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The Potential of Positive Art Therapy in Psycho-Oncology: A feasibility randomized controlled study

Master Thesis
Positive Clinical Psychology and Technology (M. Sc.)

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Viersen, December 12th, 2022
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For my loved ones-

In this world or another.

Abstract

Limited psycho-oncological support is a significant health disadvantage for patients with breast cancer. The development of new treatment options can expand the range of treatments available and thus support and strengthen unreached patient groups. An interplay of positive psychology and art therapy could be such a new treatment option. A feasibility randomized clinical trial is proposed to study the interplay between positive psychology and art therapy. Symptom burden was measured by the Edmonton Symptom Assessment Scale. The participants' experience and perception of positive art therapy were assessed with three open questions. Merged data analysis showed that symptom burden had decreased while participants found positive art therapy helpful and enjoyable. In future studies, a variation of the intervention and measurement tools used would be desirable.

Keywords: psycho-oncology, feasibility clinical trial, positive psychology, art therapy, Edmonton Symptom Assessment Scale

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Breast cancer is one of the most challenging medical conditions at an individual level and within the social context (Ganz, 2008; Schenker et al., 2022; Schulz-Kindermann, 2013). Besides the most common physiological complaints, namely pain, nausea and fatigue, also complex psycho-oncological symptoms (e.g., adjustment disorders, depression, anxiety) are likely to occur (Ganz, 2008; Institute of Medicine and National Research Council National Cancer Policy Board, 2004). Due to increasing numbers of cancer diagnoses, an expansion and advancement of the psycho-oncological support network is urgently necessary (Von Kries, 2014; Zentrum für Krebsregisterdaten, 2022).

Although psycho-oncological treatment programs in form of individual psychotherapy or group-therapy for example already exist (Bergelt et al., 2010; Kissane et al., 2003; Schulz-Kindermann, 2013), only a small percentage of patients takes advantage of it (Carlson et al., 2012; Holland, 2002; Mehnert et al., 2006; Meyer & Mark, 1995). Therefore, further and especially diverse treatment options should be considered to reach as many patients as possible. Particular attention should be paid to the feasibility and practicability of the intervention. Brief interventions are preferable in terms of affordability and low inhibition threshold for patients (Mehnert et al., Nainis et al., 2005).

Two already well-known treatment options are positive psychology and art therapy. Both offer innovative approaches that, when combined, could have synergistic effects. The objectives of this thesis are to determine whether positive art therapy is feasible and effective.

Prevalence and psycho-oncological need

In 2020 the number of new cases of cancer worldwide was 18,1 million (International Agency for Research on Cancer, 2022). Across Germany 502,655 new cases were registered in 2019 and projected to increase to 510,000 in 2020 (Zentrum für Krebsregisterdaten, 2022).

The proportion of breast cancer patients was 72,135, making it by far the most common type of cancer in women. Only about one percent of all new cases affect men. Approximately one of eight women will develop breast cancer in their lifetime based on current incidence rates.

On average 32 % of all cancer patients worldwide and 50 % in Germany may benefit from psycho-oncological support according to a de novo research of 74 studies (Zentrum für Krebsregisterdaten; Von Kries, 2014). The estimated proportion of breast cancer patients with psycho-oncological need amounts to 47% (Von Kries).

Psychological distress related to cancer

With an overall prevalence between 2 and 52%, adjustment disorders are one of the most common psychological complaints besides anxiety disorders (1 – 49%) and depression (0 – 58%) (Weis & Boehncke, 2010). The multifactorial occurrence of psychological, social, spiritual, and somatic symptoms is summarized under the term *distress* (Howell & Olsen, 2011; Mehnert & Koch, 2006). The *guideline psycho-oncology* (*Leitlinie Psychoonkologie*) emphasizes the frequency of distress at up to 59 % (Von Kries, 2014).

Originally the term distress is based on Hans Seyle (1954, 1976), who distinguished between two types of stress: eustress and distress. While eustress is defined as stress with positive connotations as feeling motivated and powerful, distress is experienced negatively. Those affected feel their situation is unmanageable and overwhelming and without sufficient coping mechanisms. Accordingly, the alleviation of distress and the promotion of autonomy, coping mechanisms and self-efficacy is to be supported as a protective factor in oncology and is part of a holistic treatment concept (Hinz, et al., 2019; Holzhauer et al., 2016; Kopp et al., 2000).

Treatment problems

Despite the high demand, psycho-oncological support has not reached a wide range of the population, as pointed out by Mehnert & Koch (2006), Meyer & Mark (1995), and Carlson et al. (2012). The impact of unmet needs can be shown on a physiological level: For cancer patients, it has been shown that the associated feelings of powerlessness, despair, and abandonment, combined with a lack of social support, have a suppressive effect on the natural activity of the immune system and correlate with a less favorable prognosis (Anderson et al., 1994; Kakoo Brioso et al., 2020; Levy, 1987).

The use of psycho-oncological support is related to a decrease in depression (Fann et al., 2008; Giese-Davis et al., 2011) and anxiety (Gold et al., 2016; Wang et al., 2015), higher quality of life (Reich et al., 2008; Rehse & Pukrop, 2003) and satisfaction with care which entails better compliance regarding treatment offers (Brennan et al., 2016; Von Essen et al., 2002). All in all, we see a better outcome with higher survival rate (Carlson et al., 2012; Giese-Davis et al.; Newell et al., 2002).

The reasons for the rejection of psycho-oncological support have hardly been researched so far (Mehnert et al., 2006). Holland (2002) states that the fear of stigmatization, of having a mental disorder in addition to cancer is a major reason for many patients not to address mental distress and not to engage in available support services. Schulz-Kindermann (2013) reports on the overwhelming number of medical examination and treatment

appointments that patients already have to attend and that further psycho-oncological appointments are refused for this reason. New approaches in psycho-oncological treatment could improve the support network by reaching more patients.

Positive Psychology

Psycho-oncological treatment includes individual psychotherapy, group-therapy, and others. Positive psychology can be seen as a paradigm shift (Linley et al., 2006; Meyers & Woerkom, 2012; Seligman & Csikszentmihalyi, 2000). A definition offered by Gable and Haidt (2005, p. 104) claims that "positive psychology is the study of the conditions and processes that contribute to the flourishing or optimal functioning of people, groups, and institutions". Hence positive psychology is directed towards increasing the well-being in people's lives instead of the more traditional approach on reducing their symptoms (Peterson, 2009; Wong, 2011).

Keyes (2002) provided the theoretical background for this claim by the two-continua model, which declares two dimensions of mental health: (1) absence versus presence of symptoms and (2) flourishing versus languishing of well-being. Changes on one continuum can occur in conjunction with, but also in isolation from the position on the other continuum (Keyes, 2007; Westerhof & Keyes, 2010). This theory opens a new pathway in psychological and psycho-oncological treatments: instead of focusing on reducing symptoms, it aims to strengthen well-being. Thus, it could be an alternative offer for patients who refuse psycho-oncological treatment due to stigmatization (Holland, 2002).

Mount et al. (2007) introduced the two-continua-model into psycho-oncology and stated that often the presence of symptoms does not correlate with well-being for cancer patients, too. Numerous other studies show the concrete benefits of positive psychology in psycho-oncology treatment settings. For instance, Rustøen and colleagues (2011) determined the positive effect of positive psychological interventions (PPIs) on psychological distress in oncological patients. Van der Lee and Garssen (2012) evaluated the efficacy on fatigue throughout PPIs. Casellas-Grau et al. (2014) conducted a review of PPIs for breast cancer patients and found positive effects in breast cancer patients such as enhanced quality of life, well-being, hope, benefit finding, or optimism.

Art Therapy

Even though PPIs offer a new paradigm to psychotherapy, they primarily approach the patient through linguistic accession. In this aspect, art therapy differs because it is not primarily linguistic (Malchiodi & McNiff, 2007; Stevenson & Orr, 2013). Schuster (2014) explained art therapy as a psychotherapeutic intervention, which makes use of different

techniques, materials and methods offered by visual arts and, thus, expresses their experience and behavior. Active creation or passive reception of art during the therapeutic intervention are possible. Most of the time, patients actively create.

The general psychotherapeutic benefits of art therapy for chronically ill patients in general (including Hamre et al., 2007) and in psycho-oncology in particular (Bar Sela et al., 2007; Ennis et al., 2017; Tang et al., 2019) are well studied overall. Lin et al. (2012) studied the effects of art therapy for palliative patients. They observed that the participants gained a deeper understanding for their life experiences and found meaning in them. Puetz et al. (2013) support the claim, that art therapy can reduce pain and promote quality of life. It should be emphasized here that even brief, one-time art therapy sessions have proven to be effective (Ferszt et al., 2000, Koo et al., 2020, Luzzatto et al., 2003m Mische Lawson et al., 2016, Nainis et al., 2005).

