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BRIEF GROUP PSYCHOTHERAPY AS PART OF POSTOPERATIVE REHABILITATION IN OROPHARYNGEAL CANCER: EFFECTS ON QUALITY OF LIFE, ANXIETY AND DEPRESSION



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Abstract. Beyond the severe physical consequences of the disease and its treatment, oropharyngeal cancer places a heavy psychological burden on patients, manifesting as anxiety, depression and a marked decline in quality of life. This study aimed to assess how effective a short-term group psychotherapy programme is when applied during the postoperative rehabilitation of patients with oropharyngeal cancer. A randomised controlled study enrolled 72 surgically treated patients, who were allocated either to an intervention group (n = 24) that received short-term group psychotherapy or to a control group (n = 48) that received standard postoperative follow-up. The programme combined psychodynamic group sessions, relaxation training, coping-skills training, art therapy, music therapy and family-oriented support. Quality of life was measured with the SF-36 questionnaire, and anxiety and depression with the Hospital Anxiety and Depression Scale (HADS). Data were analysed using logistic regression and Pearson’s χ^2 test (significance level $p < 0.05$). Three weeks after the start of the programme, the intervention group showed significant gains in the physical component of health: bodily pain scores rose by 26.99% and general health by 20.68%; in the psychological component, the mental health scale improved by 15.45% relative to the control group. Patients who received psychotherapy also had fewer cases of clinically significant anxiety and depression and adapted better psychosocially. Short-term group psychotherapy therefore appears to be an effective adjunct to standard oncological care after surgery for oropharyngeal cancer, and its inclusion in rehabilitation pathways may improve overall treatment outcomes and patient adaptation.

Keywords: *oropharyngeal cancer; psycho-oncology; group psychotherapy; brief psychotherapy; rehabilitation; quality of life; SF-36; HADS; anxiety; depression.*

Introduction

Cancer affects far more than the organs it invades. Alongside physical suffering, it imposes an intense and frequently long-lasting psychological strain, so that patients with malignant tumours live under chronic stress. Mental disorders are more common among oncology patients than in the general population, which underlines the need for dedicated psychological and psychiatric care for this group.

The mucosa of the oral cavity and oropharynx, together with the underlying tissues, forms an anatomically complex region, and this complexity shapes both the clinical course and the treatment

of tumours arising there. Among malignant tumours of the head and neck, cancer of the oral cavity and oropharynx ranks second in frequency after laryngeal cancer. Patients with malignant epithelial tumours of this region are most often hospitalised at stages III–IV, and their management remains a difficult and not yet fully resolved problem; as with other localisations, outcomes depend on the stage at which specific treatment begins. In Uzbekistan, oropharyngeal cancer accounts for 10% of all malignant tumours; more than 75% of cases occur in men (male-to-female ratio 4:1), most patients are aged 60 years or older, and more than 80% of cases are diagnosed at stages 1–2 (Table 1).

Table 1. Epidemiological profile of oropharyngeal cancer in Uzbekistan (as reported in the source study)

Indicator	Value
Share among all malignant tumours	10%
Share of cases in men	> 75%
Male-to-female ratio	4 : 1
Predominant age group	60 years and older
Diagnosed at stages 1–2	> 80%
Rank among head and neck malignancies	2nd (after laryngeal cancer)

The growing incidence of malignant neoplasms, together with the noticeably younger age of many patients, is increasing the number of people who develop psychopathological disorders in connection with their illness [1–3]. A key task of modern psycho-oncology is to identify, diagnose and treat such disorders in good time, because they lower quality of life and are now regarded as factors that worsen the clinical course, prognosis and survival [4, 5]. Many rehabilitation problems affecting the quality of life of cancer patients remain unsolved. There is little doubt that psychopharmacotherapy and psychotherapy are needed to relieve mental disorders in this population: patients who receive adequate and timely psychopharmacological and psychotherapeutic help adapt to their illness and their new living circumstances better and faster [6].

Interest in the use of psychopharmacological and psychotherapeutic methods in oncology has a long history [7–10]. Psychotherapeutic work with cancer patients targets emerging psychopathological symptoms, the somatic symptoms that accompany the disease or its treatment, and even the stabilisation of the tumour process. Nevertheless, earlier rehabilitation programmes have not been fully developed, mental disorders in cancer patients still receive insufficient attention, and the question of how to combine psychopharmacotherapy and psychotherapy at different stages of care – special (surgical, chemotherapeutic, radiation) or palliative – remains open.

