".*

Self-confidence and self-esteem

The positive experiences patients had by getting over restraints and becoming more extroverted within the musical activity also enhanced patients' self-confidence. One patient who characterised herself as a cautious person said in the interview: *"I had the heart to do it in the percussion group, so I think that I can do things in my life with more self-confidence – it will all work out fine".* Another patient mentioned: *"I could take more and more courage to experiment with instruments and the rhythm and I could conquer my inhibitions".* A woman who attended improvisation therapy, said: *"First I thought that I couldn't do that. But this feeling disappeared very quickly. I dared to play all these instruments. By this positive experience I think that I will dare to do many more things in my daily life (...) Here, I learned that not everything has to be perfect, and when you don't doubt yourself so much you also can achieve more".* Further, patients' self-esteem had increased. The patient of the percussion therapy who became more powerful and extrovert mentioned: *"By making music I realized that I should not hide my personality as I did most of the time in my life – I am important and I have something to say! And that's something that I want to take home with me: I want to act on my own behalf, be more autonomous. And I want to come to the fore – such as 'here I am, I am I, and so I am'"!* The woman from the improvisation therapy who detected her dominant side said: *"I learned to take more care about me and my needs. I just played the way I wanted to and I didn't care what other patients would say. Before music therapy I didn't take myself so seriously. I always paid more attention to other peoples' needs and behaved the way people expected. But through music therapy I realized that I don't want to fulfil all these expectations anymore. My family will recognise that for sure. My husband, for example, expected me to help with the decoration for Thanksgiving at our church. But I immediately cancelled it, because I want to make my own decisions".* A woman who attended sound meditation, said: *"I felt so consistent with myself and my environment. And I'm fond of myself again. Because when you have cancer you sometimes reproach yourself – why don't I function like the others? But this feeling of freedom, being content with myself and with everything that happens was very important for me – not to think 'Why me?', but just having this result, feeling safe and sheltered".*

Self-awareness

Some patients also mentioned in the interviews that their self-awareness had increased by music therapy. Examples for percussion therapy are: *"While playing rhythms I was very self-aware and I forgot everything that was going on around me"* or *"Percussion music therapy made me detect new attributes in myself".* One patient, attending improvisation music therapy, explained: *"Actually, I have acute sleeping problems. But music therapy was so*

active and I felt more awake. Thereby, my perception or awareness for the other group members had increased. And when you perceive your environment more intensively, you are also more aware of yourself and have more contact to yourself. I felt myself more intensively". Also, sound meditation made patients more self-aware. For example, one patient mentioned: *"When I listened to the sounds I perceived myself very consciously, my mind was very clear. Most of the patients fall asleep, but I was very awake."*

Relaxation and rest

Nearly all interviewed patients of the three interventions indicated that they felt more relaxed by music therapy. For example, one woman who attended improvisation therapy mentioned that she felt more relaxed due to enhanced self-esteem she had achieved by music therapy: *"My tension has decreased because music therapy pointed out that I don't need and want to fulfil all expectations. And that I don't have to be considerate to others and that I don't want to worry about what others think about me".* Two patients mentioned that they felt physically exhausted, but also relieved after one typical session (e.g.: *"We discussed our future plans and what we probably want to change in our behaviour. The further step was that we expressed these plans on the instruments. It was very exhausting. After the session I really needed some espresso. It was hard, but at the same time positive and exciting working. For me music therapy is a very exciting and intensive form of self-examination"*). Patients who attended sound meditation explained the achieved relaxation state by comparing it with autogenic training and guided imagery, a verbal relaxation form. One patient said that relaxation within sound meditation was more intense, because it was more passively: *"I can better relax within sound meditation, because I don't have to do anything".* Two patients mentioned that relaxation within sound meditation was easier, because they could let go of recurring thoughts (e.g.: *"Within guided imagery, I sometimes cannot put myself into the situation which is described in the story. It's hard to imagine that I am a tree or that I'm lying on a beach. But sound meditation is somewhat more 'smoothly', because you are not squashed into a story. I could better relax within sound meditation, because my thoughts did not drift away as within guided imagery"*). Patients also replenished physical sensations, such as weightlessness and unconsciousness *("I was completely out of it, as if I had got an injection"; "It felt like being carried by the tones – so light and weightless")*. Patients also mentioned that the relaxation state they had achieved by sound meditation was comparable to hypnosis and trance. The relaxation patients perceived made them willing to modify their behaviour and habits in terms of implementing more rest periods: (e.g.: *"Relaxation is very important for me and I have to allow myself more rest periods. I realized that I sometimes did*

too many things, I have a full timetable. I already knew that before I attended sound meditation, but it became clearer").

Power, energy and vitality

As patients indicated that music therapy helped them to feel stronger (§3.6, table 3.10), interviewed patients also mentioned that they felt more powerful and vital (e.g.: *"I felt so alive while playing the African drums"*). One woman who had insomnia said that she felt more vital and awake during and after the improvisation music therapy sessions: *"Music therapy was like waking up. Because I sleep very badly, I am always quite knocked out and crabby. I am never really awake and I walk around very sluggishly drinking too much coffee. I don't see the flowers or hear the stream flow, for example. But after the music therapy sessions I suddenly recognize everything. And that is what I understand about living. Music therapy sharpened my senses. And by perceiving my environment better, I also have more contact with myself and am more aware of myself".* Another woman who also attended improvisation therapy said: *"I felt so alive when I played instruments – not like at home where sometimes things are in a rut and standing still".*

Pain reduction and other somatic advancements

One patient of the percussion therapy mentioned that he perceived less pain while playing the rhythmic instruments. Because of irritated nerve endings, he had pain in his hands and feet at the beginning of his hospital stay. Besides a special desensitisation therapy, percussion music therapy promoted the pain reduction: *"I had less pain, or I perceived the pain differently. When you have pain, playing a musical rhythm is like a counterforce – a distraction from the pain. And once I had a stomach ache, but I could reduce it by playing more gently – I gently stroked the drumhead. These resonances made my body feel lighter. Maybe it has to do with resonances – the body has resonances and so has pain, but certainly different resonances than music"!* Furthermore, there was a positive interdependency between the patient's pain reduction and his mood: *"Because of the pain I felt depressed and my feelings and thoughts were somewhat rigid. By making music this rigidity or inhibition was reduced and I felt free. Therefore, also the pain decreased and my musical playing advanced, because I could concentrate on the rhythm rather than on the pain. Drumming produced a kind of energy, which helped me to get more vital and open. On the emotional field, the percussion therapy was a good thing, as well"!* Sound meditation also delivered somatic efforts. One patient perceived less pain at one session: *"I entered the session with a headache, but afterwards the pain had almost disappeared".* One patient's respiration had settled down during sound meditation. Another patient's irritant ear risings caused by an acute hearing loss decreased by the sound meditation.

3.8 Working elements of music therapy: quantitative results

To assess possible generators of effects which patients had experienced, patients were asked to judge several working elements within music therapy (table 3.12). Assessed working elements were discussions during music therapy and emotional perception by either playing or by listening to music. Patients who attended an active form of music therapy were also asked to what extent music therapy encouraged the contact with other group members and musical expression of emotions. Overall, the mean scores were moderate, patients indicated that they could express their emotions via music but were more ambivalent about the helpfulness of perceiving emotions.

Table 3.12
Working elements of music therapy (N = 86)

	Percussion therapy (n = 28)		**Improvisation therapy** (n = 28)		**Sound meditation** (n = 30)		
	M	***(SD)***	***M***	***(SD)***	***M***	***(SD)***	***p***
By the musical activity I could express my emotions well	2.6	(.98)	2.9	(.76)	-	-	n.s.
By the musical activities I could get into contact with other group members more easily	2.7	(.77)	2.5	(1.00)	-	-	n.s.
The perception of emotions during music therapy was helpful for handling my disease	2.1	(.72)	2.4	(.99)	2.5	(1.36)	n.s.
Discussions during music therapy were helpful (a, b)	2.9	(.89)	3.1	(.79)	2.2	(1.06)	.001

Answer range: 0 = 'no agreement' to 4 = 'high agreement'
a) Differences between percussion music therapy and sound meditation are significant at the 0.05 level (two-tailed)
b) Differences between improvisation music therapy and sound meditation are significant at the 0.05 level (two-tailed)

Differences between the three interventions were found for helpfulness of the discussions Patients who attended percussion or improvisation therapy perceived discussions as more helpful than patients who attended sound meditation. The mean difference between percussion therapy and sound meditation was 0.7 (p = .025), the mean difference between improvisation therapy and sound meditation was 0.9 (p = .001).