Interplay of PPI and AT

Lefèvre and colleagues demonstrated in 2016 that art therapy is also capable of supporting and promoting positive feelings like positive psychology aspires to do. Therefore, the interplay of both approaches could be an important and effective addition to existing therapeutic options and thus meaningfully expand the treatment options of psycho-oncology. However, the systematic interaction of positive psychology and art therapy has not been investigated yet.

Wilkinson and Chilton (2013) have presented a theoretical framework establishing links between the two disciplines. They concluded that this interplay would have a complementary nature to each other and addressed how this interplay can be compounded. To do so, they revised existing theories and their related studies and examined them to check if they correspond to the various aspects of positive psychology, e.g., experiencing flow (Csikszentmihalyi, 1991) and positive relationships (Fredrickson, 2013). Nevertheless, the interplay of both approaches has not been tested in a scientifically rigorous study yet. Accordingly, it seems reasonable to examine this new concept of a combined positive art therapy.

Current study

Considering the lack of evidence, the objective of this study is to investigate the feasibility and effectiveness of positive art therapy. The studies of Nainis et al. (2005) and Czamanski-Cohen et al. (2019) are used as a guideline for this research work. Nainis and colleagues tested a brief, one-time art therapy intervention for oncological patients. They included three ad hoc open questions to investigate the individual experience of the

participants. Despite its brevity, the one-hour intervention led to significant improvements. Regarding the study design, a control group was missing and overall designed as a quasi-experiment. Therefore, the present study compensates the lack of a control group but follows the design of Nainis et al. (2005) in order to further develop existing research in a meaningful way.

Bearing in mind the future goal the research question of this study would be weather a positive art therapy can meet patients' needs better, or at least in an alternative way than classical psycho-oncological approaches do.

Therefore, the hypothesis of this study is that patients receiving positive art therapy are expected to experience a decrease in psychological and physiological symptoms related to breast cancer in comparison to Sham- and WL group.

Methods

Description of Positive Art Therapy

In this study, a combination of positive psychology and art therapy was brought together to create a novel intervention: a brief, one-time positive art therapy session was developed. The brevity of the intervention was chosen for two reasons: First, this study was to examine the feasibility and evaluate a first run. Second, an intervention was searched which could reduce the threshold for patients to participate and thus increase the attractiveness and acceptance for patients.

The session was designed and conducted by the researcher, who is also an educated art therapist. The session essentially consisted of three parts: (1) a positive psychological introduction by the art therapist, (2) practical painting by the participants, (3) a subsequent exchange of what they experienced, felt, and created, also in the spirit of positive psychology.

Part 1 and 3 of the intervention were deliberately designed in the sense of a PPI. The positive psychological introduction (1) was taken from the book *Using positive psychology every day* (Bohlmeijer & Hulsbergen, 2018; pp. 160-161.). The described exercise was converted into a meditation to help create an inner picture of a tree as a self-symbol (The meditation is attached in Appendix A). The authors declared goal of this exercise was an improvement in "personal development, self-appreciation, competence, and self-determination" (p. 147). This picture of the imagined tree was suggested as a motif for the practical painting in the second part (2). Other researchers (Cusack, 2018; Emberson, 2011; Shakuto, 2017) agree upon the tree as a symbol of growth, endurance, and resilience. Overall, the tree can be seen as a motif strongly corresponded to the principles of positive psychology. Consequently, against the background of the psycho-oncological distress mentioned above

and the findings on the protective effect of promoting these goals (Hinz, et al., 2019; Holzhauer et al., 2016; Kopp et al., 2000), these goals fit particularly well with oncological patients.

In the last part of the intervention (3) an exchange about the creation and composition of the artworks, and the feelings and thoughts that arose, was offered. The principles of positive psychology were also minded for the exchange. The feedback was formulated in order to strengthen the existing resources of the patients, to put the healthy and functioning parts of their lives in the foreground and thus to enable the overall focus on an improvement of the flourishing.

Design

To examine the feasibility and to evaluate the effects of a positive art therapy intervention for patients a feasibility randomized controlled clinical trial (RCT) was conducted. A feasibility randomized controlled clinical trial is a study design that is used to help develop clinical trial interventions or outcome measures. A key early task of this study design is to develop a theoretical understanding of the likely process of change by drawing on existing evidence and theory, supplemented if necessary by new primary research (Abbott, 2014; Eldridge et al., 2016). This is recommendable in view of the novelty of positive art therapy. Therefore, modelling a complex intervention before a full-scale evaluation can provide important information about the design of both the intervention and the evaluation (Craig et al., 2013).

Within the RCT open ad hoc questions were emplaced to explore participants' perception of taking part in positive art therapy. The aim was to explore whether positive art therapy is acceptable and effective to patients and, if so, to identify their readiness to repeat such treatment. Since this study was carried out prior to gaining knowledge of results of the post and follow-up tests, the findings are presented with consideration to these. Randomization procedure was computer generated via Excel and ensured a random allocation to the groups (Kim et al., 2014). The study is in accordance with the Declaration of Helsinki and was approved by the Ethics Committee of the participating clinic (Johanniter-Kliniken Mönchengladbach und Rheinhausen).

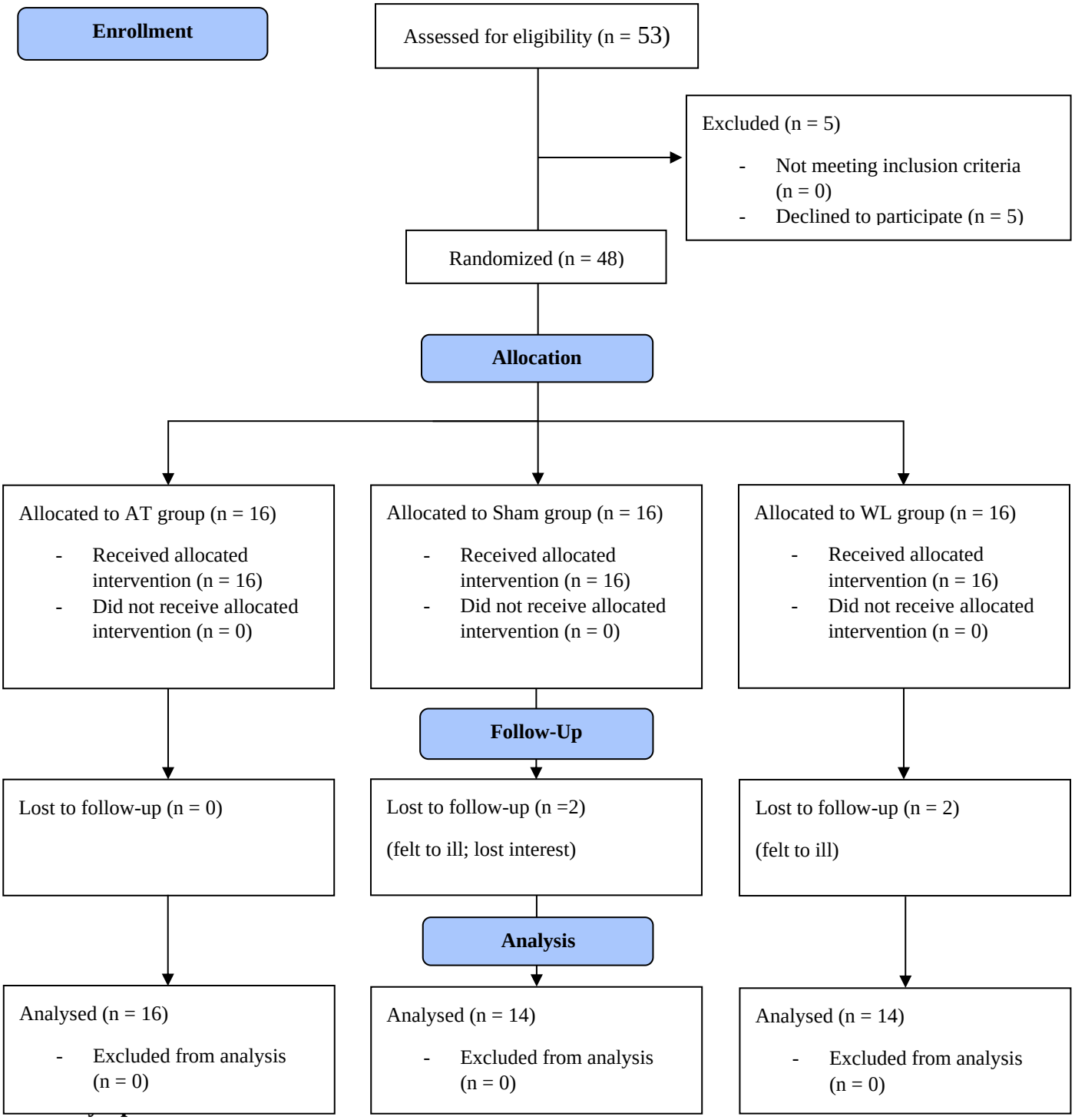
Participants

Eligible participants were recruited from a large urban academic medical cancer center (Johanniter-Kliniken Mönchengladbach und Rheinhausen) over a three-month period. The inclusion criteria were (1) diagnosis breast cancer outpatients regardless of the treatment phase, (2) 18 or older, (3) cognitive and physical capability to participate in a 3-hour session

of art therapy (4) no psychiatric diagnosis during the past six months, (5) German proficiency. 53 patients were initially invited to participate in the study and 48 patients agreed. Though 3 participants felt too occupied with their ongoing treatment and 2 did not like painting. In total 43 participants completed the study with pre- and posttest measurements, 43 participants completed the follow-up examination after one month.

