


ORIGINAL ARTICLE

Development, implementation and formative evaluation of a motivational-volitional intervention to promote sustainable physical activity in breast cancer survivors

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Abstract

Objective: The aim of the current project was the development, implementation and evaluation of the programme, Motivational-Volitional Intervention-Movement After Breast Cancer (Mo-Vo-BnB), an intervention for the sustainable promotion of physical activity of breast cancer survivors.

Methods: In a multi-stage interdisciplinary development process, the pedagogical-didactic, psychological and physical evidence-based programme was developed and implemented for women after breast cancer who were approved for medical rehabilitation and were minimally, physically active (<60 min/week). Train-the-trainer seminars were carried out for the implementation. Four sessions were implemented in two German clinics. The training quality, didactic methods and accompanying material were evaluated 6 weeks and 12 months after implementation by patients, trainers and project members ($n = 127$ evaluations).

Results: The standardised and published MoVo-BnB programme can provide practical and quality training. Content and methods can be implemented according to the manual. Training quality, didactic methods, and accompanying materials were evaluated positively.

Conclusion: The results suggest that MoVo-BnB is a useful standardised intervention for promoting the physical activity of breast cancer survivors. The demonstrated process is also suitable for other projects.

Clinical trial registration: German Clinical Trials Register (DRKS): DRKS00011122; Trial registration date: 2016 October 13.

KEYWORDS

breast cancer, development, formative evaluation, motivational-volitional intervention, physical activity

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1 | INTRODUCTION

The multimodal therapy of patients with breast cancer can lead to somatic and psychosocial secondary consequences (Kreienberg et al., 2012). Medical rehabilitation can reduce these resulting treatment consequences in the interim (Scott et al., 2013) and is therefore part of the national and international guidelines for the management of breast cancer (Kreienberg et al., 2012; National Collaborating Centre for Cancer, 2009). Additionally, empirical findings suggest that having a physically active lifestyle after completing breast cancer treatment can reduce the risk of mortality (Lahart et al., 2015), but women tend to considerably reduce their amount of physical activity while undergoing active therapy and upon concluding the therapy compared with pre-diagnosis levels (Bock et al., 2013), and their less active lifestyle will mostly continue to remain unchanged after the diagnosis without targeted intervention (Broderick et al., 2013).

Medical rehabilitation for breast cancer survivors in Germany comprises 3 weeks of inpatient treatment. Physical exercise programmes are an integral part of such a medical rehabilitation (Brüggemann et al., 2018). Nevertheless, despite the evidence showing the advantages of these programmes, such as comparatively high levels of exercising and motivation during the medical rehabilitation, many women fail to maintain a long-term physically active lifestyle after discharge (Exner et al., 2009). The promotion of physical activity that is targeted in national intervention programmes is based on the “MoVo” concept (Fuchs et al., 2011, 2012). The acronym “MoVo” stands for “motivation” and “volition” and is related to motivation theories of health behaviour (Ajzen, 1991; Bandura, 1998) and volition theories of action planning and action control (Gollwitzer, 1999; Schwarzer, 2008). Interventions based on the MoVo concept have been successfully implemented and evaluated for inpatient, outpatient, commercial settings and various target groups (Gerber et al., 2010; Göhner et al., 2012, 2015; Krebs et al., 2015). However, this type of intervention has been lacking in inpatient rehabilitation programmes for women with breast cancer, which normally involves little to no physical activity. Therefore, an adapted version of the

MoVo intervention was developed based on the specific requirements and situation of this target group.

The goal of this project was the development, implementation and formative and summative evaluation of an intervention that promotes the physical activity of breast cancer survivors who are approved for medical rehabilitation and are minimally, physically active (<60 min/week). The efficacy review was conducted in a prospective-controlled bicentred intervention trial and was reported separately (Adams et al., 2021).

2 | THEORETICAL FOUNDATIONS: THE MoVo PROCESS MODEL

The MoVo process model assumes the basic premise that not only an increase of motivation for a sustainable change in behaviour is required but also an increase in the implementation competence (volition) (Fuchs et al., 2011, 2012). The model stipulates that people tend to develop a strong regular exercise by focusing on positive and realistic expectations. Furthermore, the model acknowledges that detailed planning is necessary to avoid potential barriers to maintaining the target behaviour and in developing implementation competencies to sustain the ability to control volitive actions. As a result, the model further expands the predominant emphasis on motivational factors in maintaining behaviour change to also integrate volitional factors. Figure 1 illustrates the MoVo process model.

