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Music therapy in psycho-oncology – guided imagery and music (GIM) in curative and early palliative treatment for women with breast cancer or gynaecological cancer - a mixed methods study

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DOI (link to publication from Publisher):
10.5278/vbn.phd.hum.00075

Publication date:
2017

Document Version
Publisher's PDF, also known as Version of record

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GUIDED IMAGERY AND MUSIC (GIM) IN CURATIVE AND EARLY PALLIATIVE TREATMENT FOR WOMEN WITH BREAST CANCER OR GYNAECOLOGICAL CANCER –

A MIXED METHODS STUDY

BY
RUTH-S. HERTRAMPF

DISSERTATION SUBMITTED 2017

AALBORG UNIVERSITY
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AALBORG UNIVERSITY
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Dissertation submitted for the Degree of Doctor of Philosophy

Dissertation submitted: September, 1, 2017

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PhD Series: Faculty of Humanities, Aalborg University

ISSN (online): 2246-123X
ISBN (online): 978-87-7210-053-1

Published by:
Aalborg University Press
Skjernvej 4A, 2nd floor
DK – 9220 Aalborg Ø
Phone: +45 99407140
aauf@forlag.aau.dk
forlag.aau.dk

Printed in Denmark by Rosendahls, 2017

CV

Ruth Hertrampf was born in Dresden in 1981 and lives in Frankfurt, Germany, with her husband and two sons. She received a scholarship from Studienstiftung des deutschen Volkes for her studies in special education at the University of Cologne (Diploma, 2006). In addition, she studied music therapy at the University of Applied Sciences Heidelberg (Master´s degree, 2008) and completed further training in psycho-oncology, palliative care, and Guided Imagery and Music. She is a certified music therapist, psycho-oncologist, and certified GIM therapist. A PhD Mobility Fellowship was granted for her PhD project from Aalborg University from 2010 to 2014. From 2015, she has also been training as a psychotherapist for children and adolescents at the Heidelberg Academy for Psychotherapy (HAP), and as assistant GIM trainer at the Institute of Music and Imagery in Therapy (IMIT), Berlin.

In her clinical work she specializes in people diagnosed with cancer and their families, working at the Psycho-Oncology Department of HELIOS, Dr. Horst Schmidt Kliniken Wiesbaden, in private practice for ten years, and with children and adolescents with mental health problems.

She has taught and presented various aspects of her clinical and scientific work within music therapy, GIM therapy, and psycho-oncology at trainings for clinical professionals and national and international congresses. Together with a colleague, she has been nominated as mandate for music therapy in the revision process of the national guideline S3 for cancer treatment.

ENGLISH SUMMARY

This PhD study set out to investigate the effect of a short-term receptive music therapy approach in women undergoing active medical treatment for breast or gynaecological cancer. Research demonstrates the physical and psychological vulnerability of cancer patients throughout medical treatment trajectory, caused by the existential thread that still often accompanies a cancer diagnosis despite great advances in medical treatment options. Furthermore, complex, multimodal long-term medical treatments cause severe side-effects affecting physical and psychological well-being and quality of life (QoL) of persons with cancer.

In music therapy, research from the last decades has shown beneficial effects in different cancer populations and phases of treatment trajectory. Investigations in women with gynaecological cancer, and at the beginning of early palliative medical outpatient treatment are scarce. No short-term group intervention has been described.

The present mixed-methods study aimed at investigating the influence of Group Music and Imagery (GrpMI) therapy on the psychological outcomes anxiety, depression, quality of life, and well-being among women diagnosed with breast or gynaecological cancer at the beginning of curative or early palliative medical outpatient treatment. In a 2x4 factorial design, $N = 28$ women were randomly assigned to GrpMI + treatment as usual (TAU) or Progressive Muscle Relaxation (PMR) + treatment as usual (TAU) in six sessions over six weeks. This clinical effect study was conducted at HELIOS, Dr. Horst Schmidt Kliniken Wiesbaden, Germany.

Quantitative data was collected by the use of standardised questionnaires HADS, EORTC QLQ-C30, and Basler Befindlichkeitsskala (Basel Scale of Well-Being, BBS) at pre-test, post-test, 4-weeks FU, and 4-months FU. In addition, semi-structured interviews with all participants at baseline and with GrpMI participants post-intervention provided qualitative data.

Analysis of quantitative data using descriptive and parametric statistics revealed statistically and clinically significant results for reduction of anxiety in GrpMI. Reduction of depression and enhancement of QoL and well-being were found statistically and clinically significant in both intervention groups. These results were sustained or even further improved at FU measures.

Findings from qualitative analysis added clinical meaning to the statistical results and showed improved coping skills and benefits from the group setting after GrpMI therapy.

Overall, this PhD study contributes to research and clinical practice by updating current evidence in the field, providing statistically and clinically significant results

from a short-term group intervention in an under-researched population and place in treatment trajectory, and by merging statistical evidence with qualitative findings to provide a multidimensional understanding of the experience of the study participants.

DANSK RESUME

Dette ph.d.-studie har til formål at undersøge effekten af en kortvarig receptiv musikterapi-intervention til kvinder, der gennemgår aktiv medicinsk behandling for bryst- eller gynækologisk kræft. Forskning peger på den fysiske og psykiske sårbarhed hos kræftpatienter i hele det medicinsk behandlingsforløb, relateret til den eksistentielle krise, der stadig ofte ledsager en kræftdiagnose – på trods af store fremskridt inden for de medicinske behandlingsmuligheder. Der er tale om komplekse, multimodale langtidsbehandlinger, som forårsager svære bivirkninger, hvilket igen påvirker fysisk og psykologisk velvære og livskvalitet hos personer diagnosticeret med kræft.

Musikterapiforskningen fra de sidste årtier har påvist gode effekter af behandlingen i forskellige kræftpopulationer og faser af behandlingsforløbet. Der er dog meget få undersøgelser af kvinder med gynækologisk kræft og i begyndelsen af den tidlige palliative medicinske ambulante behandling. Korttids-gruppeinterventioner er slet ikke beskrevet i den musikterapeutiske forskningslitteratur.

Den foreliggende undersøgelse anvender et mixed-methods design med det formål at undersøge virkningen af den receptive musikterapimetode Group Music and Imagery (GrpMI: Musiklytning og indre billeddannelse i grupper) på de psykologiske variabler angst, depression, livskvalitet og velvære hos kvinder diagnosticeret med bryst- eller gynækologisk kræft, i begyndelsen af enten kurativ eller tidlig palliativ medicinsk ambulant behandling. I et 2x4-faktorialt design blev $N = 28$ kvinder tilfældigt fordelt på (a) GrpMI + standardbehandling eller (b) Progressiv Muskelafspænding (PMR) i seks sessioner over seks uger. Det kliniske effektstudie blev udført ved HELIOS, Dr. Horst Schmidt Klinikken i Wiesbaden, Tyskland.

Kvantitative data blev indsamlet ved brug af de standardiserede spørgeskemaer HADS, EORTC QLQ-C30 og Basler Befindlichkeitsskala (BBS) ved pre-test, post-test, 4 ugers Follow-Up og 4 måneders Follow-Up. Desuden blev der foretaget semi-strukturerede interviews med alle deltagere ved baseline og med GrpMI-deltagerne efter afslutningen af den musikterapeutiske intervention.

Gennem analyse af kvantitative data ved hjælp af deskriptiv og parametrisk statistik fremkom statistisk og klinisk signifikante resultater for reduktion af angst i GrpMI. Reduktion af depression og forbedring af QoL og velvære var statistisk og klinisk signifikant i begge interventionsgrupper. Disse resultater varede ved eller forbedredes yderligere ved Follow-up.

Resultaterne af de kvalitative analyser af interviewene, efter at GrpMI-terapien var afsluttet, føjede klinisk og psykologisk mening til de statistiske resultater og dokumenterede bl.a. forbedrede coping-færdigheder og positivt udbytte af gruppe-settingen

Samlet set bidrager denne undersøgelse til videreudvikling af forskningen og den kliniske praksis ved at ajourføre aktuel evidens på området. Det anvendte design gjorde det muligt at konstatere statistisk og klinisk signifikante resultater af den kortvarige gruppeintervention i en hidtil underforsket patientgruppe og behandlingsfase. Desuden føjes der gennem integrationen af statistiske fund og kvalitative resultater psykologisk og eksistentiel mening til deltagernes individuelle effektresultater og oplevelser.

ACKNOWLEDGEMENTS

This PhD study has been a long and adventurous journey which would not have been possible to master without the support of many wonderful people on various levels.

Firstly, my deepest and sincerest gratitude goes to the women who engaged in the clinical trial of this study and their families. They dedicated many precious hours of their (limited) life time together, openly shared their experiences and inner world to contribute to research in the field and help other women in the same situation. Many of those who participated in this study have since passed on, I hope they and their families can feel their voices represented and living on in this thesis and beyond.

I also want to thank Stiftung Leben mit Krebs e.V. for providing generous funding for technical equipment and study expenses.

Farther thanks go to Prof. Dr. Victor Hobi who kindly allowed me to use his well-being scale as measure for the purpose of this study.

A very special gratitude goes out to my dear colleagues at the Psycho-Oncology Department (POD) and medical and other personnel at the clinic for gynaecology and gynaecological oncology at HELIOS, Dr. Horst Schmidt Kliniken for supporting this research project throughout. With a very special mention to Dorothea Schönhals-Schlaudt and Jeannette Petri for their fantastic work supporting the women who participated in this study with GrpMI and PMR. To Doris Kopp for logistic support and to Alf von Kries who always supported my research endeavours and gently challenged me along the way.

I feel eternally grateful for being part of the Aalborg family. The PhD programme there provides an incredible creative, supportive, motivating, inspiring, educative, gently challenging, and wonderfully humorous and musical international atmosphere, which I could not have wished for better. Many extraordinary (guest) teachers and my dear fellow PhD students, of whom I am very proud to call many my dear friends now, have kept me going on this special adventure and provided wonderful support along the way.

This fantastic research environment would not be possible without the very dedicated, skilled, and caring leadership of wonderful Hanne Mette Ochsner Ridder. She continues the great work of miraculous late Tony Wigram who generously invited me to participate in a PhD course before enrolment into the programme and who amazingly supported my application for the fellowship on different levels. I am very grateful to both.

My very, very deep and special gratitude goes to my two amazing supervisors Lars Ole Bonde and Cathy McKinney, without whom I could never have successfully managed this PhD endeavour. Both have proven incredible patience, pragmatic, emotional, caring, and critical support, and inspiring and gently challenging guidance throughout. They were both there for me in difficult and in good times and will always have my deepest affection and admiring respect for the great professionals and amazing persons they are.

With a special mention to Isabelle Frohne-Hagemann who led me the way into exploring and professionally working with GIM. And to GIM colleagues who supported me along the way and provided valuable clinical input in establishing the research design for this study.

A very special gratitude goes to my dear friend Margareta Wärja who has been part of this PhD adventure since the very first day. Especially during our collaborative work on the systematic review article, she has become one of the closest and most important persons to me, sharing our ups and downs along the way towards finalization of our respective PhD projects.

I am also very grateful to Melody Schwantes Reid, Timothy Honig, and Julian O´Kelly for their splendid support in editing the articles and/or parts of this thesis.

Special thanks go to Dorothea Dülberg, Steffen Schmidt, Christine Kukula, Elisabeth Hertrampf, Maurizio Götz, Mara Kuhnert, and Friedemann Hertrampf for their support in music analysis, transcriptions, picture editing, and formating.

And finally, last but by no means least my deepest gratitude goes to my family and friends, especially to my husband for technical, moral, and emotional support at all times during this long journey. To my children who were given to me during the time of the PhD and helped me grow in many different personal ways. And to my many dear friends who have stayed by my side with patient support and encouragement despite the little time I was able to share with them.

Thank you all for being there and contributing to this thesis in your special way!

TABLE OF CONTENTS

TABLE OF FIGURES

LIST OF TABLES

CHAPTER 1. INTRODUCTION

Great advances in medical screening and treatment procedures in the past decades have increased long-term survival of people diagnosed with cancer (Berrino et al., 2007; Frickhofen, 2015). Still, cancer continues as a leading disease in terms of incidence and mortality worldwide. In women with cancer, breast cancer is still the prominent diagnosis accounting for 25.1% of diagnosis; gynaecological cancer follows with 16.3%, of which 7.9% is cervical cancer, 4.8% corpus uterine cancer, and 3.6% ovarian cancer (International Agency for Research on Cancer, 2013; World Health Organization, 2013).

A cancer diagnosis can be experienced as traumatic and shake the present life situation to its core. Women with breast cancer and gynaecological cancer are specifically affected in their bodies and reproductive organs. Surgical procedures and often long-term multi-modal medical treatments are accompanied and followed by complex physical and psychological side-effects that affect well-being and quality of life (QoL) until long after treatment has ended (Angenendt, Schütze-Kreilkamp, & Tschuschke, 2007; Singer, Das-Munshi, & Brahler, 2010). Pain, nausea, emesis, hairloss, or loss of fertility are common physical side-effects. About 32% of patients with cancer show psychological comorbidities, such as anxiety, depression, mood disturbances, distress, fatigue, problems in sexuality, adaptation disorder, or post-traumatic stress disorder (PTSD) (Angenendt et al., 2007; King & Hinds, 2003; Massie, 2004; Singer et al., 2010; Zabora, 2010). Treatment perspectives may change from curable to non-curable throughout medical treatment, an existential threat which can be experienced as the ‘sword of Damocles’ hanging over their lives, as illustrated in Gustav Klimt´s painting *Death and Life* (Figure 1-1), hence, mirroring the complex and severe situation of these women and their need for psycho-oncologic support.

Figure 1-1 “Death and Life”, Gustav Klimt

Breast cancer has come to be a highly public disease, covered widely in the media (Stryker et al. 2007), and illustrated by various celebrities openness to discussing their diagnosis. These public displays raise awareness, create support and understanding for women with breast cancer, and facilitates funding of research (Frickhofen, 2015). However, gynaecological cancer is far behind in the public awareness, acceptance, and support. Issues like sexuality and fertility are still taboos in many societies, creating enormous emotional pressure on women diagnosed with gynaecological cancer.

A growing body of research on music interventions in various cancer populations during the last decades has provided evidence for beneficial effects on different psychological and physiological outcomes (Bradt, Dileo, Magill, & Teague, 2016; Hertrampf & Wärja, 2017). Yet, challenges in methodological rigor, lack of detailed information on the intervention under investigation, and small sample sizes, especially in music therapy interventions, complicate the interpretation and generalizability of results.

Research literature on group music therapy interventions during active medical treatment is scarce. For women diagnosed with gynaecological cancer, there is a lack of research in music therapy research (Hertrampf & Wärja, 2017). Still, the clinical reality of growing incidence rates for gynaecological cancer and the need for early psycho-oncologic treatment to prevent manifestation of psychological comorbidities call for supportive interventions at early stages of medical treatment for this population.

This PhD study is a mixed methods study which aims to examine the evidence base for the clinical significance, as experienced by myself and colleagues, of using GIM and GrpMI with women in clinical psycho-oncology. Using both quantitative and qualitative methods it aims to a) contribute to a better understanding of the efficacy of music therapy and GIM in particular within a clinical setting of evidence-based medicine and b) give voice to the lived experience of women with breast cancer or gynaecological cancer during active medical treatment with this music therapy method.

Those aims are addressed in the four articles this PhD study is based upon. An overview of those articles and their integration in this thesis are presented in section 1.5. A brief summary and the abstract of the articles are provided at the corresponding place in this thesis to allow for the reader to follow the content of this thesis more easily.

In all, the four articles of the present PhD study and the linking text of this thesis may contribute to a better understanding of the efficacy and importance of music therapy in psycho-oncology under active medical treatment for women with breast cancer or

gynaecological cancer. My hope is that it will also inspire further qualitative and quantitative research in this area and beyond.

1.1. CONTEXT OF THE STUDY

The clinical context for this PhD study is set by, and adapted to clinical reality of music therapy in psycho-oncology during active outpatient medical treatment for women with breast or gynaecological cancer. In addition, theoretical aspects of existential and group psychotherapy as well as guided imagery and music inform the design and therapeutic intentions of the intervention. Both the clinical and the theoretical framework will be explained in this chapter.

Psycho-oncology or psycho-social oncology is defined as *"a complementary specification of oncology that deals with physical, psychological, social, and spiritual aspects of a cancer disease in its origin and throughout the whole progress."* (translated after Weis et al. 2007, p. 185). These aspects relate to the levels of health-realted QoL (Bradley, Rose, Lutgendorf, Costanzo, & Anderson, 2005; Luckett, King, Butow, Friedlander, & Paris, 2010). Family members and others important for the support of the cancer patient are included in the psycho-oncologic concept of care.

In Germany, psycho-oncology has developed as a clinical profession in the past decades, and is offered widely in inpatient and outpatients treatments for a range of cancer conditions. Accredited cancer centres implementing clear guidelines for research (AWMF guidelines, DKG e.V., 2017), treatment, and clinical practice assure high quality in medical and psycho-social treatments throughout the treatment trajectory for patients and their families.

At the research cite, HELIOS Dr. Horst Schmidt Klinik, Wiesbaden, psycho-oncology has been implemented and practiced since 1999. The Psycho-Oncology Department (POD) offers specific psycho-social and psychotherapeutic support in a multi-disciplinary team, consisting of four psychologists, two music therapists, and two secretaries during time of study recruitment. All therapists were trained in psycho-oncology and in addition specialized in music therapy, guided imagery and music, psychodrama, family therapy, cognitive behavioural therapy, or relaxation techniques. Music therapy (among other creative arts therapies) forms an integrated part in the psycho-oncologic treatment and is specifically stated as adjunct therapy in the national guideline S3 for mammary carcinoma by the German Cancer Society (DKG e.V., 2017; Gruber et al. 2011).

1.2. CONCEPTUAL FRAMEWORK AND TERMINOLOGY

The following sections will provide the reader with a short description of the medical background and theoretical frame this PhD study is situated within. In addition, terminology is defined here and will be used as such throughout the thesis.

1.2.1. CHEMOTHERAPY AND ENDOCRINE TREATMENT

The medical treatment trajectory through cancer care includes all stages from diagnostic phase, medical procedures, active treatment, and rehabilitation after medical treatment, and the palliative phase. For this study, the focus is on active treatment with chemotherapy and/or endocrine therapy in curative or early palliative situation for women with breast cancer or gynaecological cancer. Figures 1-2 and 1-3 show affected organs of both populations. Table 1-1 provides a short overview of specific characteristics of both breast and gynaecological cancers, their treatment, and potential side-effects.

Often treatment options are combined in a long-term multi-modal approach for better treatment outcomes. However, these come with various complex side-effects that patients may suffer until long after the end of medical treatment. Following psychological distress, anxiety, depression, fear of recurrence, and fatigue, specific psychological side-effects may negatively impact on health-related QoL through treatment for breast or gynaecological cancers. These include effects on body image, female identity, sexuality, and reproduction (Bradley et al., 2005; Luckett et al., 2010). However, it is important to note that many side-effects can be prevented or controlled by additional medication or adjustment of the medical treatment. Furthermore, the occurrence of side-effects may vary dependent on the specific characteristics of the cancer diagnosis, the physical state and psycho-social context of the woman with cancer, and previous experiences of active cancer treatment.

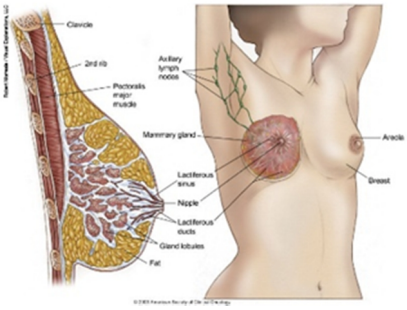


Figure 1-2 Female breast

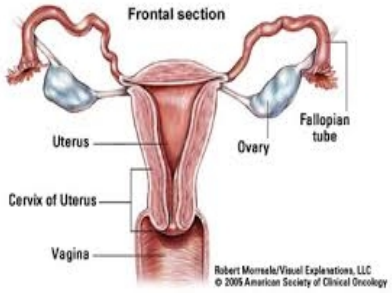


Figure 1-3 Female reproductive system (http://www.patientresource.com; June 15, 2017)

	Breast cancer	**Gynaecological cancer**
Types of diagnoses	Invasive breast cancer (stages I-IV) Ductal carcinoma in situ (DCIS) Lobular carcinoma in situ (LCIS) Inflammatory breast cancer Breast cancer during pregnancy	Cervical cancer Endometrial/uterine cancer Gestational trophoblastic disease Ovarian cancer (incl. fallopian tube, peritoneal, germ cell, stromal cell) Vaginal cancer Vulvar cancer
Incidence	25.1% of cancers in women worldwide	16.3% of cancers in women worldwide
5year survival Overall Non-metastasized Regional metastasized Distant metastasized	 90% 99% (61% diagnosed at this stage) 85% (5% diagnosed at this stage) 26%	 46% 92% (15% diagnosed at this stage) 73% 29% (60% diagnosed at this stage)
Relapse rate	20-30% of early stage disease	
Local treatments (focused on tumor site) **& potential side-effects**	Surgery (lymphadenectomy, lumpectomy, mastectomy, reconstruction of the breast) > short-term side-effects: pain, tenderness, difficulty in arm movements; > long-term side-effects: problems with body image, loss in self-esteem, fatigue, lymphedema Radiation therapy > short-term: pain, fatigue, mild skin reactions	Surgery (lymphadenectomy, salpingo-oophorectomy, hysterectomy, omentectomy, cytoreductive/ debulking surgery) > short-term side-effects: pain, tenderness, difficulty in urinating and bowel movements; > long-term side-effects: loss of fertility, premature menopause, problems in sexual functions, problems with body image, loss in self-esteem, fatigue, lymphedema Radiation therapy (external, internal; brachytherapy) > short-term: pain, fatigue, mild skin reactions, upset stomach, loose bowel movements
Systemic treatments (focused on cancer cells anywhere in the body) **& potential side-effects**	Chemotherapy (intravenous, oral) - adjuvant: surgery first, then chemotherapy - neoadjuvant: first chemotherapy to shrink the tumor, then surgery > short: fatigue, risk of infection, nausea, emesis, hair loss, loss of appetite, diarrhea, cognitive difficulties (reduces attention span, loss of memory) Endocrine therapy > fertility, sexuality, disturbances in body image and self image. Targeted therapy	Chemotherapy (intravenous, oral) - adjuvant: surgery first, then chemotherapy - neoadjuvant: first chemotherapy to shrink the tumor, then surgery > short: fatigue, risk of infection, nausea, emesis, hair loss, loss of appetite, diarrhea, cognitive difficulties (reduces attention span, loss of memory) Endocrine therapy > fertility, sexuality, disturbances in body image and self image. Targeted therapy

Table 1-1 Characteristics of breast cancer and gynaecological cancer and treatments

1.2.2. CURATIVE AND EARLY PALLIATIVE TREATMENT

In medical cancer care, different treatment perspectives and paradigms can be distinguished depending on the goal in focus. Whereas curative approaches are naturally cure-oriented, palliative approaches concentrate on the reduction of symptoms and maintaining the QoL in people with an incurable treatment perspective.

> Palliative care is an approach that improves the quality of life of patients and their families facing the problems associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual. (World Health Organization, 2002).

The medical progress of the past decades has discovered many treatment options for various kinds of cancer even in incurable stages. Arthur and Bruera (2015) stated that the overemphasis on cure may have a blinding effect on care-givers for the real needs of the "unfortunate ones" (p.3). This advocates a dynamic view on the process of cancer development, treatment perspectives, and treatment adaptations in clinical practice (Arthur & Bruera, 2015; Frickhofen, 2015; see Figure 1-4).

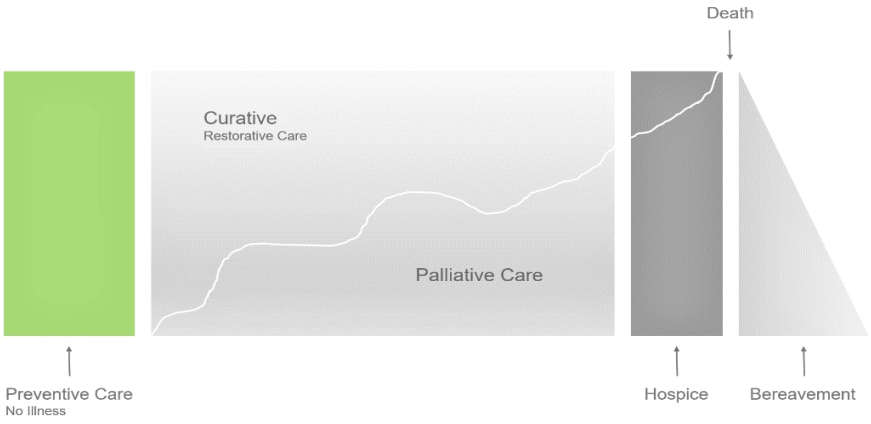


Figure 1-4 Integration of curative and palliative care in the treatment trajectory

Adapted from Emanuel, von Gunten, & Ferris, reproduced in Kuebler, Davis & Moore: Palliative Practices, An Interdisciplinary Approach, p. 22.

The course of treatment trajectory as displayed in the figure above does not visibly include rehabilitation of persons with cancer during or after medical treatment. Rehabilitation seeks to restore or enhance functioning and self-management of patients within a multi-disciplinary context (Silver, Raj, Fu, Wisotzky, Smith, & Kirch, 2015; Stubblefield, Hubbard, Cheville, Koch, Schmitz, & Dalton, 2013).

However, both approaches work well together in cancer care as they propose patient and family oriented holistic interdisciplinary concepts to facilitate patient empowerment and improvement of health-related QoL (Silver et al., 2015). Thus, the concept of rehabilitation can be understood as an underlying paradigm throughout treatment trajectory.

There is a persistent desire among clinicians, patients, and their families to better understand the cancer disease trajectory and predict the course of events. For the patients and their families, this has key implications in planning the medical care, making very important time-dependent decisions, and generating the best goals of care. It guides the physician to provide the most appropriate form of care, thereby avoiding over and under treatment, informing them during the decision-making process of assisting a patient to transition from cure-oriented care to a palliative mode of care, with more emphasis on quality of life. (Arthur & Bruera, 2015, p. 6).

1.2.3. GUIDED IMAGERY AND MUSIC (GIM) AND MUSIC AND IMAGERY (MI)

The spectrum and clinical application of receptive music therapy approaches is broad (Grocke & Wigram, 2007). Receptive music therapy is defined by Bruscia:

> In receptive [music therapy] experiences, the client listens to music and responds to the experience silently, verbally, or in another modality. The music used may be live or recorded improvisations, performances or compositions by the client or therapist, or commercial recordings of music literature in various styles (e.g. classical, rock, jazz, country, spiritual, new age). The listening experience may be focused on physical, emotional, intellectual, aesthetic or spiritual aspects of the music and the client´s responses are designed according to the therapeutic purpose of the experience. (Bruscia, 1998, pp. 120-121)

In the broad spectrum of receptive music therapy approaches implementing music and imagery, most approaches have in common intentional music listening undertaken in a relaxed state, which can help to “relax, soothe, and reduce pain and anxiety particularly in contexts that are stress inducing” (Grocke & Moe, 2005, p.19).

The term "imagery" subsumes "images in all sensory modalities...", including visual, auditory, olfactory, gustatory, tactile, and "... kinaesthetic images, body sensations, feelings, thoughts and noetic images (an intuitive sense of imaginal events that arise outside of other imagery modes).” (Goldberg, 2002, p. 360)

Bruscia (2002) defined Guided Imagery and Music (GIM) as the “umbrella title” for all music therapy practices that include music and imaging in an altered state of consciousness, which can be understood as a very relaxed, dreamlike state of mind

that allows for altered sensory perceptions (Heink, Katsikas, & Lange-Altman, 2017). "The Bonny Method of GIM" refers to Helen Bonny´s specific individual and group therapy forms (Bonny, 2002; Bonny & Savary, 2005; Summer, 2009) as well as to GIM modifications and variations in individual and group therapy setting (see Figure 1-5).

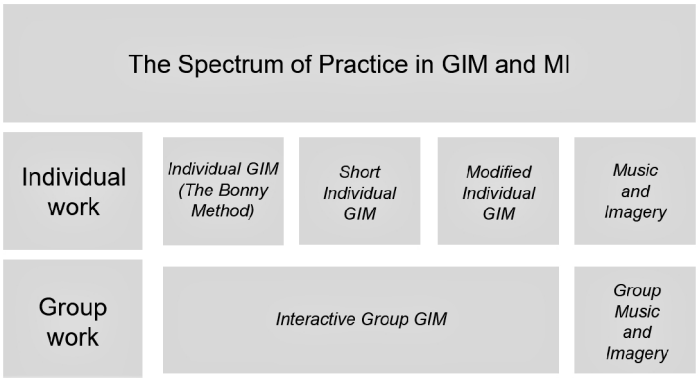


Figure 1-5 The spectrum of practice in Guided Imagery and Music (GIM) and Music and Imagery (MI), based on Grocke & Moe, 2015, adapted from Standards for Training in GIM (European Association of Music an Imagery, EAMI), with kind permission from Martin Lawes

GIM can be used for therapeutic purposes, healing, self-development, or spiritual growth (Bruscia 2002, p. xxi). Grocke and Moe (2015) provided clear descriptions for three major approaches within the spectrum of practices implementing music and imagery:

- Music and Imagery (MI) is used for individual and group therapy (GrpMI). Usually, an image (or sequence of images) is introduced as focus for the music listening to enhance a relaxed state. During the listening period, all senses are activated; the clients experience the music without verbal interaction with the therapist or other group members. GrpMI in its therapeutic intention focuses on group factors (e.g. socializing, interpersonal focus) and is mostly supportive. (Grocke & Moe, 2015, p.25).
- Guided Imagery and Music (GIM) applies MI and includes a verbal interaction component during the music listening experience. Clients describe their experience verbally in a dialogue with the therapist and/or the group. Other group members may describe their own experiences, whereas the therapist´s role ("guiding") is to support the persons in their individual experiences by affirming comments or questions that help deepen the imagery experience. Hence, "guiding" here implies a supportive and not directive role of the therapist.
- Shortened Bonny Method of GIM (BMGIM) sessions adapt the original individual GIM format developed by Dr. Helen Bonny (Bonny, 2002; Bonny

& Savary, 1990) to clinical setting by shortening elements of the structure (mainly the music).

In GIM work, the music experience is usually expressed in some form of creative process, e.g. active musical improvisation, writing, or drawing. Helen Bonny worked with drawings of mandalas as an "outward expression to the inward experience" (Kellogg, MacRae, Bonny, & Di Leo, 1977, p.126) of the immediate preceding therapy work. Mandala in its original Sanskrit meaning describes a circle. In analytical psychotherapy, Carl Gustav Jung defined it as "an archetypal image", which "signifies the wholeness of the Self. This circular image represents the wholeness of the psychic ground" (Jung in Jaffe, 1989, pp. 334-335) and when drawn spontaneously, mandalas can have a therapeutic effect as they mirror inner imbalances and the individual´s attempt to re-organize ambivalent inner aspects into a concentric form (ibid.)

The term mandala will be used here in reference to the creative drawing expressions of the music and imagery experiences of the women who participated in this study.

1.2.4. PROGRESSIVE MUSCLE RELAXATION (PMR)

Progressive muscle relaxation (PMR) by Jacobson (1990) is a technique used to learn to observe and regulate muscular tension. Tension is deliberately induced to different muscle groups of the body, one by one, and then released. The focus is on the perception of the contrast between tension and relaxation. PMR is one of many induction types, i.e. guided relaxation exercises, used in GIM and MI work (Grocke & Moe, 2015; Grocke & Wigram, 2007).

This technique can be applied throughout the treatment trajectory. Research indicates PMR that has beneficial effects on physical and psychological tension, distress, anxiety, depression, nausea and emesis, and QoL in cancer patients (Chan, Richardson, & Richardson, 2011; Cheung, Molassiotis, & Chang, 2003; Molassiotis, Yung, Yam, Chan, & Mok, 2002).

1.2.5. EXISTENTIAL PSYCHOTHERAPY

Existential psychotherapy is a psychodynamic approach relating inner conflicts to "an individual's confrontation with the givens of existence" (Yalom, 1985). Those givens, also referred to as ultimate concerns, are: inevitability of death, freedom and its attendant responsibility, existential isolation, and meaninglessness (Yalom 1985, 2005). As these givens can be linked to the four dimensions of human existence: the physical, social, personal, and spiritual realms (Cooper, 2003), they directly relate to the levels of QoL and aspects of psycho-oncology as described above. Frankl (1997) added the importance of meaning under all circumstances to existential therapy. His

development of logotherapy includes meaning of life even in suffering and defines meaninglessness as meaning that is not yet discovered.

1.2.6. GROUP PSYCHOTHERAPY

Group settings allow for different dynamics and processes than individual settings within psychotherapy (Short, 2002; Whitaker, 2000). Yalom (1985, 2005) defined eleven therapeutic factors which describe characteristic processes or important aspects in group psychotherapy. They may apply differently to various groups, and the importance of different factors may change over time in the same group, or show greater importance in some groups than others. The eleven therapeutic factors are briefly described here (based on Yalom, 1985, 2005).

- *Instillation of hope*. Observation of other group members farther along in their process may help group members to feel hope for themselves.
- *Universality*. Sharing common experiences, issues, challenges, and feelings among group members may help remove feelings of isolation and provide validation of the individual experience. Thus, creating a supportive bond among group members.
- *Imparting information*. Specific factual information, suggestions, and experiences from other group members or the group facilitator (therapist) are shared to further psycho-educational learning or knowledge about new skills to facilitate the coping process.
- *Altruism*. Group members may realize that each of them can contribute something to the group process or other group members.
- *Corrective recapitulation of the primary family experience.* Earlier learned dysfunctional behavior can be corrected within the family-like group allowing for new functional patterns in communication, behavior, and social interaction to be lerned.
- *Development of socializing techniques*. Social behavior is learned through interaction with others. The other group members provide feedback and reflections on maladaptive or more appropriate social behavior.
- *Imitative behaviour*. The behavior of other group members or the therapist is often modelled, thus allowing for the individual to find the most suitable behavior.
- *Interpersonal learning*. The benefits of positive interpersonal relationships within the group can facilitate emotional healing.
- *Existential factors*. Existential issues such as meaning of life can be explored in the group setting.
- *Catharsis*. Group members learn how to speak about their own feelings, address their issues, and express strong feelings about other group members in a goal-directed and responsible manner.
- *Group cohesiveness*. The shared experiences facilitate a feeling of belonging to the group.