Figure 1.

Flowchart of the study



The Edmonton Symptom Assessment Scale (ESAS; Bruera et al., 1991; Rees et al., 1998) is a self-rating scale with nine items that measure the severity of psychological and physical symptoms associated with cancer.

The severity of the symptoms is rated using a numerical scale of the ESAS from 0 (no symptom) to 10 (strongest symptom). The following symptoms are queried: distress, pain, tiredness, nausea, depression, anxiety, drowsiness, lack of appetite, and shortness of breath. These symptoms consist of physical (pain, tiredness, nausea, drowsiness, lack of appetite, and shortness of breath) and emotional (distress, depression, and anxiety). The sum of patients' responses to these nine symptoms is the ESAS global distress score (GDS).

To make the numerical scale from 0 to 10 easier to understand, the symptoms can also be divided into none (0), mild (1 - 3), moderate (4 - 6) and severe (7 - 10) (Selby et al., 2010).

The ESAS has proven itself over the last 25 years as a simple and quick assessment and monitor scheme, presenting the main symptoms of palliative patients and their intensity, course, and response to treatment (Bruera et al., 1991; Hui et al., 2017). A study of common assessment methods in palliative care found out that the ESAS is the second most used assessment method in both palliative care research and clinical settings (Harding et al., 2011). The ESAS has been validated later in other populations, including cancer patients (Chang et al., 2000; Cheifetz et al., 2014; Philip et al., 1998). Validity and reliability are given (Chang et al., 2000; Watanabe et al., 2012).

Medians for each item were searched and compared between groups and time points to measure the treatment success of positive art therapy.

Perception of Art Therapy

Three open questions were asked to evaluate the patients´ perception of the art therapy intervention: (1) Would you like to experience art therapy again? (2) How did the art therapy change your overall wellbeing? (3) Did you feel comfortable making art? The questions were embedded in the posttest, which was conducted directly after the intervention for the AT and Sham group and after three hours after the pretest for the WL group. Nainis et al. (2006) had already used these questions in their study to test a classical art therapy intervention. With the aim of establishing comparability between their classical art therapy and the positive art therapy used in this study these questions followed Nainis et al.

Furthermore, the first question aims at acceptance and thus a low inhibition threshold among patients in order to better meet the unmet needs of patients. The second question provides initial information about effectiveness in the sense of positive psychology, in which

wellbeing plays a decisive role. And the third question offers space for critical comments to elicit possible obstacles in acceptance or difficulties in the experience.

Procedure

Patients participated in this study based on their voluntary informed consent. They were informed by the researcher about the background of the study via an information sheet and optional conversation about upcoming questions. Three groups were formed, and participants randomly allocated: a standard art therapy group (AT) tailored to include a positive psychological intervention, a sham art therapy intervention (Sham) tailored to control confounding factors and a waiting list control group (WL).

AT received a brief and one-time positive art therapy session as described above in the description of Positive Art Therapy. Numerous materials were available, such as colored pencils, watercolors, acrylic paints, wax crayons, various paper formats, colored wool, stickers, glue, scissors, etc. The researcher and art therapist took an open, welcoming, and guarding stance but not steering towards any specific content. Besides assistance was available both for technical painting questions and to absorb any emotional outbursts. After completion of the intervention, the posttest was collected. The intervention lasted three hours and all parts were held in the group.

The Sham group obtained a mandala painting session without positive psychological introduction (1) or exchange (3). Yet, there was offered possibility to ask questions regarding the use of craft materials. This group was created to test the influence of painting itself without psychotherapeutic embedding, neither conventional nor positive psychological. For this purpose, mandala coloring pictures were offered in the respective group on the same conditions as the AT group (material, room, day of the week, time of the day etc.).

For the WL group, a date in the middle between the survey dates of AT and Sham was chosen as the date for the pretest. WL was offered standard care, which involved treatment from two perspectives: medical and psychological. In Germany all patients are offered psycho-oncological support, which means individual talk therapy in the participating clinic. To prevent serious disadvantages for this group, subsequent art therapy support was offered after the completion of the data collection.

Participants of all 3 groups were asked to complete a follow-up test after four weeks.

Statistical Analysis

To analyze the data IBM SPSS for Mac version 28 was used. As the assumption of normality was not met (Chang et al., 2000), non-parametric tests were applied. First, Friedman tests were applied separately for each group to compare participants' severity of

symptoms at the three time points (pre, post and follow up after one month). Dunn-Bonferroni post hoc tests were conducted to detect between which time points a change had occurred in case of possible significant differences. In addition, Kruskal Wallis tests were run to explore differences between the three groups, including Dunn-Bonferroni post hoc tests. A p-value less than 0.05 was typically considered to be statistically significant.

In order to analyze the data from the open question section of the follow-up test, techniques from thematic analysis (Braun & Clarke, 2006) were used (Appendix C). An inductive approach was taken to identify the different themes. This technique helps to stay grounded in the data and reduces the influence of the researcher´s bias.

Answers of the participants were read and re-read to aid familiarity and compared for similarities and differences. Perceived themes were constantly monitored and compared to each other during the whole process. This process was conducted for each question (respectively the answers) separately.

Results

Participants

53 patients were approached, 48 participated in the pre- and posttest, 43 also completed the follow-up test (Figure 1). Thus, there was a dropout rate of 10.42 %.

Participants´ sociodemographic and medical characteristics are described in Table 1. The mean age of the breast cancer patients was 51.15 years (*SD* = 9.00). The majority (79.17 %) lived in a relationship. Related to the stage of disease, 66.67 % of the participants contracted breast cancer for the first time, 9.17 % of the participants experienced a relapse and 4.17 % were in a palliative situation.

Table 1.

Patients´ sociodemographic and medical characteristics

Variable	Value
Age (Years)	
Mean	*M* = 51.15 (*SD* = 9.00)
Range	29 - 72
Relationship status [*n* (%)]	
Single	10 (20.83 %)
In Relationship	38 (79.17 %)
Disease Status [*n* (%)]	
First diagnosis	32 (66.67 %)
Recurrence	14 (9.17 %)
Palliative	2 (4.17 %)

Note. *n* = 48; *M* = mean; *SD* = standard deviation

A Kruskal H test showed no significant differences between the groups in the pre-test in terms of symptom burden according to the ESAS (Tab. 2).

Within-subjects´ data analysis

Friedman test was conducted to determine whether ESAS symptoms scores differ before (pre-test), immediately after (post-test) and one month after the intervention (follow-up-test). The results revealed a significant effect of time of symptom burden measured by ESAS (Figure 2).

The sum of patients' responses to these nine symptoms is the ESAS global distress score (GDS).