Few significant correlations were found between working elements and patients' burden of the disease at T0 (table 3.13). Unexpectedly, ambivalence over emotional expressiveness (T0) did not correlate significantly with enhanced musical expression of emotions. This indicates that those patients who expressed their emotions less because of inability and fear of negative consequences could express their emotions via music as well as patients who were less ambivalent over emotional expressiveness.

Table 3.13
Correlations between working elements of music therapy and burden of the disease (T0) on the one hand and ambivalence over emotional expressiveness (T0) on the other hand (N =86)

	By the musical activity I could express my emotions well	**By the musical activities I could get into contact with other group members more easily**	**The perception of emotions during music therapy was helpful for handling my disease**	**Discussions during music therapy were helpful**
	ρ	***ρ***	***ρ***	***ρ***
Psychosomatic discomfort	.05	.19	.03	.01
Anxiety	-.07	**.27***	.19	.04
Deficits in information	.15	.08	**.30***	.08
Restrictions in everyday life	-.03	-.08	.13	.00
Social impact	-.22	-.09	-.11	**-.24***
Total burden of the disease	-.03	.14	.14	.03
Effect ambivalence	-.21	.20	.03	-.08
Competence ambivalence	-.04	.16	-.02	.11
Total ambivalence over emotional expressiveness	-.19	.17	-.03	-.05

**. The correlation is significant at the 0.01 level (two-tailed) ρ = Spearman's correlation coefficient
*. The correlation is significant at the 0.05 level (two-tailed)

A Spearman correlation analysis was accomplished to find out to what extent particular emotions and perceptions the patients had during the sessions helped them to handle their disease. It delivered interesting results (table 3.14): the perception of relieve during the sessions seemed to be helpful for handling cancer. It was also interesting that those patients who had cancer related emotions during the sessions indicated that the perception of emotions was helpful. However, a further correlation analysis indicates that relief was higher in patients who perceived music therapy as a welcome distraction from negative cancer related emotions ($\rho = .33$; $p < .05$) than in patients who perceived cancer related emotions during music therapy ($\rho = .18$; $p = .09$).

Table 3.14
Correlations between helpfulness of perceiving emotions and emotions during music therapy (N = 86)

	The perception of emotions was helpful for handling my disease			
	Percussion music therapy (n = 28)	**Improvisation music therapy** (n = 28)	**Sound meditation** (n = 30)	**Total** (N = 86)
	ρ	***ρ***	***ρ***	***ρ***
Cheering up	.25	.24	**.41***	.20
Relief	**.67****	**.60****	**.56***	**.59****
Aggression	.24	-.03	-.05	.00
Embarrassment	.02	.32	.12	.04
Threat	.24	-.12	-.05	.02
Cancer related emotions	.30	.24	.12	**.22***

**. The correlation is significant at the 0.01 level (two-tailed) ρ = Spearman's correlation coefficient
*. The correlation is significant at the 0.05 level (two-tailed)

3.9 Working elements of music therapy: qualitative results

Patients also mentioned numerous working elements of music therapy in the final interviews (T11) and explained to what extent these elements were helpful. Five of those working elements were in line with Smeijster's qualities of music (1995; 2006). Five additional working elements for active music therapy (percussion and improvisation therapy) and 3 additional working elements for sound meditation were found. As working elements of active music therapy differed from those of sound meditation they will be presented separately.

Working elements of active music therapy

Analogy (Smeijsters)

According to the *Analogue Process Model* (Smeijsters, 1995) emotions can be expressed through music. One patient who attended the improvisation therapy benefitted from music therapy, because she had difficulties to express her emotions verbally: *"With music you can express things that you may not be able to put into words. With words you always have to explain so much. With music you just can play the instruments. Music therapy is important to me because I do not need to express myself verbally. Via music I can express my feelings more directly, it's easier for me. And I think that music therapy helps me more than verbal therapy".* Another patient of the percussion therapy could reflect and express her actual mood by playing music. She was enraged in one particular session because of a time interference of music therapy and another therapy she also attended. Music therapy was a helpful medium to express emotions and so relieving the anger: *"I played the kettledrum very hard and gave my anger free reign. I felt better afterwards. And so it would be at home: when I get angry about my husband, I go to the cellar and rail loudly. If I had my own drum, I could release my anger in a different way".* One patient who attended improvisation therapy generally had difficulties to express her emotions. She said that that her actual emotions were very diverse and constantly changing: *"One moment I am afraid, the other moment I feel anger, which suddenly changes into sorrow. I don't know how to handle this mix of emotions. I want to let my emotions free reign, but I don't know how".* In the course of the therapy, she recognized that the improvisation therapy was not the right therapy for her. She especially found it difficult to explain her emotions and perceptions verbally: *"Something happened with my emotions when I played music, but I couldn't put it into words. And I don't have the need to analyse everything, to explain how I perceive the music or what the music does to me emotionally"*. Even though she did not like to talk about her emotions, she had the wish to let them – especially her anger – free reign in a more physical way *("…hitting the sandbag would be helpful, but I'm physically impaired…")*. Thereupon, she switched to the percussion

therapy, which turned out to be expedient and beneficial concerning emotional expression: the rhythmical parameters were more analogous to her current emotions, especially her anger.
Besides the feature of musical expression of emotions, the *Analogue Process Model* states that patients' musical behaviour conforms to his or her general behaviour. Behaviour patterns can be clarified by the musical improvisations. This gives patients the possibility to deal with their problems which are related to rigid and familiar behaviour patterns, because they safely can modify these patterns and try out new, alternative behaviour within the musical improvisations. The working element of analogy account for the patients' awareness and exploring new behaviour as described in §3.7 (e.g., becoming more extraverted, self-centred or setting clear limits earlier). By music therapy, patients experienced that they are able to change obtrusive behaviour patterns and that new behaviour advances their well-being, so that they intended *and* felt capable to integrate this new behaviour into their daily life.

Musical interaction / contact (Smeijsters)
As patients indicated that music therapy encouraged the contact with other group members (§3.8, table 3.12), several interviewed patients moreover pointed out the functions of musical interaction and contact. They perceived musical interaction with other group members as enjoyable. Especially within the percussion group, musical interaction, playing together with others was seen as a precondition to let the music function (e.g.: *"Drumming in a group is more enjoyable. I actually think that the rhythms only function with more instruments"*). Patients enjoyed musical contact with other group members, exemplary statements of patients from the percussion group were: *"Everybody begins to play a specific rhythm on his own, then we find each other and we have a joint rhythm. That was very special, it gave me a feeling of power, somehow"*; *"I enjoyed the musical interaction. I listened to the others and I could react to their play. I enjoyed the group experience, because it also was a joint sentience, a mutual exchange"* and *"I had a kind of musical dialogue with the therapist – we communicated musically – with questions and answers. That was fun".* Patients who attended the improvisation music therapy said: *"I enjoyed it and I perceived that the other people also enjoyed the musical interaction in the group. It really was a group experience. And this group experience even made it more enjoyable"* and *"Although everybody tried to play something on their own to express their feelings, the group members always found each other within the music. That was very nice".* Patients also highlighted the value of musical interaction by explaining that different group constellations also effected the musical interaction (e.g.: *"After the immense change of patients, there was more musical contact between group members. Although everyone played a bit for himself, they were open and sometimes a kind of harmony arose. You listen to the others, react to their play, play the same or replenish the*

rhythm. That made it more harmonious, which I liked very much"). One patient said that music provided the opportunity to get into contact with people more unreservedly. She had musical contact with another patient who she wouldn't have had contact beyond music therapy with: *"Mrs S. and I have had a good access to each other since the first session. I don't have contact to her beyond music therapy and I wouldn't want it, either. But within the music, it fitted somehow".*

Association (Smeijsters)

Associations came up within patients who attended the percussion music therapy. Patients associated the sound of the African Drum with African peoples with necklaces and colourful robes, dancing at a campfire. The sound of the steel drum evoked positive memories about a Caribbean holiday in one patient. Another patient remembered reading adventure books about Africa when he was a little child. All mentioned associations evoked positive emotions, although they were not always directly related to the patients' life and their experiences.

