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Acceptability and Feasibility of a Personalized, Modular Intervention to Promote Dignity, Meaning and Mindfulness in Palliative Patients in a Swiss Acute-Care Hospital: A Single-Center Feasibility Study

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Abstract

Background

Patients with a life-limiting serious disease commonly experience substantial emotional and spiritual distress, death anxiety, depressive symptoms and loss of dignity. Fostering dignity and meaning and relieving psychological distress are central objectives of palliative care. To address the heterogeneous and individual needs of palliative patients, a personalized, modular intervention approach was developed for the acute care setting, consisting of Dignity Therapy, modified CALM Therapy and a mindfulness-based intervention (MBI).

Aim

We aimed to evaluate the acceptability of the modular intervention and assess feasibility in terms of eligibility, recruitment, retention, intervention completion and questionnaire completion; exploratory pre-post patient-reported outcomes were also examined.

Methods

In this single-center feasibility study, inpatients and outpatients receiving palliative consultation-liaison care at University Hospital Basel were screened for eligibility during 16 recruitment months between February 2020 and September 2023. Participants received standard specialized palliative consultation service plus one selected module of the personalized intervention: Dignity Therapy, modified CALM Therapy or an MBI. Acceptability was assessed using a post-intervention semi-structured interview with Likert-scale items and open questions. Feasibility was assessed using eligibility, recruitment, retention, intervention-completion and questionnaire-completion rates. Exploratory pre-post patient-reported outcomes included the Patient Dignity Inventory (PDI), Death and Dying Distress Scale (DADDS) and Patient Health Questionnaire-9 (PHQ-9).

Results

Of 580 screened patients, 79 (13.6%) were eligible and 12/79 eligible patients (15.2%) agreed to participate. Ten of 12 participants completed the post-intervention assessment and were included in the study, corresponding to a retention rate of 83.3%. During the final three months of recruitment, 26/108 screened patients (24.1%) were eligible and 6/26 eligible patients (23.1%) participated. Participants who completed the post-study interview rated the chosen module as highly helpful (mean 4.8, SD 0.42). Exploratory pre-post analyses suggested a reduction in PDI and PHQ-9 scores.

Conclusion

The personalized modular intervention was acceptable among participants who completed the evaluation, but recruitment and intervention completion remained challenging in the acute palliative care setting. The exploratory findings support further evaluation in a controlled trial before conclusions can be drawn about efficacy or routine implementation.

Trial registration

ClinicalTrials.gov NCT03744442.

Trial registration

ClinicalTrials.gov NCT03744442, prospectively registered on Nov 13th, 2018.

Background

Patients with a life-limiting serious disease commonly experience substantial emotional and spiritual distress, death anxiety, depressive symptoms and loss of dignity. [1–3] For patients with advanced cancer, ASCO recommends integrating palliative care into standard oncology care, and psychological and existential support are core components of palliative care more broadly.[4,5] Some aspects of dignity, such as symptom management, privacy, respect and a calm environment, can be addressed through established components of general palliative care.[5] In contrast, the feeling of being human and being oneself, having meaningful relationships and experiencing existential satisfaction are more individualized aspects of dignity that are more challenging to address and may require targeted interventions.[6–10]

Evaluated approaches aiming to foster dignity and meaningfulness in patients with advanced disease are usually applied as standardized and manualized stand-alone interventions.[11] Prior psychotherapy research has shown that, in other clinical populations, evidence-based treatment components structured as freestanding modules within a flexible design can improve outcomes compared with standard evidence-based treatments.[12–16] We developed a personalized modular intervention with the purpose of more precisely addressing the heterogeneous needs of palliative care patients nearing the end of life.

In a multi-step process, including literature review and expert consensus among international specialists in palliative care, a three-module intervention approach consisting of Dignity Therapy (DT), modified CALM Therapy (CALM) and a mindfulness-based intervention (MBI) was formulated, as described previously.[17] All three modules are empirically grounded and have been used in palliative care. The modular approach aims to build on the strengths of these evidence-based treatments while improving their fit to individual patient needs and preferences. Because symptom burden and psychosocial needs vary substantially in palliative care[18], patient preferences and the palliative care team's clinical assessment were considered when selecting the therapeutic support module. In this feasibility study, we

evaluated the acceptability of the modular intervention approach and assessed feasibility in terms of eligibility, recruitment, retention and intervention completion.

Methods

This was a single-center, patient-preference feasibility and acceptability study of a personalized modular intervention in a small sample of patients receiving palliative care at University Hospital Basel, Switzerland. The study was designed primarily to evaluate recruitment, retention, intervention completion and acceptability, and secondarily to explore pre-post patient-reported outcome signals. Satisfaction with the intervention and recommendation to other patients were measured by a semi-structured interview; assessment after the completion of the intervention (T1 = 2 weeks after baseline) and at 1-month follow- up (T2).

Setting

The study was implemented within the hospital palliative care consultation-liaison service at University Hospital Basel, Switzerland. This specialized hospital-based service, established in 2014, provides clinical and psychosocial support as well as research and training in palliative care. Members of the service provide consultations to inpatients with advanced diseases across hospital wards and to outpatients continuing therapy at University Hospital Basel. In this study, the interprofessional service was defined as standard specialized palliative consultation service (SSPC). The modular intervention was added to SSPC and was not intended to replace it.

Participants

The target population comprised patients with advanced, incurable, life-limiting disease and multimodal support needs who were mentally and physically able to engage with the offered therapeutic support. All patients approached for study participation routinely received standard specialized palliative consultation service at University Hospital Basel.

Patients were excluded if they lacked capacity to provide informed consent, had confusion, delirium or dementia precluding participation, were too unwell to complete the study procedures, or were unable to speak and read German. Participants were recruited during 16 recruitment months between March 5ths 2020 and September 30th, 2023. The study was approved by the Ethics Committee Northwest and Central Switzerland (BASEC-ID: 2018-01998) and conducted in accordance with the Declaration of Helsinki, ICH Good Clinical Practice, Swiss law and applicable Swiss regulatory requirements. All participants provided written informed consent before enrollment.