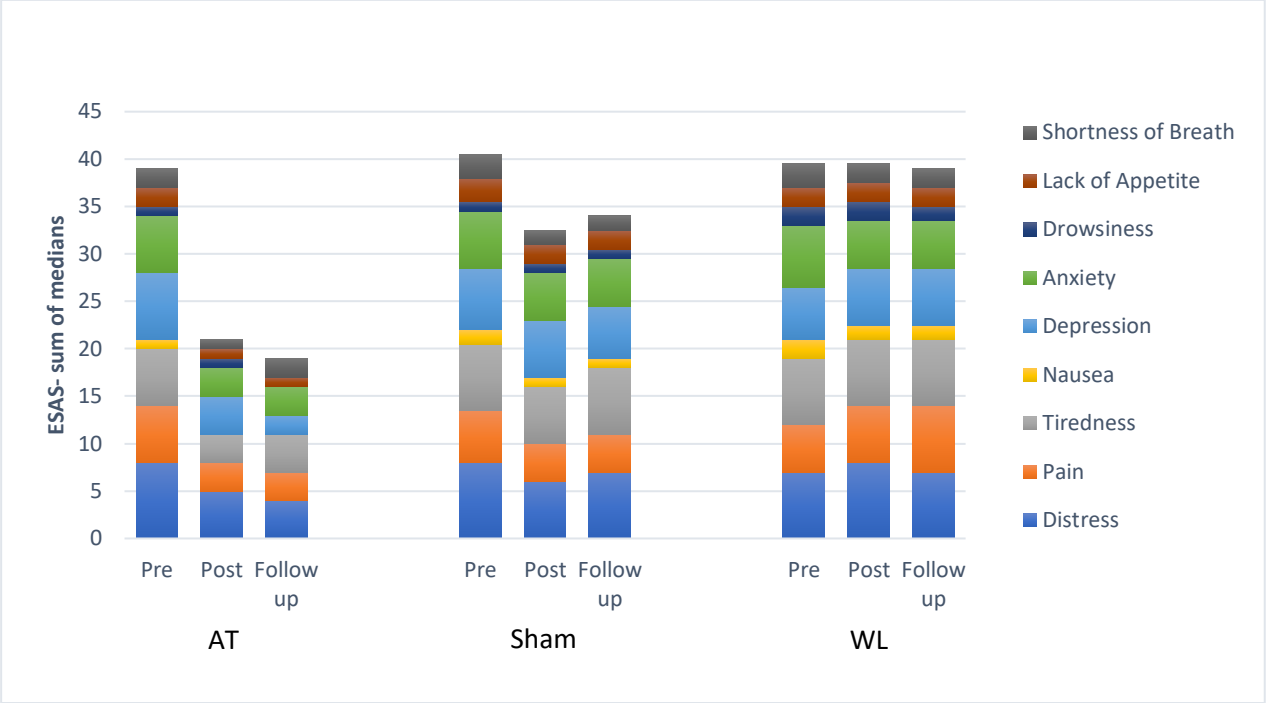
Lastly, the global distress score was significantly reduced within AT group, $\chi 2(2) = 65.297$, $p < .001$. Post hoc tests using Dunn-Bonferroni tests showed a significant reduction at pre- and post-test ($z = 6.285$, $p_{adjusted} < .001$, medium effect size according to Cohen (1992): $r = .55$) and pre- and follow up-test ($z = 6.683$, $p_{adjusted} < .001$, medium effect size according to Cohen (1992): $r = .58$). The median ESAS Score was 5 before the intervention, 2 immediately after the intervention and 2 after one month.

For the Sham the global distress score was significantly reduced, $\chi 2(2) = 20.777$, $p < .001$. Post hoc tests using Dunn-Bonferroni tests showed a significant reduction at pre- and post-test ($z = 3.780$, $p_{adjusted} < .001$, medium effect size according to Cohen (1992): $r = .34$) and pre- and follow up-test ($z = 3.496$, $p_{adjusted} < .001$, medium effect size according to Cohen (1992): $r = .31$). The median ESAS Score was 5 before the intervention, 3 immediately after the intervention and 3 after one month.

For WL group no significant difference was found.

Figure 2.

Symptoms at three time points per group



Note. AT = art therapy group, Sham = sham art therapy group; WL = waiting list control group.

In detail, the statistical results were as follows:

Distress was significantly reduced within AT group, $\chi 2(2) = 18.929$, $p < .001$. Post hoc tests using Dunn-Bonferroni tests showed a significant reduction in pre- and post-test ($z = 1.033$, $p_{adjusted} = .014$, small effect size: $r = .27$) and pre- and follow-up-test ($z = 1.467$, $p_{adjusted} < .001$, medium effect size according to Cohen (1992): r = .38). The median ESAS Score was 8 before the intervention, 5 immediately after the intervention and 4 one month later. There was a significant difference found in the Sham group as well, $\chi 2(2) = 12.298$, $p = .002$ The post hoc test showed a significant reduction in pre- and post-test ($z = 1.214$, $p_{adjusted} = .004$, medium effect size according to Cohen (1992): $r = .31$). There was no significant difference found in relation to the WL group.

Pain was significantly reduced within AT group, $\chi 2(2) = 13.240$, $p < .001$. Post hoc tests using Dunn-Bonferroni tests showed a significant reduction in pre- and post-test ($z = 1.033$, $p_{adjusted} = .014$, small effect size according to Cohen (1992): $r = .27$) and pre- and follow-up-test ($z = 1.067$, $p_{adjusted} = .010$, small effect size according to Cohen (1992): $r = .28$). The median ESAS Score was 5.5 before the intervention, 4 immediately after the intervention and 4 one month later. There was a significant difference found in the Sham

group, $\chi 2(2) = 6.453$, $p < .040$. But the post hoc tests showed no significant results. For the WL group a significant difference was found, $\chi 2(2) = 10.157$, $p = 006$. Post hoc tests using Dunn-Bonferroni tests showed a significant reduction at pre- and follow-up-test ($z = -1.143$, $p_{adjusted} = .007$, medium effect size according to Cohen (1992): $r = .31$). Worsening of symptoms in relation to the medians was assumed to had been determined (medians at pre-test = 5, at post-test = 6, at follow-up-test = 7).

Tiredness was significantly reduced within AT group, $\chi 2(2) = 14.607$, $p < .001$. Post hoc tests using Dunn-Bonferroni tests showed a significant reduction at pre- and post-test ($z = 1.267$, $p_{adjusted} = .002$, medium effect size according to Cohen (1992): $r = .33$) and pre- and follow-up-test ($z = 1.033$, $p_{adjusted} = .014$, small effect size according to Cohen (1992): $r = .27$). The median ESAS Score was 6 before the intervention, 3 immediately after the intervention and 4 one month later. There was no significant difference found for the Sham and WL groups.

Depression was significantly reduced within AT group, $\chi 2(2) = 10.793$, $p = 005$. Post hoc tests using Dunn-Bonferroni tests showed a significant reduction in pre- and follow-up-test ($z = 1.167$, $p_{adjusted} = .004$, medium effect size according to Cohen (1992): $r = .30$). The median ESAS Score was 6.5 before the intervention, 6 immediately after the intervention and 5.5 one month later. There was no significant difference found for the Sham and WL groups.

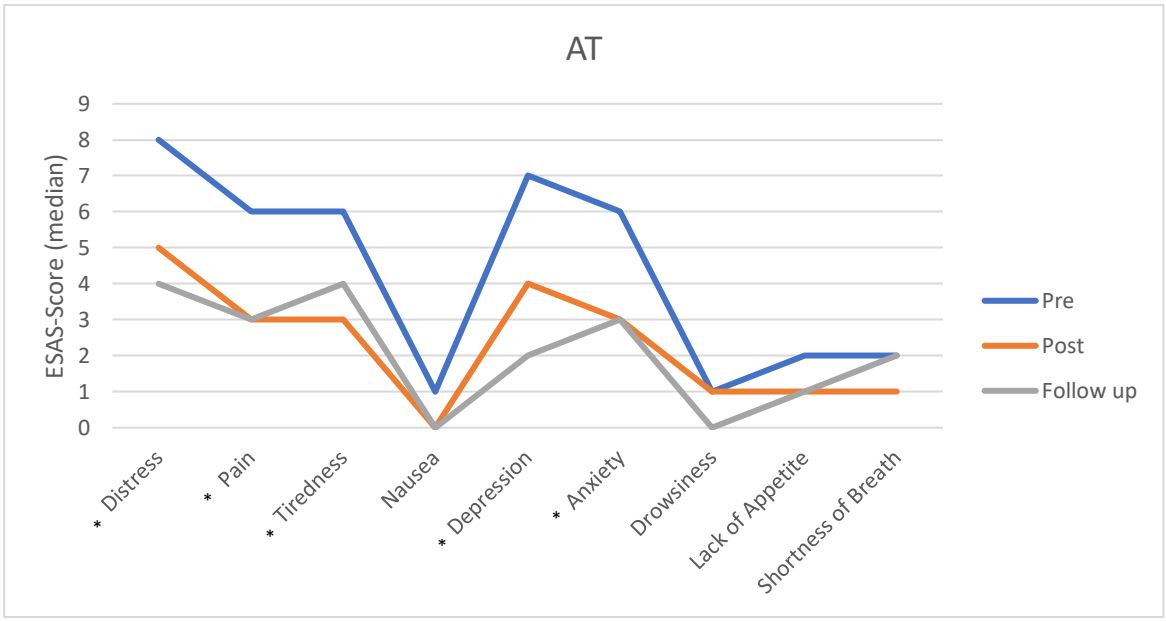
Anxiety was significantly reduced within AT group, $\chi 2(2) = 14.308$, $p < .001$. Post hoc tests using Dunn-Bonferroni tests showed a significant reduction in pre- and post-test ($z = 1.200$, $p_{adjusted} = .003$, medium effect size according to Cohen (1992): $r = .31$) and pre- and follow up-test ($z = 1.000$, $p_{adjusted} = .019$, small effect size according to Cohen (1992): $r = .26$). The median ESAS Score was 6 before the intervention, 5 immediately after the intervention and 5 one month later. There was no significant difference found for the Sham and WL groups.