(Symbolism of) instruments (Smeijsters)

Patients attached value to specific instruments for several reasons. Some patients just liked the sound of instruments (e.g., steel drum and djembé). For other patients, several instruments and their sound symbolized personal traits, physical and emotional states. One patient, for example, liked the ocean drum, because *"…it was fascinating, on the ocean drum I could express so many facets of myself – you can play it loud, which fits because I normally am a dominant and loud person. But I also wanted to show and practise the diffident side of me musically, because I often offend with my dominance. And with the ocean drum you can also play very quietly".* Another patient associated the rhythm instruments with power, whereas the melodic instruments stand for something soft and meek. Although the melodic instruments better fitted to her introverted personality, she preferred the rhythm instruments, because she could express power, which she usually cannot express easily.

There were patients from both percussion and improvisation therapy who especially liked the rhythm instruments, because they considered drumming easier to play than melodic instruments (e.g.: *"Drumming helped me to come out of my shell. The melodic instruments have more to do with achievement and ability"* and *"…when I was drumming, I could let myself go, release pressure. I really could go for broke. So I really was more aware of myself. With the melodic instruments it's different: you cannot exhaust them because you have to be careful not to break them"*). One patient especially liked the djembé, because of the deep, sonorous bass tones: *"You really feel the vibrations, so it's a physical sensation as well. And I also liked all the different tone colours of the djembé".*

(Physical) activity (Smeijsters)

Patients enjoyed being actively involved into the musical play, playing music by themselves rather than passively listening to music. Patients liked to contribute something personal and to have it in their own power to influence the musical play. Being active affected patients' mood positively: *"I recognized that not just listening to music is enjoyable, but also when you get in on the music. It is another kind of joy, because it is active. Listening to music is more relaxing, whereas active music therapy is positive exhaustion."* and *"When I'm just listening to music, I cannot do something own – that would make me nervous somehow"*. A patient who attended percussion therapy said: *"Just the fact that you have done something to advance rhythmic skills – you don't do that in normal life. You are just consuming, listening to a CD, which is also nice, but without any effort on your own part. But within music therapy, I had the feeling that it's my own work and that I have expressed myself musically. Listening to music is like going into the sauna and playing music is like riding the bike (...)".* Other patients accentuated the aspect of physical activity within the musical play, which increased relaxation: *"It was a physical activity, which captured me in a way that nothing stressed me anymore."* and *"In difficult situations, I need physical activity. I do the chores, for example. And within percussion therapy, I also had physical activity. Maybe that's why I could relax and get away from my difficult situation so well"*. Further, several patients additionally attended therapies which had a more passive character, such as autogenic training. They liked the combination of these active and passive interventions (e.g.: *"Autogenic training was very relaxing. So was music therapy, but by doing something actively, it's another form of relaxation. Music therapy was a kind of counterpoint, just the right mixture of passivity and activity").* One patient's self-awareness had increased, because she felt more awake by the activity and energy which arose within the musical improvisations: *"When you don't do anything, just sleeping all the time, it never gets better. And you can contribute something of yourself to the music, which was very important for me".*

Diversity

Patients pointed out that the build-up of each session was very diverse. It was a well-balanced mixture between little exercises with clear instructions and free improvisations. Further, patients liked the variety of topics, exercises and default rhythms: *"Every session was completely different and it was never boring. I looked forward to every session and I was really curious about what's going to happen"* and *"I especially liked the mix between listening to music at the beginning, musical warm-ups including physical activity, cognitive work and free improvisations about a specific topic. All in all, it was a nice piece of work, because it was so diversified".* Patients of the improvisation therapy also explained in detail

what they liked about the specific units. The warm-ups were helpful because they decreased tension. One patient said: *"It was a good introduction, because it loosened tension. Therefore, I could better cope with the given topic afterwards, because I was less inhibited and tensed".* Other patients liked guidelines by the therapist and the given defaults about a specific topic (e.g.: *"The default of topics gave me food for thought. For example, the therapist asked what we wanted to achieve within the following months. You can think about that first and afterwards you can express it with the instruments. And if you only improvise about your feelings without a given topic, something's missing"*). Patients also liked the free improvisations on a given topic within the improvisation therapy and on a given rhythm within the percussion therapy, respectively. One patient mentioned: *"Within the free improvisations you can experiment very well. If you don't like your own playing, you just can change it. I felt very free, because I had it in my own grip how to play and I myself could change it".*

New experience

For many patients, it was the first time that they actively had contact with music instruments. They wanted to gain new experience and were curious about their reactions to music therapy. For some patients, just the fact that they have tried something new was a good experience. One patient who attended the percussion therapy said that she was proud that she had chosen something unfamiliar and that she was self-contented about her courage to experiment with many instruments. Another patient, attending improvisation therapy, said: *"It is something that you don't do at home. Once, we did something with our voice, we made crazy sounds. If my family had seen me, I'd probably been more inhibited. But here, everybody does it, so I do too. I really liked it to do things I normally don't do".* Making new experiences with music also applied to a patient who already had a musical background. He played the trumpet in an orchestra and said that he liked the new, more experimental approach to music: *"If you compare music therapy with playing in an orchestra, music therapy is not such a big hit from the musical point of view, but certainly from the experience. I wasn't acquainted with that by my musical experiences at home, where music takes an orderly course".*

Feeling of success

Especially patients of the percussion group, but also of the improvisation group mentioned that they had feelings of success. Most of the patients had no musical background, but they managed to play the instruments and they were surprised about the euphonic result. Although music therapy does not intend to achieve good musical results, for many patients, especially from the percussion group, it was important that the music they played sounded good. The percussion therapy had a more educational and instructional approach compared to

improvisation therapy: given rhythms were rehearsed and patients wanted to fulfil the instructions. Exemplary statements of patients who attended the percussion therapy were: *"Without any previous musical knowledge and without mental effort you can get a good result within a short time. Even if you play one or two times together with the group, it already sounds good"* and *"I liked to see my own progress. At the beginning it was mental work, but the more we played together the easier it became. So, I could experiment with the rhythms, played some syncope's for example. I was very happy that I managed it, because it is not easy".* Feelings of success were positively related to the patients' increased self-esteem. Patients recognized that they could achieve playing instruments, which gave them self-confidence and the courage to experiment. One patient who attended the improvisation therapy said that she became more self-confident because *"...you can achieve the instructions. Sometimes we only got little defaults and I was surprised and happy how I managed them because it was new for me. I was very impressed about the rhythm I played".* Another patient said: *"I liked the session in which we did something with our voices. We danced and made rhythmic sounds with our voice. It was not so easy but it was a nice experience that I finally managed to do it".*

Freedom from judgement

Feeling of success and increased self-esteem also had to deal with the fact that the patients' musical play was not judged. Music therapy is not about accomplishment, because there is no wrong or right way to play. Because it was free from judgement, it also gave the patients a feeling of freedom. One patient said: *"Music is free of judgement; thereby it's also free of barriers. And I had the feeling that I just could do everything. (...) Often you don't have the heart to do something because you think you cannot achieve it or you are not gifted. But within music therapy I recognized that it doesn't matter, the important thing is that you just do it and think well of yourself".* Patients felt free and did not feel the pressure to perform, which also had to deal with the perceived equality of group members (e.g.: *"Making music with unfamiliar people with different social backgrounds - one is a salesman, the other a doctor, for example. But the group formed a community where I felt safe and free. It was so free of judgement, it didn't matter what you can do or what kind of job you do. We just made music together"*). Another patient said that music therapy experiences were totally contrary to the "dreadful" musical experience she made as a child within the piano lesson: *"Everything I played was always wrong. I wasn't a good piano player, I didn't hear my own faults and I couldn't hold the rhythm. But here, it doesn't matter anymore if I don't hit the right beat or tone. It's just important that I find my* own *rhythm".* Another patient said: *"Hour by hour I tried more, combining and altering the rhythms we learned. It was a nice experience that I*

just tried it without pressure and fear. The result doesn't matter, but the fact that I've tried it anyway".