Procedures

The personalized modular intervention

The modular intervention approach followed evidence-based intervention strategies developed to promote dignity and meaning and to reduce distress among patients with advanced life-threatening disease. The intervention was structured into freestanding modules that represented a selection of options for clinicians and patients and could be adapted to patients' needs and preferences **(Figure 1)**.Before module selection, the palliative care consulting team conducted a multidimensional assessment covering underlying diagnosis, understanding of disease, symptom burden, functional status, demographic factors, distress and spiritual needs. This assessment was used to identify individual needs and preferences and to determine whether the patient was mentally and physically able to benefit from one of the modules. The three modules were then introduced to the patient, who selected one module according to personal preference after discussion with the clinician. The physician could provide a recommendation based on the assessment. Parameters considered in recommending a module included: (1) stage of disease, life expectancy, diagnosis, patient pathway and existential readiness for Dignity Therapy; (2) physical condition, such as physical limitation of speech or physical tension, and symptom burden; (3) mental condition, including distress related to disease symptoms and fear of death; and (4) social factors, including close relationships.

Modular Intervention

Each module was designed to be delivered in two structured 60-minute sessions by an adequately trained therapist. Sessions were provided either at the patient's bedside or during outpatient visits. The entire intervention, including handing over the generativity document within DT, was ideally completed within 1-2 weeks.

Module 1: Generativity

The module "generativity" that consisted of Dignity Therapy gives patients the opportunity to create a legacy document (generativity document) that can be passed on to significant others or family members. If requested by the patient, a significant other or close family member was contacted and invited to participate. In the first session (approximately 60 minutes), Dignity Therapy was explained to the patient. Based on the DT question protocol (Supplementary Table S1), patients alone or together with accompanying relatives were guided through the conversation by a trained therapist. The patient's narration was audiotaped, transcribed verbatim and edited to provide a clear and readable narration called the "generativity document". In the second session (approximately 60 minutes), the generativity document was read aloud to the patient to ensure that it contained no errors requiring correction. The final version was handed over to the patient to be passed on to significant others or family members.

Module 2: Living meaningfully

The module "living meaningfully" was based on modified CALM Therapy and aimed at patients with high levels of death anxiety and distress. CALM covers four domains:

1. Symptom control and communication with health care providers: cooperation and improved communication with health care providers, and support regarding medical decision-making to ensure the best care and control of symptoms, were addressed.
2. Self-concept and relations with close others: supporting adjustment of self-esteem and identity to disease-related changes, including effects on relationships with close others, care needs and support, was addressed.
3. Spiritual well-being / meaning and purpose in life: understanding the individual meaning of suffering and dying, and evaluating priorities and goals when facing advanced disease, were addressed.
4. Preparing for the future, sustaining hope and facing mortality: anticipatory fears, balancing life and death, advance care planning and preparation for dying were addressed.[19–21]

According to the patient's needs and individual preferences, different topics within the CALM manual were explored and discussed within two individual therapy sessions (approximately 60 minutes each) delivered over a period of two weeks by a certified CALM therapist. Patients had the option to invite a significant other or close family member to one or both sessions.

Module 3: Mindfulness

The module "mindfulness" was aimed at patients who preferred to reduce distress through an MBI. Patients in the mindfulness module attended two 60-minute sessions over a period of two weeks. They could choose between two mindfulness-based exercises, namely "mountain meditation" and "breath meditation". During these sessions, patients were instructed to focus their attention on the present moment, the "here and now". The therapist guided patients through the exercise and reminded them to gently bring their focus back to the present moment when their mind drifted away.

Measures

Sociodemographic and clinical data were collected at baseline, including age, gender, relationship status and religious preferences. Medical data, including time since primary diagnosis, cancer site or type of non-oncological disease, were obtained from medical records.

Primary Outcomes

Outcomes on acceptability and feasibility

Acceptability of the modular intervention was assessed using a post-intervention semi-structured interview that included items with 5-point Likert response scales, allowing participants to rate their experience with the chosen intervention. These items evaluated participants' perceptions of how helpful the intervention was for themselves and its capacity to enhance personal meaning. Additional aspects,

including willingness to recommend the chosen therapy to other patients and families, perceived benefits of participation and suggestions for improvement, were assessed using open questions.

Feasibility of the personalized modular intervention was assessed by the number and proportion of screened patients who met eligibility criteria, the proportion of eligible patients who consented and started the intervention, intervention completion/retention, questionnaire-completion rates, and reasons for non-participation, exclusion, withdrawal or non-completion. Feasibility outcomes were summarized for the total recruitment period and for the final optimized recruitment phase.

Secondary Outcomes

To explore potential changes in patients' sense of dignity, death anxiety, distress and depressive symptoms, participants completed three questionnaires before (T0) and after the intervention (T1): the Patient Dignity Inventory (PDI), Death and Dying Distress Scale (DADDS) and Patient Health Questionnaire-9 (PHQ-9). Higher scores indicate greater dignity-related distress, death-and-dying distress and depressive symptom severity, respectively.

Statistical Methods

Exploratory paired pre-post comparisons of questionnaire scores were conducted using paired t-test. Given the feasibility design and small sample size, p values were interpreted descriptively and no inference about efficacy was drawn.

Results

Sociodemographic and medical characteristics

Among included participants (n=10), mean age was 67.1 years (SD 16.27) and seven participants (70%) were female. Most participants were diagnosed with a progressive oncological disease (9/10, 90%), with gynecological cancer sites being most frequently represented **(Table 1)**.