Nausea, lack of appetite, drowsiness and shortness of breath showed no significant changes, even though positive trends in the medians were be observed in pre- and post-test.

All things considered, participants who participated in AT (Fig. 3) experienced a significant reduction in symptom burden in four out of nine items in pre- and post-test (distress, pain, tiredness and anxiety), and in five of nine items at pre- and follow-up-test (distress, pain, tiredness, depression and anxiety). Participants who participated in the Sham group (Fig. 4) experienced a significant reduction in two out of nine items (distress and pain). Participants who participated in WL (Fig. 5) experienced significant increase in pain. Effect sizes were small to medium according to Cohen (1992).

Figure 3.

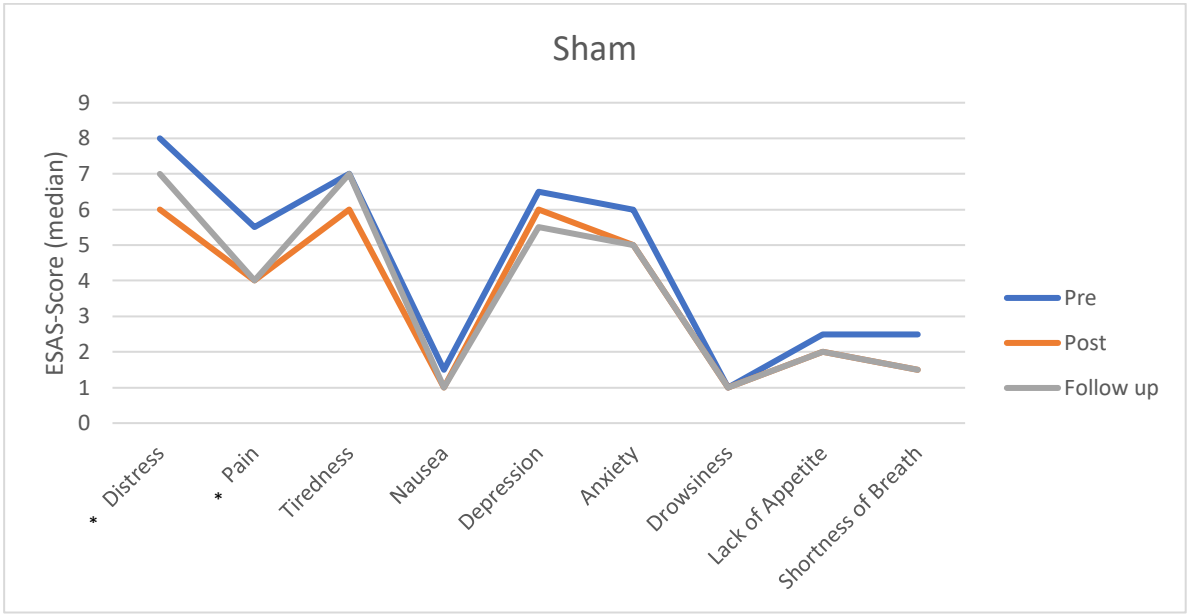
Symptoms at three time points for AT group



Note. AT = art therapy group.

Figure 4.

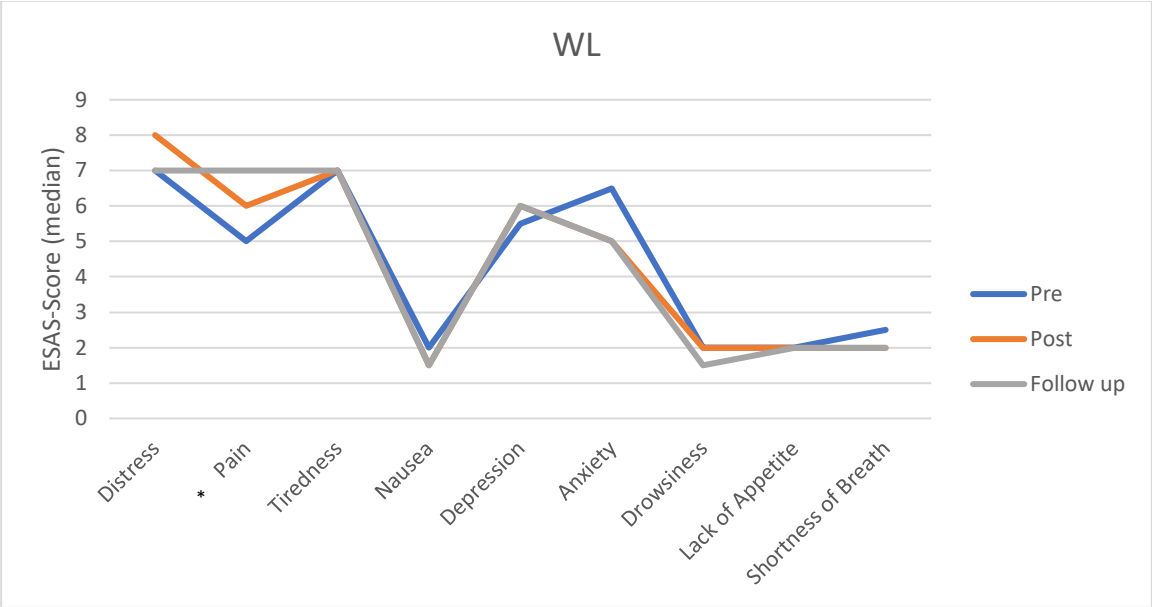
Symptoms at three time points for Sham group



Note. Sham = sham art therapy group.

Figure 5.

Symptoms at three time points for WL group



Note. WL = waiting list control group.

Between-subjects data analysis

In regard to the between subjects data analysis, the Kruskal-Wallis H test showed significant improvements across the three groups in seven out of nine items: distress, pain, tiredness, depression, anxiety, nausea, and drowsiness. All seven items showed symptom reduction from pre to post and follow up.

The results in detail are as follows:

Distress was significantly reduced in the post-test, $\chi 2(2) = 14.032$, $p < .001$. Subsequent post-hoc tests (Dunn-Bonferroni tests) showed that AT and WL groups differ significantly ($z = -3.700$, $p_{adjusted} < .001$). This is a strong effect according to Cohen (1992) with r = .66. Distress was also reduced in the follow up-test, $\chi 2(2) = 19.458$, $p < .001$. Subsequent post-hoc tests (Dunn-Bonferroni tests) show that both AT and Sham ($z = -3.280$, $p_{adjusted} = .003$, large effect size according to Cohen (1992): $r = .61$) and WL groups differ significantly ($z = -4.167$, $p_{adjusted} < .001$, large effect size according to Cohen (1992): $r = .78$).

Pain was significantly reduced in the post-test, $\chi 2(2) = 17.193$, $p < .001$. Subsequent post-hoc tests (Dunn-Bonferroni tests) show that AT and WL group differ significantly ($z = -4.132$, $p_{adjusted} < .001$). Pain was also reduced in the follow-up-test, $\chi 2(2) = 23.530$, $p < .001$. Subsequent post-hoc tests (Dunn-Bonferroni tests) showed that both AT and WL ($z = -4.847$, $p_{adjusted} < .001$, large effect size according to Cohen (1992): $r = .90$) and Sham and WL group

differ significantly (z = -2.623, $p_{adjusted}$ = .026, small effect size according to Cohen (1992): r < .50).

Tiredness was significantly reduced in the post-test, $\chi 2(2) = 15.852$, $p < .001$. Subsequent post-hoc tests (Dunn-Bonferroni tests) showed that both AT and Sham (z = -3.501, $p_{adjusted}$ = .001, large effect size according to Cohen (1992): r = .62) and AT and WL group differ significantly (z = -3.393, $p_{adjusted}$ = .002, large effect size according to Cohen (1992): r = .60). Tiredness was also reduced in the follow up-test, $\chi 2(2) = 18.007$, $p < .001$. Subsequent post-hoc tests (Dunn-Bonferroni tests) showed that both AT and Sham (z = -3.306, $p_{adjusted}$ = .003, large effect size according to Cohen (1992): r = .61) and AT and WL group differ significantly (z = -3.925, $p_{adjusted}$ < .001, large effect size according to Cohen (1992): r = .73).