Over the past decade, more effective and innovative treatments have extended the life expectancy of cancer patients. Longer survival and the focus of modern medicine on preserving quality of life make it essential to study the psychological mechanisms of adaptation and to formulate principles of psychological rehabilitation. At the same time, current treatments do not guarantee a full recovery, have side effects and may leave functional impairments, all of which intensify fear of the disease and of relapse.

The present work is part of a larger dissertation project entitled “Characteristics of Mental Disorders in Patients with Oropharyngeal Cancer and Methods for Correcting the Therapeutic Process”, whose practical aim is to develop psychotherapeutic programmes for these patients. Group psychotherapy offers broad possibilities for working through intrapersonal and interpersonal conflicts and fears – patients discover that their problems and complexes are not unique – and for achieving

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catharsis. An important advantage of the group format is the support of “fellow sufferers”: the patient realises that they are not alone and can act both as a participant in the corrective process and as an observer of it.

Aim of the study: to evaluate the effectiveness of short-term group psychotherapy in the rehabilitation of patients with oropharyngeal cancer during the postoperative period.

Materials and Methods

Study setting and patients

The study was carried out at the Regional Oncology Dispensary (Tashkent, Republic of Uzbekistan) in 2019–2020. It enrolled 72 patients aged 18 years and older (age range 18–56 years) with a diagnosis corresponding to ICD-10 code C10 who were under postoperative follow-up at the oncology clinic and had sought medical care voluntarily. Of the 95 patients invited, 72 (75.8%) signed informed consent and were randomised. The protocol was approved by an independent ethics committee and by biomedical ethics committees, and all participants gave written informed consent in line with the Declaration of Helsinki.

Why a short-term format was chosen

Short-term group psychodynamic therapy was chosen for practical reasons. Not every patient who starts group psychotherapy is able to complete a full course: many drop out because their health deteriorates or because postoperative chemotherapy begins. Within a limited time window, a short-term format makes it possible, first, to motivate patients as strongly as possible for longer-term work, which is more demanding and potentially more disappointing than they expect after surviving the postoperative period; and second, to deliver an intensive intervention even to patients who cannot yet realistically appraise their situation and lack motivation for further rehabilitation [11, 12].

Randomisation and study groups

Randomisation was computer-based: on admission, each patient was entered into a database and given an individual serial number, and allocation to the study or control group was made automatically using random numbers. The study group comprised 24 patients, who were divided into three closed psychotherapy groups of eight; the control group comprised 48 patients, who did not receive psychotherapy and attended the oncology clinic only for routine postoperative follow-up. Drug treatment was standardised in both groups. The trial followed the core principles of modern comparative research in psychotherapy. The design of the intervention is summarised in Table 2.

Table 2. Design of the short-term group psychotherapy programme

Parameter	Study group
Start of therapy	2 weeks after surgery
Group format	3 closed groups × 8 patients
Session frequency	3 times per week, at a fixed time
Session length	60 minutes
Number of sessions	10
Total course duration	25 days
Components	Psychodynamic group sessions; relaxation techniques; coping-skills training; art therapy; music therapy; family therapy
Control group	Standard postoperative follow-up, no psychotherapy

Each brief-therapy course opened with an introductory discussion, followed by an assessment of the patient's strengths, weaknesses and personality profile. Patients received information about the nature of psychotherapy and were encouraged to keep a diary or record specific events. They were taught relaxation techniques and coping skills and were given homework assignments [13].

Outcome measures and statistical analysis

Quality of life was evaluated with the SF-36 questionnaire (physical and psychological components), and the severity of anxiety and depression with the Hospital Anxiety and Depression Scale (HADS). Data were processed in Microsoft Excel, STATISTICA 6 and Biostat. Odds ratios (OR) with 95% confidence intervals (95% CI) were calculated by logistic regression, and between-group differences were tested with the non-parametric Pearson χ^2 test. Quantitative variables are given as M ± SD and as medians (Me) with the 25th–75th percentiles (IQR). Differences were considered statistically significant at $p < 0.05$.

Results

Patient characteristics

The two groups were comparable at baseline (Table 3). The mean age was 33.0 ± 7.8 years in the study group and 33.2 ± 8.8 years in the control group. The groups did not differ significantly by ethnicity, and most patients in both groups (85.0%) lived in cities. More than half of the patients had no family of their own, and roughly one-third were unmarried.