The basic conception of the MoVo intervention programme builds on these theoretic considerations and was published as a standardised manual (Göhner & Fuchs, 2007). The programme was intended for the inpatient rehabilitation for people with orthopaedic illnesses. The intervention included two sessions during the stay (one 60-min and one 90-min group meeting), a 10-min individual talk that supplemented a phase of self-observation and a postal and phone consultation after completing the rehabilitation. The participants were asked at the start of the first session about their previous (positive) experience with physical activity (*outcome experience*) and the positive feedback

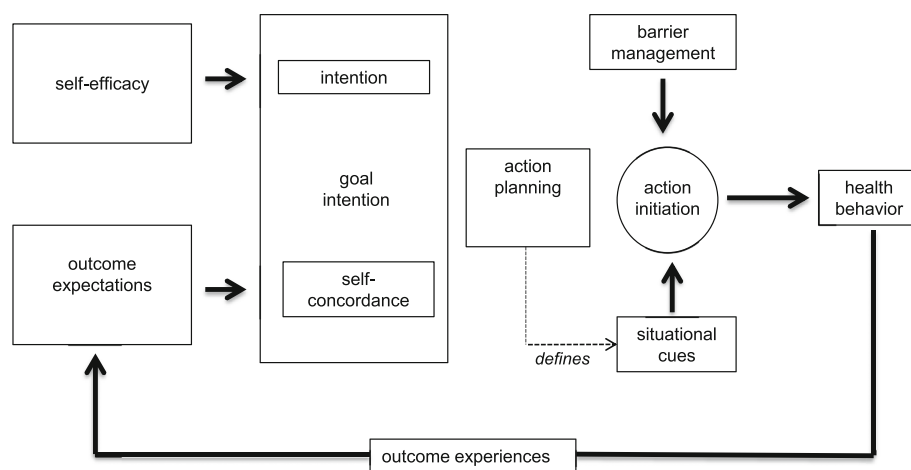


FIGURE 1 The MoVo process model

they received for this activity (*self-efficacy*). Subsequently, each person defined their personal health goals in terms of *goal intention*. Before the individual talk, one of these activity ideas was specified and conceptualised for an *action plan*. During the individual talk that followed, the designs of the activity plans were briefly discussed. During a second group meeting, the internal and external *barriers* were identified that could jeopardise the implementation of these plans. To prevent relapse, participants developed individual counter strategies (*volitional intention shielding*). After discharge from the clinic, reminder post cards were sent that stated the formulated intentions and plans. Finally, a brief phone conversation with the participant was held to determine the extent that the intervention was successful.

Based on this conception, various customised interventions for changing behaviour have been successfully developed, implemented and evaluated in various settings, for example, outpatient rehabilitation for people with obesity (Gerber et al., 2010; Göhner et al., 2012), inpatient rehabilitation for people with mental disorders (Göhner et al., 2015) and for workplace health promotion (Krebs et al., 2015). Fundamentally, the existing MoVo intervention seemed suitable for breast cancer survivors who are not physically active. Several factors necessitated the following specific adjustments: (a) Although activities such as endurance training demonstrate short-term and mid-term use, the reduction of relapse and mortality risk can, however, only be realised for the people concerned after a long period of time. This differs from those people affected by orthopaedic illness for whom the MoVo intervention had been developed in its original form: here, the desired alleviation is provided in the short-term such as an improvement in mobility or building muscles. Details on the use of physical activity after breast cancer should therefore occupy a longer time-frame than in the previous MoVo interventions. (b) The multimodal therapy provided to patients with breast cancer can lead to various somatic and psychosocial limitations such as pronounced restrictions in movement, muscle pain and anxiety and depressive states (Jäger, 2012). The possible activities for this target group should therefore be customised to the specific characteristics of the illness to a greater extent than they had been with the previous target groups of the MoVo interventions.