Cognitive effort

Within percussion music therapy, practising and experimenting with rhythms required cognitive effort and concentration. Thereby, patients were distracted from negative thoughts concerning their difficult situation (e.g.: *"I was just busy with the rhythm. I didn't have the time to think about anything else. And I really enjoyed being engaged just with one thing so intensively, which I actually rarely succeed in. What's more, my thoughts didn't drift away as they do within other therapies I attended".*). One patient mentioned that he perceived less pain, because he had to concentrate on the rhythms. Another patient's self-awareness had increased. She said: *"I was concentrating just on the rhythms; I forgot everything that was going on around me. And thereby, I also was more aware of myself, I had more contact to myself".*

<u>Working elements of sound meditation music therapy</u>

Associations (Smeijsters)

Numerous patients referred about positive associations they had during the sound meditation. Images came up in them, which caused comfortable psychological and physical states. Most of the patients had associations and images of nature: *"Images of mountains, sunshine and a blue sky came up during the sound meditation regularly. That was very relaxing. These images of nature provoked a comfortable feeling, because I'm close to nature. It's important for me to do much outside in the nature and I liked that these images also came within sound meditation"* and *"I felt like being on a river which just picks me up without any effort of myself. It was a flow, so easy-going without any obstacles".* Another patient said that associations of nature came up by the spoken word of the therapist: *"The therapist said 'We are on the sea' – and I heard the sound of the crashing sea. I really felt as if I was sitting in a boat and I could feel the waves. Images of water came up and I could feel the sunshine on my skin. Another time I saw a meadow and I smelled the fresh grass. I perceived that with all my senses, it was very intensively. It was a new experience, because normally I don't perceive such things so intensively".* One patient associated the sounds with a Buddhist abbey, which provoked a deep relaxation that gave her strength.

Passivity

Patients enjoyed sound meditation because they did not have to do anything actively. Exemplary statements were: *"It's nice just to feel comfortable without having to do*

anything"; "It was very comfortable that you were not demanded to do anything. You just could concentrate on yourself – that was the positive thing about sound meditation. Unlike the poetry therapy I also attended. Within poetry therapy I had to reflect and explain my perceptions" and *"I liked that it was so passive. I wouldn't like active music therapy. I would constantly think that I am unmusical. That would stress me too much and I wouldn't like to expose myself to this pressure".*

Instruments

Patients highlighted specific instruments which caused relaxation and other sensations described in §3.5 and §3.7. Exemplary statements about the sound of the monochord were: *"The monochord appealed me; it was constantly the same sound, so I got totally relaxed"* or *"With the sound of the monochord, I really feel as a part of a river, as if I am carried by the tones. And a feeling of freedom comes up in me"*. Two patients especially preferred the more quiet sounds of the gong and the singing bowl: *"The monochord was too loud, I got a little agitated. But I liked the quiet sounds at the beginning. I was drawn in by the gong and the singing bowl. I became totally relaxed, it was very comfortable"* and "*By the well composed quiet sounds I could concentrate on myself and get away from problems very well".* Other patients said that they could relax well because of the comfortable sound of the therapists' voice and the auxiliary spoken words, e.g.: *"Mr Rose* [author's note: one of the therapists] *spoke in the middle of the session while playing the instruments. I didn't quite understand what he said, but I perceived his voice as very comfortable"* and *"Mrs Nitsche* [author's note: one of the therapists] *has a beautiful voice, I came into a condition of relaxation right from the beginning of her introductory words"*. Patients also liked the overtone singing (e.g.: *"The overtone singing helped me to concentrate on myself. It has something soothing. And I missed the voice and the overtone singing when Mrs Nitsche offered the meditation because she does not speak and sing during the session"*). One patient was fascinated by the sounds of the kantele. Others did not mention particular instruments, but liked the interplay of all instruments (e.g.: *"I think it was the interplay of all the instruments which made me relax so well. I didn't prefer any particular sounds or instruments. It was just the interplay of all instruments which fits together so well"*). One patient liked that the instruments were played live by a therapist rather than from CD: *"There is somebody who plays just for you and the other participants. That's simply nicer than listening to a CD, because there is a companion. I liked that the sound meditation was offered by a person and not by a machine, thus a CD-player".*

Atmosphere

A special atmosphere prevailed within the sound meditation right from the beginning of the session. Patients were asked to enter the room quietly to create or facilitate the state of relaxation even before the first sounds were played. Patients said in the interview: *"I liked that we had to enter the room quietly without speaking so much. This provoked a kind of deepness and seriousness – a good introduction into relaxation"; "I liked that we had to enter the room quietly. It gave a feeling of being sheltered".* One patient highlighted the respectful contact among the patients, which helped to become more open, to let go and relax: *"At the end of the session we could refer how we perceived the sound meditation. All the diverse perceptions were not judged, neither by the therapist, nor by other patients. I didn't have the feeling that patients were not taken seriously about their perceptions, even if they were totally contrary to one's own perceptions. We treated each other in a respectful manner".*

4. DISCUSSION

To our knowledge, this is the first study about music therapy within post-hospital curative treatment. The results of this study indicate that music therapy can have positive influences on well-being of cancer patients in the post-hospital curative stage. Patients were almost satisfied about the interventions and they perceived diverse effects by the music therapy interventions. Furthermore, we found numerous working elements of music therapy.

The strength of the present study is its mixed-method design. Patients' comments in the interviews offered momentous supplements concerning perceived effects and working elements. For example, several patients felt more self-confident and were stimulated to explore new behaviour, which was not assessed by the quantitative questionnaires. Furthermore, own questionnaires were designed for the quantitative assessment of this study and their internal consistencies were satisfying. Due to the lack of standardized tools, our questionnaires could also be useful for other researchers.

Our findings give valuable contributions in respect to usefulness and exigency of music therapy for this population. It also offers valuable guidelines for optimization and initiation of music therapy interventions for cancer patients in the post-hospital curative stage. The most relevant findings and their contributions and guidelines will be discussed in detail.

Satisfaction

Patients were satisfied about the offered music therapy interventions. In our opinion, satisfaction is a basic requirement for the therapy to work in order to achieve the desired effects. Patients attending sound meditation scored lower on the dimensions therapists' approach than patients attending active music therapy. We assume that these low results have to deal with the fact that the relationship between the therapist and the patient is less relevant within receptive music therapy, because there is almost no interaction between the patients and the therapists.

Patients' ambivalence over emotional expressiveness before music therapy started

The findings about patients' ambivalence over emotional expressiveness are in line with results of previous research. Research has indicated that cancer patients have difficulties in expressing emotions (Fernandez-Ballesteros et al., 1998; Lilja et al. 1998; Manna, Foddai, Di Maggio, Pace, Colucci, Gebbia & Russo, 2007). Our patients were more ambivalent over emotional expressiveness compared to norm groups. Before starting music therapy, they felt less capable to express emotions and they did not express feelings because they were afraid of negative consequences. Traue (1998) mentions that this conflict between one's need to express emotions and the desire not to display subjective emotions causes difficulties in communicating emotional needs and problems in relationships. This may implicate consequences, such as decreased self-esteem. As research indicates that music therapy can enhance emotional expressivity in cancer patients (Aldridge, 1996; Bailey, 1984; Clements-Cortes, 2004), patients who would like to, but have difficulties to share negative cancer related emotions, might benefit from music therapy.

In this study, we did not measure if ambivalence over emotional expressiveness was decreased by music therapy. Possible changes could not have been accounted to music therapy alone, as it was a part of a whole treatment. Future research is necessary to investigate the effects of music therapy on patients' emotional expressivity. Future research should be conducted in settings where patients only receive music therapy in order to retest if music therapy enhances emotional expressivity. A pretest-posttest control group design could be used in which both control and examination group receive the same treatment and the examination group additionally receives music therapy.

Emotions during music therapy

The results of our research also give valuable information about the patients' need to perceive particular emotions during music therapy. Most of our patients benefitted from music therapy by experiencing positive emotions, such as joy. They were happy that music therapy distracted them from negative cancer related emotions. Interestingly, at the same time the

perception of cancer related emotions during music therapy helped patients handling their disease. However, we only found significant evidence that relief was established by distraction, but not by the experience of negative emotions. Nevertheless patients might have psychological benefits and feel relieved by experiencing, expressing and sharing negative cancer related emotions and sorrows.

