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Reducing Burnout among Oncology and Palliative Care Professionals Using Art Therapy: A Structured Group Intervention

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Abstract

Background: Burnout is a significant concern among oncology and palliative care professionals because of sustained exposure to high workloads, patient suffering, deterioration, and death. Arts-based interventions may offer a supportive approach by facilitating emotional expression, reflection, and stress relief. ***Aim:*** To evaluate the feasibility and preliminary effects of a structured group art therapy intervention on burnout among oncology and palliative care healthcare professionals. ***Methods:*** This mixed-method, single-arm pilot study was conducted at King Faisal Specialist Hospital & Research Centre, Riyadh, Saudi Arabia. Participants attended eight weekly 60-minutes group art therapy sessions led by a certified art therapist. Burnout was assessed before and immediately after the intervention using the Maslach Burnout Inventory–Human Services Survey for Medical Personnel [MBI-HSS [MP]]. Post-intervention written feedback explored participants' experiences and perceived impact. Eighteen healthcare professionals enrolled, and 13 completed both pre- and post-intervention assessments. ***Results:*** A favorable trend was observed in Emotional Exhaustion, with a smaller favorable trend in Depersonalization, while Personal Accomplishment remained largely unchanged. None of the pre–post differences reached statistical significance. Qualitative feedback was generally positive, with participants describing emotional expression, reflection, relaxation, stress relief, and peer connection as important benefits. Some participants reported only temporary or limited benefit, and protected, uninterrupted participation time was identified as an important requirement for future implementation. ***Conclusion:*** Structured group art therapy may be a promising supportive intervention for oncology and palliative care professionals, particularly in relation to emotional exhaustion. However, the small sample size, single-arm design, and immediate post-intervention assessment limit conclusions regarding effectiveness. Larger controlled studies with longer-term follow-up and protected participation time are warranted.

Keywords: Art therapy; burnout; emotional exhaustion; oncology; palliative care; healthcare professionals; staff well-being.

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INTRODUCTION

Burnout is a persistent occupational concern among healthcare professionals and is particularly relevant in clinical environments characterized by sustained emotional demands, high workload, repeated exposure to suffering, and frequent encounters with death and dying. The World Health Organization defines burnout in the International Classification of Diseases, 11th Revision [ICD-11], as an occupational phenomenon

arising from chronic workplace stress that has not been successfully managed. It is characterized by three dimensions: emotional exhaustion, increased mental distance or cynicism toward one's work, and reduced professional efficacy[1].

Oncology and palliative care professionals may be particularly vulnerable because their work requires sustained engagement with patients experiencing serious illness, treatment failure, symptom burden, deterioration, grief, and end-of-life concerns. Burnout in oncology is well documented. In a large U.S. study, approximately 45% of oncologists met criteria for burnout based on emotional exhaustion and/or depersonalization, with greater time devoted to direct patient care associated with increased risk[2]. A systematic review and meta-analysis of 26 studies involving approximately 5,768 oncologists similarly estimated pooled prevalences of 32% for emotional exhaustion, 24% for depersonalization, and 37% for low personal accomplishment, highlighting the considerable burden of burnout within oncology practice[3].

The problem is also relevant within Saudi Arabia. A study conducted among healthcare professionals in a comprehensive cancer center in Riyadh found that 28.7% of respondents experienced moderate-to-severe burnout, with physicians showing the highest prevalence, followed by nurses and allied healthcare professionals[4]. In a national study of palliative care physicians in Saudi Arabia, 18.2% experienced emotional exhaustion, while 25% reported depersonalization and reduced personal accomplishment[5]. These findings indicate that burnout is not solely an international concern but is also relevant to oncology and palliative care practice within the Saudi healthcare context.

Although organizational factors are central contributors to occupational burnout, individual and group-based interventions may provide additional mechanisms for supporting healthcare professionals in managing the emotional consequences of demanding clinical work. Among these approaches, art therapy is of particular interest because it combines creative expression, reflection, emotional processing, and interpersonal engagement. Art-based interventions may provide healthcare professionals with a non-verbal means of exploring emotionally difficult experiences that may be challenging to articulate through conventional discussion alone. In an exploratory study of health and social care staff, art-viewing and art-making facilitated emotional expression, interpersonal engagement, and reflection on work-related stress, with many participants reporting beneficial effects attributed to the intervention[6].