3 | METHODS

The study has been approved by the Ethics Review Committee of the Landesärztekammer Baden-Württemberg in Germany, number: B-F-2014-093, and the data protection board of the German statutory pension scheme. Written informed consent was provided by all study participants prior to data collection and intervention.

3.1 | Development and content of the intervention

The intervention, which was based on the MoVo concept, was developed according to international and national recommendations for the conception of complex interventions (Craig et al., 2008; Meisert, 2009; Mühlhauser et al., 2011; Pfaff et al., 2011) in a

multi-stage process and in cooperation with two rehabilitation clinics that are funded by the German retirement insurance programme. The development process (see Figure 2) included the systematic reappraisal of the literature on the benefits of physical activity, barriers to exercise and effective behaviour change techniques; the analysis of the status quo with regard to the framework conditions in the two clinics; and the didactic construction of a prototype; and the implementation of this prototype.

3.2 | Gathering evidence

The most common barriers that hinder breast cancer survivors from exercising are breast cancer-related fatigue with extreme tiredness and exhaustion (Weis, 2011), lack of time, no willpower or bad weather (Ottenbacher et al., 2011) and psychological symptoms like anxiety, depression or a reduced sense of self-worth after diagnosis (Zopf et al., 2013). Additionally, techniques for reporting behaviour change interventions have been proposed by Michie et al. (2013). An overview of the evidence-based techniques, which were adopted as a basis for developing the training intervention, are shown in Table 1. Finally, empirically validated and theoretically defined quality criteria for good instruction were searched and defined as the foundation for delivering the intervention (Feicke & Spörhase, 2012).

3.3 | Analysis of the status quo

The levels of experience and qualifications across the different training programmes were varied. The duration of the sports therapy during rehabilitation comprised at least 5 h per week. Knowledge on the topic of exercise in the case of breast cancer (e.g., What value does it have? What kinds of exercise can be performed?) was available for patients. However, the information was mostly conveyed across patients and their indications and not necessarily at the start of rehabilitation.

The following four modifications of the MoVo intervention resulted from recording the evidence and analysing the status quo: (a) The size of six to eight people per group should be similar to the original MoVo intervention (Göhner et al., 2012). The decision for group intervention took place primarily for economic reasons, but the results of the analysis suggested the criterion of small, closed groups based on the specific target-group stresses (e.g., fatigue and concentration problems). (b) The analysis also suggested that the patients could remain concentrated to the greatest possible extent over multiple times. Thus, the adjusted intervention was divided into four 60-min sessions. (c) One of the sessions should be dedicated to the topic of barrier management. (d) The duration with which women pursued exercise during rehabilitation indicated that they will have already had positive experiences with exercise during the course of their stay. In addition to flipcharts, a booklet and activity log, presentations and videos with case studies were chosen to ensure the greatest possible instructive aids.