Nausea was significantly reduced in the post-test, $\chi 2(2) = 8.764$, p = .012. Subsequent post-hoc tests (Dunn-Bonferroni tests) showed that AT and WL (z = -2.957, $p_{adjusted}$ = .009, large effect size according to Cohen (1992): r = .52) differ significantly. Nausea was also reduced in the follow-up-test, $\chi 2(2) = 6.668$, p = .036. Subsequent post-hoc tests (Dunn-Bonferroni tests) showed that only AT and WL differ significantly (z = -2.423, $p_{adjusted}$ = .046, medium effect size according to Cohen (1992): r = .45).

Depression was significantly reduced in the post-test, $\chi 2(2) = 7.606$, p = .022. Subsequent post-hoc tests (Dunn-Bonferroni tests) showed that AT and WL (z = -2.490, $p_{adjusted}$ = .038, medium effect size according to Cohen (1992): r = .44) differ significantly. Depression was also reduced at the follow up-test, $\chi 2(2) = 12.022$, p = .002. Subsequent post-hoc tests (Dunn-Bonferroni tests) showed that both AT and Sham differ significantly (z = -2.569, $p_{adjusted}$ = .031, medium effect size according to Cohen (1992): r = .48) and AT and WL differ significantly (z = -3.280, $p_{adjusted}$ = .003, large effect size according to Cohen (1992): r = .61).

Anxiety was significantly reduced in the post-test, $\chi 2(2) = 11.447$, p = .003. Subsequent post-hoc tests (Dunn-Bonferroni tests) showed that AT and WL (z = -3.315, $p_{adjusted}$ = .003, large effect size according to Cohen (1992): r = .59) differ significantly. Anxiety was also reduced in the follow up-test, $\chi 2(2) = 8.298$, p = .016. Subsequent post-hoc tests (Dunn-Bonferroni tests) showed that AT and WL differ significantly (z = -2.641, $p_{adjusted}$ = .025, medium effect size according to Cohen (1992): r = .49).

Drowsiness was significantly reduced in the post-test, $\chi 2(2) = 9.310$, p = .010. Subsequent post-hoc tests (Dunn-Bonferroni tests) showed that both AT and Sham (z = -2.729, $p_{adjusted}$ = .019, medium effect size according to Cohen (1992): r = .45) and AT and WL

(z = -2.546, $p_{adjusted}$ = .033, medium effect size according to Cohen (1992): r = .48) differ significantly. Anxiety was also reduced in the follow up-test, $\chi 2(2) = 8.633$, p = .013. Subsequent post-hoc tests (Dunn-Bonferroni tests) showed that AT and WL differ significantly (z = -2.789, $p_{adjusted}$ = .016, large effect size according to Cohen (1992): r = .52). There were no significant differences found in regard to the lack of appetite and shortness of breath.

All results of the Kruskal Wallis test are displayed in Table 2.

The GDS was significantly reduced at the post-test, $\chi 2(2) = 34.063$, $p < .001$. Subsequent post-hoc tests (Dunn-Bonferroni tests) show that both AT and Sham (z = -3.388 $p_{adjusted}$ = .002, small effect size according to Cohen (1992): r = .16) and AT and WL (z = -5.810, $p_{adjusted} < .001$, small effect size according to Cohen (1992): r = .28) differ significantly. The GDS was also significantly reduced in the follow-up-test, $\chi 2(2) = 35.674$, $p < .001$. Subsequent post-hoc tests (Dunn-Bonferroni tests) show that both AT and Sham (z = -4.295 $p_{adjusted} < .001$, small effect size according to Cohen (1992): r = .22) and AT and WL (z = -5.712, $p_{adjusted} < .001$, small effect size according to Cohen (1992): r = .29) differ significantly. For the pre-test no significant differences were found.

Table 2.

Results of between-subjects´ data analysis

Item	Timepoint/ group	$\chi 2(2)$	p-value	Effect size r
Distress	Pre	1.822	.402	
	AT vs. Sham			-
	AT vs. WL		-	-
	Sham vs. WL		-	-
	Post	14.032	< .001 ***	-
	AT vs. Sham		.539	-
	AT vs. WL		< .001 ***	.65
	Sham vs. WL		.055	-
	Follow-up	19.458	< .001***	-
	AT vs. Sham		.003**	.61
	AT vs. WL		< .001 ***	.77
	Sham vs. WL		> .999	-
Pain	Pre	1.034	.402	
	AT vs. Sham		-	-
	AT vs. WL		-	-
	Sham vs. WL		-	-
	Post	17.193	< .001** *	-
	AT vs. Sham		.232	-
	AT vs. WL		< .001 ***	.73
	Sham vs. WL		.054	-
	Follow-up	23.530	< .001 ***	-
	AT vs. Sham		.088	-
	AT vs. WL		< .001 ***	.90
	Sham vs. WL		.026*	.50
Tiredness	Pre	.187	.911	
	AT vs. Sham		-	-
	AT vs. WL		-	-
	Sham vs. WL		-	-
	Post	15.852	< .001 ***	-
	AT vs. Sham		< .001 ***	.62
	AT vs. WL		< .002 **	.60
	Sham vs. WL		> .999	-
	Follow-up	18.007	< .001 ***	-
	AT vs. Sham		.003**	.61
	AT vs. WL		< .001 ***	.73
	Sham vs. WL		> .999	-
Nausea	Pre	.892	.892	
	AT vs. Sham		-	-
	AT vs. WL		-	-
	Sham vs. WL		-	-
	Post	.012	.012*	-
	AT vs. Sham		.324	-
	AT vs. WL		.009 **	.52
	Sham vs. WL		.532	-
	Follow-up	6.668	.036 *	-
	AT vs. Sham		.153	-
	AT vs. WL		.046 *	.45
	Sham vs. WL		> .999	-
Depression	Pre	.406	.816	
	AT vs. Sham		-	-
	AT vs. WL		-	-
	Sham vs. WL		-	-
	Post	7.606	.022*	-
	AT vs. Sham		.069	-
	AT vs. WL		.038 *	.44
	Sham vs. WL		> .999	-

	Follow-up	12.022	.002 **	-
	AT vs. Sham		.031*	.48
	AT vs. WL		.003 **	.61
	Sham vs. WL		> .999	-
Anxiety	Pre	.100	.951	
	AT vs. Sham		-	-
	AT vs. WL		-	-
	Sham vs. WL		-	-
	Post	11.447	.003**	-
	AT vs. Sham		.075	-
	AT vs. WL		.003**	.59
	Sham vs. WL		.850	-
	Follow-up	8.298	.016 **	-
	AT vs. Sham		.067	-
	AT vs. WL		.025*	.49
	Sham vs. WL		> .999	-
Drowsiness	Pre	.505	.777	
	AT vs. Sham		-	-
	AT vs. WL		-	-
	Sham vs. WL		-	-
	Post	9.310	.010*	-
	AT vs. Sham		> .999	-
	AT vs. WL		.033*	.45
	Sham vs. WL		.019*	.48
	Follow-up	8.633	.016 *	-
	AT vs. Sham		.067	-
	AT vs. WL		.025*	.49
	Sham vs. WL		> .999	-
Lack of appetite	Pre	.173	.917	
	AT vs. Sham		-	-
	AT vs. WL		-	-
	Sham vs. WL		-	-
	Post	2.562	.278	-
	AT vs. Sham		-	-
	AT vs. WL		-	-
	Sham vs. WL		-	-
	Follow-up	3.226	.199	-
	AT vs. Sham		-	-
	AT vs. WL		-	-
	Sham vs. WL		-	-
Shortness of breath	Pre	.456	.796	
	AT vs. Sham		-	-
	AT vs. WL		-	-
	Sham vs. WL		-	-
	Post	1.171	.557	-
	AT vs. Sham		-	-
	AT vs. WL		-	-
	Sham vs. WL		-	-
	Follow-up	.009	.996	-
	AT vs. Sham		-	-
	AT vs. WL		-	-
	Sham vs. WL		-	-

Note. AT = art therapy group, Sham = sham art therapy group; WL = waiting list control group.

* p < .05, * p < .01, ** p < .001 ***

Ad hoc question analysis

There was a content analysis conducted in order to examine obtained answers to the three open questions: (1) *Would you like to experience art therapy again?* (2) *How did the art therapy change your overall wellbeing?* (3) *Did you feel comfortable making art?*, a content analysis (Mayring, 1991) was conducted.

Due to the fact that first and third questions are decision questions, usually answered with "yes" or "no", analysis categories were easily found. After the analysis they were slightly adapted and complemented by a third category in the course of the process, which took the varying responses into account. So here the analyses were unambiguous. The second question allowed more exploration of the participants. Hence, the detected categories differed.

Would you like to experience art therapy again? (1)

87.5 % (n = 14) would like to repeat the positive art therapy. 62.5 % (n = 10) of the participants formulated the explicit request to continue, even though there was no question about it. Two participants rejected; one of them argued, that they would prefer an individual positive art therapy intervention ("not in a group").