Table 1. Demographic and clinical characteristics of participants (n=10)

Characteristic	n (%) or mean	SD
Age, years	67.1	16.27
Gender		
Male	3 (30%)	
Female	7 (70%)	
Relationship status		
Married or living with partner	5 (50%)	
Living alone (single or widowed)	5 (50%)	
Religion		
Not religious	2 (20%)	
Religious	8 (80%)	
Primary disease / cancer site		
Gynecological	3 (30%)	
Hematological	1 (10%)	
Head and neck	1 (10%)	
Lung	2 (20%)	
Other cancer sites	2 (20%)	
Non-oncological disease	1 (10%)	
Time between primary diagnosis and study participation, months	16.7	18.1

Acceptability

Descriptive analysis of six Likert-scale acceptability items indicated high acceptability of the intervention among participants who completed the post-intervention interview. Participants reported perceived benefits in the areas of dignity, meaning of life, significance of life and will to live, with reduced distress reported by some participants.

The chosen modules were well received and perceived as helpful by most participants, as indicated by a mean score of 4.8 (SD=0.42) on a 5-point Likert scale (1=not at all helpful, 5=very helpful). Participants reported improvements in meaning of life (mean=4.1, SD=0.57; 1=strongly disagree, 5=strongly agree), sense of dignity (mean=4.6, SD=0.52), will to live (mean=4.2, SD=0.63) and significance of life (mean=4.0, SD=1.15). Some participants reported reduced perceived distress (mean=3.44, SD=0.66) **(Figure 2)**.

Eight of 10 participants with post-intervention interview data (80%) stated that they would recommend the intervention; this item was missing for two participants. Among participants receiving DT (6), three indicated that DT helped them review important life memories and that this reflection was transformed into appreciation of life and gratitude. Among participants receiving CALM Therapy (3), two perceived the conversations as helpful for facilitating end-of-life conversations, structuring and prioritizing wishes

and concerns, and decision-making; some also reported a feeling of security and trust. The participant receiving the MBI stated that thinking of the therapy and the included meditation helped her calm down at night. Eight of 10 participants (80%) reported a positive impact on their emotional state, and four of 10 (40%) reported that the intervention helped with acceptance of the end-of-life situation. Five of 10 participants reported a positive impact of the intervention on family members, while this response was missing for five participants. Illustrative comments included: “The therapy has brought me even closer to my wife”; and “My wife recognized that I am at a different point now, more able to accept my disease, having a more positive mindset - she is very thankful.”

Feasibility

During 16 recruitment months between February 2020 and September 2023, 580 patients were screened. Seventy-nine patients (13.6%) met all eligibility criteria and 12/79 eligible patients (15.2%) agreed to participate. One participant died, one withdrew before post-intervention assessment, and one did not fully complete the T1 questionnaire measurement, leaving 10 participants for the post-intervention interview and 9 participants for paired questionnaire analyses **(Figure 3)**. During the final three months of recruitment (July-September 2023), 108 patients were screened, 26/108 were eligible (24.1%) and 6/26 eligible patients participated (23.1%). Retention from enrollment to post-intervention assessment was 10/12 (83.3%). Reasons for non-participation or exclusion included physical deterioration or poor physical condition, cognitive impairment, transfer to another facility, language barriers, patient decline and limited staff resources **(Figures 4 and 5)**.

Secondary Outcomes

Descriptive statists of secondary outcome data are provided in **Table 2** and **Figure 6.**

Table 2: Descriptive statistics of the questionnaire outcome data at Baseline and T1

Questionnaire	T0 median/IQR (mean/SD)	T1 median/IQR (mean/SD)
PDI	52/7 (54.8/12.7)	41/8 (41.7/8.1)
PHQ9	8/4 (9.4/4.2)	6/2 (5.9/3.2)
DADDS	19/10 (21.7/6.5)	17/13 (19.6/7.1)

Differences in questionnaire score data were normally distributed. Exploratory paired analyses of questionnaire data available before (T0) and after (T1) the intervention (n=9) showed a reduction in PDI scores after the intervention (p=0.002) and a reduction in PHQ-9 (p=0.025), while changes in DADDS (p=0.081) scores were not statistically significant in this small group of participants (n=9) (Figure 6). In order to correct for multiple comparisons, we applied the Benjamini-Hochberg (BH) and Bonferroni

correction to the paired test results **(Table 3)**. These p values should be interpreted descriptively in light of the feasibility design, small sample size and absence of a control group.

Table 3: Correction for multiple comparison

Comparison	Raw p-value	Benjamini-Hochberg (BH)	Bonferroni
1	0.002	0.006	0.006
2	0.025	0.0375	0.075
3	0.081	0.0810	0.243

Discussion

This article reports a feasibility and acceptability study of a personalized modular intervention designed to address the heterogeneous psychosocial and existential needs of palliative care patients nearing the end of life. The primary objective was to assess the feasibility and acceptability of a modular intervention comprising Dignity Therapy, modified CALM Therapy and an MBI in acute hospital care. The study evaluated methodological challenges related to eligibility, recruitment, resources, retention and intervention completion, and explored pre-post patient-reported outcome signals. The personalized aspect of the modular intervention, including patient choice of therapy after clinical assessment and discussion, was evaluated as a central component of the developed approach. The extent to which patients' choices were guided by recommendations from the palliative care team was not formally evaluated. Because included patients had to meet the clinical study's mental and physical eligibility criteria, all offered therapies were considered suitable for the study population. However, social factors and stage of disease were considered in module recommendations and may have influenced patients' choices.

Acceptability, feasibility and exploratory outcome signals

Only a small proportion of patients screened in this acute-care setting were physically and mentally able to participate in the modular intervention within a clinical study. Among participants who completed the post-intervention evaluation, acceptability was high and the intervention was perceived as helpful. These findings suggest that structured communication and individualized psychosocial support may be valuable for selected palliative care patients who are able and willing to participate.

Most participants who completed the evaluation reported that the intervention increased their sense of dignity, meaning and significance of life and strengthened their will to live. We observed a reduction in PDI scores after the intervention and a non-significant reduction in PHQ-9 scores. However, because the study did not include a control group, these exploratory pre-post changes cannot be attributed to the modular intervention alone. Questionnaire scores may also have been influenced by SSPC, changes in physical health, regression to the mean or the natural course of disease. A randomized controlled trial

comparing the modular intervention plus SSPC with SSPC alone is needed to estimate potential efficacy more accurately.