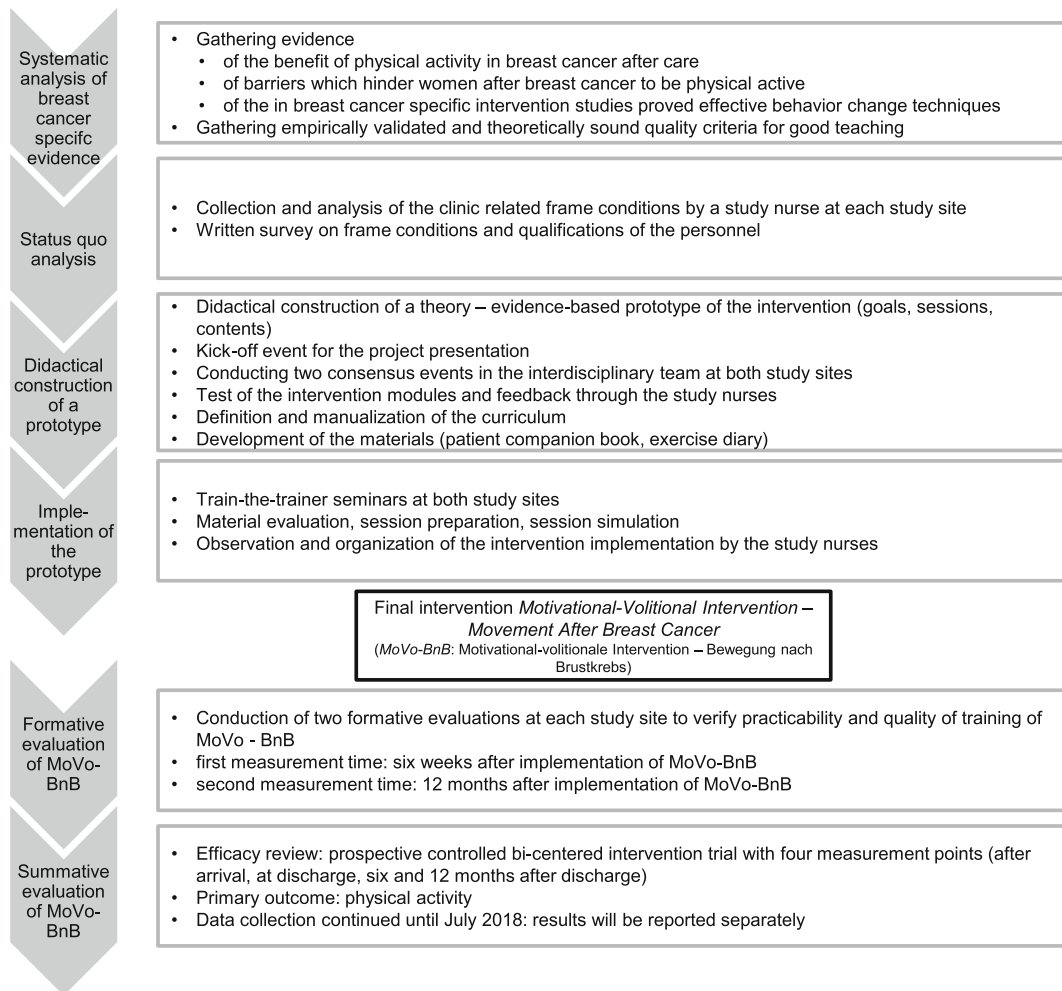


FIGURE 2 Development process

Each session comprised the following four phases that provided structure and served different didactic functions: (1) phase-in period, (2) development and result back-up phase, (3) intensification and reflection phase and (4) final phase.

3.4 | Didactic structure

As shown in Figure 2, after a kick-off event with the two clinics, the intervention was developed. The result was a first version of the curriculum with the designation “MoVo-BnB” (Motivational Volitional Intervention – Movement After Breast Cancer [Bewegung nach Brustkrebs]). This version was published in written form (Spöhrase et al., 2019). An overview of the teaching goals, contents and methods is displayed in Table 2.

3.5 | Implementation

Train-the-trainer (TTT) seminars were prepared as an implementation strategy, given that the introduction of manualised training programmes often present a challenge (Brandes et al., 2008; de Vries et al., 2008; Morfeld et al., 2011). The TTT seminars took place over

three consecutive days and were carried out by two project employees at the clinics, and a total of nine employees were trained. The theoretical background of the intervention, the view on teaching and learning and the structure of the individual sessions and materials (manual, booklet and activity log) were included in the training content. Future trainers viewed the material, prepared the sessions, simulated the sessions and obtained feedback. During the phase of the first training run, two project employees were present during the sessions to aid in successful implementation, as they helped with the technology (PC, projector and powerpoint presentation) and could have helped the trainer, if needed. An evaluation of the TTT seminars by self-questionnaires and group interviews only provided positive assessments. The trainers felt certified in their knowledge through the programme and felt optimally prepared, especially because of the high level of learning from the simulation of the sessions (Rolf et al., 2017).