1.3. PERSONAL MOTIVATION

The idea for this PhD project and the decision to embark on this long, challenging, enriching journey was inspired by the convergence of important areas of my personal and professional development:

Growing up in a musicians' family, I have always been in contact with a great variety of musical pieces and musical performances in various combinations. Since an early age, playing and listening to music have been experiences I have deeply related to the aesthetics, emotions, and the strong moving power of music. The sharing of musical impressions and expressions with others in particular creates a sense of connectedness and deep understanding beyond words for me.

In my GIM training I broadened my personal relation with music to a therapeutic level, and have applied this method in various contexts in my clinical work since. Through working with people with cancer in different stages of treatment trajectory I have developed a sincere personal respect for their experiences with the illness, related side-effects, and existential issues. Applying GIM in individual sessions in this clinical context, I have found this method facilitates inner key images and the (re)activation of inner resources which help people with cancer find new meaning in life, develop new coping strategies to better deal with the medical treatment or prepare for death, reconcile with intrapersonal or interpersonal unfinished business, and escape the physical limitations set by the illness. Summer (2011) puts this experience beautifully into words, "*The central assumption of the use of music and imagery is that the freedom we possess in our imagination transcends the limitations imposed upon us by external forces…"* (Summer, 2011, p. 488).

Together with my music therapy colleague, I have also worked for several years with mixed population groups of women with breast or gynaecological cancer in different treatment phases, with GrpMI therapy over only four sessions. The qualitative feedback from the women who had participated in the sessions was very promising and augmented the beneficial effects I had witnessed in individual therapy with a sense of solidarity and feelings of connectedness in a coherent circle amongst each other. Many of the women participated in more than one group cycle to continue their personal process with the music, with us as therapists, and with the other women. As we were receiving extra funding from a cancer support association for one year to establish GrpMI therapy as additional supportive group in psycho-oncologic treatment, we felt we needed to collect quantitative data to support our clinical observations, and the valuable feedback from the women. We chose the Basler Befindlichkeitsskala as pre-post measure for the subjective well-being of the women, as it had been used in another music therapy study with people with cancer in the same hospital, with promising results (Seidel, 2005). For pragmatic reasons we only used a shortened version of the measure, which was not validated and could not serve for research purposes. However, combined with the visual presentation of individual

mandalas or complete cycles with mandalas and the verbal impulses, which capture the session´s essence in key words, a wish, or positive self-instruction etc. to take home, from the women, the emotional impact and impression it made on medical personnel and fund providers was strong. Furthermore, the women were proud that they had been able to contribute to secure the continuity of this specific supportive treatment for themselves and other women in a similar situation. More than once we thought we would love to make "a real study" out of our clinical concept and provide scientific evidence for our clinical experiences. In addition, the women themselves continuously encouraged this idea, and were willing to contribute in their way to improve the psycho-social treatment options for cancer patients in the hospital.

In summary, this study was highly motivated by my own personal and clinical experience as a psycho-oncologist, a music therapist, and a GIM therapist working with women diagnosed with breast cancer or gynaecological cancer along their treatment trajectory in an interdisciplinary psycho-oncologic team. In addition, my clinical experience of working with GrpMI in small groups with women with breast or gynaecological cancer, and different treatment perspectives (curative or palliative) contributed to my motivation for this study. Through these experiences I was inspired to better understand and document working mechanisms of GIM. Finally, it was my wish to communicate clinical observations more effectively, by merging statistical findings with experiences from patients within an evidence-based environment, to provide an improved clinical psycho-social support for cancer patients during active medical treatment.

1.4. PURPOSE OF THE STUDY

The purpose of this PhD study was to investigate the effect of a group music therapy intervention – Group Music and Imagery – on different psychological outcomes relevant to women with breast cancer or gynaecological cancer undergoing active medical treatment. In addition, qualitative aspects of the relationship between music, imagery, the different diagnoses, and the different treatment perspectives were explored.

As described and summarised in the literature review (Chapter 2), this study contributes to research in various ways, as it is the first randomized music therapy group intervention study at the beginning of curative or early palliative active outpatient medical treatment, and one of the first randomized trials in music therapy focusing on women with gynaecological cancer.

The combination of research questions, mixed methods approach, and specific intervention for the particular population in focus are intended to develop our understanding of working mechanisms of receptive music therapy and encourage both practitioners and researchers in implementing and investigating short-term interventions as supportive adjuncts to active medical treatment in oncology settings.

1.5. OVERALL STRUCTURE OF THE STUDY

The present PhD study is article-based, following the structure for PhD studies in the doctoral programme of music therapy at Aalborg University. In this thesis, four articles (see Figure 1-6) relevant to the core issues of the study are presented and summarised here. Abstracts of the articles are integrated in the relevant sections (see also Figure 1-6).

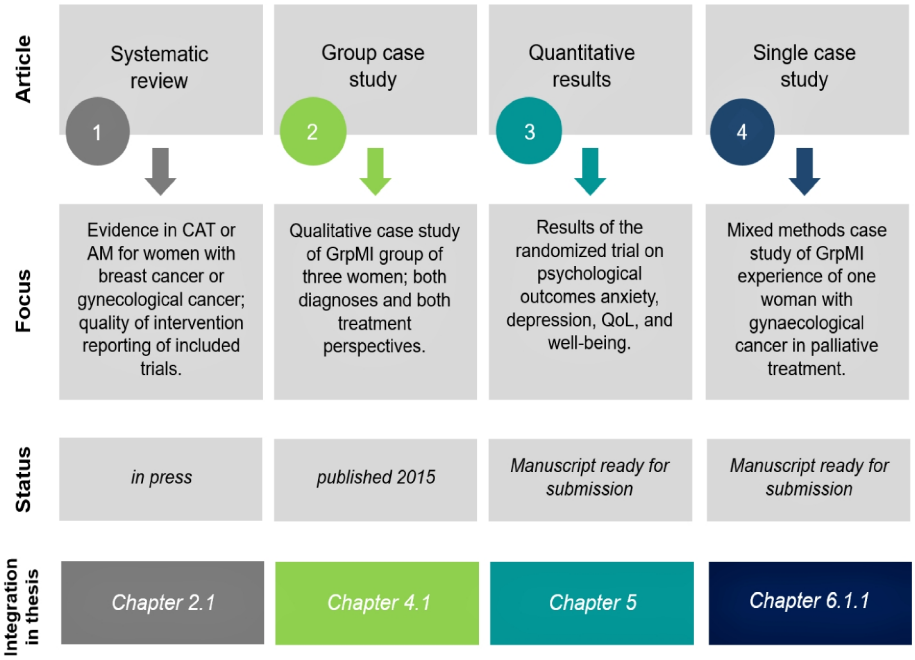


Figure 1-6 Articles of this PhD study in order of presentation in this thesis with reference to chapters

CAT = creative arts therapies; AM = arts medicine

1.6. SHORT SUMMARY OF THE ARTICLES OF THIS PHD

(1) The Effect of Creative Arts Therapy and Arts Medicine on Psychological Outcomes in Women with Breast or Gynecological Cancer: A Systematic Review of Arts-Based Interventions.

This systematic review of 21 papers on creative arts therapies (CAT) and arts medicine (AM) interventions for women with breast cancer or gynaecological cancer provides updated evidence on the effectiveness of both treatment approaches on psychological outcomes along the treatment trajectory. The lack of research in CAT

and AM for gynaecological cancer is confirmed and discussed. In addition, the quality of intervention reporting of included trials is evaluated. To improve intervention reporting in future trials, a newly developed checklist for arts-based interventions is introduced.

This review article is abstracted in Chapter 2.1.

(2) Group Music and Imagery (GrpMI) Therapy with Female Cancer Patients.

In this group case study, the personal experiences of a GrpMI process of three women with different diagnoses and treatment perspectives in one group are described from a qualitative perspective. The role of the music, the imagery, the group setting, and important aspects of the GrpMI experiences as a process are explained and the positive therapeutic outcomes are summarised.

One of the women from this group provides a personal perspective in the single case study in section 6.1.2.

This group case article is abstracted in Chapter 4.1.

(3) Effects of group music therapy on anxiety, depression, quality of life, and well-being among women with breast cancer or gynaecological cancer in outpatient medical treatment: results from a randomized clinical trial.

The third article presents, summarises, and discusses the beneficial quantitative results of this mixed methods study on the psychological outcomes anxiety, depression, QoL, and well-being. In addition, implications for clinical practice and future research are described.

The abstract of this article is presented in Chapter 5.

(4) Effects and experiences from Group Music and Imagery (GrpMI) in gynaecological cancer: A mixed methods case study.

This mixed methods case study describes, summarises, and bridges qualitative and quantitative results of GrpMI of one woman with gynaecological cancer in palliative treatment. Thus, she represents one sub-group of the study participants. Her experiences and findings are in line with the experiences described in the group case study.

This mixed methods case study is abstracted in Chapter 6.1.1.

In addition, a further single case study of a woman with breast cancer in curative treatment is presented in this thesis in section 6.1.2. The mixed methods approach in both single case studies help to bridge the qualitative and quantitative results.

CHAPTER 2. LITERATURE REVIEW

2.1. SYSTEMATIC REVIEW OF RANDOMIZED CONTROLLED TRIALS (RCT), CLINICAL CONTROLLED TRIALS (CCT), AND CLINICAL EFFECT STUDIES

A systematic review of RCTs and CCTs of music intervention studies on women with breast cancer or gynaecological cancer is provided in Article 1 of this study.

Hertrampf, R.-S. & Wärja, M. (2017):

The Effect of Creative Arts Therapy and Arts Medicine on Psychological Outcomes in Women with Breast or Gynecological Cancer: A Systematic Review of Arts-Based Interventions.

Arts in Psychotherapy, 2017,56, 93–110; https://doi.org/10.1016/j.aip.2017.08.001

Background. Breast cancer and gynecological cancer are two major diagnoses affecting women worldwide. Clinical research on arts-based approaches for these populations has gained a growing interest in the last decade with promising results.
Objective. The purpose of this study was (a) to review evidence of arts-based approaches involving creative arts therapy (CAT) and arts medicine (AM) on psychological outcomes in women of both populations and (b) to evaluate the reporting of arts-based interventions.
Method. This systematic review examined randomized controlled trials and quasirandomized controlled studies with repeated measures. Researchers assessed each study for risk of bias using GRADE. A checklist called Reporting on Arts-Based Interventions was developed and applied to all studies included in this review. Researchers computed effect sizes for relevant outcomes.
Results. Searches identified 294 items producing 104 nonduplicate titles. Twenty-one items met inclusion criteria. These included a total of 1,703 participants (83.1% breast cancer, 16.9% gynecological cancer). CAT was applied in 10 papers *(n* = 646); AM in 11 *(n* = 1,057). For gynecological cancer, only two AM studies were found and no CAT studies were identified. Anxiety and depression were the most prevalent outcomes for both approaches across all studies. Overall, small to large effect sizes were found for AM studies and null to large effect sizes for CAT studies. Body image and sexuality were scarcely addressed. Intervention reporting was inadequate.
Conclusions. The results suggest that arts-based interventions may be effective for improving psychological outcomes for targeted populations. Research for gynecological cancer patients is recommended, as are trials aimed at improving body image and addressing sexual function and related concerns. Enhanced quality of methodology and intervention reporting are critical.

Whilst the paper details RCT and CCT studies for women with breast or gynaecological cancer throughout treatment trajectory (see overview in Appendix A), in this thesis I am elaborating on both diagnostic groups at the beginning of active outpatient treatment, be it curative or early palliative. Therefore, one CAT study included in the systematic review is of special relevance for the context of the present thesis. Romito, Lagattolla, Costanzo, Giotta, and Mattioli (2013) conducted a single session of integrative music therapy and emotional expression with women with breast cancer during outpatient chemotherapy. Four to five women met for 150 minutes in a group and experienced music listening, relaxation, active music engagement, evocative images, and biographical narratives. Results showed a reduction of depression with medium ES, anxiety and stress with small ES at post-test. No FU data was collected. Another music therapy study was placed at the end of active outpatient treatment of women with breast cancer (Stordahl, 2009). Here, four individual sessions of music-assisted relaxation were compared to relaxation alone. At post-test, medium effects were found for depression, small effects for distress, and no effect for coping and benefit finding. Moradian, Walshe, Shahidsales, Ghavam Nasiri, Pilling, and Molassiotis (2015) compared attentive music listening to specially designed acustic impulses (Nevasic© audio programme) versus control for their effect on chemotherapy-induced nausea and emesis. No significant improvement of QoL was found. The authors reported major issues with treatment fidelity. Only two studies on gynaecological cancer were identified. One was set in the screening period (Chan et al., 2003) and used music listening, the other applied music relaxation videos during radiation therapy (Chi et al., 2015). Both found medium effects for anxiety reduction at post-test. Chi and colleagues (2015) reported a small reduction of pain at post-test, no effect was found for the study in screening.

Further relevant literature includes a recent systematic review (Bro et al., 2017) on 25 studies on music interventions with adult cancer patients of various diagnoses undergoing active medical treatment. Seven trials during chemotherapy were included. Out of the 25 studies, 23 were individually adapted to the participants´ needs, in 20 studies music was selected by the participants, and 15 applied music listening as intervention. Overall results across studies showed significant reduction of anxiety, pain, depression, and distress. Mood, QoL, relaxation, and energy were found significantly enhanced. No significant reduction of nausea was identified. The authors advocated higher methodological quality in RCT studies along with consideration of musical and cultural background of study participants for future research. They supported individually tailored interventions adapted to the patient´s needs rather than standardized applications.

In addition to controlled studies, a non-randomized clinical effect study in group music therapy with cancer population was conducted by Burns, Harbuz, Hucklebridge, and Bunt (2001). Their clinical effect study investigated physiological and psychological outcomes in 29 cancer patients in a cancer help centre. Different cancer diagnoses were represented in the sample; breast cancer was predominant.

Participants showed different stages of cancer and were pre-experienced in, or undergoing surgery or active medical treatment. Group music therapy sessions with listening to music and active music performance with the same music showed enhanced well-being and relaxation during music listening, increased well-being and decreased tension during active improvisation, and decreased cortisol levels in both music therapy practices (Burns et al., 2001).

For GIM research, McKinney and Honig (2017) recently published the first systematic review on health outcomes of a serious of at least six individual Bonny Method of Guided Imagery and Music sessions in adults. Two studies on women with cancer were included and revealed small to very large effect sizes: medium effect sizes for reduction of anxiety at post-test and 6-weeks follow-up [FU] (Bonde, 2005); small effect sizes at post-test and large at FU for reduction of depression, large effect sizes in total mood disturbance at post-test and 6-weeks FU (Burns, 2001), and small to very large ES in enhancement of quality of life (Bonde, 2005; Burns, 2001). For high methodological quality, Bonde´s study (2005) was described as model for conducting mixed method´s research (Aigen, 2008).

In a mixed methods study, Bradt and colleagues (2015) measured the influence of music therapy versus music medicine on mood, anxiety, relaxation, and pain with beneficial effects but no between-group differences. Patients reported a high preference towards music therapy. The theoretical thematic analysis and triangulation of data confirmed enhanced symptom management and revealed that music as medium helped embody hope for survival and connect to a pre-illness self-image (Bradt et al., 2015). The authors also point out potential connections to prior loss and trauma through the music in both music therapy and music medicine.

2.2. REVIEW OF QUALITATIVE RESEARCH

In the mixed methods case study article (see section 6.1.1), a literature summary of qualitative research on GIM and breast or gynaecological cancer population is presented (Hertrampf, 2017, in preparation).

A short overview of relevant qualitative research since 2000 in individual and group music therapy for both targeted population groups is provided as follows (see Table 2-1 and Table 2-2). Studies purely focused on palliative treatment at the end of life, other cancer diagnoses, or children are not included as they exceed the scope of this thesis.

Overall, main qualitative research approaches represent case studies that derived from clinical practice (Gimeno, 2015; McDougal Miller, 2015; Meadows, 2015) or as parts of larger research projects (Bonde 2004, 2005, 2007a; Hertrampf, 2015; Wärja, 2015). One article (Dimiceli-Mitran, 2015) presents a group concept and evaluation of working with MI in rehabilitation after treatment. One group music therapy study

	Paper	Design	Population / setting	Place in treatment trajectory	MT approach / intervention	Findings (summarized)
Individual work	Bonde (2004, 2005, 2007)	Two individual case studies from a mixed-methods study; Overall themes from entire study sample	One breast and one abdominal cancer survivor from mixed study sample (41-65 y) / outpatient	Rehabilitation after treatment	BMGIM / ten 90-120 min sessions	Significant reduction in anxiety and significant enhancement of mood and QoL, which were sustained at FU; improved coping, development of hope, development of new perspectives on past, present and future, improved understanding of self, (new) love of music, coming to terms with life and death, opening towards spirituality.
	Gimeno (2015)	Case study	Woman (41 y) with breast cancer	After mastectomy	Short GIM (MIJ – Music Imagery Journeys) / six 30 min sessions	Various healing images that helped perceive less pain, anxiety, and stress, and promoted increased relaxation, feelings of hope, exploration of inner needs, and improved communication with family members
	McDougal Miller (2016)	Case study	Woman with breast cancer / various settings	Throughout treatment trajectory into hospice care	Various approaches of GIM and MI / 35 sessions over nine years with varying duration	Enhanced symptom management for fatigue, pain, anxiety, panic attacks, and needle phobia
	Meadows (2015)	Case study	Woman (52 y) with breast cancer		BMGIM and MI / rehabilitation after treatment	Focus on treatment of body during medical treatment may cause confrontation with unresolved emotional issues after treatment. Expression of burdening emotions and feelings of anxiety and guilt, process and integration in daily life through MT.

Table 2-1 Overview of qualitative research – Individual work

	Paper	Design	Population / setting	Place in treatment trajectory	MT approach / intervention	Findings (summarized)
Group work	Dimiceli-Mitran (2015)	Concept description and group evaluation	Cancer survivors / outpatients	Rehabilitation after treatment	GrpMI wellness with supportive MI and Simonton´s techniques / Six weekly 90 min sessions	Beneficial effects on stress-reduction and coping, supportive group experience.
	Hertrampf (2015)	Case study from a randomized trial	Women with breast or gynecological cancer / outpatient	Beginning of curative or early palliative outpatient treatment	GrpMI / six weekly 90-120 min sessions	Enhanced coping with cancer and treatment-related side-effects through key images as new resources, rediscovering individual resources, integration of new body- and self-image, positive changes in individual behavior, interpersonal communication, and perception of the disease. Therapeutic factors (Yalom, 1985) universality, group cohesiveness, instillation of hope, imitative behavior, and catharsis were most important.
	McClean, Bunt, & Daykin (2012)	Modified grounded theory analysis of 23 patient telephone interviews, focus on healing and spiritual properties of MT	Adult people with cancer of different diagnoses / 5-day residential retreat program at cancer care centre	Various, no limitation described	Active music making and receptive MT / single session for appr. 90 min	Four major themes, earlier proposed by Magill (2005), were confirmed: transcendence, connectedness, meaning-making, and faith and hope; musical improvisation as meaningful creative experience.
	Wärja (2015)	Case vignettes with narrative statements from a randomized trial	Gynecological cancer survivors with good prognosis / outpatient	Rehabilitation after medical treatment	GrpMI (KMR-Brief Music Journeys) in psychotherapeutic, existential, and expressive arts therapy frame / eight 150 min weekly sessions	Full-size body paintings in combination with active music listening facilitated improved body image, hopes for the future, finding of new perspectives, and being able to talk openly about sexual concerns.

Table 2-2 Overview of qualitative research – Group work

applying active and receptive techniques conducted modified grounded theory analysis and confirmed four major themes that have been proposed earlier in research in the field, namely transcendence, connectedness, meaning-making, and faith and hope (McClean et al., 2012). Breast cancer is the dominant diagnosis in studies, and most focus on rehabilitation after medical treatment. Only three studies (Bonde, 2004, 2005, 2007; Hertrampf, 2015; Wärja, 2015) include women with gynaecological cancer; only one of them is based at the beginning of outpatient treatment (Hertrampf, 2015). Reported findings across approaches and settings along the cancer treatment trajectory describe improved symptom management for pain, fatigue, stress, anxiety, depression, mood, and QoL. In addition, enhanced coping, communication with others, self-understanding, new body and self-image, development of new perspectives on life and future, emotional processing, and (re-)activation of resources and creativity are described. In group approaches, the groups themselves were experienced as supportive. Wärja´s (2015) finding that women could address sexual concerns stands out as the only paper to feature this treatment outcome.

For further literature on music therapy in palliative care at the end of life or other cancer diagnoses, please refer for example to Bradt and colleagues (2016), Bradt and Dileo (2014), O`Callaghan (2009), or O´Kelly and Koffman (2007).

CHAPTER 3. METHOD

3.1. EPISTEMOLOGICAL AND ONTOLOGICAL CONSIDERATIONS

Professional music therapy has grown from empirical practice, informing and generating theories and knowledge from within itself and through the integration of ideas from other disciplines (Wigram, 1999). Music therapy and GIM approaches are considered beneficial adjunct therapies in cancer treatment and have been growing in clinical significance for the reduction of stressful symptoms and side-effects accompanying cancer treatment (Bonde, 2005; Bradt et al., 2016; Hertrampf & Wärja, 2017; Short, 2002). Breast cancer is well represented in public awareness and research (including music therapy research), but as highlighted in Chapters 1 and 2, there is a lack of publicity and studies on gynaecological cancer in the study. Thus, there is a need for research in the field to improve the clinical situation for these women.

Mixed methods approaches have grown more popular in social sciences during the last decade (Hesse-Biber, 2011; Torrance, 2012), allowing for researchers to investigate research aims from different angles applying different methodologies (Creswell & Clark, 2011; Torrance, 2012). This PhD study has been guided throughout by the firm belief that we need to conduct more mixed methods research to better understand the effect of music therapy on different outcomes and the experience of clients in clinical practice. Both quantitative and qualitative approaches have their unique values in conducting research and informing clinical practice. It is important to merge evidence and findings from both approaches to create a multi-dimensional perspective of clinical reality.

Bearing the above in mind together with my clinical expertise of working with both targeted populations and treatment perspectives in GrpMI with mixed groups, it was of high importance to develop this PhD study as close as possible to clinical reality of music therapy in psycho-oncology. The combined clinically and research-informed design of this study aimed to investigate both the effect of GrpMI and the individual experiences of the women with breast cancer or gynaecological cancer undergoing active medical treatment. Hence, a mixed methods approach was most appropriate.

3.2. RESEARCH QUESTIONS

The aim and research questions of the clinical effect study were based upon previous research findings and gaps in the literature as summarised in Chapter 2, and the background sections in the articles this thesis, as follows:

1. What is the influence of GrpMI on
    a) anxiety,
    b) depression,
    c) quality of life, and
    d) well-being

for women with breast cancer or gynaecological cancer undergoing curative or palliative active medical outpatient treatment?

In addition, the relationship between GrpMI imagery and both diagnoses and treatment perspectives were investigated for a better understanding of underlying processes, and to inform further clinical applications, leading to a second research question:

2. What are the differences in the influence of GrpMI on these four variables as related to the treatment perspective (curative vs. palliative treatment)?

3. What differences can be identified in the imagery occurring related to the treatment perspective (curative vs. palliative treatment)?

4. What differences can be identified in the imagery occurring related to the diagnosis (breast cancer vs. gynaecological cancer)?

5. What differences can be identified in regards to the chosen pieces of music?

The first research question was addressed by implementing quantitative measures for each of the four dependent variables (see section 3.5.2) at different time points. Results of the clinical trial and answers to this question are summarised in Article 3 and Chapter 5.

Research question 2 can be understood as sub-question to the first research question investigating potential sub-group effects in reference to diagnosis or treatment perspective. Results of the sub-group analyses are addressed in chapter 5.

Research questions 3 to 5 are addressed in the thematic analysis (section 4.2) and qualitative analysis of music and imagery (Chapter 4.3).

3.3. STUDY DESIGN

This PhD study is a mixed methods study based on a clinically and research informed concurrent triangulation design (Creswell & Clark, 2011; see Figure 3-1). The investigation combined a prospective randomized clinical trial with 2x4 split-plot factorial design (Goos, 2009; McKinney, 2014) comparing Treatment as usual (TAU) + GrpMI versus TAU + Progressive Muscle Relaxation (PMR) in six small-group sessions over six weeks with a qualitative investigation on participants´ personal experiences of the GrpMI therapy intervention in connection to their coping with cancer and treatment-related side effects.

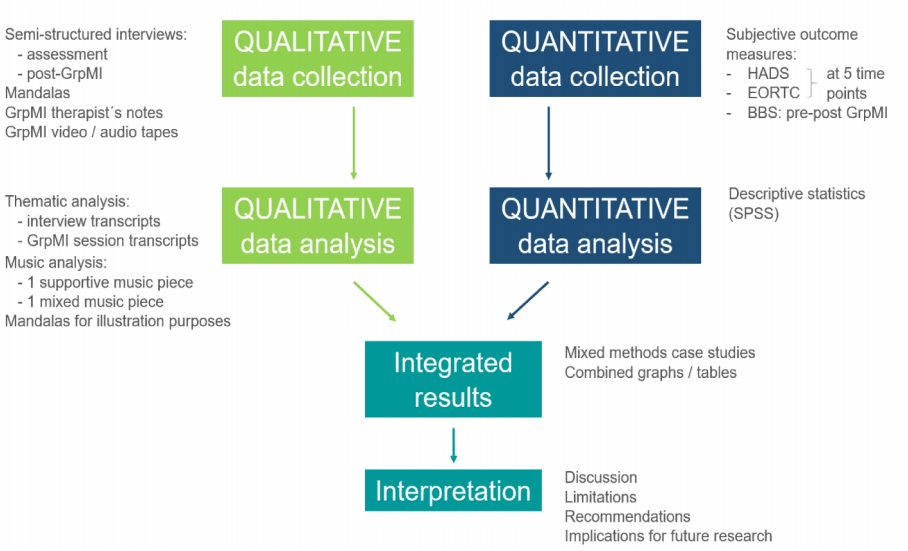


Figure 3-1 Concurrent triangulation design of this PhD study

An a priori power calculation with SPSS on QoL with a medium effect size of $d = .60$ on $\alpha = 0.05$ and 20% drop-out and lost-to-follow-up included resulted in a total sample size of $N = 32$.

3.4. DATA COLLECTION AND RECRUITMENT

Qualitative data was derived from patient interviews conducted at assessment and post-GrpMI-intervention, therapist´s session documentation, and transcribed video-tapes from GrpMI sessions. During the process of the intervention, the researcher (a trained and certified music and GIM therapist and psycho-oncologist) who conducted the interviews had no insight in the group process to avoid bias at post-GrpMI-intervention interview. Interviews were kept confidential and both intervention therapists were unaware of their content.

Quantitative data arose from subjective outcome measures HADS and EORTC QLQ-C30 (both in German version) and were filled out by the participants at five time-points: baseline, pre-test, post-test, 4-weeks FU, and 4-months FU. Both questionnaires were selected for this study for their psychometric properties after consultation with medical research experts at the research site and were sent to the study participants by the secretary of the psycho-oncology department via post. The choice of the Basel scale of Well-Being (Basler Befindlichkeitsskala, BBS) was based on clinical experience in previous music therapy work at the research site, and it was completed pre and post each of the six GrpMI sessions.

An overview of the recruitment and analysis process is displayed in Figure 3-2 (Consort Flow diagram; Altman et al., 2001).

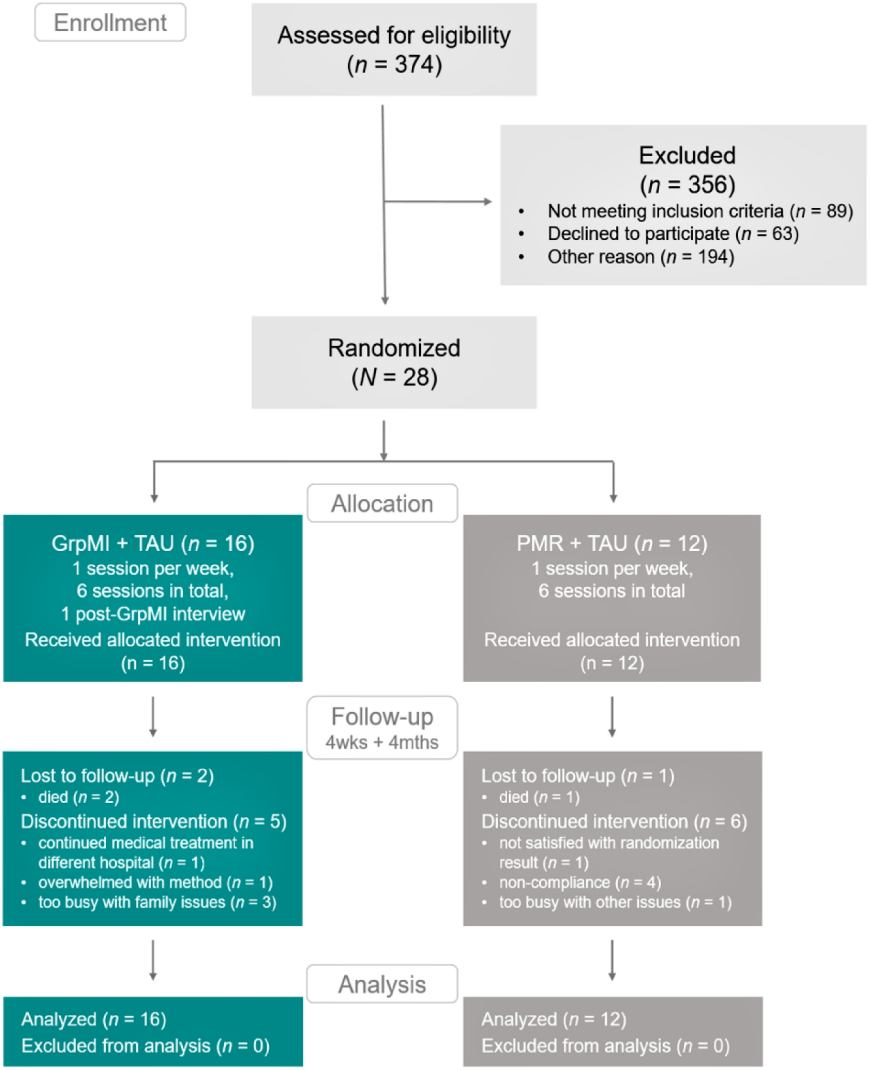


Figure 3-2 Consort Flow diagram

3.4.1. PARTICIPANTS

Based on the established inclusion criteria, doctors decided in an interdisciplinary tumour board meeting, which of the women being treated at both accredited cancer

centres for breast cancer and gynaecological cancer at HELIOS Dr. Horst Schmidt Kliniken Wiesbaden, Germany, were eligible for this study. Based on their decision, a research nurse prepared a list of possible participants. These potential candidates were unknown to me and I was not involved in the decision process of eligible candidates. An information sheet (see Appendix B) explaining the aims and conditions of this study was sent to them. Those women who expressed their interest and motivation for study participation could contact the secretary of the psycho-oncology department or medical personnel of both cancer centres. Name, diagnosis, and treatment perspective were listed and forwarded to me, so I could contact these women to answer preliminary questions about the study and arrange a meeting for the assessment (see section 3.5.3). The assessment session included explanations of the study objectives and conditions, informed consent, and first data collection of baseline measures and a semi-structured interview.

Women were excluded from the study when they did not meet the inclusion criteria, declined to participate, or gave other reasons such as: living too far away; being already committed to a medical study, not willing/able to commit to more; did not want to burden family members or friends to drive them to study interventions; being physically unable to attend outpatient treatment; set other priorities due to limited life-expectancy or because they were receiving outpatient psychotherapy.

A total sample of $N = 28$ was recruited between October 2013 and April 2015 from women meeting the following inclusion criteria: (a) female patients with (b) breast cancer or gynaecological cancer, (c) aged 18 years or older, (d) at the beginning of curative or early palliative outpatient treatment, (e) with diagnostic or/and treatment-related side-effects, (f) personal motivation and engagement for self-development and insight-oriented therapy, (g) ability of imaging to music, (h) ability to read and understand German, (i) no dislike of classical music, and (j) no known current psychiatric diagnoses or hearing impairment.

Of the 28 women, 25 were German and one each from Turkish, Russian, and Czech origin. Age was distributed between 28 and 71 with a mean of 52 years (SD = 12.17; see Table 3.1). Distribution between women in retirement, on sick leave, and still at work was equal (about 30% each). Almost all women had a medium to high education (24/28) and a similar level of financial security (27/28). 21 of all women were married or in a stable relationship and 23 had children (1 child $n = 8$; 2 children $n = 11$; 3 children $n = 4$), 12 lived together with their partner and children. Only five women reported a low quality of social network, all others felt very well supported. Breast and gynaecological cancer were equally distributed, more women were in curative than in palliative treatment (17 vs 11). 19 received adjuvant therapy, 9 were in neoadjuvant treatment. Most women received their treatment in periods of 21 with some minor variance. All included women reported a high affiliation towards music and that they frequently used music in their daily lives. None had prior experience with music therapy or reported dislike for classical music or negative memories related to specific musical instruments or music pieces.