The main recruitment challenges were patients' health status and rapid health decline near the end of life, identifying an appropriate time window for the intervention, transfers to other facilities, language barriers and staff resources. Increasing available resources and including outpatients appeared to improve recruitment and implementation during the final recruitment phase. The low participation rate also suggests that implementing the modular intervention as part of a clinical study is challenging because study procedures, including pre- and post-intervention questionnaires, add burden for this vulnerable population. Offering the modular intervention outside the constraints of a clinical study may increase patients' willingness to accept therapeutic support.

Clinical implications

Only a small proportion of screened palliative care patients were suitable for participation in this modular intervention study. For selected patients, structured communication approaches such as Dignity Therapy and CALM Therapy may support discussion of difficult topics regarding end-of-life care, hopes, wishes and family concerns. Although the MBI is less conversational, it may support self-awareness, acceptance and regulation of distress. The modular format may therefore help clinicians to offer different forms of therapeutic support according to patients' preferences and needs. Individual therapies are resource intensive; however, because only a minority of screened patients were eligible and willing to participate, implementation may be feasible in this small group of patients with flexible procedures. To further evaluate acceptability among suitable patients and potential efficacy of SSPC plus the modular intervention compared with SSPC alone, a randomized controlled trial with a calculated sample size of 40 patients (20 per study arm) has been conducted (NCT06549075, BASEC ID: 2024 – 01301). In this trial, patients were randomized to either SSPC plus the modular intervention or SSPC alone, with the option of choosing a module after participation in the SSPC group. Offering the modular intervention within an RCT was challenging because of study burden and the possibility of allocation to the control group. However, a controlled design was necessary to distinguish intervention effects from SSPC, natural history and measurement variability. Results of this RCT are currently being analyzed.

Strengths and limitations

Our study has several limitations. First, recruitment was interrupted twice because of health-related staff shortages and the COVID-19 pandemic. Owing to the long and interrupted recruitment period, with different conditions across phases, overall recruitment estimates should be interpreted cautiously. Second, the study procedures, including pre- and post-intervention assessments with several questionnaires, may have influenced patients' decisions to decline the offered intervention. Third, the timing of post-intervention measurement was determined by study staff and clinical circumstances, making it difficult to distinguish potential intervention-related changes from fluctuations in mental and physical condition on the day of measurement. Fourth, the short interval between baseline and post-intervention assessment precluded evaluation of sustained effects on psychological distress, anxiety,

depression, mental well-being, dignity or meaning over time. However, longer-term follow-up is difficult in this vulnerable population and may also be strongly influenced by disease progression, increasing symptom burden and functional impairment. Fifth, CALM-based therapy included only two sessions due to the short-term nature of the modular intervention as described.[17] However, CALM therapy usually requires at least 3 sessions, limiting the effect that conventional CALM therapy might have on death anxiety and other outcomes. Additional limitations include the single-center design, very small sample size, selection of patients well enough to participate in a clinical trial, missing of one questionnaire baseline data set, exploratory testing. The influence of the palliative care team recommendation on the patients' choices of therapy was not evaluated in the interview.

Because this feasibility study did not include an SSPC-alone comparator, potential changes in mental well-being may reflect the modular intervention, SSPC, natural history or other clinical factors. This issue will be addressed more directly in the planned randomized controlled trial, in which SSPC alone will serve as the comparator to SSPC plus the modular intervention.

Conclusion

This feasibility study shows that recruitment and intervention completion are challenging in an acute palliative care setting, but that the personalized modular intervention was acceptable and perceived as helpful among participants who completed the evaluation. Exploratory pre-post outcome signals, including reduced PDI scores, should be interpreted cautiously because of the small sample size and absence of a control group. A randomized controlled trial is needed to evaluate whether adding the modular intervention to SSPC improves patient-reported outcomes compared with SSPC alone.

Declarations

Ethics approval and consent to participate: All procedures performed in this study were in accordance with the ethical standards of the institutional and national research committee and with the 1964 Declaration of Helsinki and its later amendments. The study was approved by the Ethics Committee Northwest and Central Switzerland (2018-019998). All participants provided written informed consent before enrollment.

Trial registration: ClinicalTrials.gov NCT03744442.

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Use of AI-Based Tools in Manuscript Preparation

We used artificial intelligence (AI)-based tools, including ChatGPT and OpenEvidence, to support manuscript preparation. We also used publicly available search technologies that may incorporate AI-based functionalities. All AI contributions were strictly assistive, and all content was reviewed and approved by the authors to ensure accuracy, integrity, and compliance with ethical standards.

Consent for publication: Not applicable

Competing interests

RS received funding in the context of a Horizon Europe project from the Swiss State Secretariat for Education, Research and Innovation (SERI; contract number 22.00094), and from Wings Health in the context of a proof-of-concept study. RS received a speaker honorarium from Novartis. RS is chairman of the Basel Institute for Psychosomatic Medicine (BIPM) and founder and managing director of the Psychosomatic and Psychosocial Services GmbH, that develops and implements psychosomatic and psychosocial training and continuing education programs. RS is member of the Swiss Academy of Psychosomatic and Psychosocial Medicine (SAPPM) – where he is member of the Scientific Advisory Board, of the Société Médicale Suisse d'Hypnose (SMSH), of the Dt. Kollegium für Psychosomatische Medizin (DKPM), of the Dt. Gesellschaft für Psychosomatische Medizin und Ärztliche Psychotherapie (DGPM), and of the German Balint Society (DBG). RS serves as spokesman of DKPM and DGPM for Consultation and Liaison Psychosomatics. He is member of the board of trustees of the Stiftung Europäische Akademie für biopsychosoziale Gesundheit und Integrative Therapie (SEAG; Foundation European Academy for Biopsychosocial Health and Integrative Therapy) and the Foundation Psychosomatic and Social Medicine (Ascona Foundation).

All other authors declare no financial or non-financial competing interests.

Data availability: The datasets generated and/or analyzed during the current study are available from the corresponding author on reasonable request.