Table 3. Baseline characteristics of the study and control groups

Characteristic	Study group (n = 24)	Control group (n = 48)
Age, M ± SD, years	33.0 ± 7.8	33.2 ± 8.8
Age, Me (IQR), years	33.0 (28.0–36.3)	32.0 (27.0–36.8)
Urban residents	85.0% (both groups combined)	
No family of their own	54.2% OR 1.40; 95% CI 0.45–4.35; p = 0.77	52.1% OR 1.18; 95% CI 0.53–2.63; p = 0.84
Not married, n (%)	7 (29.2%)	16 (33.3%)

Baseline quality of life (SF-36)

At baseline, the lowest SF-36 scores (≤ 50 points) in both groups were found on the bodily pain and general health scales (Figure 1). Such scores reflect a pessimistic view of one's own health and of future rehabilitation prospects, as well as restrictions in everyday physical activity caused by pain. Reduced physical functioning was found in half of the control group and in 45.8% of the study group. Within the psychological component, low vitality was recorded in 24 (50.0%) control and 11 (45.8%) study patients: these respondents had rarely felt cheerful and energetic during the previous four weeks. In addition, 27.1% of control and 33.3% of study patients rated their social connections as poor, and 35.4% and 20.8%, respectively, felt that their emotional state interfered with daily activities.

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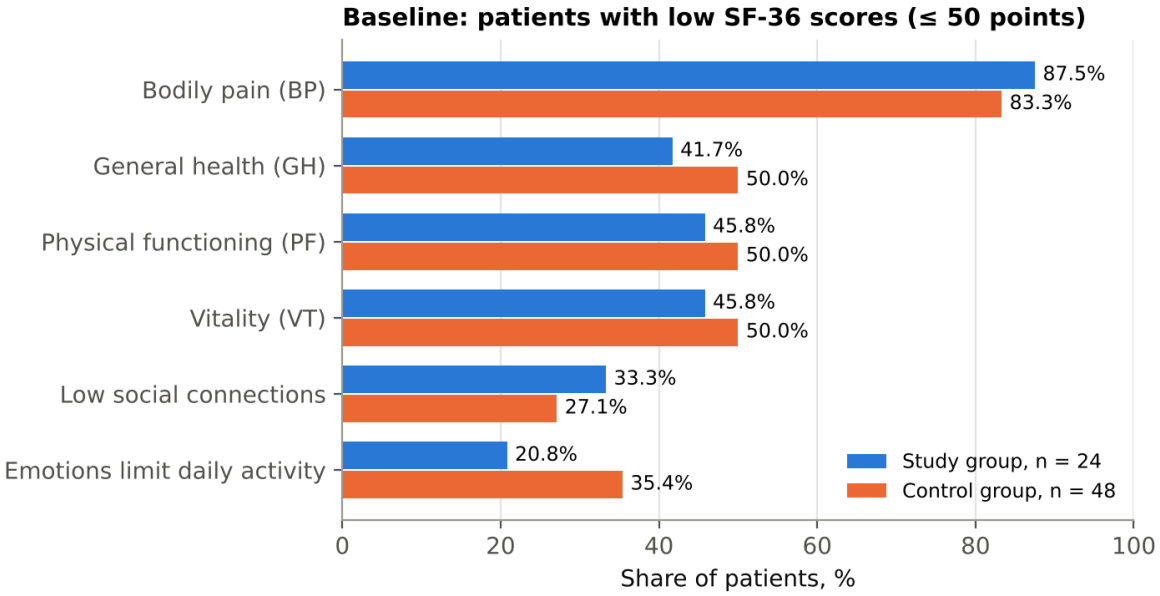

Figure 1. Proportion of patients with low SF-36 scores (≤ 50 points) and psychosocial difficulties at baseline

Physical health indicators

Median SF-36 scores of the physical component are presented in Table 4. Three weeks after the start of psychotherapy, the study group showed a statistically significant improvement on the bodily pain scale (from 34.0 to 50.0 points; p = 0.02), the general health scale (from 51.5 to 58.0 points; p = 0.006) and the physical component summary (from 50.8 to 53.3 points; p = 0.007). In the control group, none of the physical scales changed significantly.