Variables		Total (*n* = 28)		GrpMI (*n* = 16)		PMR (*n* = 12)	
		n	%	*n*	%	*n*	%
Age	M (SD) [Range]	52 (12.17) [28-71]		53 (11.94) [37-71]		52 (12.97) [28-68]	
Occupation	No job	1	3.6	1	6.3	0	0
	Retired	8	28.6	5	31.3	3	25.0
	On sick leave	10	35.7	4	25.0	6	50.0
	Working	9	32.1	6	37.5	3	25.0
Education	Primary	4	14.3	3	18.8	1	8.3
	Secondary	12	42.9	10	62.5	2	16.7
	Tertiary	12	42.9	3	18.8	9	75.0
Financial status	Low	1	3.6	1	6.3	0	0
	Average	15	53.6	11	68.8	4	33.3
	High	12	42.9	4	25.0	8	66.7
Marital status	Single	5	17.9	2	12.5	3	25.0
	Married	18	64.3	11	68.8	7	58.3
	In relationship	3	10.7	2	12.5	1	8.3
	Widow	2	7.1	1	6.3	1	8.3
Children	No	5	17.9	3	18.8	2	16.7
	One	8	28.6	3	18.8	5	41.7
	Two	11	39.3	8	50.0	3	25.0
	Three	4	14.3	2	12.5	2	16.7
Living situation	Alone	5	17.9	3	18.8	2	16.7
	With partner	7	25.0	2	12.5	5	41.7
	With child(ren)	1	3.6	0	0	1	8.3
	With partner and children	12	42.9	10	62.5	2	16.7
	With other person	3	10.7	1	6.3	2	16.7
Social network	Not very good	3	10.7	1	6.3	4	33.3
	Good	15	53.6	9	56.3	6	50.0
	Very good	10	35.7	6	37.5	2	16.7
Cancer diagnosis	Breast	15	53.6	10	62.5	5	41.7
	Gynecological	13	46.4	6	37.5	7	58.3
Treatment perspective	Curative	17	60.7	9	56.3	8	66.7
	Palliative	11	39.3	7	43.8	4	33.3
Treatment type	Adjuvant	19	67.9	9	56.3	10	83.3
	Neoadjuvant	9	32.1	7	43.8	2	16.7
Medical treatment	Chemotherapy	25	89.3	13	81.3	12	100.00
	Endocrine therapy	1	3.6	1	6.3	0	0
	Combined therapy	2	7.1	2	12.5	0	0
Period of medical treatment (days)	7	4	14.3	4	25.0	0	0
	21	10	35.7	2	12.5	8	66.7
	28	3	10.7	3	18.8	0	0
	varying	11	39.3	7	43.8	4	33.3

Table 3-1 Demographic and clinical characteristics of study participants at baseline

Baseline characteristics for the dependent variables showed normal levels of anxiety ($\bar{x}$ = 7.6, slightly over cut-off) and depression ($\bar{x}$ = 5.5). Global QoL was medium ($\bar{x}$ = 56.86) as were physical functioning (PF; $\bar{x}$ = 67.64), emotional functioning (EF; $\bar{x}$ 57.12), and cognitive functioning (CF; $\bar{x}$ = 69.45). Role functioning (RF; $\bar{x}$ = 44.62) and social functioning (SF; $\bar{x}$ = 40.38) showed lower medium levels.

Women who were excluded from the study were from various origins including German, Turkish, Russian, Czech, African, Indian, and Polish. Distribution of age,

working status, diagnoses, treatment perspectives, and treatment periods were comparable with the study sample. Educational and financial security levels were lower in average than for included participants. They experienced their social network as of lower quality and reported a higher incidence of living alone, with partner, or with one child. Some have had prior experiences with music therapy or relaxation techniques are were not willing engage in the same intervention again. Affiliation with music was less and use of music in daily life was fewer reported.

3.5. MEASURES

3.5.1. QUALITATIVE MEASURES

Qualitative data were collected in the audio-taped semi-structured interviews at assessment (see Section 3.5.3) and after the GrpMI process, in video-tapes from GrpMI sessions and the GrpMI therapist´s notes from those sessions provided qualitative data. In addition, Mandalas from all MI interventions (assessment sessions, GrpMI sessions, post-GrpMI sessions) were collected for illustration purposes.

3.5.2. QUANTITATIVE MEASURES

The following self-report questionnaires were implemented in this study (see Appendix C) due to their wide use in oncology trials and rich evidence for psychometric properties for the respective outcome variables (Luckett et al., 2010).

- ***Anxiety and depression***. The HADS, Hospital Anxiety and Depression Scale (Snaith & Zigmond, 1994) includes 7 items for each of the two sub-scales anxiety and depression, 14 items in total, which are rated on a 4-point Likert scale (score 0-3) on a spectrum from "Not at all" to "Very much". Possible scores range from 0 (low anxiety or low depression) to 42 (high anxiety or high depression) on the total scale. According to the manual, interpretation of the scores for both sub-scales include "Normal" (0–7); "Mild" (8–10); "Moderate" (11–14), and "Severe" (15–21). The clinically relevant cut-off for diagnosis for each sub-scale is 7. The evaluated timeframe covers the past week. Cronbach´s α and split-half reliability for both sub-scales are .8. Retest reliability for up to two weeks is $r_{tt} > .8$. The HADS scale has been validated in various translations and shows high sensitivity and specificity ($r = .8$).

- ***Quality of life (QoL)***. European Organization for Research and Treatment of Cancer (EORTC) – Quality of Life Questionnaire (Aaronson et al., 1993) QLQ-C30 consists of 30 items, which are divided into five functional status scales, three symptom scales, one overall QoL and health status scale, and six individual items. Of these, 28 items are rated on four-point scales and two items ("overall health" and "overall quality of life")

on seven-point scales. The five functional status scales assess "physical functioning," "role functioning," "cognitive functioning," "emotional functioning," and "social functioning." Symptoms and side effects are assessed with three symptom scales. The EORTC-QLQ-C30 is well recognized and used worldwide in studies on cancer population (Bradt et al., 2016). Scores on all scales range from 0 ("low level of QoL/functioning/symptomatology") to 100 ("high level of QoL/functioning/symptomatology"). The QLQ-C30 has been evaluated as very reliable and valid measure with high sensitivity and specificity in different cancer populations (Luckett et al., 2010).

Both questionnaires were filled out by the participants at five time points: baseline, pre-test, post-test, 4-weeks FU, and 4-months FU (see Figure 3-3).

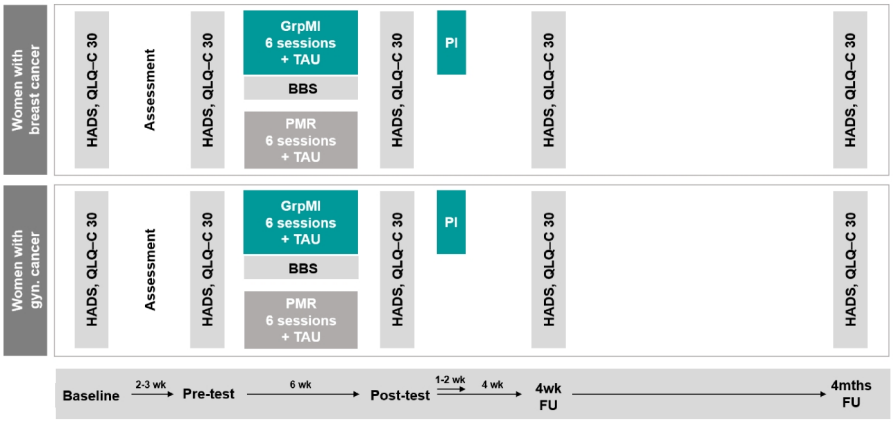


Figure 3-3 Clinical Flow chart.

PI = Post-GrpMI-Intervention session (see section 3.6.4)

- ***Well-being***. The Basel Scale of Well-Being (Basler Befindlichkeitsskala BBS; Hobi, 1983) includes 16 bipolar items on 7-point Likert scales with four items for each of the four sub-scales "intrapsychological balance," "vitality," social extraversion," and "vigilance." Sum scores range from 4 (low well-being) to 28 (high well-being) for each sub-scale. Cronbach's α with various samples is between .88 and .79. Re-test reliability is between .69 and .79. High validity was shown in comparison to other widely used questionnaires in this context (e.g., Freiburg Personality Inventory, Freiburger Persönlichkeitsinventar; Fahrenberg et al., 2001; General Health Questionnaires; Goldberg & Hillier, 1979; Giessen-Test; Beckmann et al., 1990).

This questionnaire was filled out by the GrpMI participants at the beginning (pre) and end (post) of each of the six sessions.

3.5.3. ASSESSMENT

At the beginning of the assessment session, I explained the information material about the study again to the women and answered their questions concerning the study. Before collecting any data from the interview or study intervention experience, the women signed informed consent. They were aware that they could decline from the study at any point without stating any reason and without any consequences for their medical treatment, or further psychosocial support. In the semi-structured interview (see Appendix D), I asked the women about their current life situation, their diagnosis- and treatment-related side-effects, their perception of the cancer, their attitude towards the medical treatment, prior experiences with relaxation exercises and music therapy, and hopes and expectations for the study participation. The assessment session was led by myself as researcher, in my capacity as an accredited psycho-oncologist and music and GIM therapist, who was not involved in the group interventions. Both group therapists were kept unaware of the contents of the assessment session.

The interview was followed by a standardized MI experience with a short guided PMR induction and resource-oriented imagery induction (Grocke & Wigram, 2007; see Appendix E), inviting the women to imagine a light or energy in a momentarily suitable colour, which could be explored in its qualities, used to strengthen the whole body supported by the breathing etc., and taken into the music listening experience to Frederick Delius´ *La Calinda* from the opera *Koanga*. The same musical piece was presented in the post-GrpMI-intervention session to sum up the individual GrpMI experience (see case study article; Hertrampf, in preparation). For the music listening experience I selected a mixed profile (see detailed description in section 3.6.1) to assess the women´s ability of imagining to music (Bonde & Pedersen, 2015). Questions such as: *Could you get into a relaxed state and return without major problems? Could you connect with the music? How did you perceive / experience the music? Could you experience any kind of imagery (visual, auditory, tactile, physiological…)? Was there anything difficult for you in the relaxation or music listening experience?* were explored (Bonde & Pedersen, 2015), in discussion with the women. According to the reported music listening experience and my clinical evaluation of the emotional state of the women in relation to the intervention, I made a dichotomous decision for study inclusion ("Yes" or "No"), and discussed it with the women. Informed consent was re-affirmed or retrieved by the women afterwards.

After assessment, participants were randomized by computer-generated stratified randomization to either GrpMI or PMR intervention. The randomization applied stratification according to the diagnosis (block one: breast cancer, block two: gynaecological cancer) and was conducted by one of the supervisors of this PhD study (CMK). By the point recruitment stopped for pragmatic reasons, both intervention

groups were unevenly distributed. All assessment interviews and MI experiences were audio-taped and transcribed. The music equipment and painting material used was the same for assessment and GrpMI sessions (see sections 3.6.1 and 3.6.2).

3.6. INTERVENTIONS

Interventions applied in this study are described according to the checklist for arts-based interventions (Hertrampf & Wärja, 2017; adapted from Robb, Carpenter, & Burns, 2010).

3.6.1. MUSIC SELECTIONS

Musical pieces show different characteristics and profiles in regards to intensity, complexity, and emotional challenge. Bonde (2010) and Wärja & Bonde (2014)

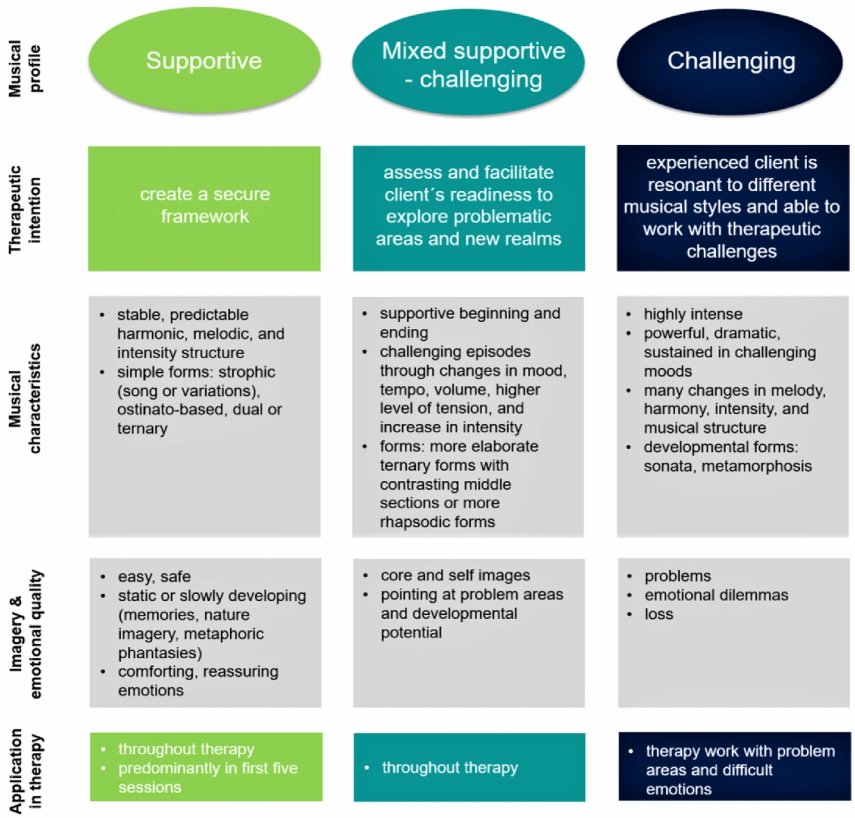


Figure 3-4 Taxonomy of music selections applied in this study, after Bonde (2010) and Wärja & Bonde (2014), with kind permission

provided a taxonomy to classify music selections into supportive, mixed supportive-challenging, and challenging (Hertrampf, 2015; 2017; see Figure 3-4). This taxonomy provided the theoretical frame for the music selections applied in this study. To mirror the clinical situation of the study participants, only music selections with a supportive or mixed supportive-challenging profile were implemented.

For analysis of different musical profiles and imagery, two music selections applied in the GrpMI process were analysed with the Music Imaging Analysis (MIA version 1.1; Rickman, 2005). The MIA presents a computer-generated intensity profile of the music selection in chart form (see section 4.3).

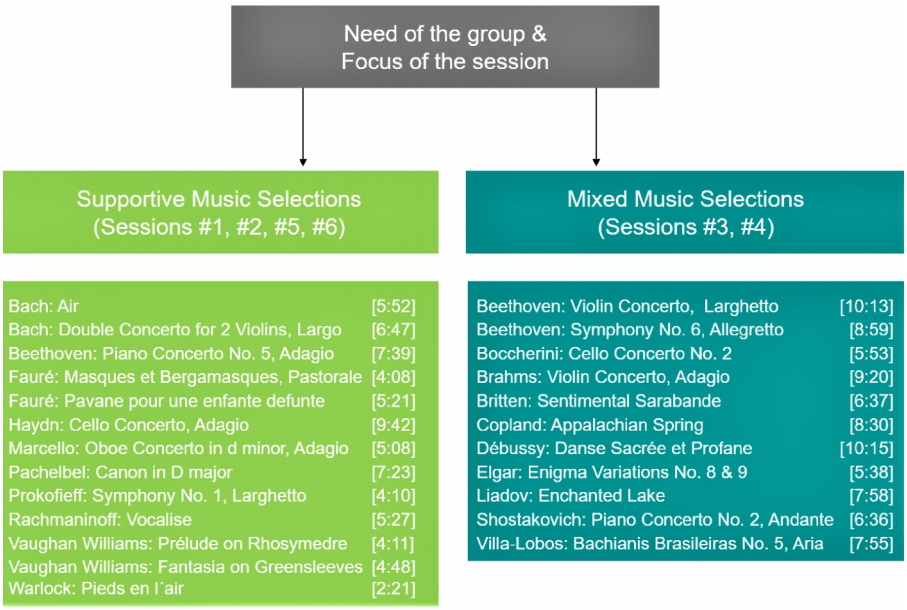


Figure 3-5 List of music selections for GrpMI sessions

Music selections were chosen by the GrpMI therapist from a pre-selected list (see Figure 3-5) in regards to their musical profile and the needs of the group from discussion in the initial dialogue. All music selections were taken from the GIM repertoire; the list was developed from research literature (Bonde, 2010; Burns, 2012; Grocke & Wigram, 2007) and clinical practice, and discussed with fellow GIM therapists. The music for all MI and GrpMI sessions was played through speakers connected to a BOSE sound system, volume control was provided by the therapist.

3.6.2. GROUP MUSIC AND IMAGERY (GRPMI)

The external structure of the GrpMI process in six sessions (see Figure 3-6) allows for both group and individual processes to evolve within a secure and stable setting. The focus of the overall therapy process was on the supportive and re-educative level to mirror and attune to the women's functioning level as they were undergoing active medical treatment (Hertrampf, 2015; Meadows, 2015; Summer, 2002; 2009; 2015).

Session No.	#1	#2	#3	#4	#5	#6
Focus	Group process	Participant´s individual process	Participant´s individual process in depth	Group process in depth	Stabilization / integration	Stabilization / integration / parting
Musical profile	Supportive	Supportive	Mixed	Mixed	Supportive	Supportive

Figure 3-6 Structure of GrpMI process

The internal structure for the GrpMI sessions followed the following format (Grocke & Wigram, 2007; Grocke & Moe, 2015; Hertrampf, 2015):

1. *Initial dialogue/pre-music discussion (15-20 minutes)*. All group members briefly dialogue about current issues relevant for the session, moderated by the therapist. The group agrees on a focus for the music listening.
2. *Relaxation induction (5-10 minutes).* The therapist provides a short PMR-based guided relaxation exercise, depending on the physical state of the group members.
3. *Focus for the music listening experience.* The therapist formulates the specific focus the group had agreed upon in the initial dialogue.
4. *Music Listening Experience (4-12 minutes)*. Intentional music listening without verbal intervention by the therapist or verbal interaction between group members.
5. *Return to a fully aware state*. The therapist provides a formulation to help all group members return to an alert state.
6. *Creative processing (10-15 minutes)*. Each woman individually expresses her personal MI experience in the drawing of a mandala without verbal interaction.
7. *Closure/integration (30-40 minutes)*. Each woman individually describes her personal MI experience and important clues in her mandala. The other group members are invited to give their feedback in free associations. This process is moderated by the therapist who supports the individual integration process of the session for each woman. As part of the integration, each group member is invited to give a title to her mandala and formulate an *`impulse´* which

captures the session´s essence in a sentence, key word, or wish etc. to take home.

All GrpMI sessions were conducted by an accredited psycho-oncologist, music therapist and GIM therapist. Participants were seated during the session, which lasted between 90-120 minutes, changing place from a smaller circle for pre-talk, induction, music listening, and post-talk to a larger circle where the painting material (a white DIN A1 paper with a soft pencil circle and Jaxon oil pastels) for the mandala drawing was displayed on individual tables. These materials were used in all MI and GrpMI sessions.

3.6.3. PROGRESSIVE MUSCLE RELAXATION (PMR)

Progressive Muscle Relaxation was offered to the women by an accredited psycho-oncologist, psychologist, and PMR trainer. The six sessions consisted of structured relaxation inductions through the whole body for approximately 30 minutes. The following muscle groups were addressed, when possible on both sides of the body: forehead, face with eyes and mouth, neck and shoulders, chest, stomach, buttocks, entire arm, hand, entire leg, foot. All women were seated during the PMR.

3.6.4. POST-GRPMI INTERVENTION SESSION

The GrpMI intervention was followed by a session similar to assessment, consisting of a semi-structured interview and MI experience. It was conducted by the researcher who was kept blind towards the contents and experiences of the GrpMI sessions before the post-GrpMI intervention interview to ensure a neutral and open perspective for the interview.

The interview generated information on the current life situation after GrpMI and on the individual experiences with the GrpMI process on various levels: characteristics of current situation with cancer and treatment-related side-effects; experiences with structure and elements of GrpMI; other group members; therapist; music; mandala drawing etc.

For the MI summing up the individual GrpMI experience after the interview, the same musical piece as in the assessment session was presented.

3.7. DATA ANALYSIS

3.7.1. QUALITATIVE ANALYSIS

Deductive and inductive thematic analysis (Braun & Clarke, 2006) was performed on transcripts of audio-tapes of the participant interviews from assessment and post-

GrpMI intervention sessions, the therapist´s notes from the GrpMI sessions, and transcribed video-tapes of the GrpMI sessions. This analysis was guided by research questions, interview questions, and aspects described as important by the participants for their individual process.

3.7.2. QUANTITATIVE ANALYSIS

Quantitative data for this study were analysed with descriptive and parametric and nonparametric statistics using SPSS version 24. To illustrate intervention effects, means at the different points of measurement were compared and effect sizes (ES) calculated (Cohen, 1988; Gold, 2006; Morris & DeShon, 2002). The interpretation of ES followed Cohen´s (1988) recommendations as small effect (d = 0.20), medium effect (d = 0.50), and large effect (d = 0.80).

3.7.3. INTEGRATIVE ANALYSIS

After separate analyses for qualitative and quantitative data sets, an integration triangulating both approaches were applied. Benefits from data triangulation in mixed methods research allow for different perspectives on the same clinical approach. Quantitative analyses provide information on the effect and the size of the effect of an intervention. Qualitative data adds a more differentiated understanding and perspective to the clinical effects (Creswell, 2010; Robson, 2011; Torrance, 2012). Therefore, data triangulation in this study will combine quantitative and qualitative results led by the research questions and focusing on the dependent variables under investigation. An illustration is provided by the description of two individual case studies (see 6.1.1. and 6.1.2). In addition, further results from participant interviews relevant for the intervention will be presented.

3.8. ETHICS

Respecting the concept of "clinical equipoise" (Miller & Joffe, 2011), two supportive interventions were offered to study participants rather than one supportive intervention compared to only TAU, favouring ethical considerations for the study. The researcher was aware of the limiting aspects of generalization of results by missing a non-intervention control group.

During the study participation, crisis intervention was offered as short verbal support without music to all women from both intervention groups when needed.

Ethics approval was granted by Landesärztekammer Hessen in June 2013 (see Appendix F).

CHAPTER 4. QUALITATIVE RESULTS

In this chapter, a group case study (section 4.1) introduces a qualitative summary of benefits from GrpMI therapy in relation to the role of music, the role of imagery, and the role of the group as experienced and described by three women of the same group cycle.

The experience of all women who completed the GrpMI treatment are then analysed using a theoretical thematic approach (see section 4.2) guided by the research questions underlying this study, proving a more thorough and differentiated qualitative perspective on the central components of GrpMI in relation to the dependent variables in focus.

At the end of this chapter, a qualitative analysis of music and imagery (see section 4.3) in relation to the two different intensity profiles (see also section 3.6.1) is presented and illustrated with mandalas and verbal descriptions from the women.

Mandalas from the study participants were exclusively used for illustration purposes of the individual experiences of the women in the GrpMI intervention group and were only described in the women´s own words. They were not further analysed for the purpose of this study.

4.1. GROUP CASE STUDY

A qualitative perspective on the experiences of three women and their GrpMI process together is described in Article 2 of this thesis (see Appendix G for reproduction of the article with kind permission of the publisher). The qualitative analysis of interview and group session data of these three women was guided by the elements of the GrpMI structure (see section 3.6.2) that were experienced as helpful in coping with the illness, namely music, imagery, group setting, and overall GrpMI experience. The same elements were further investigated in this PhD study in relation to the research questions and in the triangulation of data (see Chapters 4.2, 4.3, 5, and 6).

Hertrampf, R.-S. (2015):

Group Music and Imagery (GrpMI) Therapy with Female Cancer Patients.

Published in: Grocke, D. & Moe, T. (Eds.), *Guided Imagery and Music (GIM) and Music Imagery methods for individual and group therapy*, 243–252. JKP, Barcelona.

Background. Among cancer diagnoses in women worldwide, mammary and gynaecological carcinoma are predominant. Despite growing interest and beneficial results in the field, music therapy research on gynaecological cancer, the beginning of outpatient treatment, and on group therapy is scarce.
Objective. The purpose of this qualitative group case study was to illustrate the individual and shared experiences of six sessions Group Music and Imagery (GrpMI) of three women with breast or gynaecological cancer at the beginning of curative or palliative outpatient treatment.
Method. Data from semi-structured participants interviews and GrpMI session video tapes were analysed in qualitative analysis focusing on coping-relevant aspects of music, imagery, group setting, and other important elements of the GrpMI experience. This case study is part of a mixed methods research project.
Findings. The women described improved symptom management and coping with cancer and side-effects of medical treatment, re-discovering personal resources, integration of new body and self-image, development of new meaning and perspectives on life with cancer, improved interpersonal communication, and intensified use of music in daily life. Key images as personal embodied resources available in daily life were experienced as overall benefit of the GrpMI process.
Conclusions. Findings suggested that supportive short-term GrpMI therapy may facilitate important intrapersonal and interpersonal development which increases symptom management, coping strategies, and new meaning in living with cancer for targeted populations.

4.2. THEMATIC ANALYSIS

For theoretical thematic analysis (Braun & Clarke, 2006), semi-structured interviews from both assessments (n = 28) and post-GrpMI intervention sessions (n = 11) were audio-taped and transcribed verbatim by two independent research assistants. In addition, video-tapes from GrpMI sessions of fully completed GrpMI processes (all six sessions; n = 24) were transcribed verbatim by the research assistants. Therapist´s notes from those GrpMI sessions were also taken into account for the analysis. The transcripts were compared to recordings for accuracy by the researcher and GrpMI therapist and anonymized with study codes for analysis. Time references of the recordings were used to facilitate tracing back content units to the original material. All transcripts were included in the analysis to provide a broad spectrum of clinical reality of both diagnostic groups and different treatment perspectives.

The thematic analysis of the transcripts was driven by both deductive and inductive aspects, respecting the research questions, interview questions, and facets described as important by the participants for their individual process. A theoretical thematic analysis approach was used, aiming at identifying and analysing patterns across data (Braun & Clarke, 2006). The coding procedure was led by the research questions guiding this study and focused on anxiety, depression, QoL, and well-being on one hand, and on group experiences and music and imagery aspects on the other hand. A matrix with participants in a column against various codes allowed for exploring within and between participant themes. For identification of themes and sub-themes,

a semantic approach was used, keeping the explicit meaning of the data (Braun & Clarke, 2006). Themes and sub-themes were discussed with the supervisors.

Five major themes and 13 sub-themes reflect shared experiences of the women regardless of their diagnosis or treatment perspective were sought out to provide added meaning and depth of understanding to compliment findings related to the specific effects of the method under investigation. Thus, facilitating a richer understanding of the findings. Each theme appeared across all GrpMI participants.

Themes and sub-themes are presented in tables (Table 4-1 – Table 4-4), providing a definition of each category with personal quotes from the data as highlighting examples for the individual experiences of the GrpMI participants. Out of all GrpMI participants, examples were chosen for their metaphorical quality. The five major themes reflect on (1) anxiety (2) depression (Table 4-1), (3) QoL and well-being (Table 4-2), (4) group experience (Table 4-3), and (5) imagery (Table 4-4).

4.2.1. ANXIETY

The theme anxiety captures fear related to the perceived existential confrontation through the cancer and related medical treatment, and fear of loss through both.

Sub-themes:

- Existential fear (of progression, recurrence, or death)
- Fear of loss through cancer (treatment)

4.2.2. DEPRESSION

All experiences described by the GrpMI participants regarding depressive mood, depressive thoughts, and fatigue-related symptoms were connected to a negative and stressful perception of aspects of the cancer and/or treatment side-effects.

Sub-theme:

- Depressed mood / thoughts

4.2.3. QUALITY OF LIFE (QOL) AND WELL-BEING

The third theme represents different aspects of subjective QoL and well-being, which the women related to the (re)activation of inner resources and creativity, positive emotions and experiences, joy, and hope for the future.

Sub-themes:

- QoL and well-being despite/with the cancer (treatment)

- QoL and well-being outside of cancer (treatment)

4.2.4. GROUP EXPERIENCE

The group set a secure and trustful space for both individual and interpersonal development. Relevant aspects for coping, facilitating a sense of meaning and hope, belonging, and connectedness are mentioned and related to Yalom´s therapeutic factors (see section 1.2.6). Problematic aspects of being in a group are also addressed.

Sub-themes:

- Group as support (see also therapeutic factors section 1.2.6.)
- Problematic aspects of being in a group

4.2.5. IMAGERY

All women from the study had imagery experiences while listening to the music. In general, the imagery was described as driven by the musical development; in many occasions, the metaphoric descriptions of the imagery reflected musical characteristics, such as instruments / melodic or rhythmic motives / changes in musical structure or dynamics etc. (see also Hertrampf, 2015). Within the sub-themes, various kinds of image modalities mentioned in GIM literature (Goldberg, 2002; see also sections 1.2.3 and 4.3.) occurred.

Sub-themes:

- Symbols and representations of cancer (treatment)
- Personal resources / coping
- Inner needs
- Awareness
- Interpersonal relationships
- Transpersonal / existential issues

Table 4-1 Themes from qualitative data – Theme 1 Anxiety and Theme 2 Depression

Theme and definition	Categories and definition	Example quotes
Theme 1 Anxiety: Confrontation with existential thread, feeling of loss of control, and insecurity about the future.	• *Existential fear* connected to fear of progression or recurrence of the cancer disease, or death.	*"I try to keep calm and not panic. The future looks so devastating right now."* *"I experienced the music as very consoling and light, also heavenly..., but then also in a way I have to say I don´t know where the journey is going with the music, ... could also go into eternity, ... - ... as if I was accompanied into different spheres, as if I was leaving this world, I could imagine having such a music accompanying me, ..., but I don´t want that yet, that´s why it made me sad."* *"I´m pushing my liver metastases away. I´m not ready to face them yet."* *"With every new medical check-up I fear there will be a new diagnosis."*
	• *Fear of loss* through cancer, cancer treatment, and suffering from side effects.	*"I feel like I´m losing my self-protection"* *"Will I ever be able to have children of my own?"* *"I cannot move around like before anymore. It´s like the cancer is setting the limits now."* *"The loss of strength is determining my daily life course. Will it always be like this?"*
Theme 2 Depression: Participants experienced depressive mood and thoughts and fatigue symptoms only in direct relation to the cancer diagnosis and / or treatment (side effects).	• *Depressed mood / thoughts* connected to stressful or negatively perceived experiences or events in relation to the cancer disease or treatment.	*"I just received news that they have detected new metastases in my lung and liver. Puh, this is really bringing me down."* *"Oh, these terrible mood swings and martyring thoughts at night. I can´t even sleep properly anymore."* *"I´m not satisfied at all with my body and physical appearance. I just can´t find the strength and motivation to take better care of myself right now."*

Table 4-2 Themes from qualitative data – Theme 3 QoL and well-being

Theme and definition	Categories and definition	Example quotes
Theme 3 QoL and well-being: Through (re)activation of inner resources and creativity, positive emotions and experiences, joy and hope for the future.	• *QoL and well-being despite/with the cancer (treatment)* Connected to a wish for integration of positive emotions with self and others, (re)activation of (hidden) resources and creativity, despite or together with the cancer (treatment).	*"I want to be satisfied again with what I have. I want to be happy with the cancer."* *"I can see the cancer now as a kind of motor for change,… a new chance to get in contact with my siblings again. That makes me so happy."* *"I want to keep my passion for beautiful things and experiences – it should never go away."*
	• *QoL and well-being outside of cancer (treatment)* Connected to (re)activation and experience of positive emotions with self and others, relation for former self prior to cancer diagnosis, (re)activation of (hidden) resources and creativity outside the cancer (treatment), hope for the future.	*"I feel so happy when I´m outside in nature. Then I can just forget about this annoying disease."* *"I want to dance again and live my creativity."* *"I am much more relaxed now after the group experience. Especially with my children. Now we can enjoy the time together so much more."* *"I started to buy crazy things I´m not sure I´ll ever need. But it´s so much fun doing it and it makes me so happy that I don´t really care about it."*

Table 4-3 Themes from qualitative data – Theme 4 Group experience

Theme and definition	Categories and definition	Curative factor of group therapy (Yalom)	Example quotes
Theme 4 Group experience:	Group as support		
The group provides a safe framework among women in a similar existential situation. Participants value the group support for coping on intrapersonal and interpersonal levels.	• *Intrapersonal support*: Shared experiences and emotional expression in the safe setting facilitate individual development, transformation, and help create a sense of meaning.	Instillation of hope	*"Very important for me was to recognize that I already could deal well with the cancer disease."*
		Altruism	*"I was positively surprised that I could contribute so much vitality and zest for life into the group."*
		Imitative behavior	*"I live more calmly now. My values have changed...before the order was my job, my family, my home...But now ´minor matters` have become more important, like time together as mother and daughter...also shared experiences with my husband.... The GrpMI experience has changed my awareness for that."*
		Existential factors	*"When there was something dark, it was negative at first and then it turned positive, too,…a different aspect to look at."*
		Catharsis	*"When there was something dark, it was negative at first and then it turned positive, too,…a different aspect to look at."*
		Universality	*"It fit, it was very comfortable. I liked it very much. I felt secure and held. … We showed great consideration for each other, gave each other tips, and solidary support".*
			"It felt good no to be alone…very relieving."
		Socializing technique	*"We used to talk in different order [from session to session], and it always seemed appropriate who started and who received a little more space because she had painted a little more or the picture was more expressive than the others´. It always was in a good flow."*
	• *Interpersonal support:* Group experience as space of trust and care for each other creates a sense of belonging, connectedness, relieve, strength, and hope for the future. Dysfunctional patterns on relationship levels can be transformed.	Interpersonal learning	*"The music therapy did so good... From the group I learned to do something just for me and take myself seriously."*

	Corrective recapitulation of the primary family experience	*"The communication with my family has changed.... And my behavior ... I have become much more relaxed and calm. So life is much more enjoyable now, especially with the children who are very happy about it.... This experience gave me so much. I'm utilizing more creativity with the children now."*
	Imparting information	*"Exchanging information and talking to the other women helped me to reflect and think over my own situation."*
	Catharsis	*"I always felt relieved...I made the experience that I could also share the burdens and suffering with the other members, the disease and so on..."*
	Group cohesiveness	*"Intensive feeling of belonging together – a one-boat experience."* *"A large meadow with strong trees where I can go and lean everywhere."*
	• *Problematic aspects of being in a group:* Three women expressed unease related to mixed treatment perspectives in the same group, personal restraint and shame related to physical side effects from medical treatment, and treatment fidelity of other group members (one woman dropped out of the group process after the first session).	*"Sometimes it was difficult for me to openly share my hopes for the future and my positive emotions because the other two women were more advanced in the cancer disease."* *"I'm constantly suffering from diarrhea... I call it `My toilet problem'."* *"It was not specifically problematic, ... but it bothered me a little because she was so sad.... It was not negative, just mattered to me because she seemed to have much to work through, I think more than me and the other woman do."*

Table 4-3 (continued) Themes from qualitative data – Theme 4 Group experience

Table 4-4 Themes from qualitative data – Theme 5 Imagery

Theme and definition	Categories and definition	Example quotes
Theme 5 Imagery: The music evokes and sustains metaphoric images representing intrapersonal or interpersonal issues or issues related to cancer and treatment trajectory and coping.	• *Symbols and representations of cancer (treatment)* Metaphoric images of the cancer disease and treatment trajectory.	*"After climbing up a mountain, there´s always a special treat – getting access to my personal energy of life."* *"It made me feel trapped inside, haven´t found the way out yet."* *"The curvy lines were like a picture on a medical screen – I realized this was mirroring my diagnosis, my cancer diagnosis… and the medical process of the cancer."*
	• *Personal resources / coping* Connected to supportive memories (e.g. from family holidays, nature experiences), (re)activation of (hidden) personal resources, or GrpMI experience as supportive metaphoric image to help cope with cancer and treatment side effects.	*"The cellos were brownish, … like trees standing firmly, … very mighty,… and all around the water, the air and a little bit of sun."* *"I want to dance again and nurture my creativity." "an undulation of the music, like a river, …, a wave I can dock at as a fountain of life"*
	• *Inner needs* (Re)discovering and respecting personal needs for enhanced coping with cancer and treatment.	*"I want to learn how to play the keyboard of life with loud and soft sounds, being in balance with myself and my inner need for protection."* *"My red spot of energy and my green wings. … I wish for strength."* *"My rainbow – I need strength and consistency."* *"The light overbalances the dark…. I need that to get through the treatment."*
	• *Awareness* Becoming aware of inner personal aspects through music and imagery.	*"With every imagery experience I could explore different parts of myself."* *"The music made me aware of the connection between my conscious and unconscious. Now I can see more clearly."*

	• *Interpersonal relationships* Representations and symbolic regulation of relationships.	*"Trying out closeness and distance from the depth of my inner lake."* *"Soap bubbles flying around us… they pop lightly at touch… we decide whom we let into our world."*
	• *Existential / transpersonal themes*	*"I experienced the music as very consoling and light, also heavenly…, but then also in a way I have to say I don't know where the journey is going with the music, … could also go into eternity, … - … as if I was accompanied into different spheres, as if I was leaving this world."* *"Fireworks - I will celebrate my life with all the colors I have."* *"I was drawn to the light …; a huge impulse of light that could be lying over everything as a source of strength, maybe."*

Table 4-4 (continued) Themes from qualitative data – Theme 5 Imagery

In summary, the described themes and sub-themes from thematic analysis show a clear connection between the cancer illness and treatment-related side-effects with anxiety, depression, QoL, and well-being, group experience, and imagery experiences. Furthermore, it becomes clear how the perception of the cancer and cancer treatment affect these themes and how the women find support for the development of coping strategies, hidden and new resources, creativity, new perspectives on life, meaning of life, hope for the future, and opening towards spirituality in their GrpMI process. However, three women experienced problems in the group. One felt unease being in a group with different treatment perspectives, another felt unease due to severe physical side-effects, and a third described unease due to the drop-out of one woman after the first session. The different themes and sub-themes occurred across sub-groups for the different diagnoses and treatment perspectives.