How did the art therapy change your overall wellbeing? (2)

87.5 % (n = 15) experienced an improvement in their well-being due to the intervention. Participants stated a greater acceptance of their situation, more trust, relief and feeling of being more relaxed. Only one could not notice any improvement.

***Did you feel comfortable making art?* (3)**

Two participants had an observant, neutral attitude ("Will see in the next days"). The great majority (n = 15; 93.75 %) felt comfortable making art; only one person did not.

Discussion

The present study was designed to investigate the feasibility and benefits of positive psychology art therapy and to examine which symptoms are influenced by such an intervention. In addition, the experience and perception of the participants were of interest in to draw conclusions on the question of whether positive art therapy is perceived as pleasant, effective and worth repeating. This study was the first robust trial to evaluate the benefits of positive art therapy in improving well-being and reducing symptom burden for breast cancer patients.

The positive art therapy intervention achieved a reduction in several symptoms and as a result supports the hypothesis, that patients receiving positive art therapy are expected to experience a decrease in psychological and physiological symptoms related to breast cancer in comparison to Sham- and WL group.

Regarding the within-group differences in the AT group significant improvements were found in distress, pain, tiredness, depression, and anxiety from before to directly and one month after the intervention and in addition to these for depression from before to one month after. In the Sham group only two symptoms displayed significant improvements. Pain was reduced directly after the intervention, but the effect was only short-lived and no longer measurable after one month. For distress, this was even more pronounced: here the effect was not found at all in the Dunn-Bonferroni-tests. In WL group a reduction of pain could be measured in the assessment after one month with a medium effect size.

Regarding the between-group differences the comparison of groups directly after the positive art therapy showed a significant amelioration in seven of nine ESAS items: distress, pain, tiredness, nausea, depression, anxiety, and drowsiness. Thereby, the intervention revealed an effect on two more physiological symptoms into the bargain: nausea and drowsiness. It is particularly noteworthy that the effect lasted even after one month. The comparison of groups disclosed these differences mainly between AT and WL groups. Tiredness was significantly lessened between Sham and WL groups as well with a medium effect size. But between AT and WL groups the same observation was noted with a stronger effect size. After one month the survey was similar: the same seven items became significantly reduced in the comparison between AT and WL groups. For comparison of the Sham and WL groups there was only a significant effect in pain with only a medium effect size instead of strong effect size between AT and WL. The ameliorations also besides the AT group could be explained throughout the ongoing medical treatment and a habituation to the medical treatment process in the patients (Bauch et al., 2017; Paul et al., 2021). Along with the stronger effect size for the AT group a greater impact of the new treatment approach can be assumed.

As with Nainis et al. (2006), it can be assumed that the missing significance in the improvements for lack of appetite and shortness of breath can be explained by a floor effect. This assumption is supported by a study conducted by Richardson et al. (2009). The researchers stated that ESAS results are sometimes skewed with a floor effect. A further consideration relates to the selection criteria for participation in the study: participants were selected beforehand on the basis that they could participate in a three-hour intervention. Therefore, there is an assumption that patients whose physical symptoms were more severe refrained from participating beforehand and, thus, a selection bias was supported.

Taken together, AT showed an impressive impact on the measured symptoms, whereas fewer and weaker effects were found for the other groups. Accordingly, positive art

therapy can be seen beneficial and superior to unguided art experiences (Sham) and standard care (WL).

PPIs primarily aimed at improving wellbeing and the positive art therapy intervention has been based on a PPI (Bohlmeijer & Hulsbergen, 2018). Several studies enhance the claim, that PPIs impact physiological states (Cohen et al., 2006; Taylor et al., 2000). It is actually more remarkable that accordingly not only psychological symptoms were reduced but also physical symptoms.

Besides the improvements in psychological symptoms such as distress, depression and anxiety, the reduced tiredness is worth emphasizing. This is particularly noteworthy since one would assume that participation in a three-hour intervention would increase the state of being tired. However, this was not found to be the case. Instead, the tiredness steadily decreased from before (pre-test *md* = 6) to immediately after (post-test *md* = 4) and even after one month (follow-up-test *md* = 3). This can be explained by the Attention restoration theory (ART) by Rachel and Stephen Kaplan (1995, 2001). This theory is based on empirical research and states that activities and environments, that are perceived as enjoyable are viewed as restorative, even if they require concentration. According to ART four key components must be given to perceive an environment as restorative: (1) being away, (2) soft fascination, (3) extent, and (4) compatibility. *Being away* refers to the inner feeling of separation from one´s usual thoughts and concerns. The mentioned *soft fascination* allows an effortless held attention. *Extent* means that the activity encourages to feel totally immersed. *Compatibility* calls for an intrinsic motivation or personal preference. Cimprich (1993) tested an ART-intervention in breast cancer patients and found significant improvements on attentional capacity. Ennis et al. (2017) examined art therapy for cancer patients through the lens of ART and confirmed that art therapy is an effective treatment and suggested that the reason for this may be its restorative nature. Nature is to be seen as an optimum environment for restoration, as with Kaplan (1995, 2001). Apart from ART there are several possible explanations for the impact of the intervention:

Charlin & Cifuentes (2021), Grotjohann & Oberfeld (2018), López-Tarruella et al. (2019) attribute effects of art therapy to the use of colors. Sharif (2016) proposed that the movements linked to painting provide for improvements of emotional regulation, but King et al. (2017) refuted the claim.

Cohen & Cox (1995) credit the benefits for the non-verbal communication and that art therapy put words to mental processes that are not otherwise readily accessible.

King (2016) also considered art therapy as neurotherapeutic in eliciting verbal and non-verbal communication and assisting emotional self-regulation.

Dikker et al. (2017) offered an additional aspect by contemplating an advanced understanding of brain processes in a social context and demonstrated the brain synchrony between patient and therapist during art therapy.

Regarding the suggested motif (tree) in the positive art therapy intervention another explanation can be found. The tree was reflected both in the positive psychological attunement meditation and in this specific picture suggestion.

The tree as a symbol of self is a well-known motif in the art therapy. It serves both diagnostic and therapeutic considerations. It is used in numerous psychological tests, such as the House Tree Person Test (Buck, 1948), the Tree Drawing Test (Kaneda et al. 2010). Isaksson et al. (2021) were able to show that people with eating disorders draw smaller trees with less detail and weaker roots. Rankin (1994) found out that knotholes, broken branches, damaged trunks, and leafless trees offer clues to traumatic episodes. Gunnarsson & Eklund (2009) have developed their own treatment method around tree imagery, the Tree Theme Method (TTM), which is designed to better understand life history.

All these studies show that the tree as a motif is well researched and offers wide use with different objectives. As a model and symbol of resilience and constancy, of growth and beauty even and especially under adverse circumstances (Cusack, 2018; Emberson, 2011; Shakuto, 2017) it can be seen as an inviting object for positive psychological and related art therapeutical interventions.

It has been known for almost forty years that trees are effective and supportive in therapeutic contexts- including non-art-therapeutic contexts. For example, Ulrich (1984) found in a study that patients who could see a tree instead of a wall from their hospital room window had a shorter stay in the hospital, required less pain medication, and reported lower stress levels. Another study by Ulrich and colleagues in 1993 showed lower anxiety and stress levels in patients who were in an intensive care unit, even if only a landscape picture with trees and water was visible in their room. Numerous other studies confirm the positive aspect (Edgerton et al., 2010; Foureur et al. 2010; Ulrich et al., 1991, 2003).

Critically, it must be acknowledged that mandala painting itself also has positive effects, as several researchers (Flett et al., 2017; Hass-Cohen et al., 2018; Kim et al., 2014) have been able to show. Nevertheless, the present study showed that positive art therapy seems to be superior to mandala painting.

The overall results are positively complemented by the ad hoc question analysis regarding art therapy perception. The questions were taken from the previous study by Nainis et al. (2006) and were intended to reflect the experience of the participants. This was to assess the feasibility and whether positive art therapy could cover the unmet need of psycho-oncological patients and address the inhibition threshold.

Participants experienced positive art therapy as comfortable and would repeat it in most cases. Perceived improvements in well-being confirm the results of the ESAS and support the claim, that the positive psychological aspect found effective.

Positive attitude towards the intervention, openness, and sometimes explicit request to repeat positive art therapy confirm the feasibility and create an opportunity for this treatment method to bridge the unmet need of psycho-oncological patients.

Strengths

Despite the singularity and brevity of the intervention, auspiciously results were achieved. This is a promising approach in view of the financial constraints in the health system and the need to provide increasing numbers of patients with effective and efficient interventions.

Participants were very satisfied with the experience and the majority was interested in continuing. In reference to the low drop-out rate it can be stated a promising attempt to lower the threshold to broader psycho-oncological care.