Evidence from professionals working specifically with serious illness further supports this approach. A study evaluated a six-week art-therapy-based supervision program among end-of-life care workers and found significant reductions in exhaustion and death anxiety, alongside improved emotional awareness. The authors proposed that art-based supervision may help reduce burnout through enhanced emotional regulation, meaning-making, and reflection on death and dying[7]. Similarly, another study evaluated six structured art therapy sessions among oncology and palliative care physicians. Among participants with evaluable pre- and post-intervention data, emotional exhaustion improved significantly, and participants reported highly positive experiences of the intervention[8].

These findings are particularly relevant to oncology and palliative care because interventions limited to general stress-management strategies may not fully address the emotional and existential dimensions of caring for patients with advanced or life-limiting illness[9]. Creative and reflective approaches may provide opportunities for clinicians to process loss, reconnect with professional meaning, and share difficult experiences within a psychologically supportive group environment. The intervention developed for the present study was therefore structured around themes including self-awareness, professional identity, organizational reflection, processing patient loss, meaning-making, personal expression, and collective reflection.

Despite encouraging international evidence, research evaluating structured art therapy specifically for burnout among oncology and palliative care professionals remains limited, and evidence from Middle Eastern healthcare settings is particularly sparse. Existing Saudi studies have established that burnout is present among oncology and palliative care professionals, but intervention research examining creative, structured approaches to staff well-being remains underdeveloped. This represents an important evidence gap, particularly given the cultural and organizational context in which healthcare professionals in Saudi Arabia deliver cancer and end-of-life care.

Accordingly, the present study aimed to evaluate the effect of a structured eight-session group visual art therapy intervention on burnout among healthcare professionals working in oncology and palliative care at a tertiary referral center in Saudi Arabia. Burnout was assessed before and after the intervention using the Maslach Burnout Inventory–Human Services Survey for Medical Personnel, with specific evaluation of emotional exhaustion, depersonalization, and personal accomplishment[10]. The study also sought to generate preliminary evidence regarding the feasibility and potential value of incorporating arts-based interventions into staff well-being initiatives within oncology and palliative care services.

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METHOD

Study Design and Setting

This was a mixed-method, single-arm pilot interventional study designed to evaluate the feasibility and preliminary effect of a structured group art therapy program on burnout among healthcare professionals working in oncology and palliative care. The study was conducted at King Faisal Specialist Hospital & Research Centre [KFSH&RC], Riyadh, Saudi Arabia, a tertiary referral center providing specialized oncology and palliative care services.

The intervention consisted of eight weekly group art therapy sessions, with quantitative assessment conducted before and immediately after completion of the program. Qualitative feedback was also collected at the end of the intervention to explore participants' experiences, acceptability of the program, and perceived impact.

Participants and Recruitment

Healthcare professionals involved in the care of patients with cancer were eligible to participate. Eligible participants included physicians, nurses, and other healthcare professionals working within oncology or palliative care services. Participants were recruited using purposive voluntary sampling.

Eligibility criteria included current involvement in the care of patients with cancer, willingness and ability to attend at least six of the eight intervention sessions, approval from the participant's supervisor to attend sessions during working hours, and provision of informed consent to complete the pre- and post-intervention assessments. Participants were excluded if they had previously participated in an art therapy program targeting burnout, were unable to attend at least six sessions, or were currently on leave for psychological or psychiatric treatment.

Because this was an exploratory pilot study, no formal sample size calculation was undertaken. The study protocol initially anticipated approximately 10–14 participants, based on feasibility, availability of eligible staff, and the exploratory nature of the intervention.

Art Therapy Intervention

The intervention comprised eight weekly group art therapy sessions, each lasting approximately 60 minutes and facilitated by a certified art therapist. The program followed a structured thematic format intended to promote self-awareness, coping with occupational stress, and reconnection with personal and professional meaning.