Table 4. Physical component of SF-36 in the postoperative period, points, Me (IQR)

SF-36 scale	Control group (n = 48)			Study group (n = 24)		
	Week 1	Week 3	p_1	Week 1	Week 3	p_1
Physical functioning (PF)	69.0 61.8–75.5	71.5 55.0–83.3	0.75	75.0 55.8–80.0	72.5 64.8–78.3	0.66
Role functioning (RP)	56.0 43.8–69.3	56.5 49.0–63.0	0.60	54.0 40.0–68.8	56.5 49.0–61.5	0.74
Bodily pain (BP)	37.0 29.8–45.0	44.5 27.0–52.3	0.39	34.0 26.8–42.8	50.0 30.8–57.5	**0.02***
General health (GH)	47.0 38.8–57.3	55.0 48.4–56.0	0.10	51.5 41.5–55.5	58.0 51.8–66.3	**0.006***
Physical component summary	50.1 44.7–54.3	51.9 48.4–56.0	0.08	50.8 44.5–53.9	53.3 51.2–60.0	**0.007***

*Note: p_1 – significance of the change relative to the start of the rehabilitation course (week 1); * – statistically significant ($p < 0.05$).*

Relative changes over the three weeks are shown in Figure 2. In the study group, bodily pain scores increased by 26.99% and general health by 20.68%, versus 5.95% and 9.77% in the control

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group; the physical component summary rose by 11.02% versus 4.59%. Physical functioning and role functioning changed only slightly in both groups.

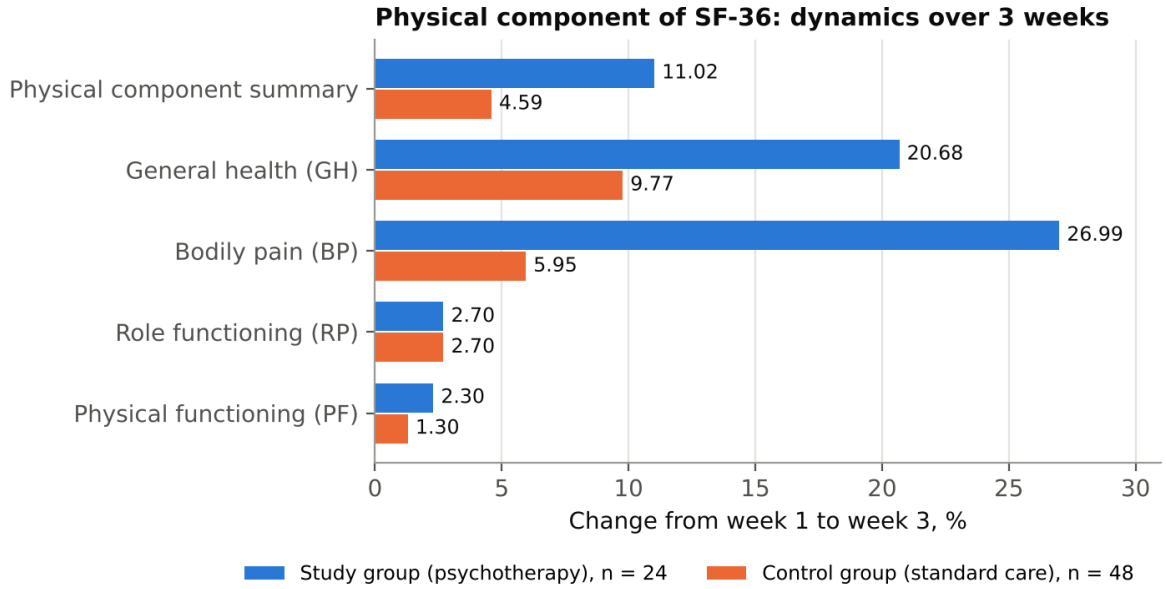

Figure 2. Change in the physical component of SF-36 from week 1 to week 3, %

Psychological indicators

Table 5 presents the psychological component of SF-36. In the study group, the mental health scale increased significantly from 53.5 to 66.0 points (p = 0.03) and the mental component summary from 53.8 to 60.9 points (p = 0.02). Vitality, social functioning and role-emotional functioning also improved, but the changes did not reach significance. In the control group, mental health (p = 0.05) and the mental component summary (p = 0.02) also rose, but to a lesser extent.