Author contributions: RS, AS, SW and KK organized patient recruitment and study procedures. SE, AS, RS and KK conducted the modular intervention. KK wrote the main manuscript text. GM, GR, HC, RaS and SE were involved in the study planning and revised the manuscript.

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Supplementary material: Supplementary material includes the Dignity Therapy question protocol (Table S1), and the semi-structured acceptability interview guide.

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Figures

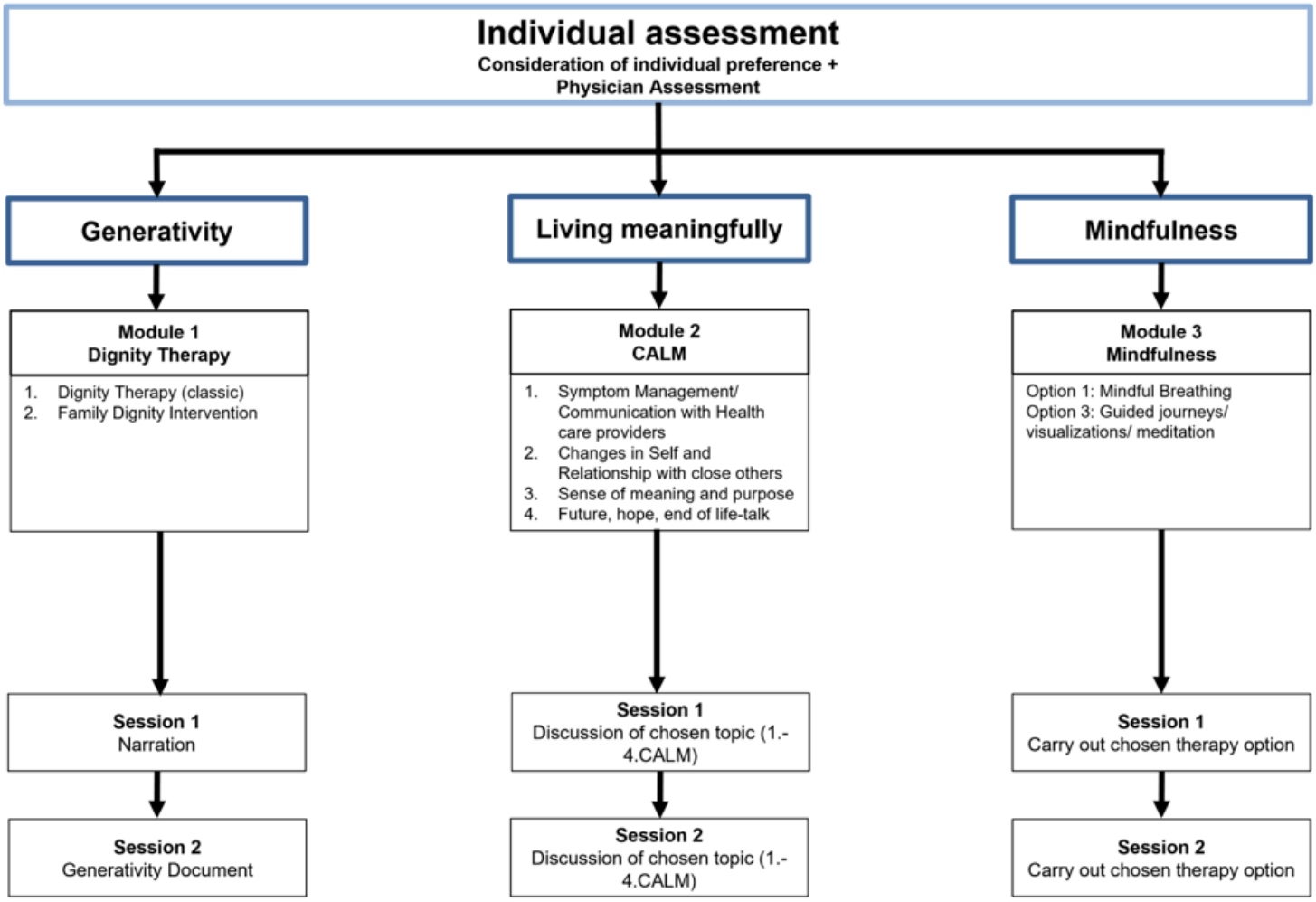


Figure 1

Overview of the personalized modular intervention, including initial assessment, patient preference and palliative care team assessment, module selection and two-session intervention structure.