4.3. MUSIC AND IMAGERY

In this section, an overview of all music selections which have been applied in the GrpMI sessions, is presented (see Figure 4-1). To further illustrate how the different types of music intensity profiles are related to different types of imagery (see Section 3.6.1), two music selections from the GrpMI process were analysed with the Music Imaging Analysis (MIA; Rickman, 2005). The MIA presents a computer-generated intensity profile of the music selection in chart form (see Figure 4-2 and Figure 4-3). In addition, imagery modalities from GIM work that occurred in the MI experiences of this study were related to personal imagery and highlighted with Mandala examples from the women.

	Music selection	Frequency over all GrpMI sessions	Frequency per session					
			#1	#2	#3	#4	#5	#6
supportive	Bach: Double Concerto for 2 Violins, Largo	2		1			1	
	Beethoven: Piano Concerto No. 5, Adagio	2						2
	Fauré: Masques et Bergamasques	1	1					
	Haydn: Cello Concerto in C, Adagio	1		1				
	Marcello: Oboe Concerto in d minor, Adagio	2		2				
	Prokofieff: Symphony No. 1, Larghetto	1						1
	Vaughan Williams: Fantasia on Greensleeves	3					3	
	Vaughan Williams: Prelude on Rhosymedre	4	3					1
mixed supportive-challenging	Beethoven: Symph. No. 6 "Pastorale", Allegretto	1				1		
	Copland: Appalachian springs	1				1		
	Débussy: Danse Sacrée et Profane	1			1			
	Elgar: Enigma Variations No. 8&9	3			2	1		
	Liadov: Enchanted lake	1				1		
	Shostacovich: Piano Concerto No. 2, Andante	1			1			

Figure 4-1 Music selections applied in GrpMI in this study

4.3.1 SUPPORTIVE MUSIC SELECTION

As an example of "supportive music", *Vaughan Williams, Prelude on Rhosymedre* was analysed. This musical piece was used in the GrpMI process of three groups (three times in session #1, once in session #6; see Figure 4-1), of which one was the basis for both the group case study (Section 4.1. and Article 2) and the individual case study of the woman with breast cancer in curative treatment (see section 6.1.2.).

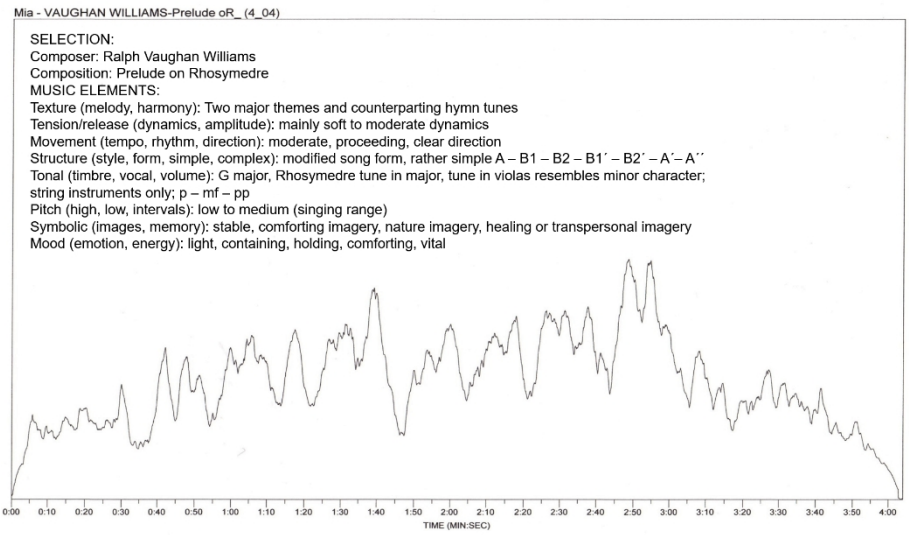


Figure 4-2. Annotated intensity profile (MIA) of Vaughan Williams, Prelude on Rhosymedre

The x-axis indicates levels of tension on a scale from minimum to maximum. The y-axis indicates duration in minutes and seconds. Scaling: 50%, smoothing: none.

Short description of the music:

Rhosymedre is the name of a Welsh village and a sacral hymn, which was composed by Ralph Vaughan Williams in 1920, using a tune by John David Edwards who served in the church of Rhosymedre. This piece is one of "Three Preludes on Welsh Hymn Tunes" for Organ by Vaughan Williams and was arranged for string orchestra by Arnold Foster in 1938. The original hymn tune, played like a cantus firmus in the violas, is interweaved with a new independent counterpoint melody presented by the violins form the start. Bonde (2007b) points out the "visionary aspect" and "body of imagery" implemented in this composition. The walking bass line underneath both hymn tunes creates lightness and transparency and emphasizes the majestic proceeding quality of the prelude. This piece was also found to intensify emotional experiences in the imagery compared to silence (McKinney, 1990).

Image potential:

All nine women reported no problems in connecting with and imagining to the music. They described the music with metaphors such as *"a round experience," "moving waves of the instruments," "with different layers of strings."* The mood descriptions of the other women included comfort, vitality, strength, confidence, and calm. This was also the case for those women who experienced imagery connected to the(ir) cancer disease. They reported feeling contained and supported by the music.

Imagery modality	Patients´ imagery examples
Visual / auditory	• Images of nature (flowers blooming, waves, forest, clouds, air) and the four elements • new beginning; fountain of life; powerful brilliance
Sensory / kinesthetic	• feeling strength and vitality in body cells • feeling the cancer or metastases
Memory / reflection	• Holidays • TV series „Our little farm" • idyllic harmony with family and friends • experiences in nature • shared GrpMI process
Metaphoric fantasy	• Feeling trapped inside with the cancer • playing church music • seeing cancer process on medical screen • two sides (light and dark) fighting inside
Transpersonal / healing	• being a flower growing from the dark into the light • bringing light and hope into body cells

Table 4-5 Patients´ imagery examples to Vaughan Williams, Prelude on Rhosymedre related to imagery modalities

Mandala examples

The first line of mandala examples (Figure 4-3) shows symbolizations of the cancer disease and related aspects, which were evoked in the first GrpMI sessions in different groups. Interestingly, in the last mandala in this row the woman had integrated the metastases described by her fellow group member in the pre-talk (see section 6.1.2.). Another example of the group being integrated into the mandala expression is the last mandala in the second line. It symbolizes healing from cancer on a very elementary cellular level, and the personal impulse states *"it´s all for us."* This is also an example of transpersonal / healing images which appeared in the last GrpMI session when the women were reflecting on their personal GrpMI experience and what they had gained from it.

Figure 4-3 Imagery and Mandala examples of study participants after listening experience to Vaughan Williams, Prelude on Rhosymedre

Diagnoses and treatment-related aspects:

No differences could be identified in the music listening, imagery, and mandala drawing experience in regards to the cancer diagnosis or the treatment perspective.

Conclusion:

Vaughan Williams' *Prelude on Rhosymedre* is a stable, containing and comforting music selection, which allows for images and feelings of support, harmony, confidence, and comfort to be evoked. "The predictable, yet refined form creates three definite „points of change" where transformation of the imagery may take place" (Bonde, 2007b, p. 265).

With the participants in this study, *Rhosymedre* afforded stabilizing and supportive images and feelings of comfort, strength, vitality, and confidence. Specific imagery related to the cancer illness or treatment occurred as well as transpersonal and healing images. The music provided a secure framework to explore those images. One woman related to negative emotions and felt trapped inside the music, but she was emotionally stable enough to stay with the situation and trusted the music to show her a way out. Five different image modalities were identified facilitating key imagery including

transpersonal and healing images, and symbolic representations of cancer and cancer treatment.

4.3.2 MIXED SUPPORTIVE-CHALLENGING MUSIC SELECTION

Shostakovich´s *Piano Concerto No. 2, Andante*, was analysed as an example of "mixed supportive-challenging music". This musical piece was used once in the GrpMI process (in Session #3) of the group that was described in the group case study (see Section 4.1. and Article 2). The woman with breast cancer in curative treatment (see section 6.1.2.) also participated in this group.

Where relevant, the music listening experiences, mood descriptions, imagery and mandala drawing experience as reported by the women directly in the GrpMI session and their memory of it in the post-GrpMI intervention interview were used for this analysis.

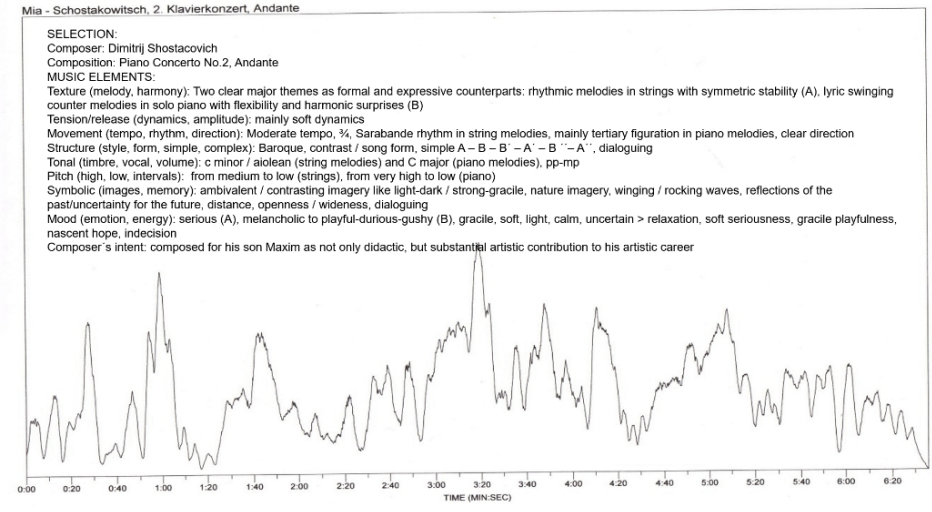


Figure 4-3. Annotated intensity profile (MIA) of Shostakovich, Piano Concerto No.2, Andante.

The x-axis indicates levels of tension on a scale from minimum to maximum. The y-axis indicates duration in minutes and seconds. Scaling: 50%, smoothing: none.

Short description of the music:

This piece is the 2nd movement of one of only two piano concertos composed by Shostakovich. Usually, his works are characterized by a high level of complexity and reflect political movements and events ironically or satirically). Surprisingly for

Shostakovich, this music selection is free from irony and politic ideas and quite simple in its complexity. His typical chromatic and contrasting harmonic style is also absent. Shostakovich himself was not proud of this specific piece, even though nowadays it is one of his most popular works. It is composed in classical concert style and reflects aesthetic beauty and artistic expression (Sheinberg, 2000). Dual elements on various levels in dialogue are characteristic of this piece: a) instrumentation (solo accompanied by small orchestration with mainly soft strings); b) two contrasting themes; c) very high to low pitch for the solo piano vs medium to low pitch for the strings; d) mainly tertiary rhythmic figures in the solo instrument vs Sarabande rhythm in the orchestra; (e) major tonality in the solo parts vs. minor tonality in the orchestra, playing with parallel keys. Interestingly, key points in the music are created using very low volume. At some points, conflicting rhythms (binary vs tertiary) lead to an intensified complexity, density, and dramatic expression. One surprising element is the low pitch organ point introduced by the French horn, creating an exotic colour and almost surreal effect. At the beginning, the end of the formal sections, and the end of the movement, the music allows for pauses or resting points to catch breath.

Image potential:

The three women could easily connect and imagine to the music (imagery examples see Table 4-6). They described the music metaphorically as *"it makes me feel free, the music is life," "It made me realize that there are many nuances in the way we communicate," "The orchestra was for me,… it had a specific severity, but a sympathetic severity. As if […] the orchestra carried the cancer disease and showed it is there and it is not easy […] and the pianist said: you can walk and be calm all the same."* The mood descriptions of all three women mirrored the duality of the music: ambivalence, mistrust – trust, tension – relaxation, chaos – harmony, danger – vitality, severity – lightness.

Mandala examples:

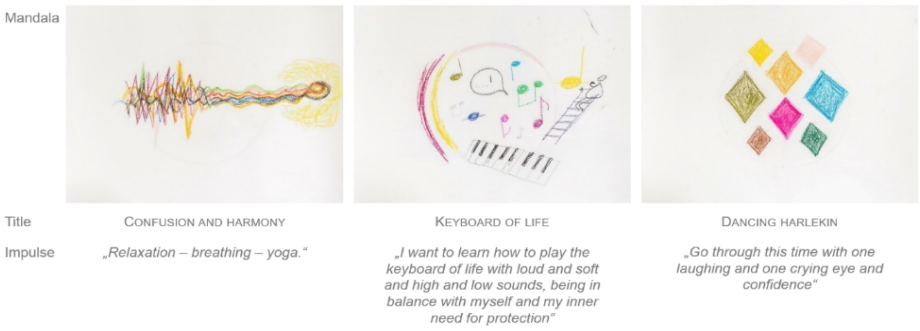


Figure 4-5 Imagery and Mandala examples of study participants after listening experience to Shostakovich, Piano Concerto No.2, Andante

Imagery modality	Patients´ imagery examples
Visual / auditory	• colorful waves from confusion / chaos to harmony • pendulum
Sensory / kinesthetic	• physical relaxation and calming down • release of tension in abdomen • waves taking inner room and transforming into well-being and comfort • seeing clearly again • breathing in and out • finding the balance • changing position / perspective • feeling the heartbeat • cancer disease and ambivalent feelings in colors
Memory / reflection	• holidays • TV series „Our little farm“ • idyllic harmony with family and friends • experiences in nature • shared GrpMI process
Metaphoric fantasy	• winding back the movie of life
Self image / core image	• self-assurance *“I made it.”* • being in connection • self playing the keyboard of life • dancing harlekin • sorting ideas and colors
Transpersonal / healing	• orchestra carrying the cancer disease and pianist reassuring

Table 4-6 Patients´ imagery examples to Shostakovich, Piano Concerto No.2, Andante related to imagery modalities

Diagnoses and treatment-related aspects:

Physical suffering and treatment-related side-effects, anxiety and fear related to the cancer, ambivalent feeling connected with the cancer and medical treatment, and coping issues were more prominent in both women with gynaecological cancer in palliative treatment. For the woman with breast cancer in curative treatment, issues connected to the integration of cancer disease and its effects back into normal life seemed more present as a focus.

Conclusions:

The Shostakovich *Piano Concerto No.2, Andante* is a piece of music with both comforting and challenging elements. Thus, evoking (core / self-) images and feelings of ambivalence between tension – relaxation and danger – security, pointing out problematic issues and areas with developmental potential. The concert form is clear and quite predictable, yet the underlying duality and surprising elements e.g. in

harmony and rhythmic motives create various “points of change” (Bonde, 2007b, p. 265) allowing for transformation of the imagery.

For the women in this study, the supportive elements of the *Piano concerto* piece provided deep physical relaxation, which served as resource to explore arising problematic areas and developmental potentials evoked by the challenging parts in the music. Those were connected to existential issues of the cancer illness or intrapersonal or interpersonal conflicts. A variety of six image modalities and key imagery were identified including transpersonal and healing imagery as well as representations of cancer and cancer treatment.

CHAPTER 5. QUANTITATIVE RESULTS

The quantitative results of this mixed methods study are described and summarised in Article 3 of this thesis. Additional graphs are presented in this thesis for further visualization.

For the calculation of ES, pooled SD at pre-test were used for all dependent variables.

Hertrampf, R.-S. & McKinney, C.H. (2017, in preparation):

Effects of group music therapy on anxiety, depression, well-being, and quality of life among women with breast cancer or gynaecological cancer in outpatient medical treatment: Results from a randomized clinical trial.

Background. Breast and gynaecological cancers are major diagnoses and causes of death among women worldwide. Research in music interventions as complements to medical treatment has grown over the last decades providing beneficial results in different cancer populations along treatment trajectory. Investigations on group interventions, gynecological cancer, early palliative treatment, and beginning of outpatient treatment are scarcely investigated.
Objective. The aim of this paper is to present quantitative results from a mixed methods randomized clinical trial implementing six weekly sessions of receptive group music therapy on anxiety, depression, quality of life, and well-being in women with breast or gynaecological cancer at the beginning of outpatient curative or early palliative medical treatment.
Method. Two conditions, receptive music therapy + treatment as usual (TAU) or progressive muscle relaxation + TAU, were randomly assigned to 28 women with breast or gynaecological cancer. Participants completed self-report measures of depression and anxiety (Hospital Anxiety and Depression Scale) and quality of life (30-item EORTC Quality of Life Questionnaire for Cancer) at baseline, pretest, posttest, 4-weeks follow-up (FU), and 4-months-FU. The Basel Scale of Well-Being was measured pre-post each music therapy session.
Results. Depression was significantly reduced over time in both intervention groups. Anxiety was not reduced in the PMR, but significantly decreased in the music therapy group. Global quality of life (QoL) was significantly enhanced over time in both groups. Well-being improved significantly pre-post each music therapy session. Effect sizes (ES) were notably higher for music therapy on all dependent variables and all measurement points. Clinical effects were sustained or even improved at FU for anxiety in the music therapy group and for depression and global QoL in both groups.
Conclusions. Despite the small sample, receptive group music therapy in six sessions proved statistically and clinically significant on all outcome variables over time. Short- and mid-term effects were sustained. Methodological quality of the randomized trial was high. Future research with high methodological quality on symmetry of outcome variables and long-term effects of interventions in the field is recommended.

5.1. SUMMARY OF SAMPLE CHARACTERISTICS

Demographic and clinical characteristics of the study sample at baseline are summarised here. Both groups were similar regarding age of participants (GrpMI: $\bar{x}$ = 53, SD = 12.17; PMR $\bar{x}$ = 52, SD = 10.24), marital status, and medical treatment (see Table 3-1). Between-group differences were found in regards to education, occupational status, and financial situation. Women in the PMR group showed a higher level of education and financial status. Half of the PMR group was on sick leave, this was also the case for 25% of the GrpMI group. The number of children and women living together with their partner and children was higher in the GrpMI than in the PMR group. Perceived quality of social network was also higher for GrpMI participants. More women in palliative treatment were participating in GrpMI.

5.2. EFFECT ON ANXIETY AND DEPRESSION

Mixed ANOVAs were performed on all dependent variables. Because the assumption of sphericity was violated for HADS anxiety scores, a Huynh-Feldt correction was applied. Anxiety was significantly decreased in the GrpMI group over time ($F_{2, 58}$ = 3.97, $p < .05$) with medium to large effect sizes at each time point. From pre-test to post-test, scores notably declined from over cut-off to a sub-clinical level with maintained effects at both FU measures (see Figure 5-1). For PMR, null effect was found ($F_{2, 58}$ = .066, $p > .10$). Mean anxiety scores remained on a "mild" level above the clinical cut-off in the PMR group at all time points (see Figure 5-1).

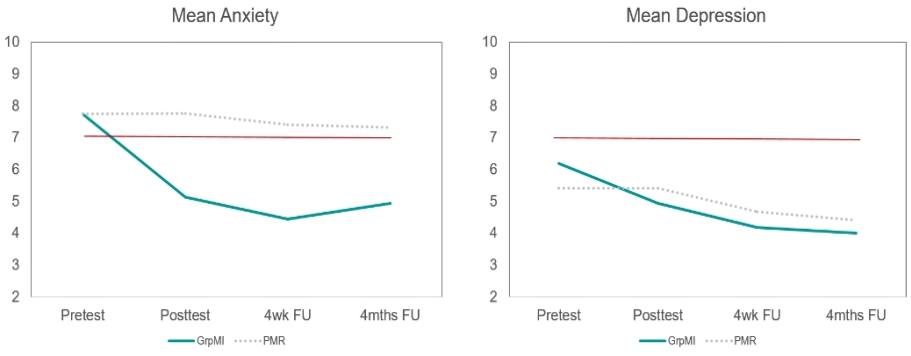


Figure 5-1 Mean anxiety and mean depression (HADS) of GrpMI and PMR over time
GrpMI n = 16, PMR n = 12; clinical cut-off represented by red line

Depression scores for both groups were sub-clinical at all measurement points (see Figure 5-1). For both groups, the depression scores significantly decreased over time ($F_{3, 65}$ = 3.76, p < .007). No between-groups differences were found significant. ES for GrpMI ranged from almost medium to medium at both FU measures. PMR showed

null effect at post-test and a small ES at 4-mths FU. No sub-group differences were found for anxiety or depression regarding diagnosis or treatment perspective.

5.3. EFFECT ON QOL

Mean global QoL scores for both groups were at a medium level at pre-test, with higher scores for PMR throughout.

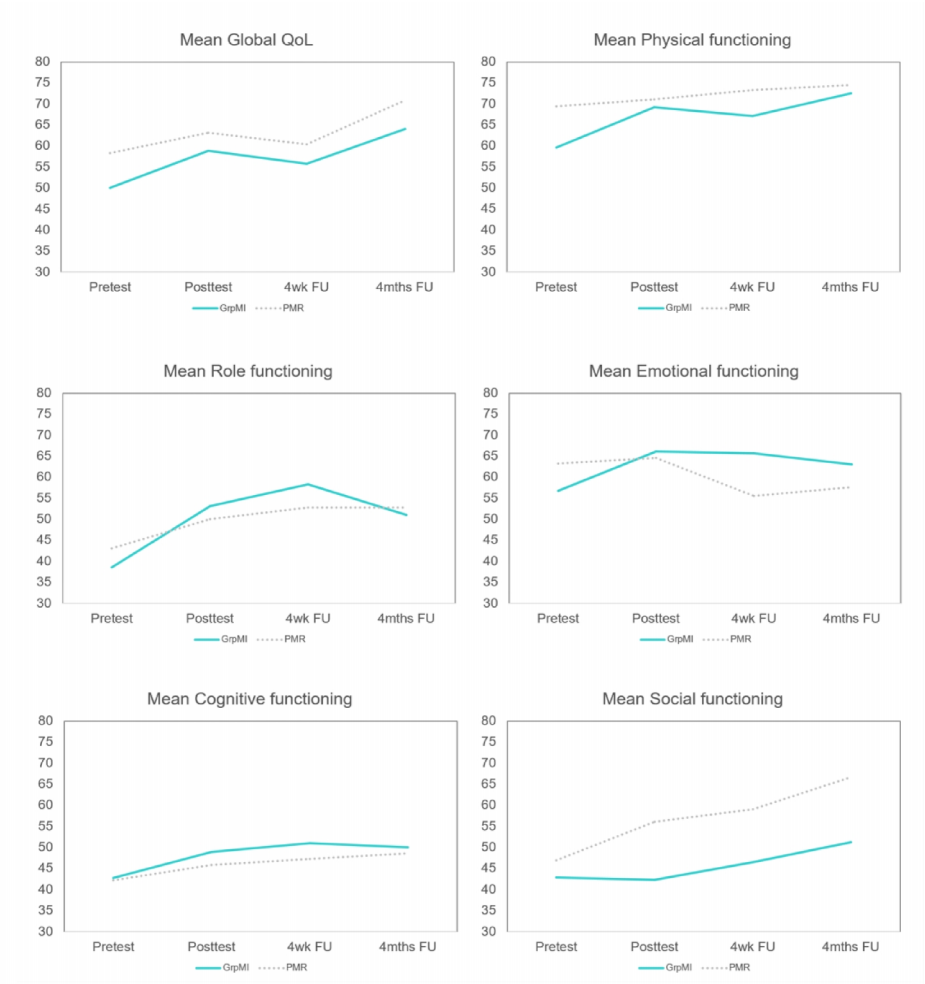


Figure 5-2 Mean Global QoL and mean functioning sub-scales (EORTC QLQ-C30) of GrpMI and PMR over time

GrpMI n = 16, PMR n = 12

Both groups showed significant enhancement of mean global QoL over time with no significant between-group interaction and medium ES for both groups at 4-mths FU (see Figure 5-2).

The functioning sub-scales showed significant enhancements of physical and role functioning for GrpMI and PMR over time. No between-group differences were found. ES for GrpMI showed medium effects at post-test and almost medium effect at first FU, which increased to a large ES at second FU. The level of PF was higher in PMR at all measurements. For RF, a marginal medium ES was found at post-test and medium ES at first FU for GrpMI.

On the sub-scales EF, CF, and SF, no significant improvements were detected over time. There was no significant between-group difference on either of those sub-scales. Calculated ES showed small effects at all measurements for GrpMI and null to small for PMR. For EF, a negative effect was found at 4wks FU for PMR. Improved EF scores for GrpMI were maintained to FU. Scores for SF were higher for PMR than for GrpMI at all time points.

No sub-group differences were found for anxiety or depression regarding diagnosis or treatment perspective.

5.4. EFFECT ON WELL-BEING

Overall well-being and all four sub-scales of the Basel Scale of Well-Being (BBS) showed very large ES for GrpMI intervention in pre-post comparison over time. Very large ES were also found in pre-post comparison for each of the six GrpMI sessions (see Table 5-1), except for the second session which showed medium ES. The effects were not sustained over time.

GrpMI session		Mean	SD	*d*
#1	pre post	16.71 21.64	1.79 1.22	2.85
#2	pre post	20.05 21.46	2.07 0.91	0.68
#3	pre post	16.32 21.21	1.66 1.74	3.55
#4	pre post	19.07 21.32	1.82 1.34	1.24
#5	pre post	17.55 20.02	1.59 1.00	1.55
#6	pre post	19.43 22.07	1.01 0.61	2.61

Table 5-1Pre- and post-GrpMI means, SD, and ES (Cohen´s d) for scores on the Basel scale of Well-Being (BBS) for overall well-being over all six GrpMI sessions (n = 11)

Nonparametric analyses by diagnosis and treatment perspective revealed no differences in overall well-being. On the sub-scales, smaller ES were found for intrapsychological balance (IB) and social extraversion (SE) in women with gynaecological cancer.

In summary, quantitative results showed beneficial effects for both GrpMI and PMR on all psychological outcomes. For GrpMI, ES ranged from small to large. Anxiety reduction showed medium to large effects. For depression, GrpMI showed small to medium effects. Global QoL, role functioning (RF), and emotional functioning (EF) were increased with small to medium ES. Physical functioning (PF) showed PF medium to large effects under GrpMI. Improvement of cognitive (CF) and social functioning (SF) were sustained at small levels. Well-being was influenced with very large effects on all scales and across the sessions. One exception is presented by the medium improvement of well-being in the second session.

Effects for PMR ranged from null to medium ES. Anxiety reduction showed null effect for PMR. For depression, a small effect was found at 4-months FU. Global QoL was influenced with null to medium ES. Null to small effects were found for PF and CF. RF showed small effects over time. SF was not affected by PMR. EF showed no effects at post-test and 4-months FU, a small negative effect was detected at 4-weeks FU.

CHAPTER 6. INTEGRATED RESULTS

Qualitative analysis (Chapter 4) described five themes in relation to the research questions and GrpMI as relevant to women with breast or gynaecological cancer at the beginning of outpatient treatment. The influence of the perception of cancer and treatment-related aspects on anxiety, depression, quality of life (QoL) and well-being, group experience, and imagery was illustrated together with important experiences related to coping. Furthermore, music imagery analysis showed that the women experienced imagery on various modalities, which included existential themes and cancer-specific symbolizations. Beneficial clinical intervention effects of GrpMI therapy on anxiety, depression, QoL, and well-being revealed through quantitative measures were presented in Chapter 5.

Here, both approaches are triangulated to explore potential congruence and divergence. Data triangulation in mixed methods research allows for different perspectives on the same clinical approach investigating potential congruence and divergence of the different data sets (Bradt et al., 2015; Creswell, 2010; Hesse-Biber, 2011; Torrance, 2012). For this purpose, two mixed methods case studies representing both diagnostic groups and treatment perspectives are described here. Both cases are compared with the total sample of this study. In addition, the internal GrpMI structure is related to the women´s perception of specific benefits of structural aspects of the underlying music therapy method for their overall GrpMI experience.

6.1. MIXED METHODS CASE STUDIES

6.1.1. CASE ANNE

This mixed methods case study describes, summarises, and bridges qualitative and quantitative results of GrpMI with a 61 years old woman (Anne) with gynaecological cancer in palliative treatment. She represents one sub-group of the participants in this study. When entering the study, Anne was married with three adult children and had a stable and supportive working and social environment. Her education and level of financial security were low. She had no prior experience with music therapy or psychotherapy.

Her experiences and findings are in line with the experiences described in the group case study (Hertrampf, 2015), namely that she: (a) was able to connect with the music and experience imagery to music easily; (b) reported improved symptom management (for dyspnoea, nausea, and fatigue); (c) developed new coping strategies; (d) discovered new personal resources; (e) found new perspectives on/new attitude towards daily life; (f) developed a newly integrated body and self-image; (g) regained hope and started to make plans for the future again despite her limited life expectancy;

(h) experienced a new perception of the cancer disease; (i) developed improved communication strategies; and (j) used music in her daily life more frequently.

Hertrampf, R.-S. (2017, manuscript in preparation):

Effects and experiences from Group Music and Imagery (GrpMI) in gynaecological cancer: A mixed methods case study.

Context. Quality research in music therapy and other Creative Arts Therapy interventions in gynecological oncology is scarce. No mixed methods single case study parallel to medical treatment has been published in the field.
Objectives. The aim of this mixed methods case study is to investigate the effectiveness of six sessions Group Music and Imagery (GrpMI) therapy and related experiences of a woman with gynecological cancer undergoing outpatient palliative chemotherapy.
Methods. The case is part of a mixed methods randomized clinical trial of *N* = 28 patients with breast or gynecological cancer at the beginning of outpatient curative or palliative chemotherapy. Participants were randomized to Treatment as usual (TAU) + GrpMI or TAU + Progressive Muscle Relaxation (PMR). Six 90-120 minute GrpMI interventions in six weeks were conducted by a certified Music and GIM therapist. Self-report measures on anxiety, depression, and quality of life were completed at baseline, pretest, posttest, 4-weeks FU, and 4-months FU. A self-report measure on well-being was completed pre-post each GrpMI intervention. The embedded qualitative investigation focused on the participants´ personal experiences from GrpMI intervention in connection to their coping with the cancer disease.
Results. Analysis of quantitative case data showed beneficial effects on anxiety, depression, well-being, and quality of life, which were sustained or further improved at both FU measures. In addition, qualitative data found improvement in symptom management for dyspnea, nausea, and fatigue, activation of inner resources, enhanced coping, development of new body and self-image, development of hope and perspectives for the future despite her limited life expectancy, and increased use of music in daily life. These findings reflect the overall group results: Both groups experiences significant decrease in depression. Anxiety was significantly reduced in GrpMI and no effect was found for PMR. Both groups reported significantly increased QoL with no significant between group differences.
Conclusion. Both qualitative and quantitative results indicated overall beneficial effects of short-term GrpMI therapy to improve coping with diagnosis- and treatment-related anxiety, depression, well-being, and QoL in women with gynaecological cancer during early palliative outpatient chemotherapy treatment. Further research on larger samples is recommended.

Anne´s HADS scores indicated severe levels of anxiety and depression at pre-test and declined under clinical cut-off at post-test and further at both FU measures. For global QoL as measured by the EORTC QLQ-C30, her low score at pre-test was increased to a medium level at post-test, which could be sustained to 4-weeks FU and further increased at 4-months FU. All of Anne´s QoL functioning subscales were low at pre-test, enhanced to a medium level at post-test, and were maintained or further improved

at FU measures. Emotional functioning (EF) and cognitive functioning (CF) showed largest overall enhancement (Hertrampf, 2017, in preparation).