Table 5. Psychological component of SF-36 after surgery, points, Me (IQR)

SF-36 scale	Control group (n = 48)			Study group (n = 24)		
	Week 1	Week 3	p_1	Week 1	Week 3	p_1
Vitality (VT)	49.5 40.0–67.3	60.0 48.5–70.5	0.06	50.5 42.8–67.3	62.0 54.3–72.0	0.07
Social functioning (SF)	57.0 48.0–64.0	60.5 46.8–69.3	0.56	56.0 44.8–64.0	61.0 42.0–69.0	0.62
Role-emotional (RE)	62.0 45.8–76.8	67.0 58.0–76.0	0.29	64.5 55.8–73.5	70.5 59.0–76.0	0.39
Mental health (MH)	55.0 49.0–67.3	65.0 52.8–75.0	0.05	53.5 49.0–68.5	66.0 59.5–75.0	**0.03***
Mental component summary	53.2 49.6–59.5	60.2 50.8–64.4	0.02	53.8 49.0–59.8	60.9 55.0–64.4	**0.02***

*Note: p_1 – significance of the change relative to the start of the rehabilitation course (week 1); * – statistically significant ($p < 0.05$).*

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As Figure 3 shows, the largest gain in the study group was on the mental health scale (+15.45% vs +9.80% in the control group), followed by vitality (+13.77% vs +11.85%); the mental component summary improved by 9.54% vs 7.57%.

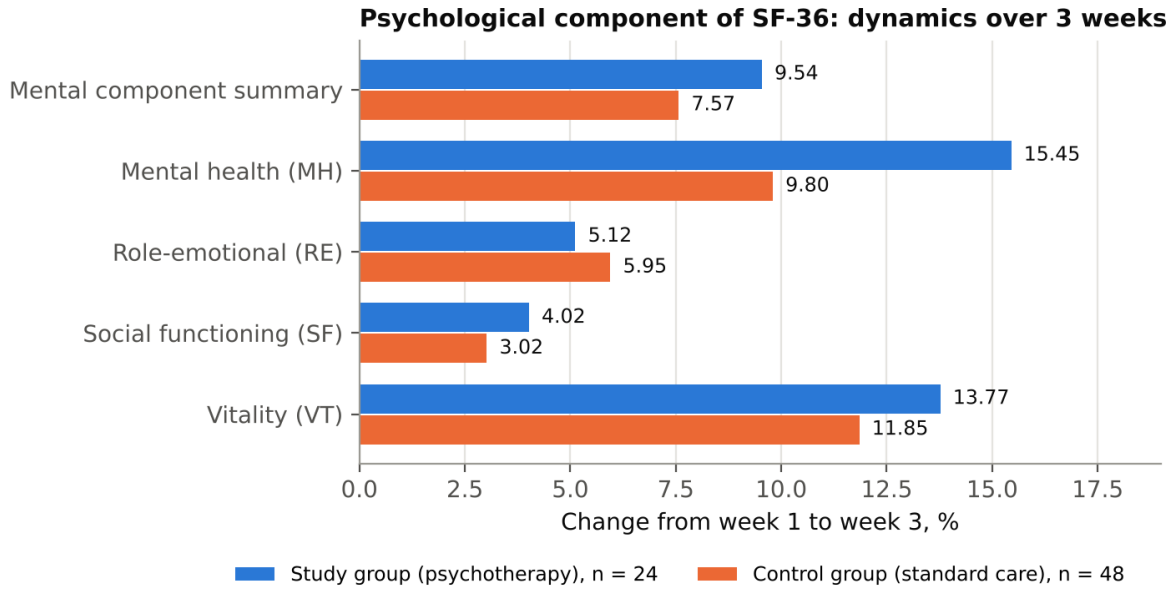

Figure 3. Change in the psychological component of SF-36 from week 1 to week 3, %

Anxiety and depression (HADS)

At the start of psychotherapy, the great majority of patients in both groups had clinically significant anxiety and depression (Table 6, Figure 4) [14]. By the end of the second week, the share of patients with clinically significant anxiety was lower in the study group than in the control group (12.5% vs 27.1%; OR 0.38; 95% CI 0.10–1.51; p = 0.27), and the same was true of depression (16.7% vs 39.6%; OR 0.31; 95% CI 0.09–1.03; p = 0.09). These differences favoured the intervention but did not reach statistical significance. By week 3, no patient in the study group had clinically significant anxiety or depression, whereas 2 patients (4.2%) in the control group still did [15].