Next to the assessment of emotional perception, it would be advisable to assess musical expression of emotions in future studies. Emotional expressivity of patients' musical play could be observed with the help of developed measurement instruments. For example, Wosch (2001) has developed a computerized tool which aims to measure emotional expressivity and its changes within music therapy improvisations. It is an instrument by which the rater sits at the computer. While listening to the taped improvisation he clicks at those emotions he hears within the improvisation. The rater can choose between five different basic emotions, such as anger and joy. The tool enables the rater to appoint the exact moment of expressed emotions as well as emotional changes within the improvisation. Comparing improvisations of different sessions might give valuable information about the process and possible progress of the patient's musical expressivity of emotions. The tool was developed for individual music therapy; an analysis of the improvisations might be difficult within a group setting.

Perceived effects

Patients especially perceived psychological and psychosomatic advancements via music therapy. Perceived psychological and psychosomatic effects were similar within all the three offered music therapy treatments. Social effects were lower within all offered music therapy interventions, but significantly higher within the two active types of music therapy (percussion and improvisation therapy). Low social effects may result from the fact that patients did not perceive social isolation or were not inhibited in the contact with others before music therapy started. We did not measure social isolation and problems in social contact before music therapy started. We assessed social impact and restrictions in everyday life instead. These dimensions of the burden of disease questionnaire did not include social isolation and social contacts. This means that they did not match with our social construct. The same constructs should be assessed at the beginning and at the end of the music therapy interventions in order to investigate progress. Concerning social effects, it would also be advisable to accomplish retests after several weeks in order to examine long-time effects. Patients have to live and act in their used social environment to detect possible changes or advancements.

Perceived psychosomatic effects for as well active and receptive music therapy were relaxation and rest as well as increased power and vitality. Perceived psychological effects, which were congruent within all interventions, were mood improvement, release of positive emotions, distraction from stress and negative cancer-related emotions and increased self-awareness. Several of the perceived effects found in this study are in line with findings of studies with acute and palliative cancer patients, such as mood improvement (Weber et al., 1996; Hanser et al., 2006; Cassileth et al., 2003; Waldon, 2001; Gallagher et al., 2006) and relaxation (Bailey, 1983; Reinhardt, 1999, Cunningham et al., 1997; Hanser et al., 2006). Other findings, such as a decrease in anxiety could not be affirmed by our study. New findings in our study, compared to studies with palliative and acute patients, were increased self-confidence and self-esteem, a revelation of behaviour patterns and a stimulation to explore new behaviour within active music therapy. These distinct findings might indicate that patients' needs depend on the stage of the treatment. Cancer patients in the post-hospital curative stage may deal with other issues and have other problems and needs than patients in acute or palliative situations. For example, reducing anxiety may play a more essential role during medical treatment and in the final stage of the disease. Acute patients are afraid of medical side-effects, such as pain, fatigue and nausea. Music therapy can help to reduce fear and pain in order to endure the medical treatment and to counteract non-compliance. Knowing that one will die from cancer, decreasing fear of death and accepting the end of life could be aims of music therapy within palliative care. Cancer patients who convalesce from the medical treatment also perceive anxiety. In our study, patients had fear of cancer progress. However, anxiety may play an inferior role, because convalescing patients have future perspectives, unlike palliative patients. Therapies within post-hospital curative treatment could focus on these future perspectives; having overcome medical treatment could be seen as an intercept of a new period of life. Patients might have the need to become aware of their needs and identity, to define new alignments and orientation for their life in order to improve well-being. Researchers have described changes in the self that occur following cancer diagnosis and treatment, and the need to reconstruct or redefine one's own identity (Corbin & Strauss, 1988; Fife, 1994; Morse & Carter, 1996). Music therapy might assist patients in identity and future-oriented aspects, as our results indicated that active music therapy enhanced patients' self-awareness and stimulated patients to critically challenge their actual behaviour.

Our study revealed that self-esteem and self-confidence are important issues concerning cancer patients. Decreased self-esteem may result from physical impairments, identity problems, but also from self-reproaches and feelings of guilt. Not only the fact that patients' self-confidence and self-esteem could be increased within active music therapy, also the

investigation of generating working elements for increasing self-esteem underline the valuable usefulness of music therapy for this population: patients had feelings of success and felt equal to other group members because music therapy was free from judgement. Equality and feeling successful may be essential and of outmost importance for cancer patients, because they may perceive themselves as less valuable than the 'healthy majority'.

As the results of the present study are based on self-reported measures, the strength of patients' perceived effects should be proven by future research. Further, the examined music therapy interventions were part of a post-hospital curative program, patients' perceived effects cannot be accounted to music therapy alone. As patients could choose between the three music therapy interventions the results are influenced by patients' preferences. On the other hand, a randomized experimental design was not desired, because the indications of the examined interventions varied. In our opinion, a randomized design would also be critical from the ethical point of view. Personal preferences should be respected in regard to the choice of an intervention in order to let music therapy function.

Nevertheless the results of the present study indicate the benefits and the importance of music therapy within post-hospital curative treatment. Furthermore, we found additional indications for music therapy compared to music therapy within acute and palliative cancer. We suggest that future music therapy research with convalescing cancer patients should definitely focus on aspects which differed to those of acute and palliative music therapy research, such as increased self-confidence and the stimulation to explore new behaviour in order to enhance well-being. Furthermore, it would be important to investigate if these effects can also be achieved by receptive music therapy. In our opinion, the extent and helpfulness of discussing personal needs, stimulating redirections in shaping one's life and behaviour modification within music therapy should be assessed by qualitative methods in interviews. Furthermore, follow-up interviews have to be accomplished after several weeks or months to investigate if patients have implemented behaviour modifications and if those enhanced their well-being. Effects on patients' self-confidence should rather be tested with validated standardized instruments, such as the Multidimensional Self-Concept Scale (MSCS) by Fleming and Courtney (1984).

Working elements of music therapy

Our examination of the working elements of music therapy confirmed the existence of several of Smeijster's qualities of music (1995; 2006). The qualities *analogy, communication, symbolism, association* and *physical activity* were also found in our study. *Analogy* means that emotions can be expressed musically. Several patients of our study indicated that they expressed their actual emotions via the instruments. For example they expressed anger on the

drum, which gave them relief. According to Smeijster's *Analogue Process Model* (1995), patients' behaviour is analogue to their musical behaviour. This was also the case within our patients. Active music therapy enabled several patients to release behaviour patterns and to become aware of their behaviour. At the same time it enabled our patients to reflect their behaviour and to determine own needs. In turn, active music therapy stimulated several patients to explore new behaviour. For example, patients became aware that they wanted to become more extroverted, more self-centred or to set clearer limits to others. Within music therapy, the patients could practise these needs safely. *Communication* was another working element we found. Patients in our study perceived the communication and the musical contact as enjoyable and it was linked to mood improvement. In our opinion, communication can also be seen as a working element for analogy, because (musical) behaviour was triggered by interaction. Patients reacted to each others' play, which means that analogies between normal and musical behaviour can only be revealed and triggered by musical interaction between at least two people. Smeijster's third quality, *symbolism*, was also found in the present study. For several patients, the instruments symbolized their own personal traits, such as extroversion and introversion: interestingly, these patients preferred to play on instruments which symbolized the opposite of their personality. This means that the symbolism of instruments enabled patients to try out unfamiliar behaviour musically. Further qualities of Smeijsters were also found in the present study: patients had several *associations* while playing or listening to music, which released both relaxation and almost positive emotions. The same effects were accomplished by *physical activity*. Furthermore, patients perceived power and vitality by being physically active.

Next to Smeijster's working elements of music therapy, additional working elements were detected in the present study. In contrast to Smeijster's qualities, these working elements do not reflect qualities of music. Per se, they are related to the modalities of the offered music therapy interventions, such as the offered instruments and the diversity of the sessions. This implicates that these working elements are not categorically unique for music therapy and that they might also be initiated within other therapies. The purpose of the present study was not to find unique working elements of music therapy or evidence that music therapy distinguishes to other therapies. We were interested in the modes of action of music therapy and by which means diverse effects were established in post-hospital curative cancer patients in order to find benefits of music therapy for this population and to make suggestions about improving and implementing music therapy in this field.

Our results indicate that the same effects were established by different working elements. For example, relaxation was generated by activity within improvisation and percussion therapy, whereas passivity was its major generator within sound meditation. Mood

improvement was linked to musical communication within active therapy, but to associations within sound meditation. This indicates that therapy might work differently for patients and that benefits also depend on patients' personal issues and preferences. In order to assist the patients in finding the right music therapy (if different forms are offered), it is necessary to assess these personal aspects and preferences.