The eight sessions addressed the following themes and activities:

1. Exploration of emotional and psychological well-being through the House–Tree–Person [HTP] drawing activity.
2. Identification of occupational stressors and sources of burnout through drawing a representation of the "burnout face."
3. Expression of work-related emotions and development of problem-solving skills through mask-making using painting and collage.
4. Processing grief and loss associated with patient deaths through clay sculpting representing feelings of being stuck and becoming free.
5. Reconnection with personal identity and self-worth beyond the professional role through drawing representations of the inner voice.
6. Exploration of personal emotional and psychological needs through drawing symbolic representations of love and worry.
7. Rediscovery of motivation and meaning in personal and professional life through painting a favorite place.
8. Reflection, consolidation of therapeutic experiences, and burnout prevention through self-portraits representing the past, present, and future.

The intervention incorporated multiple artistic techniques, including drawing, coloring, painting, sculpting, collage, and mixed-media activities, combining visual art with music. Participants were provided with a structured and supportive environment in which to explore occupational experiences, express emotions, and develop personal coping resources through creative expression.

MEASURES

Demographic and Work-Related Characteristics

Participants completed a baseline questionnaire collecting information on age, gender, profession, years of professional experience, years of experience working in oncology or palliative care, average weekly working hours, and previous participation in wellness or stress-reduction programs.

Additional work-related variables were assessed using single-item 5-point response scales. Perceived workplace support was rated from 1 [none] to 5 [very high]. Perceived work-related stress during the previous 2 weeks was rated from 1 [not at all] to 5 [extremely]. Overall job satisfaction was rated from 1 [not satisfied] to 5 [very satisfied]. Intention to discontinue working with oncology or palliative care patients in the near future was rated from 1 [strongly disagree] to 5 [strongly agree].

BURNOUT

Burnout was assessed using the Maslach Burnout Inventory–Human Services Survey for Medical Personnel [MBI-HSS [MP]]. The instrument consists of 22 items rated on a 7-point frequency scale ranging from 0 [never] to 6 [every day] and assesses three dimensions:

Emotional Exhaustion [EE], Depersonalization [DP], and Personal Accomplishment [PA].

The EE subscale comprises nine items, the DP subscale five items, and the PA subscale eight items. Higher EE and DP scores indicate greater burnout, whereas lower PA scores indicate lower professional accomplishment. The three dimensions were analyzed separately rather than combined into a single total burnout score.

The MBI-HSS [MP] was administered at baseline and again immediately following completion of the intervention.

A structured written feedback form was administered following the final session to capture participants' perceptions of usefulness, acceptability, and perceived impact of the intervention.

Statistical Analysis

Descriptive statistics were used to summarize participant characteristics and study outcomes. Continuous variables were assessed for normality using the Shapiro–Wilk test. Approximately normally distributed continuous variables were summarized using means and standard deviations, whereas non-normally distributed variables were reported using medians and interquartile ranges. Categorical variables were summarized using frequencies and percentages. Ordinal work-related variables were reported primarily using medians and interquartile ranges.

For the primary exploratory outcome analysis, pre- and post-intervention EE, DP, and PA scores were compared within participants. The distributions of paired difference scores were assessed for normality. When the normality assumption was met, paired-samples t tests were used; Wilcoxon signed-rank tests were additionally performed as sensitivity analyses because of the small pilot sample.

Mean pre–post differences were reported with 95% confidence intervals, and standardized within-participant effect sizes were calculated using Cohen's dz. Given the pilot nature of the study, effect sizes and confidence intervals were emphasized alongside p values to characterize the magnitude and precision of observed changes rather than relying solely on statistical significance.

Exploratory analyses were also conducted to examine relationships between baseline MBI dimensions and demographic or work-related characteristics. Spearman rank-order correlations were used for continuous and ordinal variables, and Mann–Whitney U tests were used for comparisons involving two-group categorical variables. Holm adjustment was applied to assess the influence of multiple exploratory comparisons.

All statistical tests were two-sided, with $p < .05$ considered statistically significant. Given the exploratory pilot design and small sample size, inferential findings were interpreted cautiously and considered hypothesis-generating rather than confirmatory.

Ethical Considerations

The study was reviewed and approved by the Institutional Review Board [IRB] of King Faisal Specialist Hospital & Research Centre, Riyadh, Saudi Arabia. Participation was voluntary, and written consent was obtained before enrolment. Participants received information regarding the study purpose, procedures, potential risks and benefits, confidentiality, and their right to withdraw without consequence. Study data were coded to protect participant identity and were accessible only to the research team. The study was considered minimal risk and was conducted in accordance with institutional research governance requirements.