6.1.2. CASE CHARLOTTE

The second mixed methods case study in this thesis illustrates the effects and experiences from GrpMI of a young woman with breast cancer in curative treatment, representing another sub-group of this study sample. She validated the case study by reading through and providing feedback to me in a one hour phone call. As a long-term effect of her individual process during GrpMI treatment, she is currently training to become a dance therapist. The motivation and inspiration for this career change derived from imagery of the GrpMI experience. Charlotte has recently created a dance therapy project for a small group of women diagnosed with breast cancer to pass on her personal experience as a patient and as someone who has experienced very helpful psycho-social support in a very difficult time of her life.

Social and professional background. Charlotte, a young woman of 37 years, was in a stable relationship and had no children. She studied architecture and worked part-time in project management parallel to medical treatment, which provided her with a high level of financial security. She described both her social and professional network as stable and supportive. Five years before she entered the study, she had ended short-term outpatient psychotherapy treatment after a psychological crisis due to her first cancer diagnosis.

Medical background. Two months before the start of the study, Charlotte was diagnosed with an invasive mammary carcinoma and operable lymph node metastases on the right side of her body. Due to a genetic predisposition, this was the second time she experienced a cancer diagnosis, as she had undergone a mastectomy, radiation therapy, endocrine treatment, and breast reconstruction on the left-hand side of her body three years before. Now, she had just started curative chemotherapy combined with endocrine treatment and her physician had recommended a prophylactic ovarian dissection.

Charlotte participated in six GrpMI sessions from October to December 2013, together with another young woman (39 years) with breast cancer and an older woman of 71 years with ovarian cancer. Both other women had multiple metastases and were receiving palliative chemotherapy.

Summary of the Therapeutic Process

Assessment session. In the interview, Charlotte described various side-effects of the medical treatment she was suffering from, such as nausea, mood swings, distress, fatigue, demoralizing thoughts, sleeping problems, hair loss, difficulties relating to sexual activity, and dryness of skin. With medication she was more or less handling some of these side-effects well. Despite the side-effects she experienced her QoL as

"quite well, almost as before the diagnosis" and she felt she could do "many beautiful things now with more time for me, and less time at work." She was positively compliant towards the medical treatment and described her relationship with the cancer disease as "A package which is being carried on my shoulders. …It is a part of me and my task right now." Her body resembled "a garden that needs to be taken care of and weeded." She wanted to better be in contact with her inner needs and respect her personal boundaries. Choir singing, listening to music, dancing, sleeping, eating, being and talking with friends and family, and being in nature served as resources. Music played an important role in her life, especially moving to music, which symbolized "an elixir of life" for her. In the study, she hoped to gain more personal insight and discovered new aspects about herself, and become calmer and more balanced. She had no prior music therapy experience.

Charlotte described the music in the assessment session as a radiant, light "energy spin" (see Figure 6-4) with positive mood, bouncing spiral dynamic movements like a ball, originating in the centre, being able to get back on track when unbalanced, resembling *"falling down, getting up, and continuing like in real life."*

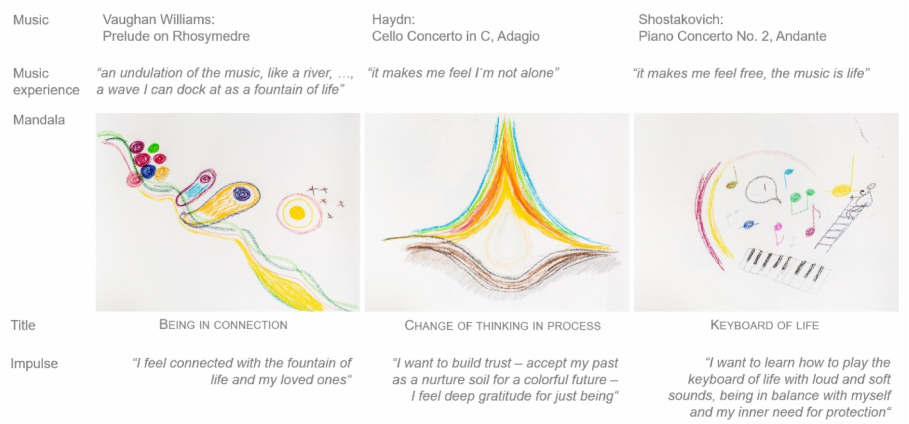


Figure 6-1 Overview of Charlotte´s GrpMI process, Sessions 1-3

GrpMI sessions. In her first GrpMI session, Charlotte addressed her hope for cure from cancer, and the probable medical procedures she would need to undergo due to her genetic predisposition for this illness. She discussed the amputation of her breast and an ovarian dissection with her doctors, which meant she would never be able to have children the way she had always dreamed. Family and connection with her loved ones provided great support for her, and she was currently suffering from a conflict with her sisters. To the music, which she experienced as comforting, supportive, and dynamic, Charlotte imagined herself in warm and supportive contact with her family and friends (as coloured spots; see Figure 6-1), and the music as fountain of life. On the right side in the middle, she painted a fellow group member (yellow spot)

surrounded by a pink ring protecting her from the attacking metastasis (black stars) that she had described with fear earlier in the pre-music talk. The woman whose metastasis Charlotte had painted was very touched by this immediate empathetic and caring connection.

In the second session, Charlotte explained her decision to go through with both medical procedures recommended by her doctors and her own sadness and grief about the consequences. She was looking for alternatives, like adoption, and wanted to focus on being happy and satisfied with her life with the cancer. In recent days she had suffered from nausea, sleeping problems, and restlessness. As the conflicting situation with her sisters was still present, she was longing to make peace with herself and her loved ones. The music offered her solace and support in her vulnerable state. In the mandala, she expressed the connection between her former and future self she was looking for, existential gratitude, and a big grieving tear in the middle. The siblings' conflict she described was picked up by another woman in the group in her mandala, which she painted in solidary union to symbolize *"We´re not alone."*

Difficulties in dealing with her own well-being in communication with others in the phase of medical treatment were addressed by Charlotte in the third session. She expressed feelings of ambivalence between fear and hope and her need for self-protection. Her mandala "Keyboard of life" (see Figure 6-1) illustrates herself up on the ladder, being in contact with and in control of the musical sounds. This key image became a central image for Charlotte and the other two women in the group who creatively re-illustrated their own version for their personal coping process.

Figure 6-2 Overview of Charlotte´s GrpMI process, Sessions 4-6

In the fourth session, dancing appeared as a hidden resource to the music. Charlotte took a different perspective in her theme of regulating communication and closeness and distance to other people. She was now playfully trying different patterns from her inner lake as centre of her own being (see Figure 6-2). The fifth session allowed

Charlotte to reflect upon her personal experience of the cancer illness, which is represented in the different mountains. Charlotte felt animated and supported by the music while climbing the mountains, marking the last mountain top with her green flag, and gliding down with a parachute in the warm sunshine as a special treat after all the suffering. In the last session, her dancing resource returned, and Charlotte painted herself as prima-ballerina in the centre of the mandala in an upright and proud position. The GrpMI process had made her realize that she wanted to dance again, which she hadn´t done in a very long time.

Post-GrpMI-intervention session. Charlotte summarised her personal GrpMI experience as a *"journey to her inner world."* In the interview she described herself as being calmer and more balanced, more aware of her personal resources, and feeling more able to transfer them into daily life. Most important from the whole process for her was the feeling "*that I already can deal well with the cancer*" and that she "*could bring so much vitality and zest for life into the group"* (Hertrampf, 2015). She described improved symptom management and felt able to control them with the new strategies she had discovered in the GrpMI process. In the music and imagery Charlotte experienced the music as *"colourful notes that need to come out in the world, joyful melodies."* Her essence of this session and her GrpMI process resembled *"airy and coloured tunes of the harp – a flowing round dance of colourful, comforting sounds."*

Quantitative Results

Anxiety and Depression. Charlotte´s depression score (HADS) was *notably* over cut-off at pre-test and continuously decreased over time, reaching level 0 at 4-months FU (see Figure 6-3).

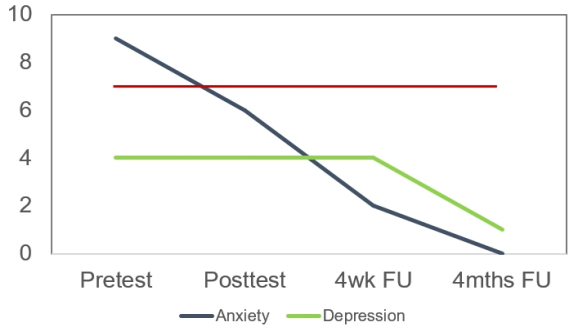


Figure 6-3 Mean Anxiety and Depression Scores (HADS)
Clinical cut-off represented by red line.

Her depression scores (HADS) were sub-clinically stable until 4-weeks FU and further decreased at 4-months FU.

Quality of Life. Charlotte´s global QoL (see Table 6-1) increased on a medium level from pre-test to post-test and then decreased to a low level at 4-months FU. On the QoL subscales she showed medium scores at pre-test, only cognitive functioning (CF) was low. At post-test all subscales were improved to a medium or high level. Physical functioning (PF), role functioning (RF), and cognitive functioning (CF) were sustained at 4-weeks FU. All other scores declined to 4-months FU.

	Measurement / subscales	Pretest	Posttest	4wk FU	4mths FU
EORTC QLQ-C30	Global QoL	66.67	75.00	50.00	33.33
	Physical functioning (PF)	60.00	73.33	73.33	73.33
	Role functioning (RF)	66.67	83.33	83.33	33.33
	Emotional functioning (EF)	75.00	83.33	50.00	50.00
	Cognitive functioning (CF)	33.33	66.67	66.67	33.33
	Social functioning (SF)	50.00	83.33	50.00	16.67

Table 6-1 Mean Global QoL and Subscales (EORTC QLQ-C30) - Charlotte

Well-being. Charlotte´s well-being pre-post improved in each GrpMI session apart from session #2 (see Figure 6-4). Largest enhancements can be noted in Sessions #1, #5, and #6.

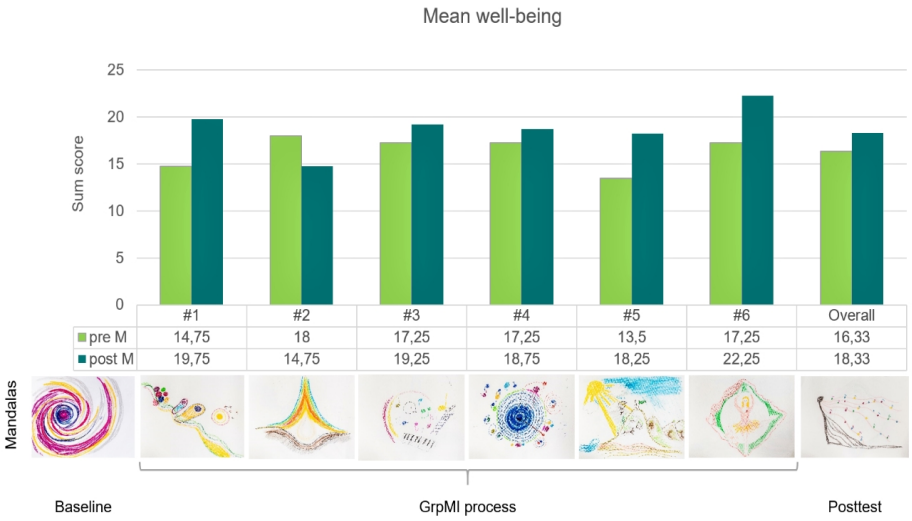


Figure 6-4: Mean Well-being (BBS) and Mandala Pictures - Charlotte

Conclusion. Charlotte´s case description illustrated how she developed over six sessions of GrpMI therapy during curative outpatient treatment with chemotherapy and endocrine treatment combined. In the GrpMI process, she developed new coping strategies; re-activated hidden inner resources; explored new perspectives on her present life situation; worked on the integration of a new body and self-image; and developed improved communication skills. Her personal well-being improved most in sessions with supportive music profiles, suggesting that these provided what Charlotte needed. She was the only woman in the study sample whose well-being score post GrpMI declined in comparison to pre GrpMI (see Session #2). Linking her emotional pressure and vulnerability of the difficult decisions she had to make for her future very shortly before that session, it is understandable from a clinical perspective that her well-being was negatively affected by the visualization and embodiment of the ambivalent emotions she was dealing with. At the 4-weeks FU Charlotte was receiving her ovarian dissection and a few weeks later a radical mastectomy, two major medical procedures affecting her female identity and reproductive organs. The notable decreases in her global QoL and functioning scores reflect this vulnerable period of time. However, she felt she had made the right decision to decrease further risk of recurrence or appearance of gynaecological malignoma. Her friends and family supported her in this difficult time and she had discovered alternatives for "natural mothering," namely adopting a child or working with children and adolescents. The social support and development of hope and future perspectives contributed to further decreasing scores in anxiety and depression despite lower levels of QoL.

6.2. ADDITIONAL INTEGRATED RESULTS

When asked about the personal meaning of the different elements of the internal GrpMI structure (see Section 3.5) in the post-GrpMI intervention interview, the women attributed their experience to specific characteristics, which facilitated their personal engagement into the GrpMI experience (see Table 6-2).

Group MI structure	Patient experiences
Initial dialogue / pre-music discussion	• determine personal issues from each group member (*"what moves me"*)
Focus for Music and Imagery experience	• integrated concentration of issues from all group members • *"Starting point for where the music will bring us or what she´ll show us today"* therapist important for moderation, filtering, and verbalizing
Relaxation induction	• facilitates relaxed state, training effects over time • facilitates to feel and be aware of whole body and different body parts • helps to open all senses and prepare for MI experience

Table 6-2 GrpMI structure and patients´ experiences

Music and Imagery experience	• leads to inner depth • evokes, develops, and transforms (key) imagery (*"treasures I can take home", "images are available whenever I need them", "images are deeply connected with my body and emotions – I´ll never forget them"*) • facilitates link between the unconscious and the conscious
Creative processing – Mandala drawing	• creative synthesis of MI experience • Mandala as embodiment of (key) imagery and MI experience, helpful for coping • makes key imagery, connection between different key images, and transformational developments visible for patients, other group members, and therapist
Closure / integration	• facilitates connections between group members to each others´ imagery (experience) • facilitates new ideas, perspectives, and transformational impulses to personal perception
Impulse formulation	• verbal synthesis of MI experience (including meaningful associations from other group members and therapist) • helps to remember key images and important aspects/perspectives from the session • can be used as supportive self-instruction for coping

Table 6-2 (continued) GrpMI structure and patients´ experiences

In the linking of the overall GrpMI structure with the different types of musical profiles and the overall benefit on well-being in pre-post session comparison (see Figure 6-5), both arching sessions (#1, #6) with supportive music and #3 with mixed supportive-challenging music showed largest enhancement of well-being. Smallest changes in pre-post well-being were found in Session 2.

Session No.	#1	#2	#3	#4	#5	#6
Focus	Group process	Participant´s individual process	Participant´s individual process in depth	Group process in depth	Stabilization / integration	Stabilization / integration / parting
Musical profile	Supportive	Supportive	Mixed	Mixed	Supportive	Supportive
ES for well-being	2.85	0.68	3.55	1.24	1.55	2.61

Figure 6-5 GrpMI process and ES for well-being (Cohen´s d) in pre-post GrpMI session comparison

CHAPTER 7. DISCUSSION

In this study I sought to investigate the impact of GrpMI therapy on anxiety, depression, QoL, and well-being of women at the beginning of curative or early palliative outpatient treatment for breast or gynaecological cancer. In addition, I wanted to examine whether therapeutic effects could be sustained after four months. Furthermore, I inquired as to the personal experiences from the women participating in the GrpMI therapy in relation to the psychological outcomes and important elements of the music therapy method for their individual coping with the illness and side-effects from treatment.

This chapter will provide a discussion of results, outcome measures, study design, integration of results, and study limitations as well as conclusions, recommendations and implications for future research.

7.1. REFLECTIONS ON QUANTITATIVE RESULTS

Quantitative results showed overall beneficial intervention effects with small to large ES of GrpMI on anxiety, depression, and QoL over time, and the effects were sustained or further improved at both FU measures. These effects were in line with previous research (Bonde, 2005; Bradt et al., 2016; Bro et al., 2017; Hertrampf & Wärja, 2017).

Anxiety. At post-test, anxiety as measured by the HADS was reduced with medium effect for GrpMI after six sessions. Romito et al. (2013) found in their study only small effects for anxiety reduction at post-test after a singular group music therapy session, indicating that the number of supportive therapy sessions are important for the reduction of anxiety related to cancer treatment. FU scores after four weeks were larger than in Bonde´s (2005) study with cancer survivors at 6-weeks FU. When looking at the mean scores of both studies, values are comparable at pre-test, post-test, and FU. One may speculate that "anxiety" is perceived and accentuated differently in different places of treatment trajectory. In medical procedures, anxiety is likely to be reduced through supportive interventions as shown by the two RCTs on women with gynaecological cancer where medium effects for anxiety reduction were found at post-test (Chi et al., 2003; Chan et al., 2015). Anxiety related to active treatment and associated side-effects is likely to be reduced by psychosocial support and the development of coping strategies for treatment side-effects, whereas fear of recurrence or anxiety related to re-integration in active social and work environment in cancer survivors may require longer and more complex psychotherapeutic processes. It would be interesting to compare anxiety scores after four to six months, but no FU data was available for any of the dependent variables. However, fear of death in the face of a cancer diagnosis may be experienced as a universal quality by most people affected and throughout the treatment trajectory.

Depression. Depression was measured by the HADS was reduced with small effect at post-test for GrpMI, which is line with Bonde (2005). Music-assisted relaxation after four individual session at the end of outpatient treatment decreased depression with medium effect at post-test (Stordahl, 2009). Romito et al., (2013) found medium effects at post-test after one session group music therapy. However, as depression is a more complex and process-oriented variable, it is unlikely to change after one single session of music therapy (Hertrampf & Wärja, 2017). PMR showed nearing small to small effects at FU measures, for GrpMI, medium effects at both FU measures were calculated. Bonde (2005) found a large effect for the reduction of depression at FU. Moreover, the women in both Bonde´s (2005) and the present study showed sub-clinical scores for depression measured with HADS at all time points, limiting the clinical value of the effects. Still, the activation of resources, development of coping strategies, and emotional transformation after a series of psychosocial interventions decreases anhedonic psychological states and is therefore helpful in the context of psycho-oncology.

QoL and well-being. The significant enhancement of QoL as measured by the EORTC QLQ-C30 in both conditions confirms previous research findings in the field (Bradt et al., 2016; Bro et al., 2017). QoL is a very complex and multi-dimensional construct closely related to individual well-being, which may be perceived very differently by each individual (Fayers et al., 2001; Hand, Bjordal, & Groenvold, 1997; van der Krieke et al., 2016). In the context of chronical illness research, it is often related to health issues and performance or functioning status (Fayers et al., 2001), focusing on symptoms and limitations set by the illness, rather than on personal resources and coping abilities. This study showed small effects on QoL at post-test and FU, which is in line with Bonde´s (2005) result using the same measurement. As a psychosocial or psychotherapeutic approach is not focused on the improvement of physical symptoms, but rather on the symptom management and coping (Bonde, 2005), effects on functioning levels of QoL need to be interpreted with caution.

As QoL is directly related to subjective well-being, the Basel Scale of Well-Being (BBS) reflects different facets of QoL in a more differentiated way than the QLQ-C30. Overall well-being, intrapsychological balance, vigilance, vitality, and social extraversion revealed medium to very large improvements in each of the six sessions, suggesting that GrpMI therapy is an appropriate intervention to enhance individual well-being and QoL for women in active medical treatment. The music for this study was selected by the therapist from a pre-selected list according to scientific criteria and the need of the group. This study also showed that the combination of supportive and mixed supportive-challenging music selections (Bonde, 2010; Wärja & Bonde, 2014) worked well with highly significant effects on well-being. Intra-psychological well-being and vigilance, capturing attention and alertness, were most enhanced, indicating the influence of the GrpMI intervention on emotional processing and "sharpening" the senses through relaxation and music listening with a clear focus. In active music making, vitality is more likely to be enhanced than vigilance, as shown in Seidel´s (2005) study. She offered active and receptive music therapy in one to 20 sessions to men and women in active treatment for both curative and palliative

treatment. Here, overall well-being and all sub-scales on BBS were similarly enhanced over sessions. Burns and colleagues (2001) found improved well-being for both receptive and active music therapy approaches.

In the present study, well-being showed least enhancement in the second session with medium ES. This may be related to the music selections the therapist chose for these sessions. All musical pieces applied in these sessions (Bach *Double concerto for 2 violins, Largo*; Haydn *Cello concerto in C, Adagio*; Marcello *Oboe concerto in d minor, Adagio*) can be experienced as rather serene and solacing and may facilitate emotional depth rather than purely soothing and comforting support. For future research and clinical work, a more differentiated categorization of music selections as presented by Wärja and Bonde (2014) might be considered and recommendations for specific music selections taken into account. Sharing of clinical experience among clinicians and researchers working with GrpMI is of utmost importance.

Subgroup analyses on the dependent psychological variables anxiety, depression, QoL, and overall well-being revealed no differences in regards to diagnoses and treatment perspectives. This is due at least in part to the small *N*. When the two treatments are further subdivided by diagnosis or treatment perspective, the number of participants in each cell is small. From clinical experience, I had assumed higher levels of anxiety and depression and lower levels of QoL and well-being for women in early palliative treatment, but the sample is too small to confirm or refuse this assumption. For the well-being sub-scales IB and SE, smaller effects were found in women with gynaecological cancer. These may be related to individual characteristics of personality. This might encourage future investigations to also include women with gynaecological cancer in their samples and contribute to the scarce body of research in the field. However, it needs to be mentioned that one woman described unease due to the mixed treatment perspectives, as she felt limited in the expression of positive emotions and hope for the future, while her fellow group members were in a more severe state of the illness.

As the chosen dependent variables guided both the quantitative and qualitative analysis, a reflection on their choice is in order. In the context of this study, all psychological outcomes chosen are of clinical relevance for women with breast or gynaecological cancer in active outpatient treatment (Bro et al., 2017; Singer et al., 2010) and widely researched upon in music intervention studies (Bradt et al., 2016; Bro et al., 2017; Hertrampf & Wärja, 2017), offering comparison of results across studies, which is important for future meta-analyses. From a clinical point of view, other dependent variables could have been equally or even more important to focus upon, for example, clinical symptoms such as fatigue and distress and also more resource-oriented outcomes such as coping, self-confidence, emotion regulation, or spirituality. Aspects of self-image, body-image, or sexual concerns were mentioned by the women, but did not seem of importance or relevance to them in that stage of treatment trajectory. These are more likely to grow in importance after medical treatment has ended and the focus of the women shifts from “surviving from one chemotherapy to the next” to a fuller re-integration in their social life context, as

indicated by the findings of Wärja´s (2015) study that GrpMI therapy in an expressive arts framework facilitated the expression of sexual concerns in women with gynaecological cancer.

Regarding the sample of this study, the between-group differences at baseline suggest a higher social and economic status for the women in the PMR group as they had higher education and financial security and were more likely to be on sick-leave than women in the GrpMI group. PMR participants had fewer children and fewer lived in a family context. This could indicate that the overall social and financial pressure was likely to be higher for women in the GrpMI intervention. Thus, it makes sense that PMR participants´ scores in overall QoL and physical and social functioning were higher throughout the study than for GrpMI participants. On the other hand, having children and family to offer support imply a protective function and may be connected to a higher responsiveness in role, emotional, and social functioning. All women were highly motivated to engage with music and in the group setting. Most women used music in their daily life frequently, had a high affiliation with music, and believed in the power of music before entering the study. Similar patient profiles were mentioned by Bradt and colleagues (2015). After study participation, the connection with music was increased further due to the positive overall experience.

7.2. REFLECTIONS ON QUALITATIVE RESULTS

Qualitative findings highlighted both individual and shared experiences of the women participating in the GrpMI process. They supported the beneficial quantitative results and provided the women´s perspective on the importance of the selected dependent variables on their lives and coping with cancer. It is impressive how closely anxiety, depression, QoL, and well-being as well as characteristic elements of the GrpMI intervention, namely the music, imagery and creative expression, and the group were related to the individual experiences of the cancer illness and treatment by the women. The (re)activation of inner resources, development of coping strategies, finding new perspectives on life and hope for the future, finding new meaning in life, and taking steps towards an integration of the cancer illness into a new body and self-image were important experiences from GrpMI as described by the women. These findings are in line with previous case studies (Bonde 2005, 2007a; Dimiceli-Mitran, 2015; Gimeno, 2015; Hertrampf, 2015; McDougal Miller, 2015; Meadows, 2015). Some of these aspects might have contributed to the differential effect of GrpMI versus PMR on anxiety. As they all contribute to an overall sense of coping, they also impact QoL and well-being. Similar themes were also found in previous research by Bonde (2005), Bradt and colleagues (2015), and McClean and colleagues (2012).

The close relation of music and imagery as experienced by the women in GrpMI is particularly noteworthy. It was impressive how well all women remembered distinct elements of the music selections from their GrpMI process and how intensely they related the music to key images that occurred in their own or other women´s processes. They kept them as embodied resource “treasures,” available whenever they needed

them (Hertrampf, 2015). This supports the beneficial effects of the GrpMI therapy on individual coping.

In subgroup analyses regarding music and imagery and potential relations with diagnosis or treatment perspective, no sub-group differences could be found. All image modalities including healing and transpersonal images arose across diagnostic groups and treatment perspective. Again, my a priori clinical assumption was that women in palliative treatment would experience more healing and transpersonal images. Any comparison of subgroups is hampered by the small sample size. Whilst the power calculation aimed at changes in primary measure, it wasn't powerful enough to detect significant change between subgroups.

The group was experienced as a safe and supportive environment by the women. They especially valued the new perspectives from others that arose in the post-music listening and drawing discussion. All therapeutic factors of group therapy (Yalom, 2005) could be identified, and the women described beneficial experiences for the individual coping process on various levels. Universality, group cohesiveness, interpersonal learning, imparting information, instillation of hope, imitative behaviour, existential factors, and catharsis seemed of special importance (Hertrampf, 2015). The group setting and GrpMI method seemed to provide an appropriate setting for the women to address difficult personal and existential issues. The shared experiences in the GrpMI setting facilitated interpersonal support during active treatment outside of and after the GrpMI therapy, for example, the women wrote encouraging letters to each other, engaged in social activities, and visited each other during the chemotherapy appointments. These findings indicate that a supportive group intervention at the beginning of active outpatient treatment can result in an increased therapeutic outcome through therapeutic factors (Short, 2002) and improved coping within the group setting and beyond. However, for some women in a vulnerable emotional state, the group setting may be overwhelming and an individual supportive approach more appropriate. One woman was overwhelmed with her personal emotions in the first GrpMI session and withdrew from further GrpMI participation. There was no indication of emotional instability or previous trauma experiences in the assessment. She had very high HADS scores throughout the study process, but she did not feel ready and strong enough to confront her personal issues.

To structure the group and provide a secure framework for all individuals within the group setting, the role of a qualified therapist is very important (Dimiceli-Mitran, 2015). Study participants explained in their post-GrpMI intervention interviews how important the warm, empathetic presence of the therapist was for them. This was also recently confirmed by a mixed methods study comparing music therapy and music medicine in a cross-over design (Bradt et al., 2015). Participants clearly preferred the music therapy for future support as they valued the presence and function of the qualified therapist. These findings highlight the importance of a high level of professional and clinical expertise and flexibility in therapists, who must tailor a focus that works for all group members, chose suitable music, and facilitate a well-

structured, balanced verbal processing after the music listening that encourages each woman in the group to share her experiences and emotions.

7.3. REFLECTIONS ON INTEGRATED RESULTS

The quantitative results are limited in their contribution as they showed beneficial intervention effects over time on the various psychological outcomes, but they cannot provide information on how the women experienced the intervention and what these quantitative effects meant for them in their life with the illness. At the same time the qualitative results cannot be generalized beyond the experiences of the women in this study. Therefore, it was of great importance to add a qualitative perspective to the generalizable findings of clinical improvement as they facilitate a better understanding of what helped improve the situation of the women to have them describe their experiences in their own words. The five themes and 13 sub-themes elaborated on in this study are closely related to how these women perceived their illness and side-effects of the treatment. Therefore, they contribute to a more authentic understanding of the impact of music therapy on women with breast or gynaecological cancer in active treatment. Further meaning could have been added by bringing the therapist´s perspective into the triangulation. In her reflections in a 2-hour long meeting with me, the music therapist supported the internal GrpMI structure over the six sessions and the music selections applied in the process, especially Vaughan Williams “Prelude on Rhosymedre” seemed very appropriate for the first or final session. She described the positive attitude of all women towards music therapy and openness towards the group.

All women participating in GrpMI could notably follow the relaxation inductions and engage with the music and mandala drawing. Even the woman who experienced a connection to traumatic memories could engage in relaxation and music listening at the beginning, but was then overwhelmed by her emotions. It was difficult for her to draw her mandala and discuss it with the therapist and group, but she stayed until the end of the session as she felt she was not alone in her suffering. The therapist also confirmed the group engagement, reflecting Yalom´s therapeutic factors. In her perception, interpersonal learning and group cohesiveness seemed of utmost importance to the women. They gave her feedback on how they communicated outside the group sessions and supported each other during their chemotherapy treatments and tried to transport the group spirit into the hospital setting outside GrpMI with little gestures, such as writing encouraging letters, engaging in joint social activities, bringing small presents as treats after the treatment, accompanying each other during the application of chemotherapy. For a broader holistic and systemic understanding of the women´s situation and impact of music therapy and PMR outside the therapy setting, the perspective of medical staff and family members would have been interesting to include in the triangulation. As the women in the PMR group also established a therapeutic relation with the therapist, the women´s own and her reflections on the women´s PMR process could be integrated in future investigations.

7.4. REFLECTIONS ON OUTCOME MEASURES

All the self-report questionnaires outcome measures used in this study were chosen for their quality in psychometric properties and wide clinical use, although self-report measures may also be prone to subjective bias, under reporting, exaggeration or acquiescing (Bowling, 2002; Robson, 2002). Nonetheless, it is important to highlight that as they were filled out easily and in a short time, the effort for the women participating in this study was limited, an important aspect considering the highly stressful situation of the women during active treatment. HADS and QLQ-C30 are symptom-oriented questionnaires, leaving aside important aspects of coping, resource-orientation, development of new skills or strategies (Bonde, 2005). The QLQ-C30 questionnaire focuses on aspects of health-related quality of life, primarily physical symptoms, side effects and interpersonal aspects. The construct of QoL is very complex and highly subjective (van der Krieke et al., 2016). In the context of chronical illness, QoL is often related to health issues and performance or functioning status, focusing on symptoms and limitations set by the illness, rather than on personal resources and coping abilities. As the women in this study were receiving active medical treatment with complex treatment side-effects, their functioning levels as measured by the EORTC QLQ-C30 were likely to be affected. Global QoL as measured by the QLQ-C30 is only assessed in two of the 30 items of the questionnaire asking about perceived "health status" and "QoL" during the last week. It is not likely that a psychotherapeutic approach would have a large impact on the development of treatment-related side effects and physical symptoms of cancer treatment, rather than on the way the patients cope with them and develop new skills, strategies, and perspectives (Bonde, 2005). Bonde (2005) and Burns (2001) found large effects on the enhancement of QoL in their studies when applying Antonovsky´s (1993) *Sense of Coherence Scale*, which is more sensitive to various aspects of QoL. However, the present study showed significant improvement of physical functioning with small effects in PMR at FUs and medium to large effects for GrpMI over time, which may have been affected by an improvement of coping strategies or enhanced communication skills with others, including medical staff, when additional medication for the handling of side-effects was needed. Development of new coping strategies and the ability to regulate emotions in a complex and highly stressful existential situation is much more important in this context and likely to be reflected in improvement of emotional functioning as shown in this study.

A strength of the HADS questionnaire is that it specifically includes items related to psychological symptoms as somatic items could be confounding for sensitivity with illness and treatment effects (Luckett et al., 2010). Furthermore, Love (2004) critiqued the scale for its depression sub-scale, which strongly focuses on anhedonia as measure for depression, which may impact its sensitivity towards minor depression or adjustment disorders with depressed mood (Love, 2004; Luckett et al., 2010). As a cancer diagnosis is often experienced as a critical or even traumatic event, it is likely to cause adjustment reactions and disorders especially at the beginning of the

treatment course. The HADS was shown sensitive for intervention effects in various randomized psychosocial intervention studies (Luckett et al., 2010). However, in the context of cancer research other additional outcome measures more sensitive for various types of depressive moods might be taken into account.

The *Basel Scale of Well-Being* is a short, but differentiated neutral self-rating scale, sensitive towards changes in perceived subjective well-being. Depressive or maniac states are not assessed and the differentiation between items may provide difficulties in people with a limited perception of intrapersonal sensitivity or limitations in language. However, it worked well in the context of this study and provided important information on the immediate effect of GrpMI therapy.

7.5. REFLECTIONS ON THE STUDY DESIGN

The mixed methods concurrent triangulation design allowed for various opportunities to investigate and analyse data from both quantitative and qualitative perspectives separately and jointly. Especially for process-oriented and complex interventions such as music therapy, this design seems most appropriate, as quantitative analysis allows for the investigation of intervention effects and generalization of findings and qualitative analysis provides meaning and improved understanding of these intervention effects. For a more appropriate appreciation of the women´s situation and an adequate clinical adaptation of therapy interventions, it is critical to take both quantitative and qualitative elements into account for future research. This is the first study in the field to provide FU data 4 months post intervention with promising results. Despite challenges set by the investigated population, the course of the study with both FU measures worked well and the women were very committed in providing the data necessary until the end of the study.