3.6 | Data collection and measurements

The formative evaluation included two survey dates (6 weeks and 12 months after implementation) in the participating clinics. The data were collected via structured visitations by two project employees

TABLE 1 Breast cancer evidence-based behaviour change techniques as a basis for developing the MoVo-BnB sessions

The behaviour change techniques	Session			
	1	2	3	4
Provide information on consequences of behaviour in general	x			
Provide information on consequences of behaviour to the individual	x			
Goal setting	x			
Prompt observational learning	x	x	x	
Setting sub goals	x	x		
Facilitate social comparison	x	x	x	x
Prompt self-monitoring of behaviour	x	x	x	x
Prompt practice	x	x	x	x
Prompt rewards contingent of effort or progress towards behaviour				x
Provide rewards contingent on successful behaviour				x
Action planning		x		
Provide information on where and when to perform the behaviour		x		
Prompt review of behavioural goals		x	x	x
Provide feedback on performance	x	x	x	x
Barrier identification/problem solving				x
Relapse prevention/coping planning				x
Promote use of mnemonic	x	x	x	
Prompt use of imagery				x
Stimulate anticipation of future rewards				x
Use of follow-up prompts				x

and questionnaires. The goal was the assessment of the training quality from multiple perspectives (participants, trainers and project members). The trainers were clarified on the matter that the observations did not refer to their person, rather they serve the review of the implementability of the manual and the accompanying material.

Each of the four sessions were visited once per clinic. Using an hourly process log, the *faithfulness to the manual* was evaluated (implementation of the manual and the methods and the duration of the individual determination steps).

Participant, trainer and project members answered a questionnaire at the end of each session that assessed the *training quality* with 26 identical items for leading a group (five items), environment and motivation encouraging learning (six items), clarity and structure (five items), activation (six items) and balance (four items) (Helmke, 2006). Answers were given on a 4-point Likert scale (1 = *disagree* to 4 = *agree*).

The surveys for the trainers included questions on the specific *learning goals of the sessions concerning training quality*. The 9 to 13 items, depending on the session, began with the question, To what extent do you think that the learning goals of this session were thoroughly reached? The patients (e.g., "... knows various activity plans and reviews their feasibility"). Answers were given on a 4-point scale (1 = *completely* to 4 = *not at all*). An evaluation followed the three to six *didactic methods* used in each unit. On a 4-point scale, it

indicated the extent that the methods should be included (1 = *completely* to 4 = *not at all*). Lastly, feedback was optional using three *open questions* (Which aspects did you find good in the training unit? Which aspects did you not find good? Other remarks).

In addition to the items that assessed training quality, the surveys for the participants consisted of five questions on the *accompanying material* (Did you find the booklet/activity log for this session useful? Is all necessary content from this session included? Did you use the booklet for preparation and follow-up? Do you have remarks about the visual design?). The questions could be answered dichotomously with Yes or No. Finally, participants responded to three *open questions* (What did you particularly like about the training? What did you not like at all about the training? Do you have any suggestions on improving the training?).

3.7 | Data analysis

The structured hourly process logs were evaluated and summarised according to noted comments on the individual sessions. The evaluation of the survey took place primarily using description average analysis, which was performed using the statistics program SPSS v. 22. The free text entries were counted, structured and assigned in fitting categories in the style of the structured content analysis (Kuckartz, 2016).

TABLE 2 Overview of goals, content and methods of the four MoVo-BnB sessions

Goals	Content	Methods
Session 1: Sports after breast cancer—Is that possible?		
Participants identify suitable sports and develop the intention to increase their physical activity.	Intervention overview and its goals Handling the patient companion book Rules of conduct Positive effects of physical activity after breast cancer Suitable sports Use and formulation of goals Use and structure of the exercise diary Technical support options (apps)	Introduction, discussion, lecture, work with case examples
Session 2: How do I set my goals?		
Participants set realistic goals regarding their physical activity and are able to implement them adequately in everyday life.	Analysis of the self-monitoring Use of action plans Action planning Review of the action plan regarding its practicability	Discussion, lecture, work with case examples
Session 3: How do I manage barriers?		
Participants can successfully deal with barriers during in-patient rehabilitation stay and afterwards in everyday life.	Physical activity experiences during rehabilitation Positive reinforcement Review of the individual action plan Barrier management Use of praise and reward Reminder aids	Discussion, lecture, work with case examples, gallery walk, imagination exercise
Session 4: What is next?		
Participants evaluate their experiences during in-patient rehabilitation stay and anticipate their future behaviour in everyday life.	Repetition and reflection of the sessions 1–3 Reminder options of physical activity Review on successes in performing physical activity during rehabilitation Use and structure of the exercise diary for everyday life Reinforcement strategies Review of goals, action plans, barrier management Reminder strategies Intervention evaluation	Discussion, lecture, reflection exercise, movement exercise, role play, hand-evaluation

4 | RESULTS

4.1 | Sample

Women after breast cancer: After the first measurement time (T1), $n = 51$ surveys from the individual sessions were completed by participants, and $n = 30$ assessments were completed at the second measurement time (T2). Trainers: At T1, $n = 12$ instruction evaluations from the trainer's perspective were completed. At T2, $n = 8$ evaluations were collected.