RESULTS

A total of 18 healthcare professionals enrolled in the pilot study. Of these, 13 participants completed both the baseline and post-intervention assessments and were included in the final complete-case analysis. Five participants did not complete the post-intervention assessment and were therefore excluded from the paired pre–post analyses. The final analytic sample comprised 13 participants. Participants had a mean age of 35.92 years [SD = 5.65; range = 27–48 years]. The age distribution did not significantly deviate from normality, Shapiro–Wilk W = .968, p = .866. Seven participants [53.8%] were female and six [46.2%] were male. Eight participants [61.5%] were physicians and five [38.5%] were nurses.

Years of overall professional experience were non-normally distributed, W = .843, p = .023, and were therefore summarized using the median and interquartile range. Participants had a median of 7 years of professional experience [IQR = 5–18; range = 3–24 years]. Experience specifically within oncology or palliative care was also non-normally distributed, W = .778, p = .004, with a median of 2 years [IQR = 1–16; range = 1–24 years].

Average weekly working hours were approximately normally distributed, W = .903, p = .145, with participants working a mean of 44.62 hours per week [SD = 3.28; range = 40–50 hours]. None of the participants reported previous participation in a formal wellness or stress-reduction program.

Participants reported moderate perceived workplace support [M = 3.00, SD = 0.91] on a 5-point scale ranging from 1 [none] to 5 [very high]. Perceived work-related stress during the preceding 2 weeks was also moderate [M = 2.69, SD = 1.11], on a scale ranging from 1 [not at all] to 5 [extremely]. Overall job

satisfaction was relatively favorable [*M* = 3.54, *SD* = 0.97], whereas intention to discontinue working with oncology or palliative care patients was relatively low [*M* = 2.08, *SD* = 1.04]. table 1 present the summary of demographics and work-related characteristics.

MASLACH BURNOUT INVENTORY RESULTS

Complete pre- and post-intervention Maslach Burnout Inventory–Human Services Survey for Medical Personnel [MBI-HSS [MP]] data were available for 13 participants. The three MBI dimensions were analyzed separately: Emotional Exhaustion [EE], Depersonalization [DP], and Personal Accomplishment [PA]. Lower EE and DP scores represent more favorable outcomes, whereas higher PA scores represent greater perceived professional accomplishment.

Inspection of the paired change scores indicated no statistically significant departure from normality for EE, DP, or PA; therefore, paired-samples t tests were used for the primary pre–post analyses. Wilcoxon signed-rank tests were additionally conducted as sensitivity analyses because of the small sample size.

Emotional Exhaustion decreased from a pre-intervention mean of 28.38 [SD = 9.31] to a post-intervention mean of 23.54 [SD = 11.36], corresponding to a mean change of -4.85 points [95% CI [-10.88, 1.19]]. This difference did not reach statistical significance, t[12] = -1.75, p = .106, although the standardized within-participant effect was of potentially meaningful magnitude [Cohen's dz = -0.49]. Nine of the 13 participants demonstrated a reduction in EE scores.

Depersonalization also decreased, from a mean of 8.62 [SD = 4.05] before the intervention to 6.77 [SD = 5.48] afterward. The mean change was -1.85 points [95% CI [-5.25, 1.56]], which was not statistically significant, t[12] = -1.18, p = .261, Cohen's dz = -0.33. Six participants demonstrated improvement, four remained unchanged, and three demonstrated higher post-intervention DP scores.

Personal Accomplishment showed no evidence of improvement. The mean PA score decreased slightly from 35.00 [SD = 5.42] pre-intervention to 33.92 [SD = 6.06] post-intervention, representing a mean change of -1.08 points [95% CI [-5.05, 2.90]], t[12] = -0.59, p = .566, Cohen's dz = -0.16. Five participants showed increased PA, one was unchanged, and seven had lower post-intervention PA scores.

Sensitivity analyses using Wilcoxon signed-rank tests produced the same overall pattern of findings. The pre–post differences remained non-significant for EE [W = 23.0, p = .121], DP [W = 12.0, p = .238], and PA [W = 29.5, p = .483]. Adjustment for the three primary comparisons using the Holm procedure similarly resulted in no statistically significant findings.