Randomized trials in this field provide specific ethical challenges in areas such as equipoise (Miller & Joffe, 2011). For this study, two supportive interventions were compared and no non-intervention control group was established. As some of the women had a limited life time, it felt important and ethically appropriate to offer some support during the course of active treatment. A waitlist control design under these circumstances would have been ethically questionable. Two women died shortly after their GrpMI intervention. Had they been randomized to a non-intervention control, they would not have received any psychosocial support from the study in their last period of life. The research design was also informed by my intra-personal awareness, which focused on achieving balance between the importance of methodological rigor and clinical therapeutic responsibility for the women, being a clinician and a researcher at the same time. For both methodological quality, and to protect the women through providing the best support available within study conditions, I value the clear distinction between different roles in the study. In addition, respondent validation for the case studies was critical to ensure the women´s perspective on their GrpMI experience.

As active medical treatment for cancer implies a vulnerable situation for the women, the main focus of the interventions was of supportive nature and seemed appropriate for the women. Previous research in music therapy in the field of psycho-oncology advocate supportive approaches to address the patients´ need for security and stability (Bradt et al., 2015; Miller & O´Callaghan, 2010). For some women who find themselves in an overwhelmingly distressful situation, a short-term intervention as applied in this study might be insufficient for establishing a trusting relationship with the music, the therapist, and the other group members (Bradt et al., 2015). In these cases, adequate assessment of emotional stability, and needs of the patients is crucial to ensure security and beneficial outcomes of the music therapy intervention. Bradt and colleagues (2015) stress the importance of a trained therapist in these cases to provide adequate professional comfort and support.

The split-plot factorial design provided an economical and powerful design to examine intervention effects in between-groups and within-groups analyses of two treatment conditions (McKinney, 2014). It showed high methodological quality on different levels. Randomization, blinding of allocation where possible, and clearly defined and separated roles of researcher and therapists contributed to reduction of bias.

As the study was conducted in a large hospital with specialization in cancer care and accredited cancer centres, many women were eligible. The established inclusion and exclusion criteria proved reasonable. Still, various structural internal changes led to major challenges in the recruitment of study participants and the limitation of the sample size. In addition, the complex situation of the women in focus provided further challenges for recruitment (Warth et al., 2015). Many women were busy trying to keep up their normal lives with children and work despite the cancer treatment. Others had to overcome long distances to receive individualized outpatient treatment at the study site. As the GrpMI or PMR interventions were not easily combined on the same day of chemotherapy administration for different reasons (too time-intensive; scheduled at the same time; strength and focus needed for both procedures; family members or friends driving had to wait for the patient), other women rejected study participation out of fear of personal overload or abuse of help of family or friends. Many women were already suffering from complex treatment side-effects at the beginning of treatment and were not able to attend outpatient study sessions. Others were not sure about their life-expectancy and set different priorities. Many women were already receiving outpatient psychotherapy treatment at the time of recruitment and could not participate in this study, even though they would have liked to. This indicates a high demand of psycho-social support during the time of active medical treatment. Others were participating in medical studies for new treatment options and did not want to commit to another study. In future research this could be dealt with through closer interdisciplinary collaboration inside and outside hospitals and institutions, joining energy and resources in collaborative research projects. Miller and O´Callaghan (2010) advocate for time-limited, supportive interventions in psycho-oncologic

contexts along the treatment trajectory, which correspond to the situation and needs of the cancer patients. As people undergoing active medical treatment stand in a physically and psychologically vulnerable situation, adjustment of supportive therapeutic interventions requires a high level of professional competence and flexibility from the music therapist. Music therapy and GIM training should address clinical challenges and implications of therapy interventions with specific cancer populations along the treatment trajectory. Adequate assessment methods and a trustful relationship with the patients are necessary to support people with cancer and prevent drop-outs from therapy intervention studies. A short-term group intervention may be overwhelming for patients in a very vulnerable physically and mental state. Here, a more patient-tailored individual intervention might be more appropriate.

7.6. STUDY LIMITATIONS

Even though the methodological quality of this study was high, blinding of therapists and participants was not possible due to the interventions under investigation (Boutron et al., 2005; Warth et al., 2015). Difficulties in recruitment of study participants as described above and high attrition of 39% (20% was expected a priori) during the implementation of the study resulted in a small sample size, making it difficult to generalize results to a larger context. In addition, sample characteristics complicate generalization of results. The level of education and financial security, ethnicity (almost all of German origin) and affiliation with music, contrasted with women excluded from the study, suggesting caution with regard to how representative the treatment group was for women with breast or gynaecological cancer at the beginning of active outpatient treatment.

Another limitation is set by the design. For ethical considerations, a true non-intervention control-group was not implemented in favour of two supportive interventions. In addition, the dependent variable well-being was only investigated in the GrpMI intervention, as were the semi-structured interviews after the group process. The investigation of well-being pre-post the PMR sessions and a qualitative analysis of the PMR experience could have added more meaning and understanding of the working mechanisms of both GrpMI therapy and PMR with the target populations and place in treatment trajectory.

As this study only focused on group therapy and the individual process within the group setting, it is not possible to draw conclusions on MI and PMR in individual settings with the same population. The large ES for improvement of well-being pre-post GrpMI suggest this procedure is a very effective short-term intervention to enhance individual well-being on different levels, which is also an indicator for QoL. As the well-being was only measured in the music therapy intervention, no comparison data for PMR was available. This is a weakness of the present study.

7.7. RECOMMENDATIONS AND IMPLICATIONS FOR FUTURE RESEARCH

Gynaecological cancer, group music interventions, and interventions at the beginning of curative or early palliative outpatient treatment all are underrepresented in clinical research. This study is the first to investigate effects and experiences of receptive group music therapy (GrpMI) on relevant psychological outcomes in women with breast or gynaecological cancer at the beginning of curative or early palliative outpatient medical treatment (Hertrampf & McKinney, in preparation). As evidence for GrpMI in general is just starting to emerge (McKinney & Grocke, 2016), I sincerely hope the statistically and clinically significant results of this study and the qualitative findings describing the women´s experiences with GrpMI will encourage future investigations with the described target populations in this setting, despite methodological challenges. Subgroup analyses in this study did not reveal major differences between diagnostic groups and treatment perspectives due to small sample size. As overall QoL and existential fears are more likely to be affected in persons undergoing palliative treatment, sub-group differences in this respect were expected beforehand. As highlighted previously, potential differences might be detected in a larger sample. Future studies with larger samples are encouraged to examine differential effects on subgroups by type of cancer or treatment perspective. A comparison study with parallel GrpMI and individual MI intervention could provide additional information and clinical implications about applicability and indication in this place in treatment trajectory.

Warth et al. (2015) provide a helpful overview on suggestions of how to deal with methodological challenges of investigating a cancer population. For future research, parallel designs to ensure blinding of participants would improve methodological quality beyond the quality presented in this study´s design. The weakness of using subjective outcome measures could be addressed in future studies by combining self-report questionnaires with an observer rated scale (for example the MADRS for depression).

Follow-up measures were taken 4 weeks and 4 months after the intervention, so no long-term effects could be studied. Even though research in (advanced) cancer is challenging, more quality research is needed in the field to see if the demonstrated effects on anxiety, depression, QoL, and well-being can be replicated in larger samples and sustained over longer FU periods. If so, this treatment could be of clinical importance for an early application of music therapy in psycho-oncology in populations with sub-clinical psychological symptoms to prevent manifestation of comorbidities.

Many participants reported in the post-intervention interview that they felt in the middle of their personal process at the end of the six sessions, and they would have liked to continue the group sessions. When asked if they would have committed to the study knowing that more sessions had been involved, they replied, *"I´m not sure"* or

"probably not." McKinney and Clark (2004) found that the significant results could not be sustained after six sessions at FU and suggested a minimum of ten sessions for significant results for individual interventions in clinical populations. As the present study showed significant effects on all psychological outcomes under investigation, more clinically adjusted research is needed in the field. Personal communication with Wärja revealed that her study (see also Wärja, 2015) originally started with six group sessions and enlarged the process to eight sessions of 150 minutes each after the first group cycle, as both participants and therapists described the length of sessions and duration of the process was insufficient. In the rehabilitation after medical treatment with a more psychotherapeutic focus this approach seems appropriate. For the population in the present study, a process of eight sessions might have been too much. A possible solution to provide more therapy sessions and at the same time prevent and reduce attrition in future investigations could be presented by a more flexible study design, with a minimum number of sessions and additional voluntary sessions (Hertrampf & McKinney, in preparation). Furthermore, the relationship between medical treatment (for example type of medication, duration, and intensity) and GrpMI intervention needs to be investigated more thoroughly for a clear interpretation of potential intervention effects and correlations.

The overall supportive therapeutic intention and a support-oriented focus in the GrpMI sessions might have provided a secure space and setting for the women to be able to also cope with more challenging music after only two stabilizing sessions. Analysis results from Bonde (2007b) on the supportive musical piece, "Rhosymedre" with a non-clinical population found no occurrence of existential or healing imagery in contrast to the present study. McKinney (1990) found that this piece intensified the experience of emotion in the imagery compared to silence. Other studies with music interventions during chemotherapy where the music was patient-selected showed lower results (Hertrampf & Wärja, 2017). Therefore, future research should further investigate comparison trials that include both options for music selections.

Bro and colleagues (2017) advocated higher methodological quality in RCT studies in the field along with considerations of musical and cultural background of study participants for future research. They supported individually tailored interventions adapted to the patient´s needs rather than standardized applications. In addition, it is recommended for future research in group settings to a priori assess emotional state of potential patients, both for the safety of the participants and to minimize attrition (Bradt et al., 2015).

In psycho-oncology family and closely related persons are integrated in the psycho-social support system as they are known to be of great importance to ensure the patient´s compliance and QoL throughout the treatment trajectory (Singer et al., 2010; Weis et al., 2007). It is recommended to investigate music intervention effects beyond the therapeutic setting and include direct relations of the patients in quantitative and qualitative research. This could be addressed for example, in measuring QoL of the families or in conducting semi-structured interviews with family, friends, doctors, and adjunct professionals.

7.8. CONCLUSIONS

The present study provided statistical and clinical evidence of the beneficial effects of receptive group music therapy for women with breast or gynaecological cancer at the beginning of active outpatient treatment in symptom management and coping with cancer. In addition, the women´s experiences of the impact of the intervention were explored and illustrated with respondent validated qualitative data. The triangulation of quantitative and qualitative analysis support GrpMI therapy in six sessions as an appropriate treatment for the target populations. There was no clinical evidence observed to contraindicate the combined music therapy treatment of women with breast and gynaecological cancer. Clinical experience suggests that curative and palliative treatment perspectives worked well together with most study participants; however, this combination might provide challenges for some women. The importance of a qualified and experienced therapist was indicated for ensuring appropriate assessment, selection of music according to participants´ needs, and for providing balanced and structured framework for the group setting. As there is a lack of research in the field of group interventions at the beginning of outpatient medical treatment for cancer and in the field of women with gynaecological cancer, future research of a high methodological level is critical. Future investigations with larger samples, mixed methods, and follow-up designs are encouraged to compare different supportive creative arts therapy interventions in parallel designs in various settings and further investigate differential effects on subgroups by cancer type or treatment perspective to expand our understanding of adequate psycho-oncological support along treatment trajectory. Nonetheless, the evidence presented in this thesis is that the provision of a group intervention such as GrpMI as psychosocial support for women may reduce deleterious psychological effects associated with having breast or gynaecological cancer during the active treatment period.

LITERATURE LIST

Aaronson, N. K., Ahmedzai, S., Bergman, B., Bullinger, M., Cull. A., Duez, N. J., Filiberti, A., Flechtner, H., Fleishman, S. B., de Haes, J. C. J. M., Kaasa, S., Klee, M. C., Osoba, D., Razavi, D., Rofe, P. B., Schraub, S., Sneeuw, K. C. A., Sullivan, M., Takeda, F. (1993). The European Organisation for Research and Treatment of Cancer QLQ-C30: A quality-of-life instrument for use in international clinical trials in oncology. *Journal of the National Cancer Institute, 85,* 365–376.

Aigen, K. (2008). An analysis of qualitative music therapy research reports 1987-2006: Articles and book chapers. *The Arts in Psychotherapy, 35,* 251–261.

Altman, D. G., Schulz, K. F., Moher, D., Egger, M., Davidoff, F., Elbourne, D., . . . Lang, T. (2001). The revised CONSORT statement for reporting randomized trials: Explanation and elaboration. *Annals of Internal Medicine, 134*, 663–694.

Alt-Epping, B. & Nauck, F. (2015; eds). *Palliative care in oncology*. Heidelberg: Springer.

Angenendt, G., Schütze-Kreilkamp, U., & Tschuschke, V. (2007). *Praxis der Psychoonkologie: Psychoedukation, Beratung und Therapie.* Stuttgart: Hippokrates.

Antonovsky, A. (1993). The structure and properties of the sense of coherence scale. *Soc Sci Med, 36*(6),725–733.

Arthur, J. A. & Bruera, E. (2015). Disease-specific palliative care. In Alt-Epping, B. & Nauck, F. (Eds). *Palliative care in oncology*, 3–12. Heidelberg: Springer.

Aulbert, E., Nauck, F., & Radbruch, L. (2011). *Lehrbuch der Palliativmedizin.* Stuttgart: Schattauer.

Berrino, F., De Angelis, R., Sant, M., Rosso, S., Lasota, M. B., Coebergh, J. W., & Santaquilani, M. (2007). Survival for eight major cancers and all cancers combined for European adults diagnosed in 1995–99: Results of the EUROCARE-4 study. *The Lancet Oncology, 8*, 773–783.

Bibby, P. (2010). Simple main effects. In N. J. Salkind (Ed.), Encyclopedia of research designs [electronic resource] (pp. 1375-1380). Los Angeles, CA: Sage. doi:10.4135/9781412961288.n243

Bonde, L. O. (2004). Musik als Co-Therapeutin. Gedanken zum Verhältnis zwischen Musik und inneren Bildern in The Bonny Method of Guided Imagery and Music (BMGIM). In: Frohne-Hagemann, I. (Ed.), *Rezeptive Musiktherapie. Theorie und Praxis,* 111–138. Wiesbaden: Zeitpunkt Musik.

Bonde, L. O. (2005). *The Bonny Method of Guided Imagery and Music (BMGIM) with Cancer Survivors. A psychosocial study with focus on the influence of BMGIM on mood an quality of life.* PhD dissertation, Dept. of music and music therapy. Aalborg: Aalborg University.

Bonde, L. O. (2007a). Imagery, Metaphor, and Perceived Outcome in Six Cancer Survivor´s BMGIM Therapy. Qualitative Resarch Monograph Series Vol. 3.

Bonde, L. O. (2007b). Steps in researching the music in music therapy. In: Wosch, T. & Wigram, T. (Eds.). *Microanalysis in music therapy. Methods. techniques and applications for clinicians, researchers, educators and students*, 255–269. London: Jessica Kingsley.

Bonde, L. O. (2010). Music as support and challenge - Group music and imagery with psychiatric outpatients. In: Deutsche Musiktherapeutische Gesellschaft e.V. (Ed.), *Jahrbuch Musiktherapie: Imagination in der Musiktherapie*, 89–118. Wiesbaden: Reichert.

Bonde, L. O. (2015). Using mixed methods in music therapy health care research: Reflections on the relationship between the research question, design and methods in the research project Receptive music therapy with female cancer patients in rehabilitation. *Voices.* doi: 10.15845/voices.v15i2.738

Bonde, L. O. & Pedersen, I. N. (2015). Group Music and Imagery (GrpMI) in the Rehabilitation of Psychiatric Outpatients. In Grocke, D. & Moe, T. (Eds.), *Guided Imagery and Music (GIM) and Music Imagery methods for individual and group therapy,* 277–290. Barcelona: JKP.

Bonny, H. L. (2002). Music consciousness: The evolution of guided imagery and music. Gilsum, NH: Barcelona Publishers.

Bonny, K. L. & Savary, L. M. (2005; first published 1973). Music and your mind: listening with a new consciousness. Gilsum, NH: Barcelona Publishers.

Boutron, I., Moher, D., Tugwell, P., Giraudeau, B., Poiraudeau, S., Nizard, R., Ravaud, P. (2005). A checklist to evaluate a report of a nonpharmacological trial (CLEAR NPT) was developed using consensus. *Journal of Clinical Epidemiology, 58,* 1233–1240. doi:10.1016/j.jclinepi.2005.05.004

Bowling, A. (2002). Research in Health. Investigating health and health services. Buckingham: Open University Press.

Bradley, S., Rose, S., Lutgendorf, S., Costanzo, E., & Anderson, B. (2005). Quality of life and mental health in cervical and endometrial cancer survivors. *Gynecologic Oncology, 100*(3), 479–486.

Bradt, J. (2012). Randomized controlled trials in music therapy: Guidelines for design and implementation. *Journal of Music Therapy, 49*, 120–149. http://doi/10.1093/jmt/49.2.120

Bradt, J., Burns, D. S., & Creswell, J. W. (2013). Mixed methods research in music therapy research. *Journal of Music Therapy, 50*, 123–148. doi:10.1093/jmt/50.2.123

Bradt, J., Potvin, N., Kesslick, A., Shim, M., Radl, D., Schriver, E., . . . Komarnicky-Kocher, L. T. (2015). The impact of music therapy versus music medicine on psychological outcomes and pain in cancer patients: A mixed methods study. *Supportive Care in Cancer, 23*, 1261–1271.

Bradt, J., Dileo, C., Magill, L., & Teague, A. (2016). Music interventions for improving psychological and physical outcomes in cancer patients. *Cochrane Database of Systematic Reviews, 8*, CD006911. http://doi.org/10.1002/14651858.CD006911.pub3

Bro, M. L., Jespersen, K. V., Hansen, J. B., et al.(2017). Kind of blue: A systematic review and meta-analysis of music interventions in cancer treatment. *Psycho-Oncology*, *2017*;1–15. https://doi.org/10.1002/pon.4470

Bruscia, K. (2002). The boundaries of Guided Imagery and Music (GIM) and the Bonny Method. In Bruscia, K. E. & Grocke, D. (Eds.), *Guided Imagery and Music: The Bonny Method and Beyond*, 37–61. Gilsum, NH: Barcelona.

Burns, D. S. (1999). *The Effect of the Bonny Method of Guided Imagery and Music on the Quality of Life and Cortisol Levels of Cancer Patients.* PhD dissertation, Department of Music and Dance. Kansas, University of Kansas.

Burns, D. S. (2001). The Effect of the Bonny Method of Guided Imagery and Music on the Mood and Quality of Life of Cancer Patients. *Journal of Music Therapy, 38*, 51–65. doi:10.1093/jmt/38.1.51

Burns, D. S. (2002). Guided Imagery and Music in the Treatment of Individuals with Chronic Illness. In Bruscia, K. E. & Grocke, D. (Eds.), *Guided Imagery and Music: The Bonny Method and Beyond,* 171–186. Gilsum, NH: Barcelona.

Burns, D. (2012). Theoretical rationale for music selection in oncology intervention research: An integrative review. *Journal of Music Therapy, 49*, 7–22.

Cadrin, M. L. (2009. Dying well. The Bonny Method of Guided Imagery and Music at End of Life. *Voices: A World Forum for Music Therapy, 9*, 1–23. http://www.voices.no/mainissues/mi40009000312.php

Chan, Y. M., Lee, P. W. H., Ng, T. Y., Ngan, H. Y. S., & Wong, L. C. (2003). The use of music to reduce anxiety for patients undergoing colposcopy: A randomized trial. *Gynaecologic Oncology, 91*(1), 213–217. http://doi.org/10.1016/S0090-8258(03)00412-8

Chan, C.W., Richardson, A., & Richardson, J. (2011). Managing symptoms in patients with advanced lung cancer during radiotherapy: Results of a psychoeducational randomized controlled trial. *Journal of Pain and Symptom Management, 41*, 347–357. doi:10.1016/j.jpainsymman.2010.04.024

Charalambous, A., Kaite, C. P., Charalambous, M., Tistsi, T., & Kouta, C. (2017). The effects on anxiety and quality of life of breast cancer patients following completion of the first cycle of chemotherapy. *SAGE Open Medicine, 5*, 1–10. doi: 10.1177/2050312117717507

Chi, G. C.-H.-L., Young, A., McFarlane, J., Watson, M., Coleman, R. L., Eifel, P. J., . . . Grace, C. C.-H.-L. (2015). Effects of music relaxation video on pain and anxiety for women with gynaecological cancer receiving intracavitary brachytherapy: A randomised controlled trial. *Journal of Research in Nursing, 20*(2), 129–144. http://doi.org/10.1177/1744987114529863

Cohen, J. (1988). Statistical power analysis for the behavioral sciences (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates.

Creswell, J. W., (2009). Research Design – Qualitative, Quantitative and Mixed Methods Approaches. Sage Publication, 203-225

Creswell, J. W. (2012). Educational Research: Planning, Conducting and Evaluating Quantitative and Qualitative Research (fourth Edition). Pearson Education, Inc. Boston, USA.

Creswell, J. W., Plano Clark, V. L., Gutmann, M. L., & Hanson, W. E. (2003). Advanced mixed methods research designs. In A. Tashakkori & C. Teddlie (Eds.), Handbook of mixed methods in social and behavioral research (pp. 209–240). Thousand Oaks, CA: Sage.

Creswell, J. H. & Plano Clark V. L., (2011). Designing and Conducting Mixed Methods Research, second Edition. Sage Publications, California

Dimicelli-Mitran, L. (2015). Focus on Wellness: Using Music Imagery (MI) in Cancer Survivor Groups. In Grocke, D. & Moe, T. (Eds.), *Guided Imagery and Music (GIM) and Music Imagery methods for individual and group therapy,* 231–242. Barcelona: JKP.

DKG e.V. , 2017. AWMF guidelines http://www.awmf.org/uploads/tx_szleitlinien/032-051OLl_S3_Psychoonkologische_Beratung_Behandlung_2014-01_verlaengert.pdf; May 13, 2017.

Fayers, P. M., Aaronson, N. K., Bjordal, K. et al. (2001). The EORTC QLQC30 scoring manual. 3rd ed. Brussels: European Organisation for Research and Treatment of Cancer.

Frankl, V. (1997). Man's search for ultimate meaning.New York, NY: Perseus.

Frickhofen, N. (2015). Oncological and Palliative Care for Patients with Lung Cancer and Patients with Breast Cancer: Two Opposite Ends of a Spectrum. In Alt-Epping, B. & Nauck, F. (Eds). *Palliative care in oncology*, 13–34. Heidelberg: Springer.

Gimeno, M. M. (2015). MED-GIM Adaptations of the Bonny Method for Medical Patients. In Grocke, D. & Moe, T. (Eds.), *Guided Imagery and Music (GIM) and Music Imagery methods for individual and group therapy*, 179–188. Barcelona: JKP.

Gold, C. (2004). The use of effect sizes in music therapy research. *Music Therapy Perspectives, 22*, 91–95.

Gómez-Campelo, P., Bragado-Alvarez, C., & Hernandez-Lloreda, M. J. (2014). Psychological distress in women with breast and gynaecological cancer treated with radical surgery. *Psycho-Oncology, 23*, 459-466. doi:10.1002/pon.3439

Greenlee, H., Balneaves, L. G., Carlson, L. E., Cohen, M., Deng, G., Hershman, D., . . . & Tripathy, D. (2014). Clinical practice guidelines on the use of integrative therapies as supportive care in patients treated for breast cancer. *Journal of the National Cancer Institute Monographs, 50,* 346-358. doi:10.1093/jncimonographs/lgu041

Grocke, D., & Wigram, T. (2007). Receptive Methods in Music therapy: Techniques and Clinical Applications for Music therapy Clinicians, Educators and students. London: JKP.

Grocke, D., & Moe, T. (2015). Introduction. In D. Grocke & T. Moe (Eds.), *Guided Imagery and Music (GIM) and Music Imagery methods for individual and group therapy*, 19–30. Barcelona: JKP.

Gruber, H., Rose, J.-P., Mannheim, E., et al. (2011). Künstlerische Therapien in der Onkologie - wissenschaftlicher Kenntnisstand und Ergebnisse einer Studie. *Musiktherapeutische Umschau, 32*(2), 206–218.

Heink, A., Katsikas, S., & Lange-Altman, T. (2017). Examination of the phenomenology of the ibogaine treatment experience: role of altered states of consciousness and psychedelic experiences. *Journal of Psychoactive Drugs, 49*:3, 201–208, doi:10.1080/02791072.2017.1290855

Hertrampf, R.-S. (2015): Group Music and Imagery (GrpMI) Therapy with Female Cancer Patients. In: Grocke, D. & Moe, T. (Eds.), *Guided Imagery and Music (GIM) and Music Imagery methods for individual and group therapy*, 243–252. Barcelona: JKP.

Hertrampf, R.S. & Wärja, M. (2017). The Effect of Creative Arts Therapy and Arts Medicine on Psychological Outcomes in Women with Breast or Gynecological Cancer: A Systematic Review of Arts-Based Interventions. *Arts in Psychotherapy*, *56*, 93–110; https://doi.org/10.1016/j.aip.2017.08.001

International Agency for Research on Cancer (2013). https://www.iarc.fr/. September 15, 2016.

Jacobson, E. (1990). *Entspannung als Therapie. Progressive Relaxation in Theorie und Praxis.* 7th edition. Stuttgart: Klett-Cotta.

Jung, C. G. (author), Jaffe, A. (ed), Winston, C. (Translator), & Winston, R. (Translator; 1989). Memories, Dreams, Reflections. Zürich: Rascher.

Kellogg, J., MacRae, M., Bonny, H., & Di Leo, F. (1977). The use of the mandala in psychological evaluation and treatment. *American Journal of Art Therapy, 16*, 123–130.

King, C. R., & Hinds, P.S. (2003). Quality of Life from Nursing and Patient Perspectives: Theory, Research and Practice. Sudbury, MA: Jones and Bartlett.

Knill, P. J., Levine, E. G., & Levine, S. K. (2005). Principles and practice of expressive arts therapy: Toward a therapeutic aesthetics. London, England: JKP.

Koch, U. & Weis, J. (2008). *Psychoonkologie: Eine Disziplin in der Entwicklung.* Göttingen.

Krychman, M. L., Pereira, L., Carter, J., Amsterdam, A. (2006). Sexual oncology: Sexual health issues in women with cancer. *Oncology, 71*, 18–25.

Krychman, M. L., & Katz, A. (2012). Breast cancer and sexuality: Multi-modal treatment options. Continuing Medical Education, 9(1), 5–13.

Kuebler, K. K., Davis, M. P., & Moore, C. D. (2005). Palliative Practices. An Interdisciplinary Approach. US: Elsevier Mosby.

Lakens, D. (2013). Calculating and reporting effect sizes to facilitate cumulative science: A practical primer for t-tests and ANOVAs. *Frontiers in Psychology, 4*, 1–12. doi:10.3389/fpsyg.2013.00863

Lavery, S. & Christopoulos, G. (2016). Fertility. In Ring, A. & Parton, M. (Eds.), *Breast Cancer Survivorship*, 179–191. doi:0.1007/978-3-319-41858-2_15

Luckett, T., Butow, P. N., King, M. T., Oguchi, M., Heading, G., Hackl, N. A., Rankin, N, & Price, M. A. (2010). A review of recommendations for optimal outcome measures of anxiety, depression and general distress in studies evaluating psychosocial interventions for English-speaking adults with heterogenous cancer diagnoses. *Support Care Cancer, 18*, 1241–1262. DOI: 10.1007/s00520-010-0932-8

Massie, M. J. (2004). Prevalence of depression in patients with cancer. *Journal of the National Cancer Institute, 32*, 57–71.

McClean, S., Bunt, L., & Daykin, N. (2012). The healing and spiritual properties of music therapy at a cancer care centre. Journal of Alternative and *Complementary Medicine, 18*(4), 402-407. http://www.liebertpub.com/acm

McDougal Miller, D. (2016). Healing from the Core: Music and Imagery in the Cancer Journey. *Music and Medicine, 8*(2), 30–44.

Mc Kinney, C. H. (1990). The effect of music on imagery. *Journal of music therapy, XXVII*, 34–46.

McKinney, C. H. (2014). Factorial designs. In: B. Wheeler (Ed). Music therapy research. pp. 396–407.

McKinney, C. H. & Clark, M. (2004). The Effect of the Bonny Method of Guided Imagery and Music on distress, life quality, and endocrine hormone levels in women with non-metastatic breast cancer. Pilot study report 1998-2002, Center for Health Enhancement, St. Joseph Medical Center. Baltimore.

McKinney, C. H. & Grocke, D. E. (2016). The Bonny Method of Guided Imagery and Music for Medical Populations: Evidence for Effectiveness and Vision for the Future. *Music Medicine, 8*(2), 18–25.

McKinney, C. H., & Honig, T. J. (2017). Health outcomes of a series of Bonny Method of Guided Imagery and Music sessions: A systematic review. *Journal of Music Therapy, 54*, 1–34. doi:10.1093/jmt/thw016

Meadows, A. (2015). Music and Imagery in Cancer Care. In Grocke, D. & Moe, T. (Eds.), *Guided Imagery and Music (GIM) and Music Imagery methods for individual and group therapy*, 189–198. Barcelona: JKP.

Miller, F. G., & Joffe, S. (2011). Equipoise and the Dilemma of Randomized Clinical Trials. *The New England Journal of Medicine, 364*, 5, 476–480.

Miller, D., & O´Callaghan, C. (2010). Cancer care. In Hanson-Abromeit, D. & Colwell, C. (Eds.), *Effective Clinical Practice in Music Therapy: Medical Music Therapy for Adults in Hospital Settings*. AMTA monograph series. Silver Spring, MD: American Music Therapy Association, Inc.

Molassiotis A, Yung HP, Yam BM, Chan FY, Mok TS. The effectiveness of progressive muscle relaxation training in managing chemotherapy-induced nausea and vomiting in Chinese breast cancer patients: A randomised controlled trial. *Support Care Cancer, 2002, 10,* 237-46.

Moradian, S., Walshe, C., Shahidsales, S., Ghavam Nasiri, M. R., Pilling, M., & Molassiotis, A. (2015). Nevasic audio program for the prevention of chemotherapy induced nausea and vomiting: A feasibility study using a randomized controlled trial design. *European Journal of Oncology Nursing, 19*, 282–291. http://doi.org/10.1016/j.ejon.2014.10.016

Morris, S. B., & DeShon, R. P. (2002). Combining effect size estimates in meta-analysis with repeated measures and independent group designs. *Psychological Methods, 7*, 105–125.

O'Kelly, J., & Koffman, J. (2007). Multidisciplinary perspectives of music therapy in adult palliative care. *Palliative medicine, 21*, 235–241.

Redana, S. (2016). Endocrine therapy. In Ring, A. & Parton, M. *Breast cancer survivorship. Consequences of early breast cancer and its treatment*, 67–82. Heidelberg: Springer.

Rickman, S. (2005). www.miamusicmap.com; August, 28, 2016.

Ring, A. & Parton, M. (Eds.). (2016). Breast cancer survivorship. Consequences of early breast cancer and its treatment. Heidelberg: Springer.

Robb, S. L., Burns, D. S., & Carpenter, J. S. (2011). Reporting guidelines for music-based interventions. *Journal of Health Psychology, 16*, 342–352. doi:10.1177/1359105310374781

Robson, C. (2002). Real World Research. A Resource for Social Scientists and Practitioner Researchers, Blackwell Publishing.

Rohrmoser, A., Preisler, M., Bär, K., Letsch, A., & Goerling, U. (2017). Early integration of palliative/supportive cancer care – healthcare professionals´ perspectives on the support needs of cancer patients and their caregivers across the cancer treatment trajectory. *Support Care Cancer, 25*, 1621–1627.

Romito, F., Lagattolla, F., Costanzo, C., Giotta, F., & Mattioli, V. (2013). Music therapy and emotional expression during chemotherapy. How do breast cancer patients feel? *European Journal of Integrative Medicine, 5*, 438–442.

Schwarz, R. & Singer, S. (2007). Einführung psychosoziale Onkologie. München.

Seidel, A. (Ed.). (2005). Verschmerzen. Musiktherapie mit krebserkrankten Frauen und Männern im Spannungsfeld von kurativer und palliativer Behandlung. Wiesbaden: Reichert.

Sheinberg, E. (2000). Irony, Satire, Parody and the Grotesque in the Music of Shostakovich: a theory of musical incongruities. Aldershot: Ashgate.

Short, A. (2002). Guided Imagery and Music in medical care. In Bruscia, K. E. & Grocke, D. E. (Eds.), Guided Imagery andMusic: The Bonny Methoda and beyond. Gilsum, NH: Barcelona.

Singer, S., Das-Munshi, J., & Brahler, E. (2010). Prevalence of mental health conditions in cancer patients in acute care - a meta-analysis. *Annals of Oncology, 21*, 925–930.

Silver, J. K., Raj,V. S., Fu, J. B., Wisotzky, E. M., Smith, S. R., & Kirch, R., A. (2015). Cancer rehabilitation and palliative care: critical components in the delivery of high-quality oncology services. Cancer rehabilitation and palliative care: critical components in the delivery of high-quality oncology services. *Supportive Care in Cancer, 23*, (12), 3633–3643.

Snaith, R. P. & Zigmond, A. S. (1994). The Hospital Anxiety and Depression Scale (HADS). Manual. NFER-NELSON.

Stordahl, J. J. (2009). *The influence of music on depression, affect, and benefit finding among women at the completion of treatment for breast cancer.* Unpublished PhD dissertation. ProQuest Dissertations and Theses. Retrieved from http://scholarlyrepository.miami.edu/cgi/viewcontent.cgi?article=1336&context=oa_dissertations

Stryker, J. E., Emmons, K. M., & Viswanath, K. (2007). Uncovering differences across the cancer control continuum: a comparison of ethnic and mainstream cancer newspaper stories. *Prev Med, 44*, 20–25.

Stubblefield, M. D., Hubbard, G., Cheville, A., Koch, U., Schmitz, K. H., & Dalton, S. O. (2013). Current perspectives and emerging issues on cancer rehabilitation. *Cancer, 119*, 2170–2178. doi:10. 1002/cncr.28059

Summer, L. (2002). Group Music and Imagery Therapy: Emergent Receptive Techniques in Music Therapy Practice. In Bruscia, K. E. & Grocke, D. (Eds.), *Guided Imagery and Music: The Bonny Method and beyond,* 297–306. Barcelona: Gilsum, NH.

Summer, L. (2009). *Client perspectives on the music in Guided Imagery and Music*. Unpublished PhD dissertation, Aalborg University.