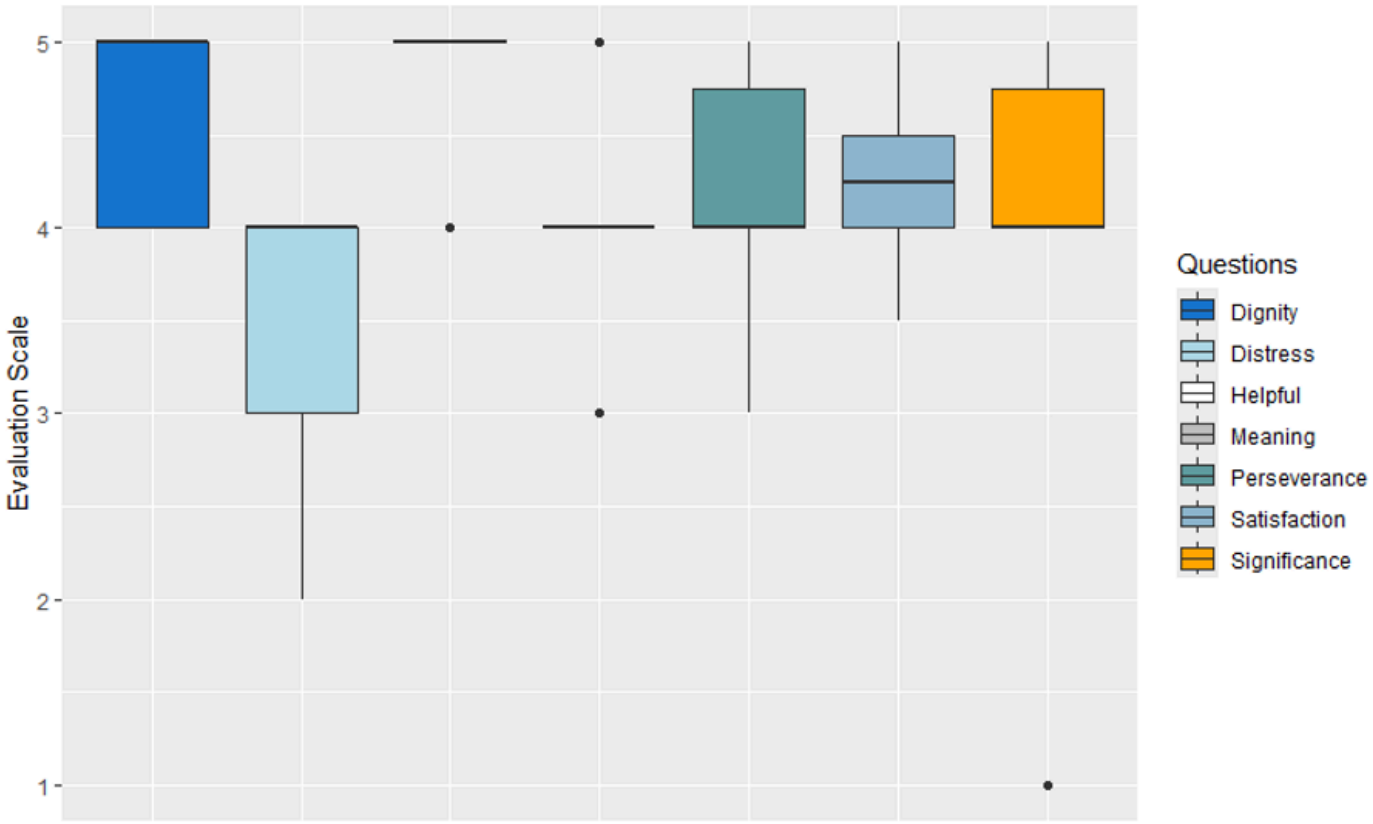


Figure 2

Descriptive analysis of the six Likert-scale items from the post-intervention interview (1=not helpful at all/strongly disagree; 5=very helpful/strongly agree) and summary of the average score across all six evaluation items (Satisfaction). Means are shown as solid lines.

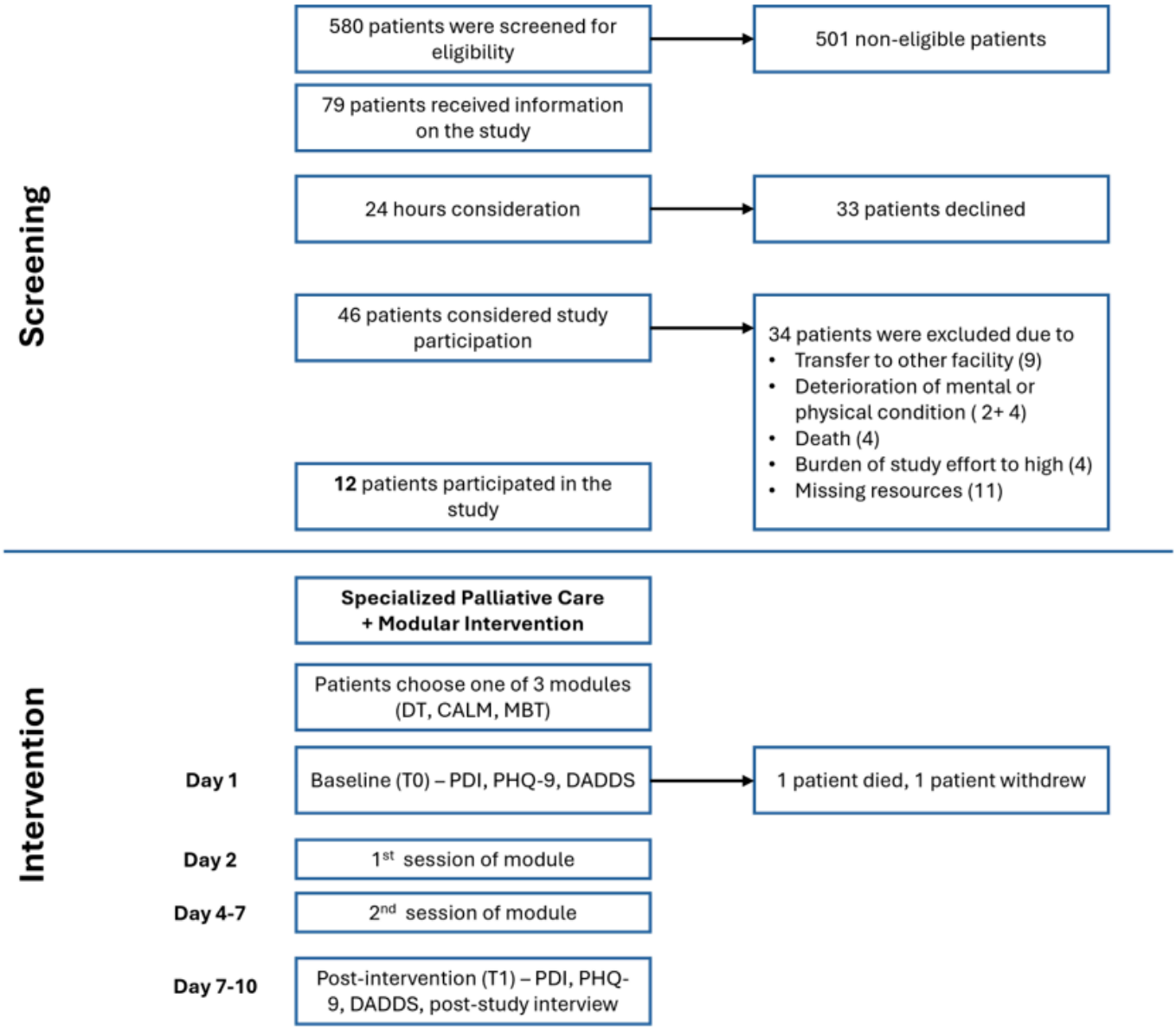


Figure 3

Participants flow through screening, eligibility assessment, enrollment, intervention delivery and post-intervention assessment. Abbreviations: DT: Dignity Therapy, CALM: Managing Cancer and Living Meaningfully, MBT: Mindfulness-based Therapy, PDI: Patient Dignity Inventory, PHQ-9: Patient Health Questionnaire-9, DADDS: Death and Dying Distress Scale.