Knowledge about the different processes by which effects can be achieved gives valuable information in order to optimize and implement music therapy. For example, as we can assume that self-confidence within active music therapy is established by feelings of success and freedom from judgement, the therapist should work with the patients' resources rather than confronting them with their limitations. Several techniques can be used within the musical improvisations in order to meet patients' needs. Bruscia (1987) has developed 64 therapeutic techniques, most of them are meant for musical improvisations. Techniques address diverse aspects, such as empathy, structure, change, challenge and emotional exploration. Imitating is one technique of empathy in which the music therapist copies or repeats what the patient is playing. This gives the patient a feeling of acceptance, which also could enhance his or her self-confidence. Emotional perception could be improved by the technique holding, in which the therapist forms a supportive musical basis to enable the patient to explore his or her emotions musically. If patients want to explore new behaviour, challenging techniques could be useful. Making space is one of those techniques: the therapist makes little interruptions within the improvisation which give the patient space to fill these gaps with music. In our opinion, this could be a useful technique for patients who want to become more extroverted.

Contrary to Smeijster's *Analogue Process Model* and his description of qualities of music, we also examined if working elements were related to perceived effects in order to find out the mechanisms by which effects may be generated. For example, we found out that *new experience* and *freedom from judgement*, increased patients' self-confidence within active music therapy. A conceptual model emerged by this analysis (figure 4.1). This model can be a useful and important starting point for a theoretical framing of the processes and modes of action of music therapy. It offers an incentive for future research to examine the links between working elements and effects in order to find out by which processes and mechanisms effects of music therapy can be achieved.

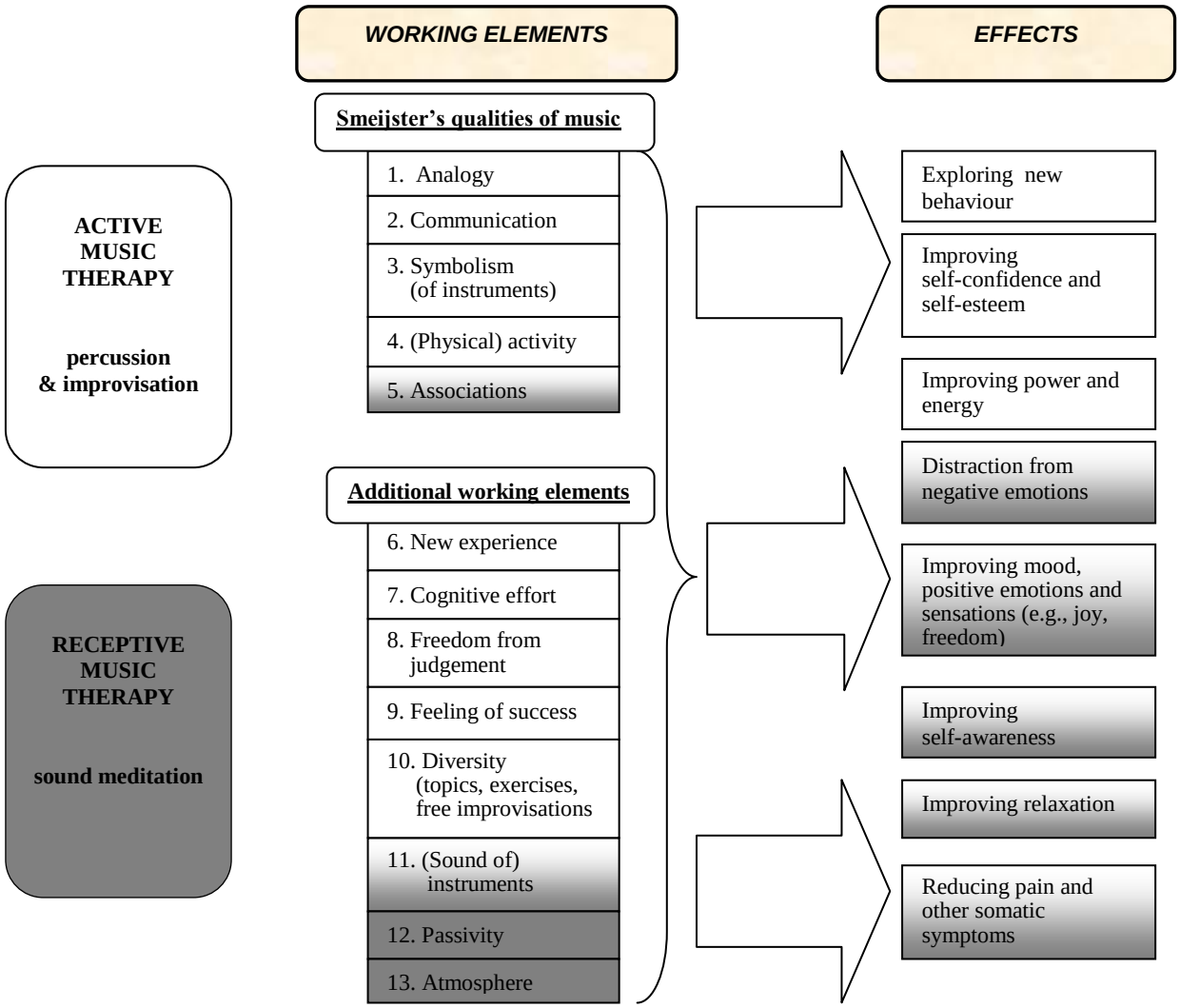

Figure 4.1
Conceptual model for working elements of music therapy and related effects

5. CONCLUSION

The results indicate that music therapy can have positive influences on well-being of cancer patients in the post-hospital curative stage. The findings offer valuable information about patients' needs in this state of treatment and how effects can be addressed within music therapy. Our findings offer valuable guidelines for the implementation and optimization of music therapy within post-hospital curative treatment. The promising results of this study should be proven by future research.

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APPENDIX

- Questionnaires
- Interview guideline

AEQ-G18

(adapted from King & Emmons, 1992**)**

Auf der folgenden Seite finden Sie Aussagen über den Umgang mit Gefühlen. Als Antwortschema wurde eine Skala zwischen "nie" und "immer" hinter die Aussagen gestellt. Überlegen Sie bei jeder Aussage kurz, wie häufig das beschriebene Verhalten für Sie zutrifft und antworten Sie dann spontan. Beachten Sie, dass die Aussagen immer aus zwei Teilen bestehen und die Antwort für beide Teile gelten soll. Da sich Menschen im Hinblick auf ihren Gefühlsausdruck sehr unterscheiden, gibt es keine richtigen oder falschen Antworten.

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Untersuchungen zur deutschen Version des Ambivalence over Emotional Expressiveness Questionnaire (AEQ-G18), Zeitschrift für Gesundheitspsychologie, 14 (4), 158-170