Internal consistency estimates should be interpreted cautiously because of the small sample. Cronbach's alpha for EE was .756 at baseline and .912 post-intervention. PA demonstrated alpha values of .629 and .579, respectively. Baseline DP demonstrated poor internal consistency [α = .035], although post-intervention reliability was substantially higher [α = .802]. table 2 present *Pre- and Post-Intervention MBI-HSS* [*MP*] *Scores.*

Overall, the findings suggest a favourable pre–post trend in Emotional Exhaustion and a smaller favourable trend in Depersonalization following the intervention. However, neither change reached statistical significance, and no improvement was observed in Personal Accomplishment. Given the small sample size and wide confidence intervals, these findings should be considered preliminary and hypothesis-generating rather than confirmatory evidence of intervention effectiveness.

Associations Between Burnout and Participant Characteristics

Exploratory analyses were conducted to examine associations between baseline Maslach Burnout Inventory–Human Services Survey for Medical Personnel [MBI-HSS [MP]] scores and participant demographic and work-related characteristics. Given the small sample size and the non-normal distribution of several demographic variables, Spearman rank-order correlations were used for continuous and ordinal variables, while Mann–Whitney U tests were used for comparisons according to gender and profession.

Age was not significantly associated with Emotional Exhaustion [EE; ρ = 0.456, p = .117], Depersonalization [DP; ρ = 0.310, p = .302], or Personal Accomplishment [PA; ρ = 0.430, p = .142]. Similarly, average weekly working hours were not significantly associated with any of the three MBI dimensions.

Total professional experience was positively associated with PA [ρ = 0.596, p = .031], indicating that participants with greater professional experience tended to report a greater sense of personal accomplishment. Experience specifically within oncology or palliative care demonstrated an even stronger positive association with PA [ρ = 0.686, p = .010]. Neither measure of professional experience was significantly associated with EE or DP.

No statistically significant gender differences were observed in EE, DP, or PA. Female participants nevertheless tended to report higher PA scores than male participants [median = 39.0 vs. 32.5, p = .072].

When participants were compared according to profession, nurses reported higher PA scores than physicians [median = 39.0 vs. 32.5; U = 6.0, p = .046]. No significant professional differences were observed

for EE or DP. However, this finding should be interpreted cautiously because gender and profession were strongly overlapping within the sample, with all nurses being female.

Among work-related factors, perceived work stress during the preceding two weeks demonstrated the strongest association with burnout. Higher work stress was strongly associated with greater EE [ρ = 0.730, p = .005]. A greater intention to discontinue working with oncology or palliative care patients was also positively associated with EE [ρ = 0.569, p = .042]. Job satisfaction demonstrated a moderate inverse association with EE [ρ = −0.465], although this did not reach statistical significance [p = .109]. Perceived workplace support was not significantly associated with any MBI dimension.

Given the small sample size and the number of exploratory comparisons performed, these results should be interpreted cautiously. After adjustment for multiple comparisons using the Holm procedure, none of the associations remained statistically significant. Consequently, the observed relationships, particularly those involving work stress, professional experience, and Personal Accomplishment, should be regarded as preliminary signals requiring confirmation in a larger sample.

Post-Intervention Participant Feedback

Post-intervention feedback indicated an overall favorable perception of the art therapy program. Participants most frequently described the sessions as providing a creative opportunity for emotional expression, venting, self-reflection, and stress relief. Several participants emphasized that the sessions enabled them to temporarily disengage from work-related pressures and focus on their own emotional well-being and self-care.

Most participants perceived the intervention as having a positive effect on stress and burnout. Reported benefits included greater relaxation, improved stress control, reduced feelings of burnout, and an opportunity to disconnect from work demands. However, some participants described the benefit as partial or temporary, while a smaller number reported little or no perceived impact. These participants attributed the limited effect either to individual differences in susceptibility to occupational stress or to insufficient uninterrupted time during the sessions.

Participants generally reported feeling comfortable within the group environment. The group setting was characterized as supportive, respectful, attentive, and encouraging. Some participants described initial shyness that diminished as the sessions progressed and other group members began sharing more openly. A minority, however, expressed a preference for greater privacy when discussing personal experiences.