Project members: Overall, $n = 14$ surveys from T1 and $n = 12$ surveys at T2 were collected.

4.2 | Assessment of the faithfulness to the manual through structured observation

From the documentation of the four hourly process logs of T1, it could be summarily determined that the implementation corresponded to the greatest possible degree to the manual. Along with the implementation reliabilities of the individual sessions, the unusual approach with the technology (i.e., PC and projector) presented a

challenge for the trainers in particular, as they were partly unfamiliar with technology in general and with this teaching approach as well. However, they were confident that this feature will improve through practice. At T2, the trainers demonstrated growth in experiences and specific routines. Initial uncertainties with the implementation of individual sessions or the unusual approach with the technology could no longer be observed in comparison with T1. Overall, the results show that all methods and tasks were easy to understand and the accompanying materials were practical to use.

4.3 | Assessment of training quality by participants, trainers and project members

In sum, participants, trainers and project members predominantly agreed that the training quality at T1 and T2 was good (see Tables 3 and 4). At T1 and T2, participants and trainers agreed on average with the *activation* items. The highest frequency of agreement was with the dimension *environment and motivation encouraging learning*. More trainers agreed with the two dimensions at T2 than at T1. The project members' average across the five dimensions was somewhat higher at T2 than at T1.

TABLE 3 Six-week evaluation of teaching quality from the perspectives of patient, trainer, project member in means (standard deviation)

Scale (1–4)	Session 1		Session 2		Session 3		Session 4		Total n = 73–76				
	PA n = 16	TR n = 3	PM n = 4	PA n = 11	TR n = 3	PM n = 4	PA n = 14	TR n = 3		PM n = 4			
Group management	3.8 (0.2)	3.9 (0.1)	3.8 (0.1)	3.9 (0.1)	3.9 (0.1)	3.5 (0.4)	3.9 (0.1)	3.2 (0.3)	3.3 (0.6)	3.9 (0.1)	3.1 (0.9)	3.6 (0.0)	3.7 (0.3)
Atmosphere/motivation	3.9 (0.1)	3.8 (0.0)	3.4 (0.3)	3.8 (0.1)	3.7 (0.2)	3.3 (0.2)	3.9 (0.1)	3.4 (0.1)	3.9 (0.1)	3.9 (0.1)	3.5 (0.1)	3.5 (0.5)	3.8 (0.2)
Clarity and structure	3.7 (0.2)	3.5 (0.4)	3.7 (0.4)	3.8 (0.3)	3.6 (0.1)	3.5 (0.3)	3.8 (0.2)	3.0 (0.6)	3.6 (0.2)	3.8 (0.1)	2.9 (0.4)	3.2 (0.0)	3.7 (0.3)
Activation	3.4 (0.4)	3.4 (0.5)	3.6 (0.1)	3.5 (0.3)	3.3 (0.1)	3.6 (0.1)	3.4 (0.5)	3.2 (0.8)	3.3 (0.2)	3.6 (0.1)	2.6 (0.4)	3.5 (0.3)	3.4 (0.4)
Summary	3.5 (0.8)	3.6 (0.3)	3.3 (0.4)	3.9 (0.1)	3.6 (0.3)	3.8 (0.2)	3.8 (0.2)	3.5 (0.0)	3.4 (0.4)	4.0 (0.0)	2.9 (0.7)	3.5 (0.7)	3.6 (0.5)
Total	3.7 (0.2)	3.6 (0.1)	3.5 (0.2)	3.8 (0.1)	3.6 (0.1)	3.5 (0.1)	3.8 (0.1)	3.2 (0.4)	3.5 (0.2)	3.9 (0.1)	3.0 (0.4)	3.5 (0.2)	

Note: Scale: 1 = I do not agree to 4 = I agree.