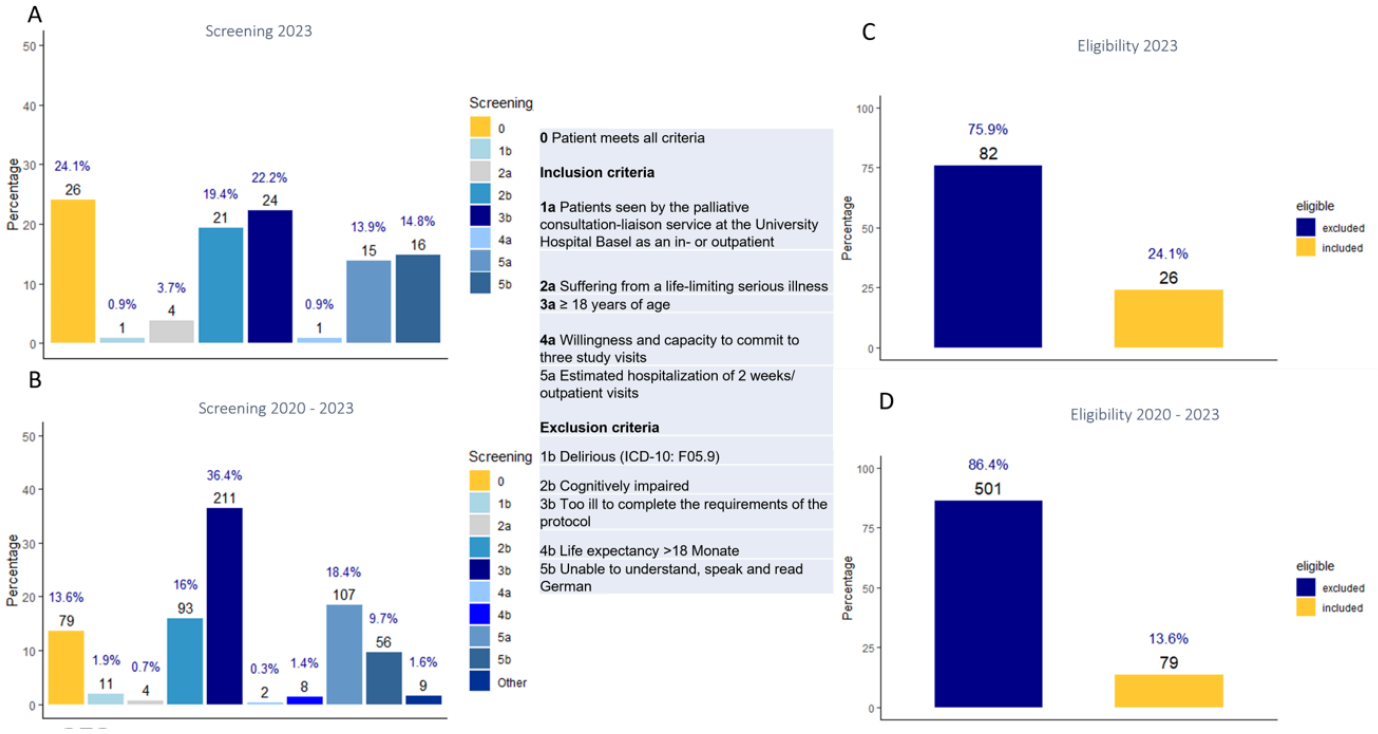


Figure 4

Summary of patient screening during the final recruitment phase, July-September 2023 (A), and during the overall study period, 2020-2023 (B). Patients not eligible for study are categorized according to inclusion and exclusion criteria. The percentages of eligible patients are summarized for the final recruitment phase, July-September 2023 (C), and for the overall study period, 2020-2023 (D).