		nie	selten	manch-mal	oft	immer
1.	Ich würde gerne meine Gefühle ehrlich zeigen, fürchte mich aber vor Peinlichkeit und Verletzung.	☐	☐	☐	☐	☐
2.	Ich halte meine Eifersucht gegenüber meiner Partnerin/meinem Partner in Zaum, obwohl ich sie/ihn wissen lassen möchte, wie mich das schmerzt.	☐	☐	☐	☐	☐
3.	Ich gebe mir Mühe mich zu zügeln, obwohl ich meinem Temperament lieber freien Lauf lassen würde.	☐	☐	☐	☐	☐
4.	Meine Zuneigung würde ich gerne auch körperlich zeigen, denke aber, das könnte falsch verstanden werden.	☐	☐	☐	☐	☐
5.	Ich versuche niemandem Sorgen zu machen, obwohl andere die Wahrheit kennen sollten.	☐	☐	☐	☐	☐
6.	Ich zwinge mich zum Lächeln, um vor anderen glücklicher auszusehen als ich wirklich bin.	☐	☐	☐	☐	☐
7.	Ich bemühe mich meine Zuneigung zu zeigen, obwohl ich befürchte als weich und zu sensibel zu gelten.	☐	☐	☐	☐	☐
8.	Eigentlich möchte ich mich für Fehler entschuldigen, fürchte aber als inkompetent zu gelten.	☐	☐	☐	☐	☐
9.	Ich fühle mich unfähig anderen zu sagen, wie viel sie mir bedeuten.	☐	☐	☐	☐	☐
10.	Ich möchte meine Zuneigung gerne ausdrucken, aber dann finde ich nicht die richtigen Worte.	☐	☐	☐	☐	☐
11.	Ich kann mich an Situationen erinnern, in denen ich jemandem besser meine Zuneigung hätte zeigen sollen.	☐	☐	☐	☐	☐
12.	Ich bemühe mich meine negativen Gefühle nicht zu zeigen, auch wenn das Nahestehenden gegenüber nicht ganz fair ist.	☐	☐	☐	☐	☐
13.	Ich würde meine Gefühle gerne spontaner zeigen, aber es gelingt mir einfach nicht.	☐	☐	☐	☐	☐
14.	Es fällt mir schwer die richtigen Worte zu finden, um anderen zu zeigen, wie ich mich wirklich fühle.	☐	☐	☐	☐	☐
15.	Ich fürchte, dass andere es missbilligen, wenn ich ihnen meine Angst- oder Ärgergefühle zeige.	☐	☐	☐	☐	☐
16.	Wenn ich mit jemandem ärgerlich umgegangen bin, plagen mich hinterher Schuldgefühle.	☐	☐	☐	☐	☐
17.	Ich kann einfach nicht zeigen, was ich wirklich fühle.	☐	☐	☐	☐	☐
18.	Wenn ich jemandem meinen Ärger gezeigt habe, stört mich das für längere Zeit.	☐	☐	☐	☐	☐

Fragen zur persönlichen Situation

Sie finden im Folgenden eine Liste mit **Belastungssituationen**, wie sie in Ihrem Leben vorkommen können. Bitte entscheiden Sie für jede Situation, ob sie auf Sie zutrifft oder nicht. Wenn ja, kreuzen Sie an, wie stark Sie sich dadurch belastet fühlen (auf der fünfstufigen Skala von „kaum“ bis „sehr stark“). Wenn nein, machen Sie bitte ein Kreuz bei „trifft nicht zu“.

FBK-R10

		trifft nicht zu	trifft zu und belastet mich kaum……sehr stark				
1.	Ich fühle mich schlapp und kraftlos……	☐	☐	☐	☐	☐	☐
2.	Ich habe Schmerzen……	☐	☐	☐	☐	☐	☐
3.	Ich fühle mich körperlich unvollkommen……..	☐	☐	☐	☐	☐	☐
4.	Ich habe zu wenige Möglichkeiten, mit einem Fachmann/-frau über seelische Belastungen zu sprechen……	☐	☐	☐	☐	☐	☐
5.	Ich habe Angst vor einer Ausweitung / Fortschreiten der Erkrankung……	☐	☐	☐	☐	☐	☐
6.	Es ist für meinen Partner schwierig, sich in meine Situation einzufühlen……	☐	☐	☐	☐	☐	☐
7.	Ich habe Schlafstörungen……	☐	☐	☐	☐	☐	☐
8.	Ich kann meinen Hobbys (u.a. Sport) jetzt weniger nachgehen als vor der Erkrankung….....	☐	☐	☐	☐	☐	☐
9.	Ich fühle mich nicht gut über meine Erkrankung/Behandlung informiert……	☐	☐	☐	☐	☐	☐
10.	Ich bin angespannt bzw. nervös……	☐	☐	☐	☐	☐	☐

Vielen Dank für die Beantwortung der Fragen.

Eingangsfragebogen (T0): Musikalischer und musiktherapeutischer Hintergrund, Zweifel and der Wirksamkeit, Argumente für die Teilnahme und Therapieziele

1. Spielen Sie ein oder mehrere Instrument(e): ☐ ja ☐ nein

2. Ist dies Ihre erste Teilnahme an einer Musiktherapie?

   ☐ ja ☐ nein

3. Haben Sie vor der Musiktherapiesprechstunde bereits von Musiktherapie gehört?

   ☐ ja ☐ nein

4. **Wenn nein**: Konnten Sie sich vor dem Gespräch in der Musiktherapiesprechstunde etwas unter Musiktherapie vorstellen?

   ☐ ja ☐ nein

5. Hatten Sie Zweifel an der Wirksamkeit von Musiktherapie (Improvisation, Trommeln oder Klangmeditation)?

☐ keine Zweifel ☐ geringe Zweifel ☐ mäßige Zweifel ☐ große Zweifel

6. Was waren die Argumente für die Teilnahme an der Musiktherapie *(mehrere Antworten möglich)*?

   ☐ Der Musiktherapeut war mir sympathisch

   ☐ Ich habe einen Bezug zu Musik

   ☐ Das übrige Angebot der künstlerischen Therapien (Malen, Plastizieren oder Tanzen) spricht mich nicht an

   ☐ Ich denke, dass ich meine Therapieziele, im Vergleich zu den anderen künstlerischen Therapien, am besten mit Musiktherapie erreichen kann

   ☐ sonstige Argumente: _____

7. Erhoffen Sie sich etwas von der Musiktherapie bzw. haben Sie Therapieziele, die Sie mithilfe der Musiktherapie erreichen wollen?

   ☐ ja ☐ nein

   Wenn ja, was erhoffen Sie sich von der Musiktherapiebehandlung bzw. welche Therapieziele wollen Sie in der Musiktherapie erreichen?

   _____

   _____

   _____

<u>Emotionsfragebogen (T1-T10): wahrgenommene Emotionen während der Musiktherapie</u>

Während des Musizierens habe ich folgende Gefühle empfunden:

	Trifft gar nicht zu	**Trifft eher nicht zu**	**Teils/ teils**	**Trifft eher zu**	**Trifft völlig zu**
…Aufheiterung	☐	☐	☐	☐	☐
…Aggression	☐	☐	☐	☐	☐
…Entlastung	☐	☐	☐	☐	☐
…Bedrohung	☐	☐	☐	☐	☐
…Peinlichkeit	☐	☐	☐	☐	☐
…eigene Ergänzung:	☐	☐	☐	☐	☐

Abschlussfragebogen (T11): Zufriedenheit, krankheitsbezogene Gefühle, wahrgenommene Effekte und wirksame Elemente – Seite 1 –

		Trifft gar nicht zu	Trifft eher nicht zu	Teils / teils	Trifft eher zu	Trifft völlig zu
1.	Die Musiktherapie hat mir Spaß gemacht	☐	☐	☐	☐	☐
2.	Ich hatte eine gute therapeutische Beziehung zum Musiktherapeuten/ zur Musiktherapeutin	☐	☐	☐	☐	☐
3.	Der Musiktherapeut/die Musiktherapeutin hat mich und meine Probleme ernst genommen	☐	☐	☐	☐	☐
4.	Ich bin zufrieden mit dem Instrumentenangebot in der Musiktherapie*	☐	☐	☐	☐	☐
5.	Die Gespräche während der Musiktherapie haben geholfen	☐	☐	☐	☐	☐
6.	Statt Musiktherapie in der Gruppe hätte ich lieber Einzelmusiktherapie gehabt	☐	☐	☐	☐	☐
7.	Über die Musik konnte ich leichter mit anderen Gruppenteilnehmern in Kontakt kommen*	☐	☐	☐	☐	☐
8.	In der Gruppe habe ich mich wohl und gut aufgehoben gefühlt	☐	☐	☐	☐	☐
9.	Meine Gefühle, die während der Musiktherapie aufkamen, hatten meistens mit meiner Krebserkrankung zu tun	☐	☐	☐	☐	☐
10.	Die Musiktherapie war eine willkommene Ablenkung von negativen Gefühlen und Sorgen	☐	☐	☐	☐	☐
11.	Das Erleben von Gefühlen in der Musiktherapie war hilfreich für die Krankheitsverarbeitung	☐	☐	☐	☐	☐
12.	Gefühle, die während der Musiktherapie in mir aufkamen, haben mich belastet	☐	☐	☐	☐	☐
13.	Die Musiktherapie war ein wichtiger Bestandteil der gesamten Behandlung	☐	☐	☐	☐	☐
14.	Bei einer möglichen Behandlung in der Zukunft würde ich wieder Musiktherapie wählen	☐	☐	☐	☐	☐
15.	Ich würde die Musiktherapie anderen Krebspatienten weiterempfehlen	☐	☐	☐	☐	☐