The duration and frequency of the sessions were considered appropriate by most participants. Nevertheless, work schedules emerged as an important practical barrier. Some participants reported that sessions occasionally felt rushed because they were conducted during working hours. A recurring recommendation was therefore to provide protected, uninterrupted time specifically allocated for participation in the intervention.

Most participants indicated that they would recommend the program to colleagues, primarily because of its perceived contribution to emotional well-being, stress relief, and team connection. Some recommendations were conditional on ensuring protected time for participation, while a small number of participants remained uncertain.

Suggestions for future implementation included expanding the program across hospital departments, increasing the number or frequency of sessions, conducting some sessions outside the hospital setting, providing activities that could also be practiced at home, improving the quality of art materials, and offering a broader range of creative activities.

Table 1: Demographic and Work-Related Characteristics of Participants Included in the Complete-Case Analysis [N = 13]

Characteristic	**Result**
Age, years, Mdn [IQR]	35 [32–39]
Gender, n [%]	
Female	7 [53.8]
Male	6 [46.2]
Profession, n [%]	
Physician	8 [61.5]
Nurse	5 [38.5]
Professional experience, years, Mdn [IQR]	7 [5–18]
Oncology/palliative care experience, years, Mdn [IQR]	2 [1–16]
Average weekly working hours, M ± SD	44.62 ± 3.28
Previous participation in wellness/stress-reduction programs, n [%]	
No	13 [100.0]
Yes	0 [0.0]

Perceived support at work, M ± SD	3.00 ± 0.91
Work-related stress during previous 2 weeks, M ± SD	2.69 ± 1.11
Overall job satisfaction, M ± SD	3.54 ± 0.97
Intention to stop working with oncology/palliative care patients, M ± SD	2.08 ± 1.04

Note. M = mean; SD = standard deviation; Mdn = median; IQR = interquartile range. Age, professional experience, and oncology/palliative care experience are presented as median [IQR]. Average weekly working hours and work-related perception variables are presented as mean ± SD. Perceived support at work was rated from 1 [none] to 5 [very high]; work-related stress from 1 [not at all] to 5 [extremely]; job satisfaction from 1 [not satisfied] to 5 [very satisfied]; and intention to stop working with oncology or palliative care patients from 1 [strongly disagree] to 5 [strongly agree].

Table 2: Pre- and Post-Intervention MBI-HSS [MP] Scores, Paired Comparisons, Effect Sizes, and Reliability [N = 13]

Domain	Pre, M [SD]	Post, M [SD]	Mean change	95% CI	t[12]	p	Cohen's dz	Wilcoxon p	Cronbach's α Pre / Post
EE	28.38 [9.31]	23.54 [11.36]	-4.85	[-10.88, 1.19]	-1.75	.106	-0.49	.121	.756 / .912
DP	8.62 [4.05]	6.77 [5.48]	-1.85	[-5.25, 1.56]	-1.18	.261	-0.33	.238	.035 / .802
PA	35.00 [5.42]	33.92 [6.06]	-1.08	[-5.05, 2.90]	-0.59	.566	-0.16	.483	.629 / .579

Note. MBI-HSS [MP] = Maslach Burnout Inventory–Human Services Survey for Medical Personnel; EE = Emotional Exhaustion; DP = Depersonalization; PA = Personal Accomplishment; M = mean; SD = standard deviation; CI = confidence interval. Mean change was calculated as post-intervention minus pre-intervention. Lower EE and DP scores indicate more favorable outcomes, whereas higher PA scores indicate more favorable outcomes. Paired-samples t tests were used for the primary analyses; Wilcoxon signed-rank tests were conducted as sensitivity analyses. Holm adjustment across the three primary paired comparisons did not yield statistically significant findings. Cronbach's alpha estimates, particularly baseline DP, should be interpreted cautiously because of the small sample size.

DISCUSSION

This mixed-method pilot study suggests that structured group art therapy may have potential as a supportive intervention for oncology and palliative care professionals. The quantitative findings showed the clearest favourable trend in emotional exhaustion, a smaller favourable trend in depersonalization, and little evidence of improvement in personal accomplishment. The qualitative findings complemented this pattern, with participants frequently describing emotional expression, self-reflection, relaxation, stress relief, and temporary disengagement from work demands as important benefits of the intervention.