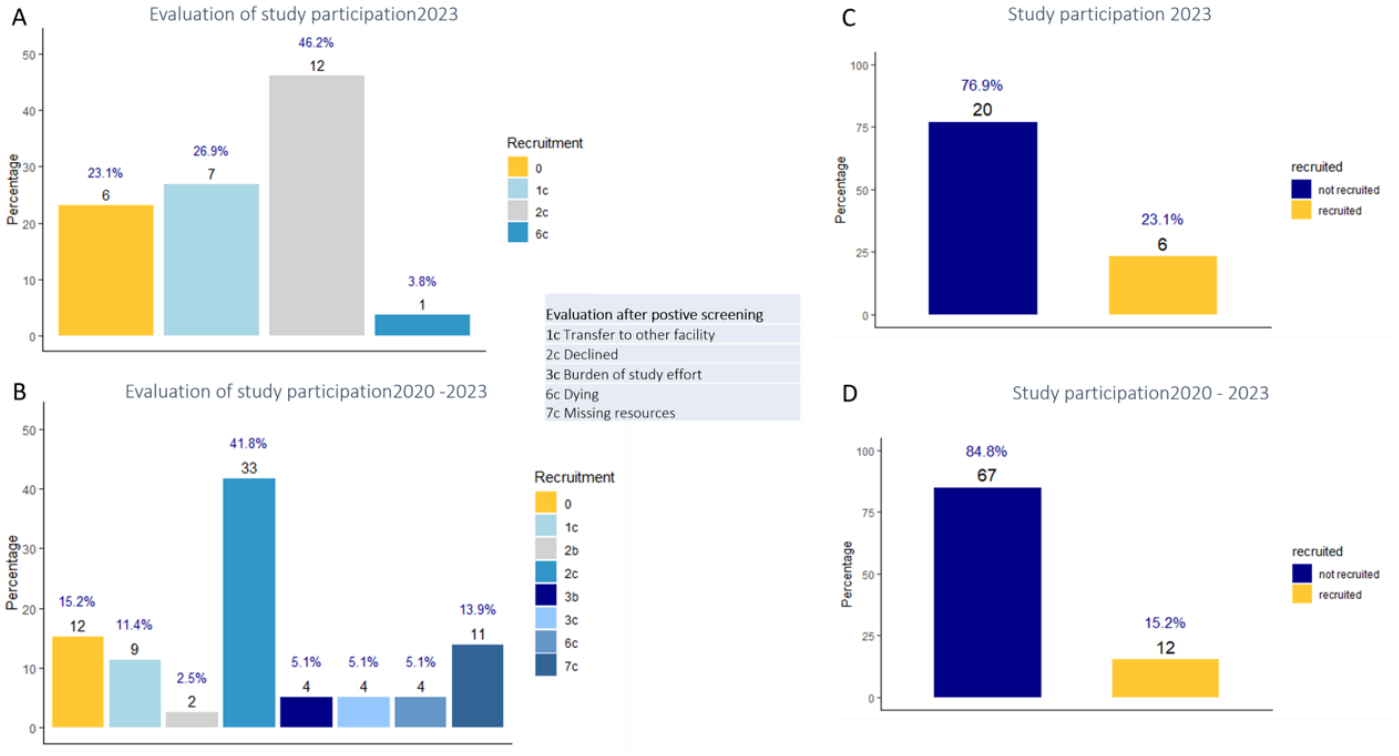


Figure 5

Summary of study participation among eligible patients during the final recruitment phase, July-September 2023 (A), and during the overall study period, 2020-2023 (B). Patients are categorized by reasons for non-participation. Percentages of eligible patients participating or not participating in the study are summarized for the final recruitment phase, July-September 2023 (C), and for the overall study period, 2020-2023 (D).

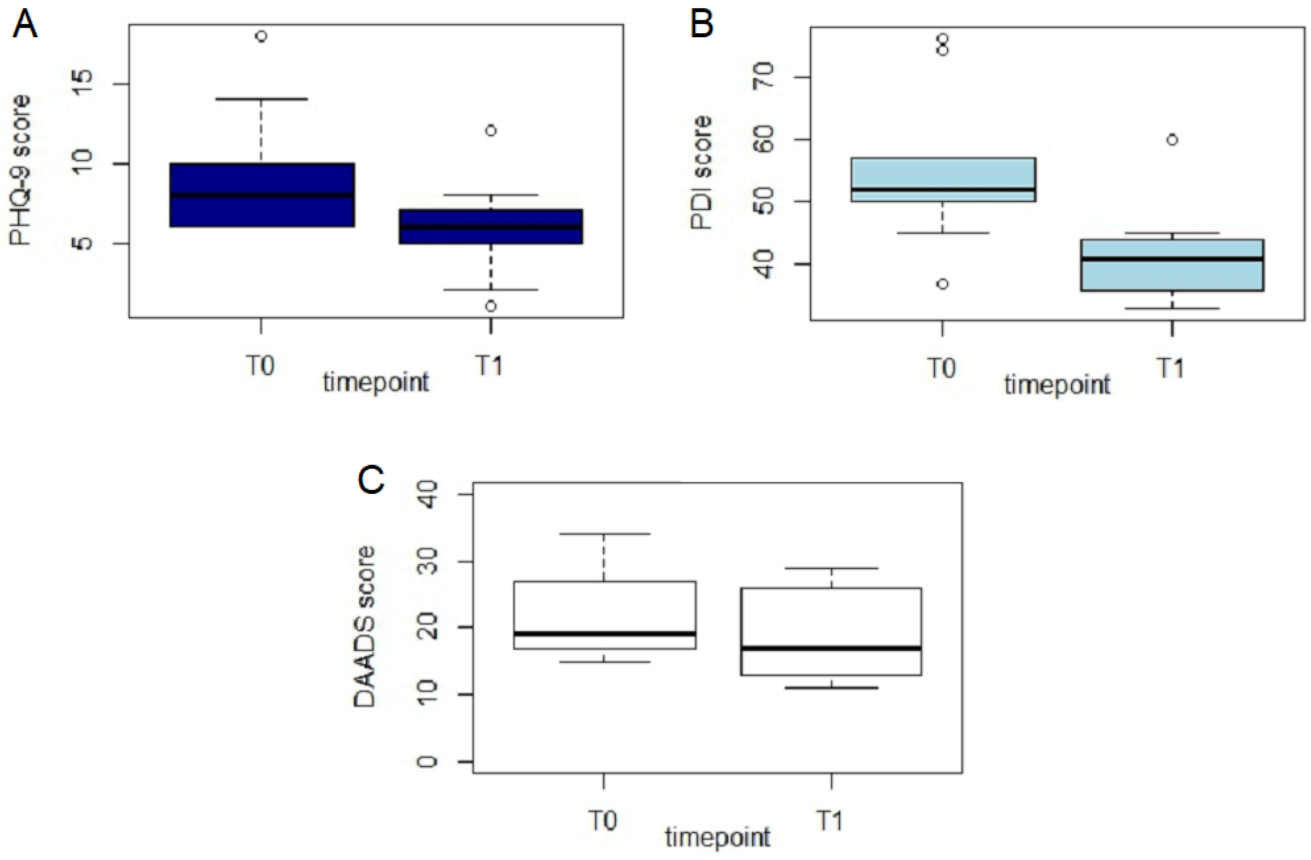


Figure 6

Boxplot of scores from A) PHQ-9, B) PDI, C) DADDS before (T0) and after the intervention (T1)

Supplementary Files

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- SupplementaryFeasibilitystudy.docx