Abbreviations: PA, patients; PM, project member; TR, trainer.

TABLE 4 Twelve-month evaluation of teaching quality from the perspectives of patient, trainer, and project member in means (standard deviation)

Scale (1–4)	Session 1		Session 2		Session 3		Session 4		Total n = 49–50				
	PA n = 8	TR n = 2	PM n = 4	PA n = 9	TR n = 2	PM n = 3	PA n = 6	TR n = 2		PM n = 3			
Group management	3.9 (0.1)	3.7 (0.1)	3.9 (0.1)	3.9 (0.1)	3.8 (0.2)	3.9 (0.1)	3.8 (0.4)	4.0 (0.0)	3.6 (0.5)	3.8 (0.4)	3.8 (0.2)	3.4 (0.0)	3.8 (0.2)
Atmosphere/motivation	3.8 (0.2)	3.5 (0.1)	3.9 (0.1)	3.8 (0.1)	3.9 (0.1)	3.6 (0.3)	4.0 (0.0)	4.0 (0.0)	3.9 (0.1)	3.9 (0.1)	3.9 (0.1)	3.6 (0.1)	3.8 (0.1)
Clarity and structure	3.8 (0.1)	3.3 (0.5)	3.8 (0.1)	3.9 (0.1)	3.8 (0.0)	3.6 (0.3)	3.8 (0.2)	3.8 (0.0)	4.0 (0.0)	3.9 (0.1)	3.7 (0.1)	3.4 (0.2)	3.8 (0.2)
Activation	3.5 (0.4)	3.5 (0.1)	3.8 (0.1)	3.5 (0.7)	3.5 (0.4)	3.7 (0.1)	3.8 (0.2)	3.5 (0.3)	3.8 (0.2)	3.9 (0.1)	3.7 (0.1)	3.7 (0.2)	3.7 (0.4)
Summary	3.7 (0.2)	3.1 (0.1)	4.0 (0.0)	3.8 (0.4)	3.8 (0.1)	4.0 (0.0)	4.0 (0.0)	4.0 (0.0)	4.0 (0.0)	3.9 (0.1)	4.0 (0.0)	3.6 (0.3)	3.8 (0.2)
Total	3.8 (0.1)	3.4 (0.1)	3.9 (0.1)	3.8 (0.2)	3.7 (0.2)	3.7 (0.1)	3.8 (0.1)	3.8 (0.1)	3.8 (0.1)	3.9 (0.1)	3.8 (0.1)	3.5 (0.1)	

Note: Scale: 1 = I do not agree to 4 = I agree.

Abbreviations: PA, patients; PM, project member; TR, trainer.

4.4 | Assessment of learning goals and didactic methods by the trainers

The surveyed trainers ($n = 8$) responded that all of the learning goals were reached in all four sessions by either indicating *Yes* or *Completely*. At T1, session 2, “How do I set my goals?” had the highest agreement ($M = 1.3$; $SD = 0.2$) with regard to achieving learning goals, and session 4 “What is next?” had the lowest ($M = 2.0$; $SD = 0.5$). At T2, “How do I manage barriers?” had the highest agreement ($M = 1.1$; $SD = 0.1$) in session 3 and the lowest in session 4 ($M = 1.2$; $SD = 0.3$).

4.5 | Assessment of the accompanying material by participants

The results from the total sample across T1 and T2 ($n = 74$) show that training materials *booklet/activity log* were clearly found to be useful.

4.6 | Open feedback by participants and trainers

Seventy comments from 61 surveys across T1 and T2 were provided by the participants for the three open questions. All participants provided positive comments, five comments about the individual sessions were negative and four suggestions were given for improvement. The following three categories could be formed from the positive comments: group, content and structure of session and trainer. The participants especially praised the open and friendly togetherness of the group. They also claimed to have had a very good feeling being together as a group. The possibility to exchange experiences and joint work was seen as an added value as well as the fact that the situations were similar regarding their situations back home and barriers that hinder them being physically active. The positive comments on content and structure of the sessions included how varied, interactive, structured and organised they were. The films and different methods (i.e., writing postcards, defining goals in writing and experiencing role play) were praised but also the information on the positive effects of exercise after breast cancer. Additionally, the content was evaluated as being helpful for the period after rehabilitation. Criticism included, among other things, that the scope of the first unit was too long and the content did not include anything new. Suggestions for improvements referred to the technical equipment.