***) Fragen 4 und 7 bitte nur ausfüllen, wenn Sie an der Trommel- oder Improvisations-Musiktherapie teilnehmen**

Abschlussfragebogen (T11): Zufriedenheit, krankheitsbezogene Gefühle, wahrgenommene Effekte und wirksame Elemente – Seite 2 –

16. Die Musiktherapiebehandlung hat dazu beigetragen, dass…

		Trifft gar nicht zu	**Trifft eher nicht zu**	**Teils / teils**	**Trifft eher zu**	**Trifft völlig zu**
a.	... ich gelernt habe, wieder ungehemmter mit anderen Menschen in Kontakt zu treten	☐	☐	☐	☐	☐
b.	... ich mich besser aus krankheitsbedingter sozialer Isolation befreien kann	☐	☐	☐	☐	☐
c.	... ich mich entspannter fühle	☐	☐	☐	☐	☐
d.	... ich mich stärker fühle	☐	☐	☐	☐	☐
e.	... ich mich weniger depressiv fühle	☐	☐	☐	☐	☐
f.	... ich neue Perspektiven für meine Lebensgestaltung sehe	☐	☐	☐	☐	☐
g.	... ich sorgenfreier in die Zukunft blicken kann	☐	☐	☐	☐	☐
h.	... ich weniger Ängste habe	☐	☐	☐	☐	☐
i.	... ich weniger müde bin	☐	☐	☐	☐	☐
j.	... ich weniger Schlafprobleme habe	☐	☐	☐	☐	☐
k.	... sich meine Stimmung verbessert hat	☐	☐	☐	☐	☐
l.	... ich meine eigenen Gefühle besser wahrnehmen kann	☐	☐	☐	☐	☐
m.	… ich negative Gefühle, die mit meiner Erkrankung zu tun haben, mehr zulasse	☐	☐	☐	☐	☐
n.	… ich besser mit negativen Gefühlen, die mit meiner Erkrankung zu tun haben, umgehen kann	☐	☐	☐	☐	☐
o.	…eigene Ergänzung: ……..	☐	☐	☐	☐	☐
p.	…eigene Ergänzung: ……	☐	☐	☐	☐	☐
q.	…eigene Ergänzung: ……..	☐	☐	☐	☐	☐

Abschlussfragebogen (T11): Zufriedenheit, krankheitsbezogene Gefühle, wahrgenommene Effekte und wirksame Elemente – Seite 3 –

17. An der Musiktherapie hat mir am meisten gefallen:

_____

_____

_____

_____

_____

_____

_____

18. An der Musiktherapie hat mir am wenigsten gefallen:

_____

_____

_____

_____

_____

_____

_____

19. Ich habe folgende Verbesserungsvorschläge für die Musiktherapie:

_____

_____

_____

_____

_____

_____

_____

_____

Interviewleitfaden (T11)

Entscheidung Teilnahme Musiktherapie:

(Frage für Patienten, die bereits von Musiktherapie gehört haben)

- Im Eingangsfragebogen gaben Sie an, bereits vor dem Informationsgespräch von Musiktherapie gehört zu haben. Was wussten Sie von Musiktherapie und woher hatten Sie diese Informationen?

(Frage für Patienten, die Musiktherapie vorher nicht kannten)

- Was haben Sie sich unter Musiktherapie vorgestellt? Was glaubten Sie, was dort passiert?

(für Patienten mit geringen bis starken Zweifeln an der Wirksamkeit)

- Im Fragebogen gaben Sie an.... Was waren das für Zweifel? Haben Sie lange gezweifelt, ob Sie an der Musiktherapie teilnehmen sollen?

- Gab es noch andere Argumente für die Musiktherapie, die nicht im Eingangsfragebogen aufgeführt waren? Welche?

Erwartungen (Prozess und Resultat):

Prozess:

- Was haben Sie sich von der Musiktherapie erhofft?
- Welche Themen wollten Sie in der Musiktherapie behandeln?
- Hatte Sie eine Vorstellung, wie die Themen in der Musiktherapie behandelt werden? Was glaubten Sie, würde in der Musiktherapie passieren?

Ergebnis:

- Welche Verbesserungen wollten Sie mit der Musiktherapie erreichen?
- Hatten Sie bestimmte Therapieziele?

Verlauf der Musiktherapie:

- Wie ist die Musiktherapie für Sie verlaufen?
- Ist die Musiktherapie so verlaufen, wie Sie sich es erhofft hatten?
- Wie fanden Sie die Musiktherapie?
- Was verlief anders?
- → (Haben sich die Erwartungen im Laufe der Behandlung geändert?)
- (Gab es neue / zusätzliche Ziele/Themen die sie in Musiktherapie behandeln wollten?)
- Hat die Therapie das gebracht, was Sie sich erhofft hatten?
- → (Wurden für Sie wichtige Themen in der Musiktherapie ausreichend behandelt?)
- → (Wurden Therapieziele erreicht?)
- → (Haben Sie etwas in der Musiktherapie vermisst?)
- Was sind die Vorteile von Musiktherapie, was die Nachteile?

Um herauszubekommen, wie die Musiktherapie gewirkt hat und was Ihnen die Musiktherapie bedeutet hat, möchte ich gerne etwas tiefer gehen....

- Als Einstieg möchte ich gerne, dass Sie mir (wenn möglich) drei Begriffe nennen, die Sie mit der Musiktherapiebehandlung assoziieren. *(Anm.: Hilfestellung, wenn Sie Schwierigkeiten haben, die Frage zu beantworten)*. Dies kann zum Beispiel ein Gefühl sein, dass Sie mit der Musiktherapie verbinden, Instrumente oder

Eigenschaften der Musik(-therapie) wie z.B. Kommunikation, Kreativität (spontan, positive und negative Assoziationen sind erlaubt)

  - Können Sie die Begriffe erläutern?
  - Was bedeuten Ihnen die Begriffe?

- Gibt es Therapiestunden oder Situation(en), die Ihnen besonders in Erinnerung geblieben ist/sind?

  - Können Sie die Situation näher beschreiben?
  - Was ist in dieser Stunde passiert?
  - Was macht diese Situation besonders?
  - Gibt es noch mehr Momente, die in der Form bei Ihnen hängen geblieben sind?

...Weitere Fragen hängen davon ab, was der Patient in vorangehenden Fragen beantwortet hat... in den folgenden Fragen will ich herausbekommen, inwieweit Therapieziele durch bestimmte Eigenschaften der Musik(therapie) erreicht wurden (Smeijsters und zusätzliche): *Keine Suggestivfragen!!!*

- Die Rolle des Therapeuten (Therapeuten-Patienten Beziehung)
- Die Rolle der Gruppe (Kommunikation, Austausch)
- Musik als Kommunikationsmittel (z.B. herausbrechen aus sozialer Isolation)
- Gefühle zulassen versus Ablenkung (weiter fragen, wie es für die Patienten war…)
- Gefühle ausdrücken durch Musik, Analogien (z.B. Streben nach Harmonie im Leben und in Musik)
- Assoziation: Gefühle wecken durch musikalische Improvisation, kognitive Prozesse in Gang setzen (z.B. Erinnerungen) Struktur (z.B. Affektregulation – Ordnung von ‚Gefühlschaos')→ wenn ja: war das Erleben von Gefühlen (die mit der Krankheit zu tun hatten) hilfreich für die Krankheitsverarbeitung?
- Bewegung durch Musik: Einfluss auf physische Symptome (z.B. Abbau von Spannungen) und Emotionen (Musik stimuliert Bewegung = Freude...)
- Kreativität: freie Auswahl Instrumentarium, freie Improvisation, was bewirken kreative
- Prozesse (z.B. Stärkung der Identität, Freiheit, Balance)

Fazit / Was hat die Musiktherapie gebracht?

- Was hat Ihnen die Musiktherapie bedeutet?
- Was hat Ihnen gefallen, was hat Ihnen nicht gefallen?
- Nehmen Sie aus der Musiktherapie etwas mit für die Zukunft?
- Welche Erkenntnisse hat Ihnen die Musiktherapie gebracht?
- → Haben Sie in der Musiktherapie etwas ‚gelernt', was Sie auf den Alltag anwenden können?
- Würden Sie wieder Musiktherapie als Therapieform wählen?
  - Warum, warum nicht?
- Würden Sie die Musiktherapie jemand anderem weiterempfehlen?