In addition, there were real improvements in numerous areas. Especially the lasting effect in the third assessment after one month despite the singularity and brevity of the intervention are to be emphasized.

Since this study is a feasibility randomized controlled trial and a second active control group in the form of Sham has been added, it can be said that this is an asset for research in this field.

Limitations

First, one may reflect whether the ESAS is the right instrument to measure the effects of a positive psychology intervention. Many questionnaires are used in this area to serve better for assessing the specific intention of positive psychology. Considering that positive psychology addresses in its turn less the reduction of symptoms and much more the strengthening of well-being, self-compassion and a post-traumatic growth, instruments such as Mental Health Continuum-Short Form (MHCSF), Self-Compassion Scale - Short Form (SCF-SF) and Posttraumatic Growth Inventory - Short Form (PTGI-SF) would have been an interesting addition.

Apart from that adopting this the open questions from Nainis et al. (2006) should be critically questioned. Although this created comparability as intended, it also missed the opportunity to ask other, more valuable questions that would further explore the question of unmet needs in particular. Questions such as whether patients experience positive art therapy as psychotherapy, whether they see it as a stigma to utilize positive art therapy and whether they see the relief as higher than the effort of another treatment appointment can be considered in future studies. This would then also require more intensive qualitative analysis but could further improve the knowledge about the acceptance and satisfaction of unmet needs.

Second, further studies, with more participants, are required to assess the role of positive art therapy in enhancing well-being and reducing symptoms in breast cancer patients. A variation of control groups and applicability to other populations, countries and cultures should be considered, too. This is important regarding the objection of Mehnert et al. (2006), that mainly women make use of psycho-oncological support, while men are underserved. Consequently, men should be considered an important research population for the question of access to psycho-oncology.

Third, the intervention was carried out by only one therapist. Concerning the Rosenthal effect (Bortz & Döring, 2006; Rosenthal & Fode, 1963) the intervention should be repeated with other therapists.

Thus, generalization of the results is limited.

Conclusion

The results of this initial study are promising and encouraging. Considering the existing treatment approach in psycho-oncological services, positive art therapy may posit an enrichment to the existing methods. Further research is needed to review and develop positive art therapy in other populations and with larger sample sizes. In conclusion, positive art therapy is worthy of further study in the treatment of breast cancer patients.

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Appendix A

Questionnaire

Bitte kreisen Sie die Zahl ein (0-10), die am besten beschreibt, wie Sie sich fühlen:

---

0 1 2 3 4 5 6 7 8 9 10

Ich fühle mich gar nicht belastet Ich fühle mich extrem belastet

---

0 1 2 3 4 5 6 7 8 9 10

Ich habe keinen Schmerz Ich habe maximalen Schmerz

---

0 1 2 3 4 5 6 7 8 9 10

Ich bin nicht müde Ich bin sehr müde

---

0 1 2 3 4 5 6 7 8 9 10

Mir ist nicht übel Mir ist sehr übel

---

0 1 2 3 4 5 6 7 8 9 10

Meine Stimmung ist sehr gut Ich bin sehr traurig/deprimiert

---

0 1 2 3 4 5 6 7 8 9 10

Ich habe keine Angst Ich habe sehr große Angst

---

0 1 2 3 4 5 6 7 8 9 10

Mir ist nicht schwindelig Mir ist sehr schwindelig

---

0 1 2 3 4 5 6 7 8 9 10

Ich habe sehr guten Appetit Ich habe überhaupt keinen Appetit

---

0 1 2 3 4 5 6 7 8 9 10

Ich habe keine Atemnot Ich habe große Atemnot

1. Würden sie, wenn sie die Möglichkeit hätten, die Kunsttherapie wiederholen wollen?

2. Hat die Kunsttherapie-Sitzung ihr Wohlbefinden verändert und wenn ja, wie?

3. Fühlten sie sich bei der Herstellung der Kunstwerke wohl?

Appendix B

Positive psychological introduction of the art therapy intervention (translated from Bohlmeijer & Hulsbergen, 2008; p. 160 f.)

Sitzen Sie aufrecht, mit beiden Füßen direkt nebeneinander.
Die Arme und Schultern sind entspannt.
Die Hände finden einen bequemen Platz.
Nehmen Sie einen Moment lang noch ihre Umgebung bewusst wahr- ohne sie zu bewerten.
Dann beginnen Sie ihre Atmung zu beobachten. Neugierig und zugewandt.
Achten Sie auf ihre Atemzüge; spüren Sie, wie Ihr Atem in den Körper hinein und aus ihm herausströmt.
Benennen Sie innerlich, wie sich Ihr Körper anfühlt. Wenn Sie in Kontakt mit Ihrem Körper sind, können Sie die Lebensenergie spüren, die er enthält. Sie brauchen nichts Besonderes zu tun, um diese Energie zu spüren.
Stellen Sie sich dann vor, wie hoch ein Baum steht, und stellen Sie sich vor, dass Sie so hoch wie ein Baum stehen.
Bäume haben starke Wurzeln, die sie mit der Erde verbinden. Ihre Wurzeln reichen tief, und versorgen sie mit Nahrung und Kraft.
Ein Baum ist stark, wenn seine Wurzeln tief reichen. Wie ein Baum in der Erde verwurzelt ist, so bist auch du im Leben selbst verwurzelt.
Spüren Sie, wie Ihre Füße Sie mit der Erde verbinden. Stellen Sie sich bei jedem Einatmen vor, wie die Energie der Erde in Ihren Körper strömt. Bei jedem Ausatmen stellen Sie sich vor, wie Ihr Atem durch Ihren Körper und Ihre Füße in die Erde fließt. Atmen Sie ein und spüren Sie, wie die Energie einströmt. Atmen Sie aus, und spüren Sie, wie der Atem ausströmt. Atmen Sie eine Minute lang auf diese Weise ein und aus.
Fest verwurzelt im Jetzt, so steht ein Baum aufrecht in seinem Stamm. Stehen Sie aufrecht in Ihrem Körper und spüren Sie, wie fest Sie stehen; so werden Sie von keinem Sturm, der durch Ihr Leben fegt, umgeworfen. Machen Sie sich bewusst, dass eine gute Pflege Ihres Körpers dazu beiträgt, Sie widerstandsfähiger zu machen. Richten Sie Ihre Aufmerksamkeit für etwa eine Minute auf alle Teile Ihres Körpers (Füße, Beine, Rumpf, Arme und Kopf).
Die Krone, die Äste und die Blätter eines Baumes sind weit offen und aufnahmefähig. Heftige Winde und Stürme mögen an den Ästen rütteln und die Blätter von der Krone wehen - aber der Baum bleibt in der Erde verwurzelt. Auch wenn er bis ins Mark seines Stammes erschüttert wird, bleibt ein gesunder Baum standhaft.

Das Leben wird Sie immer wieder mit neuen Eindrücken füttern, Eindrücke, für die Sie offen und empfänglich sein sollten. Erkennen Sie, dass jeder Sturm in Ihrem Leben vorübergehen wird. Erkennen Sie, dass alle Dinge vergänglich sind. Bleiben Sie im Jetzt verankert.
Versuchen Sie, sich selbst und Ihre Umgebung mit Mitgefühl zu betrachten. Werfen Sie einen mitfühlenden Blick auf Ihre aktuelle Lebenssituation, auf die Menschen um Sie herum, auf sich selbst.
Dann finden Sie langsam gedanklich wieder zurück ins Hier und Jetzt.
Beginnen Sie mit kleinen Bewegungen und öffnen Sie wieder Ihre Augen.
Und überlegen Sie, ob Sie das entstandene innere Baumbild zum Gegenstand ihres Malens machen wollen.

Appendix C

Content analysis (Mayring, 1991)

Question	Category	Coding rule	Anchor example
Would you like to experience art therapy again?	Yes (n = 14; 87.5 %)	Answers with affirmative content	"Yes" "Indeed" "Sure"
	No (n = 1; 6.25 %)	Answers with rejecting content	"No"
	Special (n = 1; 6.25 %)	Answers with rejecting content and added expanation	"Not in group"
How did the art therapy change your overall wellbeing?	Acceptance	Positive perception	"Now I can accept my unpleasant emotions and find them normal."
	Self-reflection		"I have better self-reflection."
	More trust		"I can feel more trust in the future and myself."
	Relaxed		"Very relaxed"
	Relief (n = 15; 81.25 %)		"I feel reliefed."
	No (n = 3; 18.75 %)	Negative or observant perception	"No" "Not sure yet, will see in a few days"
Did you feel comfortable making art?	Yes (n = 15; 93.75 %)	Answers with affirmative content	"Yes" "Very much." "Yes, very inspiring"
	No (n = 1; 6.25 %)	Answers with rejecting content	

Appendix D