Forty-one comments from 18 surveys across T1 and T2 were provided by the trainers for the three open questions. Technical problems, time pressure and partly unfavourable scheduling of sessions were especially mentioned as negative factors. Session content and organisation, interactivity and diversity of the units were praised.

5 | DISCUSSION

Despite the clear positive effects of physical activity and the mostly high motivation, women have previously achieved

inadequate results after breast cancer. Sufficient activity behaviour must be anchored into everyday life in the longer term. Our study had the objective of developing a programme for this target group.

Guided by the results of a systematic development process, the standardised and published programme MoVo-BnB (Spörhase et al., 2019) is designed for women who are not physically active after a breast cancer diagnosis, based on the MoVo process model (Fuchs et al., 2011) and the MoVo intervention programme (Göhner et al., 2012). As part of the literature development on the benefits of exercise with breast cancer, we took into consideration the potential barriers that prevent the target group from participating in sports, evidence-based and target group-specific strategies for behaviour change and quality of instruction.

Specific to MoVo-BnB, the expansion of the original MoVo intervention by focusing on the benefit of exercise and detailed information on suitable types of sport is for the target group in particular situated in the first session (“Sports after cancer, is that possible?”). The results showed that the new structure of the programme (four 60-min sessions) is user-friendly. The four sessions allow more repetition and intensification, and the closed group facilitated familiarisation and trust and improved the group and working environment overall. The additional session on the issue of barrier management also turned out to be practical, given that the impediments and the question of how these barriers can be managed were among the expectations and have a central importance for physical activity behaviour. Another change in relation to the original MoVo intervention included supplementing the first three sessions with video recordings and case studies.

The trainers evaluated the TTT seminars as being very helpful for achieving the implementation. The compressed TTT seminars allow intensive learning and preparation, which would otherwise be difficult to implement during the normal routines of the clinic. Despite the effort, the seminars were lastly time economical. Otherwise, the trainer might use their free time for preparation or do not have a proper preparation which might lead to a worse training quality. TTT seminars should be included in regular quality evaluations of patient education programmes (Mühlig et al., 2007). Other studies have also shown that in the implementation of TTT seminars, personal adjustment and acceptance of the trainers was positive, and they felt confident in their knowledge and showed commitment (Bürckstümmer, 2007; Körner et al., 2012). Despite this preparation, delays occurred in the course of implementation because of personnel changes.

Our findings at two measurement times of 6 weeks and 12 months of formative and summative evaluations revealed that the MoVo-BnB intervention can provide practical and quality training. Content and methods can be implemented according to the manual and were evaluated as very positive by participants, trainers and project members. Challenges such as initial uncertainty with the implementation of training units and the unusual approach with using the technology (PC and projector) for the trainers could no longer be observed in comparison with T1.

6 | CONCLUSION

To be able to successfully introduce the newly developed intervention in the two clinics, the framework conditions were taken into account at the start. This step, however, did not protect against impeding factors that arose such as lack of personnel. The process of implementation and the two formative evaluations indicated that the introduction of a new programme is less dependent on the conception and content than the framework conditions existing on location. The practical implication of MoVo-BnB was achieved with reasonable expenditure and the faithfulness to the manual could be confirmed 1 year after the implementation. From our point of view, it is essentially possible to integrate the programme into the treatment.

7 | IMPLICATIONS FOR PRACTICE

- To ensure that an implementation is successful, impeding framework conditions must be carefully recognised and be approached with somewhat high diligence.
- Implementation of the intervention by physiotherapists and health education personnel is very appropriate and feasible.
- Using the manual, the programme can be implemented by other personnel and in other rehabilitation institutions.
- With the development and implementation of the project, we demonstrated a process that is suitable for other projects.

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CONFLICT OF INTEREST

None declared.

DATA AVAILABILITY STATEMENT

There is no data available.

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