Summer, L. (2011). Music therapy and depression: Uncovering resources in music and imagery. In Meadows, A. (Ed.) *Development in Music Therapy Practice: Case Study Perspectives,* 486–500. Barcelona: Gilsum, NH.

Summer, L. (2015).The journey of GIM training from self-exploration to a continuum of clinical practice. In Grocke, D. & Moe, T. (Eds.), *Guided Imagery and Music (GIM) and Music Imagery methods for individual and group therapy,* 339–348. Barcelona: JKP.

Tiwari, P., Coriddi, M., Salani, R., & Povoski, S. P. (2013). Breast and gynaecologic cancer-related extremity lymphedema: a review of diagnostic modalities and management options. *World Journal of Surgical Oncology, 11*, 237.

Torrance, H. (2012). Triangulation, respondent validation, and democratic participation in mixed methods research. *Journal of Mixed Methods Research, 6*, 111–123.

van der Krieke; et al. (2016). Temporal Dynamics of Health and Well-Being: A Crowdsourcing Approach to Momentary Assessments and Automated Generation of Personalized Feedback. *Psychosomatic Medicine, 1*. doi:10.1097/PSY.0000000000000378

Wagner, L. I., & Cella, D. (2004). Fatigue and cancer: Causes, prevalence and treatment approaches. *British Journal of Cancer, 91*, 822–828.

Wärja, M. (2015). KMR (Short Music Journeys) with Women Recovering from Gynaecological Cancer. In Grocke, D. & Moe, T. (Eds.), *Guided Imagery and Music (GIM) and Music Imagery methods for individual and group therapy,* 253–266. Barcelona: JKP.

Wärja, M., & Bonde, L. O. (2014). Music as co-therapist: Towards a taxonomy of music in therapeutic music and imagery work. *Music and Medicine*, *6*(2), 16–27.

Warth, M., Kessler, J., Koenig, J., Hillecke, T. K., Wormit, A. F., & Bardenheuer, H. J. (2015). Methodological challenges for music therapy controlled clinical trials in palliative care. *Nordic Journal of Music Therapy*, *24*, 244–371. http://doi.org/10.1080/08098131.2014.987803

Weis, J. et al., (2007). Psychoonkologie. Konzepte und Aufgaben einer jungen Fachdisziplin. *Onkologe, 13*(2), 185-186.

Whitaker, D. S. (2001). Using groups to help people. 2nd edition. East Sussex: Routledge.

World Health Organization (2002). http://www.who.int/cancer/palliative/definition/en/. February 26, 2017.

World Health Organization (2013). http://www.who.int/en/. September 15, 2016.

Yalom, I. D. (1985). Theory and practice of group psychotherapy (3ed edition). New York, NY: Basic Books.

Yalom, I. D. (2005) with Molyn Leszcz. The Theory and Practice of Group Psychotherapy (5th edition). New York, NY: Basic Books.

Zhang, J. M., Wang, P., Yao, J. X., Zhao, L., Davis, M. P., Walsh, D., . . . Yue,, G. H. (2012). Music interventions for psychological and physical outcomes in cancer: A systematic review and meta-analysis. *Supportive Care in Cancer*, *20*, 3043–3053. http://doi.org/10.1007/s00520-012-1606-5

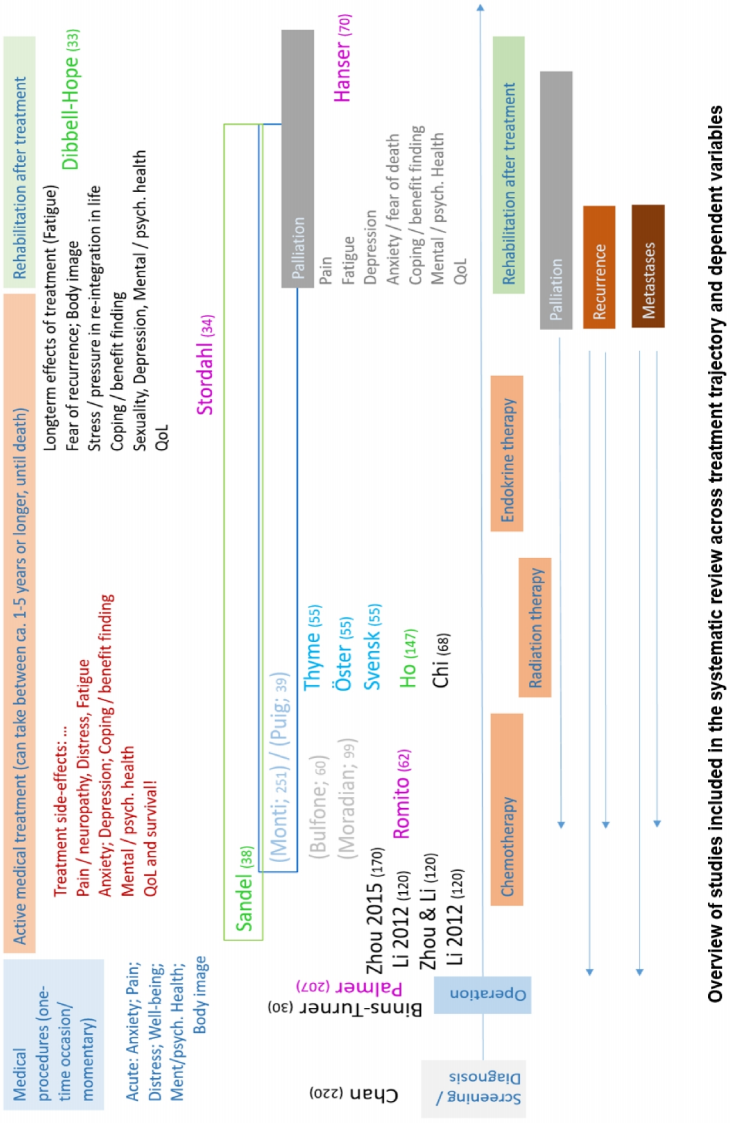
Zhou, K., Li, X., Li, J., Liu, M., Dang, S., Wang, D., & Xin, X. (2015). A clinical randomized controlled trial of music therapy and progressive muscle relaxation training in female breast cancer patients after radical mastectomy: Results on depression, anxiety and length of hospital stay. *European Journal of Oncology Nursing*, *19*, 54–59.

Zhou, K. N., Li, X. M., Yan, H., Dang, S. N., & Wang, D. L. (2011). Effects of music therapy on depression and duration of hospital stay of breast cancer patients after radical mastectomy. *Chinese Medical Journal*, *124*, 2321–2327.

APPENDICES

Appendix A. Overview of studies included in systematic review

Hertrampf, R.S. & Wärja, M. (2017). The Effect of Creative Arts Therapy and Arts Medicine on Psychological Outcomes in Women with Breast or Gynecological Cancer: A Systematic Review of Arts-Based Interventions. *Arts in Psychotherapy*, *56C*, pp. 93–110; https://doi.org/10.1016/j.aip.2017.08.001



References of studies included in the systematic review:

Binns-Turner, P. G., Wilson, L. L., Pryor, E. R., Boyd, G. L., & Prickett, C. A. (2011). Perioperative music and its effects on anxiety, hemodynamics, and pain in women undergoing mastectomy. *American Association of Nurse Anesthetists Journal, 79*(4), 21–28.

Bulfone, T., Quattrin, R., Zanotti, R., Regattin, L., & Brusaferro, S. (2009). Effectiveness of music therapy for anxiety reduction in women with breast cancer in chemotherapy treatment. *Holistic Nursing Practice*, *23*, 238–242. http://doi.org/10.1097/HNP.0b013e3181aeceee

Chan, Y. M., Lee, P. W. H., Ng, T. Y., Ngan, H. Y. S., & Wong, L. C. (2003). The use of music to reduce anxiety for patients undergoing colposcopy: A randomized trial. *Gynecologic Oncology*, *91*(1), 213–217. http://doi.org/10.1016/S0090-8258(03)00412-8

Chi, G. C.-H.-L., Young, A., McFarlane, J., Watson, M., Coleman, R. L., Eifel, P. J., . . . Grace, C. C.-H.-L. (2015). Effects of music relaxation video on pain and anxiety for women with gynecological cancer receiving intracavitary brachytherapy: A randomised controlled trial. *Journal of Research in Nursing*, *20*(2), 129–144. http://doi.org/10.1177/1744987114529863

Dibbell-Hope, S. (2000). The use of dance/movement therapy in psychological adaptation to breast cancer. *The Arts in Psychotherapy*, *27*, 51–68. *The Arts in Psychotherapy*, *26*, 73–80.

Hanser, S. B., Bauer-Wu, S., Kubicek, L., Healey, M., Manola, J., Hernandez, M., & Bunnell, C. (2006). Effects of a music therapy intervention on quality of life and distress in women with metastatic breast cancer. *Journal of the Society for Integrative Oncology*, *4*(3), 116–124.

Ho, R. T. H., Fong, T. C. T., Cheung, I. K. M., Yip, P. S. F., & Luk, M.-Y. (2016). Effects of a short-term dance movement therapy program on symptoms and stress in patients with breast cancer undergoing radiotherapy: A randomized, controlled, single-blind trial. *Journal of Pain and Symptom Management*. http://doi.org/10.1016/j.jpainsymman.2015.12.332

Li, X.-M., Yan, H., Zhou, K.-N., Dang, S.-N., Wang, D.-L., & Zhang, Y.-P. (2011). Effects of music therapy on pain among female breast cancer patients after radical mastectomy: results from a randomized controlled trial. *Breast Cancer Research and Treatment*, *128*, 411–419. http://doi.org/10.1007/s10549-011-1533-z

Li, X.-M., Yan, H., Zhou, K.-N., Dang, S.-N., Wang, D.-L., Zhang, Y.-P., … Zhang, Y.-P. (2012). Effects of music therapy on anxiety of patients with breast cancer after radical mastectomy: A randomized clinical trial. *Journal of Advanced Nursing*, *68*, 1145–1155. http://doi.org/10.1007/s10549-011-15

Monti, D. A., Kash, K. M., Kunkel, E. J., Moss, A., Mathews, M., Brainard, G., … Newberg, A. B. (2013). Psychosocial benefits of a novel mindfulness intervention versus standard support in distressed women with breast cancer. *Psycho-Oncology*, *22*, 2565–2575.

Moradian, S., Walshe, C., Shahidsales, S., Ghavam Nasiri, M. R., Pilling, M., & Molassiotis, A. (2015). Nevasic audio program for the prevention of chemotherapy induced nausea and vomiting: A feasibility study using a randomized controlled trial design. *European Journal of Oncology Nursing*, *19*, 282–291. http://doi.org/10.1016/j.ejon.2014.10.016

Öster, I., Svensk, A. C., Magnusson, E., Thyme, K. E., Sjödin, M., & Åström, S. (2006). Art therapy improves coping resources: a randomized, controlled study among women with breast cancer. *Palliative & Supportive Care*, *4*(1), 57–64. http://doi.org/10.1017S147895150606007X

Palmer, J. B., Lane, D., Mayo, D., Schluchter, M., & Leeming, R. (2015). Effects of music therapy on anesthesia requirements and anxiety in women undergoing ambulatory breast surgery for cancer diagnosis and treatment: A randomized controlled trial. *Journal of Clinical Oncology*, *33*, 3162–3168.

Puig, A., Lee, S. M., Goodwin, L., & Sherrard, P. A. D. (2006). The efficacy of creative arts therapies to enhance emotional expression, spirituality, and psychological well-being of newly diagnosed Stage I and Stage II breast cancer patients: A preliminary study. *The Arts in Psychotherapy*, *33*, 218–228.

Romito, F., Lagattolla, F., Costanzo, C., Giotta, F., & Mattioli, V. (2013). Music therapy and emotional expression during chemotherapy. How do breast cancer patients feel? *European Journal of Integrative Medicine*, *5*, 438–442.

Sandel, S. L. P., Judege, J. O., Landry, N., Faria, L., Ouellette, R., & Majczak, M. (2005). Dance and movement program improves quality of life measures in breast cancer survivors. *Cancer Nursing*, *28*, 301–309. http://doi.org/10.1097/00002820-200507000-00011

Stordahl, J. J. (2009). The influence of music on depression, affect, and benefit finding among women at the completion of treatment for breast cancer. *ProQuest Dissertations and Theses*. Retrieved from http://scholarlyrepository.miami.edu/cgi/viewcontent.cgi?article=1336&context=oa_dissertations

Svensk, A.-C. C., Öster, I., Thyme, K. E., Magnusson, E., Sjödin, M., Eisemann, M., … Lindh, J. (2009). Art therapy improves experienced quality of life among women undergoing treatment for breast cancer: A randomized controlled study. *European Journal of Cancer Care*, *18*(1), 69–77.

Thyme, K. E., Sundin, E. C., Wiberg, B., Öster, I., Astrom, S., & Lindh, J. (2009). Individual brief art therapy can be helpful for women with breast cancer: a randomized controlled clinical study. *Palliative & Supportive Care*, *7*(1), 87–95.

Zhou, K., Li, X., Li, J., Liu, M., Dang, S., Wang, D., & Xin, X. (2015). A clinical randomized controlled trial of music therapy and progressive muscle relaxation training in female breast cancer patients after radical mastectomy: Results on depression, anxiety and length of hospital stay. *European Journal of Oncology Nursing*, *19*, 54–59.

Zhou, K. N., Li, X. M., Yan, H., Dang, S. N., & Wang, D. L. (2011). Effects of music therapy on depression and duration of hospital stay of breast cancer patients after radical mastectomy. *Chinese Medical Journal*, *124*, 2321–2327.

Appendix B. Study information and consent form

Patienten-Information und -Einwilligung

Prüfstelle: HSK, Dr. Horst Schmidt Klinik
POD, Psycho-Onkologischer Dienst
Ludwig-Erhard-Str. 100
65199 Wiesbaden
Tel.: 0611-43 2729

Prüfarzt: Dr. Rita Hils
Komm. Direktorin der Klinik für Gynäkologie und Gyn. Onkologie

Titel der Studie

Guided Imagery and Music (GIM) in der kurativen und nicht-kurativen Behandlung von Patientinnen mit Brustkrebs und gynäkologischem Krebs

Prüfplancode: Hertrampf/PhD Study/Ethik-Antrag/130607/Version3

Sehr geehrte Patientin,

wir möchten Sie fragen, ob Sie bereit sind, an der nachfolgend beschriebenen klinischen Prüfung (Studie) teilzunehmen.
Klinische Prüfungen sind notwendig, um Erkenntnisse über die Eignung und Wirkweise verschiedener Verfahren zu gewinnen oder zu erweitern.

Die klinische Prüfung, die wir Ihnen hier vorstellen, wurde – wie es das Gesetz verlangt – von einer Ethikkommission zustimmend bewertet und bei der zuständigen Behörde angezeigt. Diese klinische Prüfung wird an der HSK, Dr. Horst Schmidt Klinik in Wiesbaden in Kooperation des POD, Psycho-Onkologischen Dienstes und der Klinik für Gynäkologie und gynäkologische Onkologie durchgeführt; es sollen insgesamt ungefähr 35 Patientinnen daran teilnehmen. Die Studie wird veranlasst und organisiert durch den POD, Psycho-Onkologischen Dienst der HSK, Dr. Horst Schmidt Klinik Wiesbaden.
Ihre Teilnahme an dieser klinischen Prüfung ist freiwillig. Sie werden in diese Studie also nur dann einbezogen, wenn Sie dazu schriftlich Ihre Einwilligung erklären. Sofern Sie nicht an der klinischen Prüfung teilnehmen oder später aus ihr ausscheiden möchten, erwachsen Ihnen daraus keine Nachteile für Ihre weitere medizinische Behandlung.

Sie wurden bereits auf die geplante Studie angesprochen. Der nachfolgende Text soll Ihnen die Ziele und den Ablauf noch einmal erläutern. Anschließend wird eine Mitarbeiterin des Psycho-Onkologischen Dienstes (POD) das Aufklärungsgespräch mit Ihnen führen. Bitte zögern Sie nicht, alle Punkte anzusprechen, die Ihnen unklar sind. Sie werden danach ausreichend Bedenkzeit erhalten, um über Ihre Teilnahme zu entscheiden.

1. Warum wird diese Prüfung durchgeführt?

In der geplanten klinischen Prüfung wird das psychotherapeutische Verfahren Musik-Imagination zum ersten Mal in Deutschland zur Unterstützung von Krebspatientinnen wissenschaftlich untersucht. Bisherige Studienergebnisse aus anderen klinischen Untersuchungen zeigen positive Effekte für die Patienten. Seit 2006 wird diese Methode bereits im POD, Psycho-Onkologischen Dienst der HSK mit Patientinnen der Klinik für Gynäkologie und gynäkologische Onkologie angewendet; die kontinuierliche interne Auswertung bei insgesamt ca. 250 Patientinnen zeigt durchweg unterstützende Effekte für den Umgang mit der Erkrankung, mit den Nebenwirkungen der medizinischen Behandlung und für die subjektive Lebensqualität. Von der Durchführung dieser klinischen Studie erhoffen wir uns weitere Kenntnisse über die Wirkweise der Musik-Imagination, um dieses Angebot weiterhin kontinuierlich im POD, Psycho-Onkologischen Dienst anbieten zu können.
Im Rahmen der klinischen Studie wird untersucht, wie Musik-Imagination auf Angst und Stimmung, die Befindlichkeit und die Lebensqualität wirkt. Zusätzlich wird überprüft, ob es Unterschiede in der Wirkweise gibt, abhängig davon, welche Krebs-Diagnose und welches medizinische Behandlungsziel für die Patientin vorliegen.

Die Methode Musik-Imagination ist ein psychotherapeutisches Verfahren der Musiktherapie, bei dem die Patientin in einem entspannten Zustand speziell ausgewählte Musikstücke hört und anschließend ihr Erleben (Assoziationen, Gefühle, Körperempfindungen usw.) in einem Mandala kreativ zum Ausdruck bringt. Für die klinische Studie wird diese Methode in einer kleinen Patientengruppe mit 3-6 Teilnehmerinnen durchgeführt und von einer Therapeutin des POD, Psycho-Onkologisches Dienstes begleitet.

2. Nehme ich an dem Verfahren Musik-Imagination auf jeden Fall teil?

Im Rahmen dieser klinischen Prüfung werden zwei Methoden zur Unterstützung von Krebspatientinnen in einer kleinen Gruppe miteinander verglichen: Musik-Imagination und Progressive Muskelentspannung nach Jacobson. Der Vergleich dient dazu, die verschiedenen Wirkweisen der beiden Verfahren besser beurteilen zu können.

Im Falle Ihrer Studienbeteiligung nehmen Sie entweder an der Musik-Imagination oder der Progressiven Muskelentspannung teil. Welches der Verfahren im Falle Ihrer Teilnahme angewendet wird, entscheidet ein zuvor festgelegtes Zufallsverfahren, vergleichbar mit dem Werfen einer Münze; dieses Verfahren wird Randomisierung genannt. Die Wahrscheinlichkeit, Musik-Imagination zu erhalten, beträgt 50 %.

3. Wie ist der Ablauf der Studie und was muss ich bei Teilnahme beachten?

Die Teilnahme an dieser klinischen Prüfung hat keine negativen Auswirkungen auf Ihre aktuelle medizinische Behandlung.

Vor Aufnahme in diese klinische Prüfung werden Sie zu Ihren Vorerkrankungen und Ihrem aktuellen Gesundheitsstatus befragt. Dazu gehört auch das Ausfüllen verschiedener Fragebögen im Rahmen des Psycho-onkologischen Screenings (Eingangserhebung: HADS-D (*Hospital Anxiety and Depression Scale* in deutscher Version) als klinischer Fragebogen zu Angst und Depression; EORTC als Fragebogen zur allgemeinen Lebensqualität von KrebspatientInnen). Und Sie erhalten eine Probesitzung mit Musik-Imagination. Die Möglichkeit Ihrer weiteren Teilnahme an dieser klinischen Prüfung wird von den Ergebnissen dieser Voruntersuchung abhängen.
Die Gesamtdauer der klinischen Studie reicht über 6 Monate. Dafür ist es nur zu bestimmten Zeitpunkten erforderlich, dass Sie persönlich in der Klinik erscheinen. Wenn Sie die Voruntersuchungen erfolgreich absolviert haben und sich freiwillig zur Teilnahme an der Studie bereit erklären, werden Sie per Zufall (randomisiert) zur Musik-Imagination oder zur Progressiven Muskelentspannung zugeteilt. Anschließend nehmen Sie an 6 Sitzungen in einer kleinen Patientinnen-Gruppe von 3-6 Teilnehmerinnen teil. Diese 6 Sitzungen erfolgen innerhalb von 6 Wochen, je 1x wöchentlich, und dauern ca. 60-90 Minuten. Danach erfolgt ein abschließendes Interview. Nach jeweils 4 Wochen und 3 Monaten nach der Gruppenteilnahme erhalten Sie per Post noch einmal die Fragebögen zur Nachuntersuchung.
Für den Erfolg der klinischen Studie und die Stabilität der Untersuchungsgruppen ist es sehr wichtig, dass Sie die vereinbarten Termine einhalten. Sollten Sie aus gesundheitlichen Gründen einmal nicht dazu in der Lage sein, bitten wir Sie, uns rechtzeitig zu informieren.
Bitte informieren Sie uns auch, wenn Sie planen, ein anderes psychotherapeutisches Verfahren während der Studiendauer in Anspruch zu nehmen.

4. Welchen persönlichen Nutzen habe ich von der Teilnahme an der Studie?

Sie werden durch die Teilnahme an dieser Studie voraussichtlich keinen medizinischen Nutzen für Ihre Gesundheit haben. Möglicherweise hilft Ihnen die Teilnahme, besser mit Ihrer Krebserkrankung und den Nebenwirkungen der medizinischen Behandlung umzugehen. Die Ergebnisse der Studie können möglicherweise dazu beitragen, die psychosoziale Behandlung von Krebspatienten zukünftig zu verbessern und besser beurteilen zu können.

5. Welche Risiken sind mit der Teilnahme an der Studie verbunden?

Es sind keine Risiken bekannt.

6. Welche anderen Behandlungsmöglichkeiten gibt es außerhalb der Studie?

Zur psychosozialen Unterstützung während der medizinischen Behandlung Ihrer Erkrankung stehen Ihnen auch die weiteren Angebote des POD, Psycho-Onkologischen Dienstes zur Verfügung: Begleitung, Beratung und Psychotherapie mit Gesprächen

und/oder Musik-Imagination. Die Angebote können nach Absprache bzw. nach Ausschreibung als Einzel-, Paar-, Familien- oder Gruppensitzung wahrgenommen werden.
Auch nach Abschluss der Studienteilnahme oder nach Ausscheiden aus der Studie stehen Ihnen diese Angebote offen.

7. Wer darf an dieser klinischen Prüfung nicht teilnehmen?

An dieser klinischen Prüfung dürfen Sie nicht teilnehmen, wenn Sie gleichzeitig an anderen klinischen Prüfungen oder anderen klinischen Forschungsprojekten im Bereich Psychotherapie teilnehmen. Der Grund dafür ist, dass sonst die Ergebnisse nicht eindeutig den untersuchten Verfahren zugeordnet werden können.

8. Entstehen für mich Kosten durch die Teilnahme an der klinischen Prüfung? Erhalte ich eine Aufwandsentschädigung?

Durch Ihre Teilnahme an dieser klinischen Prüfung entstehen für Sie keine zusätzlichen Kosten.
Für Ihre Teilnahme an dieser klinischen Prüfung erhalten Sie keine Aufwandsentschädigung.

9. Bin ich während der klinischen Prüfung versichert?

Bei der vorliegenden klinischen Prüfung sind die Studienteilnehmer nicht zusätzlich versichert.

10. Werden mir neue Erkenntnisse während der klinischen Prüfung mitgeteilt?

Sie werden über neue Erkenntnisse, die in Bezug auf diese klinische Prüfung bekannt werden und die für Ihre Bereitschaft zur weiteren Teilnahme wesentlich sein können, informiert. Auf dieser Basis können Sie dann Ihre Entscheidung zur weiteren Teilnahme an dieser klinischen Prüfung überdenken.

11. Wer entscheidet, ob ich aus der klinischen Prüfung ausscheide?

Sie können jederzeit, auch ohne Angabe von Gründen, Ihre Teilnahme beenden, ohne dass Ihnen dadurch irgendwelche Nachteile bei Ihrer medizinischen oder psychosozialen Behandlung entstehen.
Unter gewissen Umständen ist es aber auch möglich, dass die Prüfärztin oder die Mitarbeiterinnen des POD, Psycho-Onkologischen Dienstes entscheiden, Ihre Teilnahme an der klinischen Prüfung vorzeitig zu beenden, ohne dass Sie auf die Entscheidung Einfluss haben. Die Gründe hierfür können z. B. sein:

- Ihre weitere Teilnahme an der klinischen Prüfung ist ärztlich nicht mehr vertretbar;
- es wird die gesamte klinische Prüfung abgebrochen.

Sofern Sie sich dazu entschließen, vorzeitig aus der klinischen Prüfung auszuscheiden oder Ihre Teilnahme aus einem anderen der genannten Gründe vorzeitig beendet wird, ist es für Ihre eigene Sicherheit wichtig, dass Sie sich einer empfohlenen abschließenden Kontrolluntersuchung unterziehen. Die Prüfärztin wird mit Ihnen besprechen, wie und wo Ihre weitere Behandlung stattfindet.

12. Was geschieht mit meinen Daten?

Während der klinischen Prüfung werden persönliche Informationen von Ihnen erhoben und in der Prüfstelle in Ihrer persönlichen Akte elektronisch gespeichert. Die für die klinische Prüfung wichtigen Daten werden zusätzlich in pseudonymisierter Form gespeichert, ausgewertet und gegebenenfalls weitergegeben.
Die Daten sind gegen unbefugten Zugriff gesichert. Eine Entschlüsselung erfolgt nur unter den vom Gesetz vorgeschriebenen Voraussetzungen.
Sie haben das Recht, Ihre durch uns gespeicherten Daten einzusehen sowie unrichtige Daten zu korrigieren bzw. zu Unrecht gespeicherte Daten löschen zu lassen.
Einzelheiten, insbesondere zur Möglichkeit eines Widerrufs, entnehmen Sie bitte der Einwilligungserklärung, die im Anschluss an diese Patienteninformation abgedruckt ist.

13. Was geschieht mit meinen Audio- und Video-Aufnahmen und meinen gemalten Bildern?

Die Audio- und Video-Aufnahmen der Gruppensitzungen sowie die Audio-Aufnahmen der Prä-Post-Interviews verbleiben nach Abschluss der klinischen Studie im POD, Psycho-Onkologischen Dienst und werden für 5 Jahre dort aufbewahrt. Zugriff darauf haben lediglich zwei MitarbeiterInnen des POD, Psycho-Onkologischen Dienstes: die Therapeutin, die die Musik-Imagination durchführt (Frau Schönhals-Schlaudt) sowie die Therapeutin, die die Interviews und die Evaluation durchführt (Frau Hertrampf). Bei Widerruf der Einwilligung werden die Aufnahmen nach Rücksprache mit den Teilnehmerinnen entweder verfremdet (schwarze Balken über dem Gesicht, Tonrauschen über unerwünschte Aussagen) oder vernichtet.
Die in der Musik-Imagination gemalten Bilder werden den Teilnehmerinnen nach Abschluss der klinischen Studie im Original ausgehändigt und verbleiben als elektronische Fotodatei im POD, Psycho-Onkologischen Dienst. Das gesamte Material wird für die klinische Studie sowie damit im Zusammenhang stehende wissenschaftliche Veröffentlichungen (Publikationen) und Fachvorträge anonymisiert weiterverwendet.

14. An wen wende ich mich bei weiteren Fragen? Beratungsgespräche an der Prüfstelle

Sie haben stets die Gelegenheit zu weiteren Beratungsgesprächen mit der auf Seite 1 genannten Prüfärztin, weiteren Prüfärzten und den MitarbeiterInnen des POD, Psycho-Onkologischen Dienstes, um weitere Fragen im Zusammenhang mit der klinischen Prüfung zu klären. Auch Fragen, die Ihre Rechte und Pflichten als Patient und Teilnehmer an der klinischen Prüfung betreffen, werden gerne beantwortet.

Prüfstelle: HSK, Dr. Horst Schmidt Klinik
POD, Psycho-Onkologischer Dienst

Prüfarzt: Dr. Rita Hils
Komm. Direktorin der Klinik für Gynäkologie und Gyn.

Titel der Studie

Guided Imagery and Music (GIM) in der kurativen und nicht-kurativen Behandlung von Patientinnen mit Brustkrebs und gynäkologischem Krebs

Prüfplancode: Hertrampf/PhD Study/Ethik-Antrag/130607/Version3

Einwilligungserklärung

_____

Name der Patientin in Druckbuchstaben

geb. am _____ Teilnehmer-Nr. _____

Ich bin in einem persönlichen Gespräch durch den Prüfarzt /eine Mitarbeiterin des POD, Psycho-Onkologischen Dienstes

_____

Name der Ärztin / des Arztes / der Mitarbeiterin des POD

ausführlich und verständlich über das Prüfverfahren und die Vergleichstherapie sowie über Wesen, Bedeutung, Risiken und Tragweite der klinischen Prüfung aufgeklärt worden. Ich habe darüber hinaus den Text der Patienteninformation sowie die hier nachfolgend abgedruckte Datenschutzerklärung gelesen und verstanden. Ich hatte die Gelegenheit, mit dem Prüfarzt oder einer Mitarbeiterin des POD, Psycho-Onkologischen Dienstes über die Durchführung der klinischen Prüfung zu sprechen. Alle meine Fragen wurden zufrieden stellend beantwortet.

Möglichkeit zur Dokumentation zusätzlicher Fragen seitens der Patientin oder sonstiger Aspekte des Aufklärungsgesprächs:

_____
_____
_____
_____
_____

Ich hatte ausreichend Zeit, mich zu entscheiden.

Ich erkläre mich bereit,
an der oben genannten klinischen Prüfung
freiwillig teilzunehmen.

Ein Exemplar der Patienten-Information und -Einwilligung habe ich erhalten. Ein Exemplar verbleibt im Prüfzentrum.

Name der Patientin in Druckbuchstaben

Datum	Unterschrift der **Patientin**

Ich habe das Aufklärungsgespräch geführt und die Einwilligung der Patientin eingeholt.

Name des Prüfarztes/der Prüfärztin / der Mitarbeiterin des POD in Druckbuchstaben

Datum	Unterschrift des aufklärenden **Prüfarztes / der Prüfärztin / der Mitarbeiterin des POD**

Appendix C. Self-report questionnaires

HADS - D

Studien-Code: _____ Datum: _____

Sehr geehrte Patientin, sehr geehrter Patient!
Sie werden von uns wegen körperlicher Beschwerden untersucht und behandelt. Zur vollständigen Beurteilung Ihrer vermuteten oder bereits bekannten Erkrankung bitten wir Sie im vorliegenden Fragebogen um einige persönliche Angaben. Man weiß heute, dass körperliche Krankheit und seelisches Befinden oft eng zusammenhängen. Deshalb beziehen sich die Fragen ausdrücklich auf Ihre allgemeine und seelische Verfassung.
Die Beantwortung ist selbstverständlich freiwillig. Wir bitten jedoch, jede Frage zu beantworten, und zwar so, wie es für Sie persönlich in der letzten Woche am ehesten zutraf. Machen Sie bitte nur ein Kreuz pro Frage und lassen Sie bitte keine Frage aus! Überlegen Sie bitte nicht lange, sondern wählen Sie die Antwort aus, die Ihnen auf Anhieb am zutreffendsten erscheint! Alle Ihre Antworten unterliegen der ärztlichen Schweigepflicht.

Ich fühle mich angespannt oder überreizt	Ich fühle mich in meinen Aktivitäten gebremst
❑ meistens	❑ fast immer
❑ oft	❑ sehr oft
❑ von Zeit zu Zeit/gelegentlich	❑ manchmal
❑ überhaupt nicht	❑ überhaupt nicht
Ich kann mich heute noch so freuen wie früher	**Ich habe manchmal ein ängstliches Gefühl in der Magengegend**
❑ ganz genau so	❑ überhaupt nicht
❑ nicht ganz so sehr	❑ gelegentlich
❑ nur noch ein wenig	❑ ziemlich oft
❑ kaum oder gar nicht	❑ sehr oft
Mich überkommt die ängstliche Vorahnung, dass etwas Schreckliches passieren könnte	**Ich habe das Interesse an meiner äußeren Erscheinung verloren**
❑ ja, sehr stark	❑ ja, stimmt genau
❑ ja, aber nicht allzu stark	❑ ich kümmere mich nicht so sehr darum, wie ich sollte
❑ etwas, aber es macht mir keine Sorgen	❑ möglicherweise kümmere ich mich zuwenig darum
❑ überhaupt nicht	❑ ich kümmere mich so viel darum wie immer
Ich kann lachen und die lustige Seite der Dinge sehen	**Ich fühle mich rastlos, muss immer in Bewegung sein**
❑ ja, so viel wie immer	❑ ja, tatsächlich sehr
❑ nicht mehr ganz so viel	❑ ziemlich
❑ inzwischen viel weniger	❑ nicht sehr
❑ überhaupt nicht	❑ überhaupt nicht
Mir gehen beunruhigende Gedanken durch den Kopf	**Ich blicke mit Freude in die Zukunft**
❑ einen Großteil der Zeit	❑ ja, sehr
❑ verhältnismäßig oft	❑ eher weniger als früher
❑ von Zeit zu Zeit, aber nicht allzu oft	❑ viel weniger als früher
❑ nur gelegentlich/nie	❑ kaum bis gar nicht
Ich fühle mich glücklich	**Mich überkommt plötzlich ein panikartiger Zustand**
❑ überhaupt nicht	❑ ja, tatsächlich sehr oft
❑ selten	❑ ziemlich oft
❑ manchmal	❑ nicht sehr oft
❑ meistens	❑ überhaupt nicht
Ich kann behaglich dasitzen und mich entspannen	**Ich kann mich an einem guten Buch, einer Radio- oder Fernsehsendung freuen**
❑ ja, natürlich	❑ oft
❑ gewöhnlich schon	❑ manchmal
❑ nicht oft	❑ eher selten
❑ überhaupt nicht	❑ sehr selten

EORTC QLQ-C30 (version 3)

Wir sind an einigen Angaben interessiert, die Sie und Ihre Gesundheit betreffen. Bitte beantworten Sie die folgenden Fragen selbst, indem Sie die Zahl ankreuzen, die am besten auf Sie zutrifft. Es gibt keine "richtigen" oder "falschen" Antworten. Ihre Angaben werden streng vertraulich behandelt.