This overall pattern is consistent with recent evidence on arts-based interventions for healthcare professionals. A systematic review by found that art therapy-based interventions showed promising effects on emotional exhaustion, work-related stress, and psychological distress among healthcare workers, although substantial heterogeneity in study design and intervention delivery limited definitive conclusions[11]. Similarly, another study concluded that visual arts-based interventions may have beneficial effects on burnout, empathy, connectedness, and tolerance of ambiguity, while emphasizing the need for more rigorous longitudinal research[12].

More recent controlled evidence strengthens the plausibility of the favourable emotional exhaustion trend. In a multicenter randomized controlled trial conducted across four acute hospitals, structured group art therapy resulted in significantly more favourable emotional exhaustion scores than a waitlist control and was also associated with improvements in depersonalization, perceived stress, anxiety, and depression. These benefits were sustained at three-month follow-up[13]. Although the present pilot study cannot establish causality because it lacked a control group, the consistency in direction supports further evaluation of this intervention in oncology and palliative care settings.

The qualitative findings offer a plausible experiential context for the improvement in emotional exhaustion. Participants described the sessions as opportunities to express emotions, vent, reflect, relax, and temporarily disconnect from clinical pressures. Such experiences are consistent with the broader art therapy literature, which identifies emotional expression, reflective processing, and stress reduction as recurring features of arts-based interventions for healthcare workers[11, 12]. Emotional exhaustion is also closely linked to persistent occupational demands and depletion of psychological resources, supporting the plausibility that interventions providing structured emotional processing may influence this dimension particularly strongly[14].

The smaller favourable trend in depersonalization may reflect differences in how burnout dimensions respond to short-term psychosocial interventions. Depersonalization represents psychological distancing and detachment and may not improve in parallel with emotional exhaustion. A systematic review of burnout among professionals providing palliative care found that intervention effects varied substantially across burnout domains and that no single approach consistently improved all dimensions[15]. Similarly, a systematic review of group psychological interventions among healthcare workers found potential benefits for burnout and psychological

distress, but the magnitude of effect differed according to intervention type and study population[16].

The lack of a clear favourable trend in personal accomplishment is also consistent with the multidimensional nature of burnout. Personal accomplishment reflects perceptions of competence, achievement, and professional effectiveness and may therefore respond differently from emotional exhaustion or depersonalization. Recent evidence from randomized trials of individual-level burnout interventions demonstrates that effects vary considerably across emotional exhaustion, depersonalization, and personal accomplishment and across professional groups[17]. This supports analysing the MBI dimensions separately rather than assuming that an intervention that reduces emotional exhaustion will necessarily improve professional accomplishment.

The group environment appeared to be an important feature of the intervention. Participants generally described the sessions as supportive, respectful, attentive, and encouraging, and some reported that initial shyness diminished as group members became more comfortable sharing their experiences. Group psychological interventions have been shown to reduce distress and burnout-related symptoms among healthcare workers, although evidence remains heterogeneous and methodological limitations are common[14]. The present findings therefore suggest that peer interaction and shared participation may be relevant components of future arts-based programs.

Although the group environment was generally perceived positively, group delivery may not be equally suitable for all participants. A minority expressed a preference for greater privacy when discussing personal experiences, highlighting the importance of individual differences in comfort with disclosure. This is consistent with findings from Schwartz Rounds, where healthcare professionals valued connection, shared experience, and a safe space for vulnerability, while also reporting challenges related to fear of exposure and judgment, emotional discomfort, and concerns about psychological safety[18]. Future arts-based programs may therefore benefit from flexible approaches that allow private reflection, smaller group formats, or participation without an expectation of verbal disclosure.

A particularly important implementation issue was the need for protected, uninterrupted participation time. Several participants reported that sessions held during working hours could feel rushed because of competing clinical responsibilities and recommended dedicated time for participation. This finding is consistent with organizational evidence showing that workload, work schedules, and control over working conditions are important determinants of exhaustion and employee well-being. A meta-analysis of organizational interventions found that interventions targeting workload and work schedules were associated with reductions in exhaustion, with combined individual- and organizational-level approaches showing larger effects than organizational interventions alone[19].