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Table 6. Distribution of patients by HADS severity level, %

Group / level	Anxiety			Depression		
	Week 1	Week 2	Week 3	Week 1	Week 2	Week 3
Study group (n = 24)						
Clinical norm	0	45.8	87.5	0	25.0	83.3
Subclinical	16.7	41.7	12.5	16.7	58.3	16.7
Clinically significant	83.3	12.5	0	83.3	16.7	0
Control group (n = 48)						
Clinical norm	0	39.6	83.3	0	14.6	81.3
Subclinical	20.8	33.3	12.5	2.1	45.8	14.6
Clinically significant	79.2	27.1	4.2	97.9	39.6	4.2

Note: values are taken from Figure 3 of the original article.

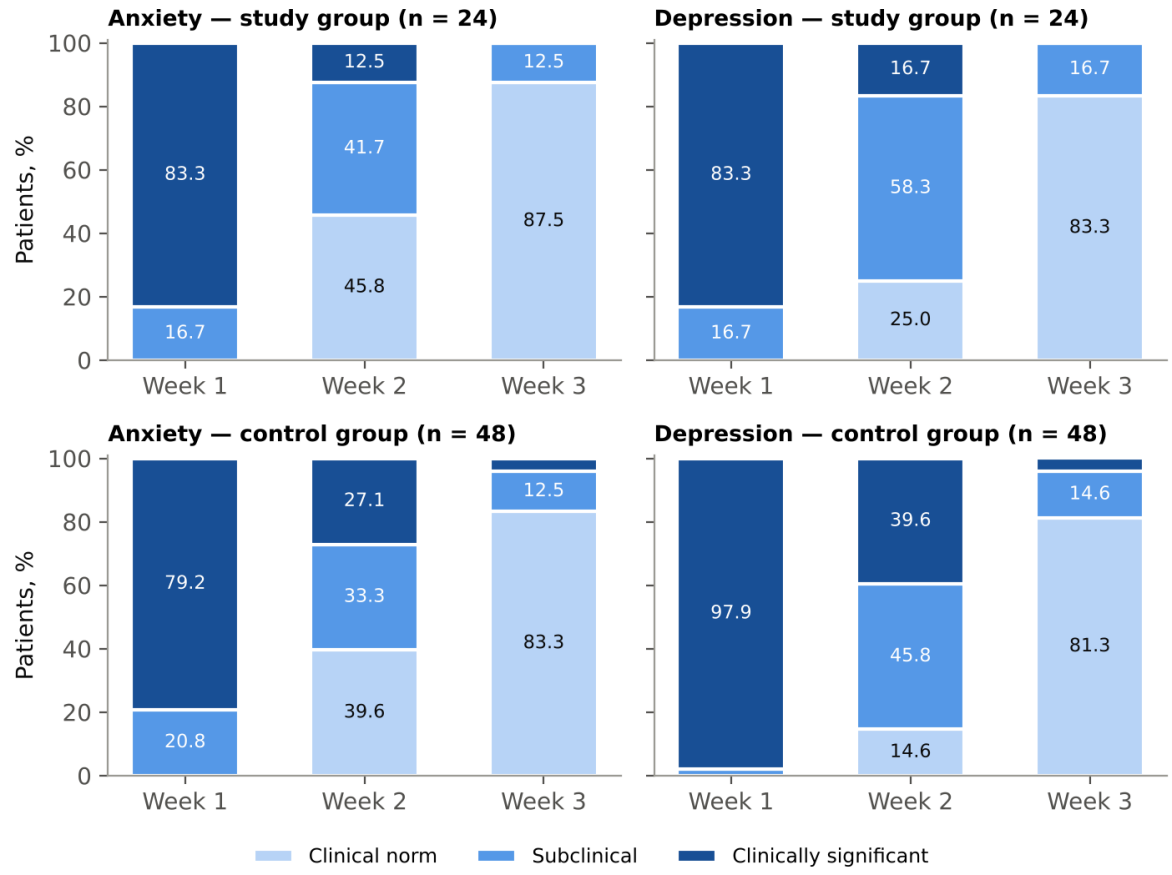

Figure 4. Severity of anxiety and depression (HADS) after surgery over the course of rehabilitation