Bitte tragen Sie Ihre erste Initial ein: |___|
Ihr Geburtstag (Tag, Monat, Jahr): |__|__||__|__||__|__|__|__|
Das heutige Datum (Tag, Monat, Jahr): |__|__||__|__||__|__|__|__|

	Überhaupt nicht	Wenig	Mäßig	Sehr
1. Bereitet es Ihnen Schwierigkeiten sich körperlich anzustrengen (z.B. eine schwere Einkaufstasche oder einen Koffer zu tragen)?	1	2	3	4
2. Bereitet es Ihnen Schwierigkeiten, einen längeren Spaziergang zu machen?	1	2	3	4
3. Bereitet es Ihnen Schwierigkeiten, eine kurze Strecke außer Haus zu gehen?	1	2	3	4
4. Müssen Sie tagsüber im Bett liegen oder in einem Sessel sitzen?	1	2	3	4
5. Brauchen Sie Hilfe beim Essen, Anziehen, Waschen oder Benutzen der Toilette?	1	2	3	4

Während der letzten Woche:	Überhaupt nicht	Wenig	Mäßig	Sehr
6. Waren Sie bei Ihrer Arbeit oder bei anderen tagtäglichen Beschäftigungen eingeschränkt?	1	2	3	4
7. Waren Sie bei Ihren Hobbys oder anderen Freizeitbeschäftigungen eingeschränkt?	1	2	3	4
8. Waren Sie kurzatmig?	1	2	3	4
9. Hatten Sie Schmerzen?	1	2	3	4
10. Mussten Sie sich ausruhen?	1	2	3	4
11. Hatten Sie Schlafstörungen?	1	2	3	4
12. Fühlten Sie sich schwach?	1	2	3	4
13. Hatten Sie Appetitmangel?	1	2	3	4
14. War Ihnen übel?	1	2	3	4
15. Haben Sie erbrochen?	1	2	3	4

Bitte wenden

Während der letzten Woche:	Überhaupt

		nicht	Wenig	Mäßig	Sehr
16.	Hatten Sie Verstopfung?	1	2	3	4
17.	Hatten Sie Durchfall?	1	2	3	4
18.	Waren Sie müde?	1	2	3	4
19.	Fühlten Sie sich durch Schmerzen in Ihrem alltäglichen Leben beeinträchtigt?	1	2	3	4
20.	Hatten Sie Schwierigkeiten sich auf etwas zu konzentrieren, z.B. auf das Zeitunglesen oder das Fernsehen?	1	2	3	4
21.	Fühlten Sie sich angespannt?	1	2	3	4
22.	Haben Sie sich Sorgen gemacht?	1	2	3	4
23.	Waren Sie reizbar?	1	2	3	4
24.	Fühlten Sie sich niedergeschlagen?	1	2	3	4
25.	Hatten Sie Schwierigkeiten, sich an Dinge zu erinnern?	1	2	3	4
26.	Hat Ihr körperlicher Zustand oder Ihre medizinische Behandlung Ihr Familienleben beeinträchtigt?	1	2	3	4
27.	Hat Ihr körperlicher Zustand oder Ihre medizinische Behandlung Ihr Zusammensein oder Ihre gemeinsamen Unternehmungen mit anderen Menschen beeinträchtigt?	1	2	3	4
28.	Hat Ihr körperlicher Zustand oder Ihre medizinische Behandlung für Sie finanzielle Schwierigkeiten mit sich gebracht?	1	2	3	4

Bitte kreuzen Sie bei den folgenden Fragen die Zahl zwischen 1 und 7 an, die am besten auf Sie zutrifft

29. Wie würden Sie insgesamt Ihren Gesundheitszustand während der letzten Woche einschätzen?

1	2	3	4	5	6	7
sehr schlecht						ausgezeichnet

30. Wie würden Sie insgesamt Ihre Lebensqualität während der letzten Woche einschätzen?

1	2	3	4	5	6	7
sehr schlecht						ausgezeichnet

BASLER BEFINDLICHKEITSFRAGEBOGEN

Datum: _____

☐ Bogen prä

☐ Bogen post

Studien-Code: ☐☐☐☐☐☐☐☐☐☐☐☐

(Initialen der Eltern, Ihr Geburtsjahr, Diagnose)

z.B.: A A B B 1 9 6 2 C 5 0

Liebe Patientin,

bitte schätzen Sie hier möglichst spontan Ihre momentane Befindlichkeit ein.
Bitte machen Sie genau ein Kreuz pro Zeile. Es gibt keine richtigen oder falschen Antworten!

Vielen Dank für Ihre Unterstützung.

Ich fühle mich jetzt....

	stark	mittel	leicht	weder/noch	leicht	mittel	stark	
ruhig								nervös
müde								frisch
redselig								verschwiegen
unaufmerksam								aufmerksam
unausgeglichen								ausgeglichen
gestärkt								geschwächt
verschlossen								mitteilsam
wachsam								zerstreut
sicher								unsicher
kraftlos								tatkräftig
kontaktfreudig								scheu
unkonzentriert								konzentriert
ängstlich								nicht ängstlich
gesund								krank
zurückgezogen								gesellig
zielstrebig								ablenkbar

Appendix D. Assessment – Semi-structured interview guide

HSK Verbundenes Unternehmen der RHÖN-KLINIKUM AKTIENGESELLSCHAFT

AALBORG UNIVERSITET

Assessment-Interview Guide

Participant code:
Date:

Remind the woman that I have not had insight in the GrMI process and that the music therapist will not be informed about the content of this interview.

Questions on socio-demographic and medical background

What is your family status?	Do you have any children?	Number and age?
How is your educational status?	Qualification?	Work status?

How is your living situation?

How do you perceive your social network?

How would you describe your current health status?

Are there currently any physical and/or psychological symptoms/treatment side-effects that affect you?
If so, which ones? Please describe intensity and characteristics if possible.

- nausea
- vomiting
- difficulties in breathing / dyspnoea
- difficulties in swallowing
- muscle weakness or numbness
- mood swings
- stress
- depressive mood or thoughts
- fatigue
- anxiety
- demoralising thoughts
- sleep disturbance
- difficulties in sexual activity
- other

.....

How would you describe your current quality of life?

How would you describe your attitude towards the medical treatment?

How would you describe your relation or attitude towards your cancer illness? If possible, please give a metaphor.

How would ou describe your interaction and communication with physicians and medical staff at the hospital?

How would ou describe your interaction and communication with your family and friends?

How do you perceive yourself and your body? Please provide a metaphor, if possible.

What gives you strength? What are your personal resources?

Are you currently undergoing psychotherapeutic treatment?

Do you have any previous experiences with psychotherapy?

What are your expectations and hopes for this study?

.....
.....
.....
.....

Questions on music

What role does music play in your life? Please describe.

.....
.....

Is there a musical piece of special importance to you? Please describe.

.....
.....

Which music or instrument could be difficult for you to hear? Do you recall any problematic experiences or memories in relation to music or a special instrument? Please describe.

.....
.....
.....

Questions on previous relaxation and imagery experiences

Haben Sie bereits Erfahrung mit **Entspannungsverfahren** und **Imaginationsverfahren**?
□ Ja □ Nein

Wenn ja, welche? Bitte beschreiben Sie.

.....
.....
.....
.....

Open issues or questions

Is there anything else important for you to ask or address right now that should stay between us here in this room? Any further comments?

.....
.....
.....
.....
.....

Appendix E. Assessment – PMR and MI induction

Nehmen Sie nun Ihren Kopf wahr. Spannen Sie Ihre Gesichtsmuskeln ein wenig an, halten Sie die Spannung kurz und lassen Sie dann wieder los. Spüren Sie den Unterschied zwischen Anspannung und Entspannung.

Nehmen Sie auch Ihren Hals und die Schultern wahr. Ziehen Sie die Schultern hoch bis zu den Ohren, halten Sie die Spannung ein wenig und lassen Sie wieder los. Spüren Sie nach, wie es sich in ihrem Körper anfühlt.

Nehmen Sie nun Ihre Arme wahr. Beugen Sie jetzt den rechten Arm und spannen Sie die Muskeln an. Halten Sie die Spannung ein wenig und lassen Sie wieder los. Beugen Sie jetzt den linken Arm und spannen Sie die Muskeln an. Halten Sie die Spannung ein wenig und lassen Sie wieder los.

Nehmen Sie auch Ihre Hände wahr. Machen Sie mit der rechten Hand eine Faust und spannen Sie die Muskeln an. Halten Sie die Spannung ein wenig und lassen Sie wieder los. Machen Sie mit der linken Hand eine Faust und spannen Sie die Muskeln an. Halten Sie die Spannung ein wenig und lassen Sie wieder los.

Nehmen Sie nun Ihren Brustkorb und den Bauch mit den inneren Organen wahr. Spannen Sie die Muskeln in diesem Bereich an, halten Sie die Spannung ein wenig und lassen Sie wieder los.

Nehmen Sie auch Ihr Becken und das Gesäß wahr. Spannen Sie beide Pobacken an, halten Sie die Spannung ein wenig und lassen Sie wieder los.

Nehmen Sie nun Ihre Beine wahr. Spannen Sie die Muskeln im rechten Bein an, halten Sie die Spannung ein wenig und lassen Sie wieder los. Spannen Sie nun die Muskeln im linken Bein an, halten Sie die Spannung ein wenig und lassen Sie wieder los.

Nehmen Sie auch Ihre Füße wahr. Ziehen Sie Ihren rechten Fuß zum Körper, so dass die Zehen zum Kopf zeigen. Halten Sie die Spannung ein wenig und lassen Sie wieder los.

Ziehen Sie nun Ihren linken Fuß zum Körper, so dass die Zehen zum Kopf zeigen. Halten Sie die Spannung ein wenig und lassen Sie wieder los.

Spüren Sie nun noch mal Ihren Körper als Ganzes, wie er jetzt gerade ist.

Nehmen Sie jetzt Ihren Atem wahr, wie er gleichmäßig ein- und ausströmt, ohne dass Sie etwas dafür tun müssen. Atmen Sie ganz in Ihrem Tempo und so tief, wie es für Sie gerade angenehm ist. Nehmen Sie beim Einatmen frische Luft und Energie in Ihren Körper auf und schicken Sie sie in jede Körperzelle. Lassen Sie sich beim Ausatmen ein wenig Anspannung nach außen abgeben.

Lassen Sie sich mit jedem Atemzug ein wenig mehr zu sich kommen. Wichtig sind jetzt nur Sie und dass es Ihnen gut geht.

Und nun stellen Sie sich ein Licht oder eine Energie in einer Farbe vor, die Ihnen jetzt gut tut ... die zu Ihnen passt.... vielleicht hat es in Ihrem Körper ein Zentrum oder eine Quelle, wo dieses Licht und die Farbe entsteht und sich ausbreiten kann.... lassen Sie dieses Licht und die Farbe mit Ihrem Atemstrom sich im ganzen Körper ausbreiten ..so viel wie Sie es brauchen... lassen Sie es in jede Zelle Ihres Körpers dieses Licht einströmen und Sie stärken.....Spüren Sie die Energie dieses Lichts und seiner Farbe in Ihrem ganzen Leibe ... und wenn die Musik nun beginnt, nehmen Sie sie mit in dieses Erleben hinein.

Alles, was auftaucht an Bildern, Gefühlen, Körperempfindungen usw., darf einfach da sein und ist in Ordnung.

Rücknahme:

Die Musik ist zum Ende gekommen. Lassen Sie sie aber noch ein wenig in sich nachklingen. …Lassen Sie sich das, was Ihnen im Musikerleben gerade wichtig war, mit den Zellen Ihres Körpers verankern. Nehmen Sie sich dafür ruhig etwas Zeit. ... Richten Sie Ihre Aufmerksamkeit nun auf die Geräusche hier im Raum, nehmen Sie diesen Raum hier wahr...und Ihren Körper... Ihren Atem ... und wenn Sie so weit sind, lassen Sie Ihren Körper tun, was er möchte: gähnen, sich strecken, sich räkeln... strecken Sie Arme und Beine... mal tief einatmen und tief ausatmen....und ganz allmählich die Augen öffnen und wieder hier in diesen Raum kommen.

Appendix F. Ethic´s approval

Anlage zum Votum der Studie

HSK Dr. Horst Schmidt Klinik, Wiesbaden / Dr. med. Rita Hils

Guided Imagery and Music (GIM) in der kurativen und nicht-kurativen Behandlung von Patientinnen mit Brustkrebs und gynäkologischem Krebs

FF 33/2013

Mitglieder der Ethik-Kommission bei der Landesärztekammer Hessen, die in der Sitzung am **19. März 2013** ein Votum zu der oben bezeichneten Studie abgegeben haben.

Prof. Dr. med. Sebastian Harder
Klinischer Pharmakologe

Dr. med. Jochen Graff
Klinischer Pharmakologe

Prof. Dr. med. Hansjürgen Bratzke
Rechtsmediziner

Prof. Dr. med. Bernhard Bauer
Neurochirurg

Prof. Dr. med. Hansjörg Wilhelm Seyberth
Kinder- und Jugendmediziner

PD Dr. med. Thomas Konrad
Endokrinologe

PD Dr. med. Michael Weber
Kardiologe

Dr. iur. Annkatrin Helberg-Lubinski
Rechtsanwältin

Appendix G. Group case article

Hertrampf, R.-S. (2015): Group Music and Imagery (GrpMI) Therapy with Female Cancer Patients. In: Grocke, D. & Moe, T. (Eds.), *Guided Imagery and Music (GIM) and Music Imagery methods for individual and group therapy*, 243–252. JKP, Barcelona.

CHAPTER 21

Group Music and Imagery (GrpMI) Therapy with Female Cancer Patients

Ruth Hertrampf

The HSK, Dr. Horst Schmidt Kliniken in Wiesbaden, Germany, is an important hospital for oncologic treatment, and its five cancer centers are certified by the German oncology association (Deutsche Krebsgesellschaft e.V.). For the patients this ensures both their medical treatment as well as their psycho-social care are at a high level.

Group Music and Imagery (GrpMI) therapy sessions, conducted by a trained GIM therapist, are integrated into psycho-oncologic therapy for female outpatients with breast cancer or gynecological cancers. Each GrpMI session takes about 90 minutes. Depending on the group size (3–6 participants) and group needs, the duration can vary and take up to 120 minutes. The women participating in the GrpMI therapy may be undergoing curative or palliative outpatient medical treatment for their breast cancer or gynecological cancer at the hospital and are suffering from multiple complex treatment-related side-effects such as pain, fatigue, sleeping problems, nausea, hair loss, problems in sexuality, and mood swings (Angenendt, Schütze-Kreilkamp and Tschuschke, 2007; Aulbert, Nauck and Radbruch, 2011; Bradt *et al.*, 2011; Hübert, 2008; King and Hinds, 2003; Klaschik and Radbruch, 2007; Singer, Das-Munshi and Brahler, 2010; Clark *et al.*, 2010). The therapeutic intention is to support the patients at the beginning of their outpatient treatment in their individual coping process and dealing with the treatment-related side-effects with a resource-oriented short-term GrpMI therapy over six sessions.

Theoretical approach

Within the GrpMI therapy format, three 'levels of practice' (Wheeler, 1983) can be applied in accordance with the stability and necessity of the group: 'supportive', 're-educative' and 'reconstructive' (Summer, 2002, 2009). At the supportive level, the interventions are structured and serve the purpose of building trust, connection, support, structure and security for the group. The 're-educative' level can be described as a working level with

more challenging and confronting aspects. At the 'reconstructive' level, personal and transpersonal transformation processes are facilitated (Summer, 2002, 2009). For the clinical work with cancer patients in only six GrpMI sessions, the focus is on 'supportive' and 're-educative' work even though reconstructive aspects can occur.

The GrpMI therapy format used here is based on the definitions of GrpMI by Bruscia (2002), Grocke and Wigram (2007), and Summer (2002). They describe it as a group format using music and imagery without verbal interaction between the therapist and the group members while listening to the music. The inner structure of each GrpMI session is similar to a BMGIM session and consists of a pre-music talk, an induction with elements of Progressive Muscle Relaxation (PMR) and the group focus for the session, the music listening, creative processing in the mandala drawing, and the post-music talk.

Music selection criteria

The musical pieces are selected according to Bonde's music intensity profiles (2010), using only 'supportive' and 'mixed supportive-challenging' pieces due to the limited number of therapy sessions and the overall situation of the participants. Their duration varies between 2:21 and 10:15. Music with a 'supportive' intensity profile is clearly structured and simple in form, harmony and dynamics, thus evoking rather static imagery for safety and well-being. Music with a mixed intensity profile facilitates personal exploration in rather dynamic imagery through supportive beginnings and endings and challenging parts in the middle of the musical piece.

The music selections are taken from the music programs used for BMGIM therapy and therefore mainly consist of classical music pieces. For the GrpMI sessions described below, the following six music selections were used:

1. Vaughan Williams, *Prelude on Rhosymedre* (4:11)
2. Haydn, *Cello Concerto in C*, Adagio (9:42)
3. Shostakovich, *Piano Concerto No. 2*, Andante (6:36)
4. Beethoven, *Symphony No. 6*, 'Pastorale', Allegretto (8:59)
5. Vaughan Williams, *Fantasia on Greensleeves* (4:48)
6. Beethoven, *Piano Concerto # 5*, Adagio (7:39).

Group Music and Imagery (GrpMI) with female cancer patients

The GrpMI sessions are conducted in a small group setting with three to six participants heterogeneously mixed regarding their cancer diagnosis and treatment perspective. Within the group setting the focus lies on the individual process of each group member. Table 21.1 gives an overview of the GrpMI structure in six sessions including general focus, musical profile (Bonde, 2010) and selected musical piece of each session.

Table 21.1 Overview of GrpMI structure

	Session 1	**Session 2**	**Session 3**	**Session 4**	**Session 5**	**Session 6**
Session focus of GrpMI process	Group process, getting acquainted with method, group and therapist	Individual process	Individual process in depth	Group process in depth	Stabilization/ integration	Stabilization/ integration/ parting
Musical profile	Supportive	Supportive	Mixed supportive-challenging	Mixed supportive-challenging	Supportive	Supportive
Music selection	Vaughan Williams: *Prelude on Rhosymedre* (4:11)	Haydn: *Cello Concerto:* Adagio (9:42)	Shostakovich: *Piano Concerto,* Andante (6:36)	Beethoven: *Symphony No. 6,* Allegretto (8:59)	Vaughan Williams: *Fantasia on Greensleeves* (4:48)	Beethoven: *Piano Concerto # 5,* Adagio (7:39)

In the first session, the participants get acquainted with the other group members and the therapist and experience their first GrpMI. They have had one music and imagination experience during the assessment phase in an individual setting. The aim is to provide a secure framework for the participants to make them feel safe in the group and to help them open up in the process. In the second and third sessions, the participants will be able to focus more on their individual process within the group setting, first still being supported by a safe and well-structured framework, and later deepening the emotional process with a mixed musical profile. In the fourth session, the focus can get back from the individual perspective to the group as a whole, deepening the group process. The last two sessions focus on the stabilization and integration of the individual and group experiences during the GrpMI therapy, closing the therapeutic process with supportive music selections. If the group is fragile and the therapeutic indication during sessions three and/or four implicates otherwise, the music therapist is free to use supportive music again.

The participants and their experiences

The three women participating in the GrpMI therapy described below were undergoing outpatient chemotherapy treatment in the hospital and suffering from multiple treatment-related side-effects. They were heterogeneous regarding their diagnosis, treatment perspective, age, and social and family background. All three were very motivated and engaged in an insight-oriented therapy. They were involved in a research study that included video and audio documentation of six GrpMI therapy sessions and audio-taped interviews with the group members pre and post the GrpMI therapy process. The findings of the study therefore describe the clients' perspective of their personal GrpMI process and what they experienced as helpful from working with music and imagery in a small group setting in relation to their dealing with the cancer and treatment-related side-effects. Four major themes emerged from the interview data:

1. the role of the music
2. the role of the imagery
3. the role of the group setting
4. the important aspects of the GrpMI experience.

THE ROLE OF THE MUSIC

Within the GrpMI setting, the three women experienced the music both as an emotional container and as a helpful device to get in contact with their body, their inner depth and their unconscious. They felt the music led and carried them into a different world, showed them hidden parts of themselves, and served as a facilitator for their imagery, making it rich and productive. The imagery was driven by the musical development, and reporting their music listening and mandala drawing experience, the participants

often related to particular instruments, passages, melodic motives, and changes in the musical structure. One participant commented, 'The cellos were brownish…like trees standing firmly…very mighty…and all around the water, the air and a little bit of sun'. She had re-imagined her recent holiday with the family in the countryside that gave her strength (Session 1, Vaughan Williams: *Prelude on Rhosymedre*). Another group member experienced the same music as 'an undulation of the music, like a river…a wave I can dock at as a fountain of life'.

Thus, it was possible for them to defocus from their disease and the complex side-effects of the medical treatment and make room for inner needs, (hidden) resources and imagery that helped to better understand their personal situation, showed a perspective toward problem solutions and an integration in their daily life (Burns, 1999, 2002).

It also helped experiencing transpersonal and existential experiences connected with the cancer. 'I experienced the music as very consoling and light, also heavenly…but then also in a way I have to say I don't know where the journey is going with the music… could also go into eternity…as if I was accompanied into different spheres, as if I was leaving this world, I could imagine having such a music accompanying me…but I don't want that yet, that's why it made me sad' (Session 1).

In the post-GrpMI therapy interview all three women remembered and could describe the musical pieces that had led to their personal key imagery in the GrpMI process. When asked what the music brought to them in the GrpMI therapy, they reported that it conveyed hope, support, consolation, vital energy and courage to face life, and they now used music in their daily life more consciously as part of their self-care and to fight treatment side-effects such as sleeping problems which could not be controlled medically.

THE ROLE OF THE IMAGERY

The imagery helped the participants to explore their inner self and confront themselves with personal conflicts, existential issues, anxiety and fear of progression of the disease on a symbolic level, which allowed security and distance to dangerous material until the person was ready to integrate it from the unconscious into the conscious (Bruscia, 1991). In Session 4 (Beethoven: *Symphony No. 6,* 'Pastorale', Allegretto), one participant combined the strengthening energetic imagery of nature (like in Session 1) with the image of her liver metastases, leaving the metastases outside the mandala circle as of '*minor relevance*'. In the last session (Session 6, which included Beethoven's *Piano Concerto No. 5*, Adagio), she experienced a transformation of this image. She felt the strong relationship between her unconscious and her conscious mind, which is reflected in her mandala where she used the same colors and motives as in Session 4, now integrating the metastases into the mandala circle as a part of her body and self-image (see Plates 21.1–21.3).

As Bruscia (1991) comments, 'images also instruct and inform the psyche by bringing forth the wisdom that already lies within the person' (p. 596). Searching for a balanced way to communicate her feelings between hope and anxiety to the outer world, one woman found a key image for herself with Shostakovich's *Piano Concerto No. 2*, Andante,

in Session 3: 'The music made me realize that there are loud and quiet, quick and slow sounds…sounds in between…like a keyboard of life…and I can decide what and how to play.' This image stayed with her and the other group members throughout the GrpMI process as a helpful representative for self-determination and self-protection. To the same piece of music, another one imagined a Harlequin with one laughing and one crying eye, representing for her both polarities of her cancer integrated in one key image, which also stayed with her as her personal companion.

The imagery consisted of symbols and representations of the cancer (treatment), personal resources, inner needs, dealing with self-protection and self-care in relationships, and integration of a new body and self-image. Like the music selections, all group members remembered their own key images and important mandalas in connection with their personal issues and important symbols in the post-GrpMI interviews. Mostly they were able to describe the musical piece that was key to them. Apart from their own personal imagery, the participants also reported key images and important mandalas of the other group members in detail, that had an impact on their personal development throughout the GrpMI therapy.

THE ROLE OF THE GROUP SETTING

The group members reported that the small group setting provided a safe and secure room for them and that they felt deeply connected, supported and understood. They described the group as being concerned, thoughtful, empathetic, trustful and balanced in giving and taking. The feeling of 'all *being in the same boat*' made it easier for them to communicate and share their personal issues, thoughts, emotions, worries, anxieties and hopes in the solidary circle of cancer patients than with family, friends and colleagues.

Even though the focus of GrpMI therapy here is on the individual process within the group setting, group dynamics occur and have an important impact on the individual's development. Thus, Yalom's 'curative factors' of group therapy (1985) can be identified in the GrpMI work. Based on verbal interaction in the therapy sessions and the post-therapy interviews, universality, group cohesiveness, instillation of hope, imitative behavior, and catharsis seemed to be most important in the process for the participants.

One participant also mentioned that it sometimes was difficult for her to freely share her hopes for the future and positive emotions with the other two women because they were more advanced in the cancer disease and suffered more from physical limitations.

THE IMPORTANT ASPECTS OF THE GrpMI EXPERIENCE

The patients described their overall GrpMI experience as a 'journey inward' or 'helpful kit to deal with the cancer'. For all three group members the shared group experience itself was very important (see above). They found it very helpful not only to focus on the disease but also to work together on supportive and useful aspects to deal with the cancer, which they felt they could take home with them in the images like a gift. One participant described as most important to her 'the recognition that I already can deal

well with the disease and I feel calm with myself…and with every imagery experience I could explore different parts of myself. I was positively surprised that I could integrate so much vitality and zest for life into the group.'

Regarding the different aspects of the GrpMI setting, they found the pre-music talk very helpful to determine the personal issues the group members brought to each session ('what moves me'), being concentrated in the focus formulated by the therapist. The induction was helpful to relax, and to feel and be aware of the whole body or different parts of it; it also helped to open up the senses and prepare for the music listening experience, which led into inner depth and evoked imagery, and helped link the unconscious with the conscious. The music and imagery experience was transported in the synthesis of the mandala drawing, which made key imagery, the connection between different key images and their transformational development over the process visible for the patients themselves, the other group members and the therapist. The mandala drawings were important for the group members to connect to each other's imagery experience and associate personal ideas, which gave a broader perspective and new impulses to the personal perception.

Conclusion: Summary of therapeutic outcome

This chapter describes how resource-oriented short-term Group Music and Imagery therapy with female cancer patients undergoing outpatient chemotherapy can contribute to the individual coping process and a better handling of the disease and treatment-related side-effects. It shows how the different aspects of the GrpMI setting (music, imagery, mandala drawing, group experience) are experienced by the participants and what they gain from the group experience for their personal development.

Summarizing, the participants described as an overall benefit of their GrpMI experience that their personal key images and those of the other group members stay with them as their 'personal treasure' which is available as an important new resource in their daily life whenever they feel in need.

Furthermore the following aspects were reported by the participants as positive outcomes in the post-GrpMI interviews, conducted as semi-structured interviews in an individual therapy setting to review each woman's experience of her personal GrpMI therapy process:

- re-discovering personal resources to cope with limitations set by the cancer and its treatment (e.g. using music to overcome treatment-related sleeping problems; finding alternatives for 'natural mothering' after an ovarian dissection in teaching and caring for children and adolescents)
- integration of a new body and self-image (e.g. integrating metastases into the mandala circle; expanded body awareness)

- changes in behavior (e.g. feeling more relaxed and acting more calmly in stressful situations; living more strongly in the here and now, being more aware of personal priorities such as spending precious time with loved ones and taking care of her body; overcoming interpersonal conflicts, taking initiative through group encouragement; continuing using music in daily life for personal exploration)
- changes in communication (e.g. improving the capacity to formulate personal needs and limitations towards family, friends and colleagues)
- changes in the perception of the cancer (e.g. positive metaphoric attribution as 'a motor for change', 'a new chance to get in contact again with my siblings').

As indicated at the beginning, further research is needed in the field to better understand the impact of music and imagery therapy work with cancer patients.

Note

Due to the speedy progression of the cancer, one participant finally received palliative care in the hospital ward and died there approximately two weeks after GrpMI therapy. Another group member died peacefully in her sleep about four weeks after completing GrpMI therapy.

References

Angenendt, G., Schütze-Kreilkamp, U. and Tschuschke, V. (2007) *Praxis der Psychoonkologie: Psychoedukation, Beratung und Therapie.* Stuttgart: Hippokrates.

Aulbert, E., Nauck, F. and Radbruch, L. (2011) *Lehrbuch der Palliativmedizin.* Stuttgart: Schattauer.

Bonde, L. O. (2010) Music as support and challenge – Group Music and Imagery with psychiatric outpatients. *Jahrbuch Musiktherapie, 6,* 89–118.

Bradt, J., Dileo, C., Grocke, D. and Magill, L. (2011) Music interventions for improving psychological and physical outcomes in cancer patients. *Cochrane Database of Systematic Reviews 2011,* Issue 8.

Bruscia, K. (2002) The boundaries of Guided Imagery and Music (GIM) and the Bonny Method. In K. Bruscia and D. Grocke (eds) *Guided Imagery and Music: The Bonny Method and Beyond* (pp. 37–61). Gilsum, NH: Barcelona Publishers.

Bruscia, K. E. (1991) Embracing life with AIDS: Psychotherapy through Guided Imagery and Music (GIM). In K. E. Bruscia (ed.) *Case Studies in Music Therapy* (pp. 581–602). Gilsum, NH: Barcelona Publishers.

Burns, D. S. (2002) Guided Imagery and Music (GIM) in the treatment of individuals with chronic illness. In K. E. Bruscia and D. E. Grocke (eds) *Guided Imagery and Music: The Bonny Method and Beyond* (pp. 171–186). Gilsum, NH: Barcelona Publishers.

Burns, D. S. (1999) *The effect of the Bonny Method of Guided Imagery and Music on the quality of life and cortisol levels of cancer patients.* Doctoral dissertation, University of Kansas.

Clark, K., Loscalzo, M., Trask, P., Zabora, J. and Philip, E. (2010) Psychological distress in patients with pancreatic cancer: An understudied group. *Psycho-Oncology, 19,* 12, 1313–1320.

Grocke, D. and Wigram, T. (2007) *Receptive Methods in Music Therapy: Techniques and Clinical Applications for Music Therapy Clinicians, Educators and Students.* London: Jessica Kingsley Publishers.

Hübert, R. S. (2008) *Musiktherapie in der Palliativmedizin: Entwicklung eines Evaluationsinstrumentariums.* Unpublished Master's thesis, SRH University of Applied Science, Heidelberg.

King, C. R. and Hinds, P. S. (2003) *Quality of Life from Nursing and Patient Perspectives: Theory, Research and Practice.* Sudbury, MA: Jones and Bartlett.

Klaschik, E. and Radbruch, L. (2007) *Lehrbuch der Palliativmedizin.* Stuttgart: Schattauer.

Singer, S., Das-Munshi, J. and Brahler, E. (2010) Prevalence of mental health conditions in cancer patients in acute care – a meta-analysis. *Annals of Oncology, 21,* 925–930.

Summer, L. (2009) Client perspectives of the music in Guided Imagery and Music. Unpublished doctoral dissertation. Aalborg University, Denmark.

Summer, L. (2002) Group music and imagery therapy: Emergent receptive techniques in music therapy practice. In K. E. Bruscia and D. E. Grocke (eds) *Guided Imagery and Music: The Bonny Method and Beyond.* Gilsum, NH: Barcelona Publishers.

Wheeler, B. (1983) A psychotherapeutic classification of music therapy practices: A continuum of procedures. *Music Therapy Perspectives, 1,* 2, 8–12.

Yalom, I. D. (1985) *Theory and Practice of Group Psychotherapy* (3rd edition). New York, NY: BAsic Books.

Plate 21.1 Mandala 1 'Ball of Energy' (Session 4)

Plate 21.2 Mandala 2 'Breaking through the Dark Sky' (Session 5)

Plate 21.3 Mandala 3 'From the Unconscious into the Conscious Mind' (Session 6)

Appendix H. Mandalas Vaughan Williams: Prelude on Rhosymedre

HOPE FOR LIFE – LIGHT AND BODY

„Foundation of life – vitality – zest for life – it´s all for us“

BEING IN CONNECTION

„I feel connected with the fountain of life and my loved ones.“

MY STRENGTH – FROM THE DARK INTO THE LIGHT

„Using all my gathered strength for the next chemotherapy.“

MY PROCESS WITH THE CANCER

„I know everything will turn out well.“

IT SHALL JUST STAY LIKE THIS

„I want to feel happy.“

2 SIDES

„The light overbalances the dark.“

Appendix I. Mandalas Shostakovich Piano Concerto No.2, Andante

DANCING HARLEKIN

„Go through this time with one laughing and one crying eye and confidence“

KEYBOARD OF LIFE

„I want to learn how to play the keyboard of life with loud and soft and high and low sounds, being in balance with myself and my inner need for protection“

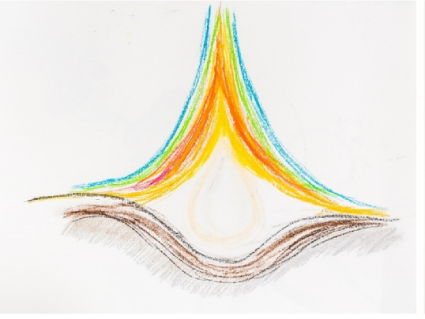
CONFUSION AND HARMONY

„Relaxation – breathing – yoga.“

Appendix J. Mandalas GrpMI Process Charlotte

BEING IN CONNECTION

"I feel connected with the fountain of life and my loved ones"



CHANGE OF THINKING IN PROCESS

"I want to build trust – accept my past as a nurture soil for a colorful future – I feel deep gratitude for just being"

KEYBOARD OF LIFE

"I want to learn how to play the keyboard of life with loud and soft sounds, being in balance with myself and my inner need for protection"

MY LAKE

"Trying out closeness and distance from the depth of my inner lake"

MOUNTAIN - ILLNESS

"After climbing up a mountain, there´s always a special treat – getting access to my personal energy of life"

MY PRIMA-BALLERINA

"I want to dance again and nurture my creativity"

ISSN (online): 2246-123X
ISBN (online): 978-87-7210-053-1

AALBORG UNIVERSITY PRESS