The exploratory associations between work stress and emotional exhaustion in the present study further reinforce the importance of workplace context. Longitudinal evidence identifies job demands, workload, and other adverse occupational conditions as important predictors of exhaustion[14]. Similarly, studies in palliative care professionals have demonstrated that work-related stress is strongly influenced by organizational and role-related factors[20]. Together, these findings suggest that the burden experienced by oncology and palliative care professionals cannot be addressed solely through individual coping interventions.

The qualitative findings support the same interpretation. Some participants described the effects of the program as partial or temporary, particularly when ongoing work pressures remained unchanged. Systematic evidence indicates that organizational-level interventions can improve psychosocial working conditions and burnout-related outcomes, particularly when they address working-time arrangements, work organization, and employee influence over work tasks[21]. More recent healthcare-specific reviews similarly emphasize that organization-directed interventions are necessary to address underlying workplace determinants of staff well-being rather than relying exclusively on individual-level approaches[22].

Accordingly, art therapy should be considered a potential component of a broader workforce well-being strategy rather than a stand-alone solution to occupational burnout. Evidence suggests that individual-level interventions can reduce some dimensions of burnout, but effects vary by profession and intervention type[17]. Organizational-level interventions may provide additional benefit by addressing workload, work organization, and working conditions[19, 21, 22]. A combined approach may therefore be more appropriate for oncology and palliative care services, where emotional demands and structural workplace pressures coexist.

The qualitative findings also provide preliminary support for the acceptability of the intervention. Most participants indicated that they would recommend the program to colleagues, and suggestions for future implementation focused largely on expanding or refining the intervention, including increasing session availability, broadening creative activities, offering activities outside the hospital, and providing home-based options. The systematic review similarly found that most art therapy-based interventions for healthcare workers were group-based and generally reported favourable

acceptability, although implementation characteristics varied substantially across studies[11].

The variation in perceived benefit should also be acknowledged. Some participants reported only partial or temporary improvement, while a smaller number perceived little effect. Heterogeneous treatment response is also evident in the wider literature, where effectiveness differs according to intervention modality, professional group, baseline distress, and duration of treatment[11, 20]. Future studies should therefore examine predictors of response rather than relying exclusively on average group-level effects.

The exploratory association between greater professional experience and higher personal accomplishment may also warrant further investigation. However, because these findings did not remain significant after adjustment for multiple comparisons, they should be interpreted cautiously. Previous palliative care literature has identified substantial heterogeneity in demographic and occupational correlates of burnout, suggesting that larger samples are required before drawing conclusions about individual predictors[15].

LIMITATIONS

This study has several limitations. The single-arm pre–post design does not allow causal attribution, as changes may have been influenced by factors other than the intervention. The small sample size limited statistical power and precision, and the use of complete-case analysis may have introduced attrition bias.

The study was conducted at a single tertiary center with voluntary participation, which may limit generalizability. Outcomes were assessed only immediately after the intervention, so the durability of any benefit is unknown. The qualitative component relied on structured written feedback rather than in-depth interviews, limiting the depth of exploration. In addition, some MBI subscales showed limited internal consistency in this small sample, particularly baseline depersonalization.

Implications for Practice and Future Research

The findings support further evaluation of structured art therapy in larger controlled studies before conclusions regarding effectiveness can be made. Future research should include longer-term follow-up to determine whether observed benefits are sustained over time.

Protected participation time should be incorporated into future programs to minimize interference from clinical duties. Further studies should also explore potential mechanisms of benefit, including emotional expression, reflection, peer connection, and temporary disengagement from occupational stress.

Art therapy should ultimately be considered as part of a broader workforce well-being strategy that also addresses workload, scheduling, working conditions, and organizational support.

Declaration of Conflicting Interests

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CONCLUSION

This pilot study suggests that structured group art therapy may be a promising supportive intervention for oncology and palliative care professionals. The quantitative findings showed a favorable trend in emotional exhaustion and a smaller favorable trend in depersonalization, while personal accomplishment remained largely unchanged. Participant feedback further indicated perceived benefits related to emotional expression, reflection, stress relief, and peer connection, while also highlighting the importance of protected, uninterrupted participation time.

Given the small sample size and single-arm design, these findings should be considered preliminary. Larger controlled studies with longer-term follow-up are needed to determine whether the observed benefits are sustained. Art therapy may be best considered as one component of a broader staff well-being strategy.

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