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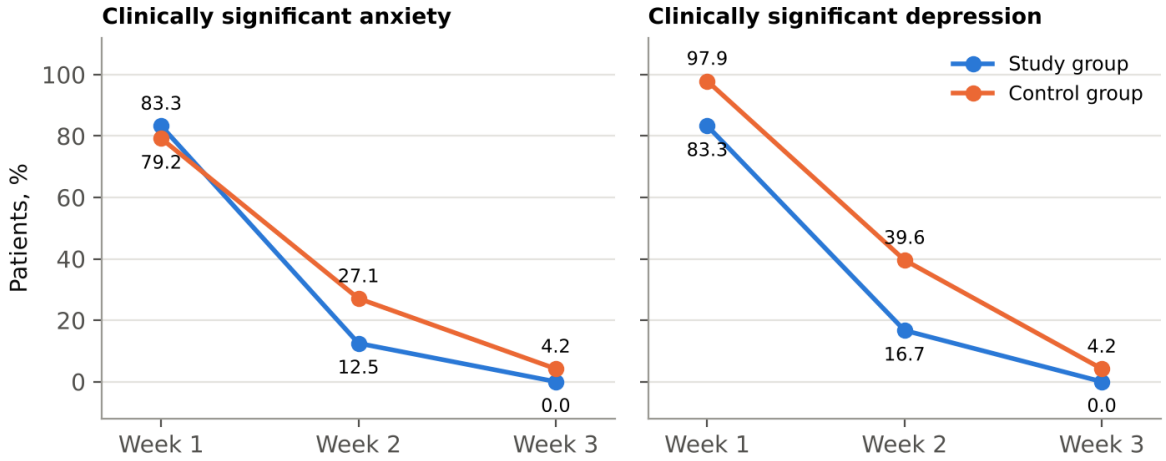

Figure 5. Proportion of patients with clinically significant anxiety and depression, study vs control group

Main outcomes at three weeks

Table 7. Main outcomes after three weeks of rehabilitation

Outcome	Study group	Control group	Difference
Bodily pain (BP), change	+26.99%	+5.95%	+21.04 pp
General health (GH), change	+20.68%	+9.77%	+10.91 pp
Physical component summary, change	+11.02%	+4.59%	+6.43 pp
Mental health (MH), change	+15.45%	+9.80%	+5.65 pp
Mental component summary, change	+9.54%	+7.57%	+1.97 pp
Clinically significant anxiety, week 2	12.5%	27.1%	OR 0.38; p = 0.27
Clinically significant depression, week 2	16.7%	39.6%	OR 0.31; p = 0.09
Clinically significant anxiety/depression, week 3	0%	4.2% (2 patients)	—

pp – percentage points (difference between the relative changes in the two groups).

Discussion

The results show that a short, structured course of group psychotherapy started two weeks after surgery is associated with measurable improvements in the quality of life of patients with oropharyngeal cancer. The most pronounced effects concerned pain perception and the subjective assessment of general health – precisely the domains that were most impaired at baseline, where more than 80% of patients scored 50 points or less on bodily pain. Within the psychological component, the mental health scale showed a significant improvement, while vitality, social and role-emotional functioning moved in a favourable direction without reaching significance.

Regarding affective symptoms, both groups improved during the first postoperative weeks, which partly reflects the natural course of recovery. However, the proportion of patients with clinically significant anxiety and depression fell faster in the psychotherapy group, and by the third

week no patient in this group remained at a clinically significant level. The between-group differences at week 2 did not reach statistical significance, which is likely related to the small sample of the study group; the results on affective disorders should therefore be interpreted with caution.

The group format appears to contribute through several mechanisms: mutual support among patients facing the same illness, the ealization that one's fears are shared, the possibility of observing others' coping strategies, and the acquisition of concrete relaxation and coping skills. The short duration of the course (10 sessions over 25 days) makes it feasible even for patients who soon go on to chemotherapy or whose health is unstable.

Conclusion

Patients who attended short-term group psychotherapy in the postoperative period showed better overall health and emotional state than patients who did not receive psychotherapy, and the effect did not depend on age or disease duration. Three weeks after the start of the rehabilitation course, the study group showed a significant increase in the physical component of quality of life on the bodily pain (by 26.99%) and general health (by 20.68%) scales, and in the psychological component on the mental health scale (by 15.45%), compared with the control group.

Findings on the dynamics of affective disorders in the study and control groups remain inconclusive, as the differences were not statistically significant. Further, more detailed research on affective disorders in patients with cancer, as well as on the development of effective psychotherapeutic methods, is therefore warranted. Integrating short-term group psychotherapy into standard postoperative oncological care is a promising way to improve patients' psychological well-being and quality of life.

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