

STUDY ON THE EFFECTIVENESS OF PSYCHOSOCIAL SUPPORT SERVICES FOR ONCOLOGICAL PATIENTS

M. V. UȚĂ¹ R. L. GIURGIU²

Abstract: *Cancer diagnosis and treatment significantly impact patients' psychological well-being and quality of life. Psycho-oncological support services have emerged as essential components of comprehensive cancer care, yet limited research exists on their effectiveness in the Romanian healthcare context. The psycho-oncological support program demonstrated significant clinical and statistical benefits for cancer patients. These findings support the integration of structured psychosocial interventions into standard oncological care and indicate the need for widespread implementation of such programs.*

Key words: *psycho-oncology, cancer patients, support groups, quality of life, coping strategies, psychological intervention*

1. Introduction

A cancer diagnosis represents one of the most challenging life events, triggering psychological, social and existential distress that extends beyond the physical manifestations of the illness (Holland, 2018). This psychological burden affects not only patients but also family members and informal caregivers, creating a network of emotional and social needs that require specialized support (Carlson et al., 2019).

The biopsychosocial model (Engel, 1977) provided a comprehensive framework for understanding the multifaceted impact of cancer, emphasizing the interaction of biological, psychological and social determinants in shaping health outcomes. Within this model, the field of psycho-oncology developed to address the psychological, behavioural and social dimensions of cancer (Holland, 1989). In the past two decades this subspecialty has evolved and addressed the emotional responses of patients at all stages of cancer, as well as their families and caretakers, and the psychological, social and behavioural factors that may influence cancer morbidity and mortality (Holland J.C., 2018).

Recently, Chartogne et al. (2021) investigated Cancer-Related Fatigue (CRF), as one of the most common side effects of cancer and the treatment to which patients are subjected. This manifestation seems to affect 50% of patients and continues to make its presence felt for several years, even after the remission of the disease. According to studies, this

¹ Independent researcher

² Ovidius University of Constanta, lauragiurgiu31@yahoo.com, corresponding author.

persistent state of exhaustion is multifactorial, with patients reporting symptoms in the following areas: biological, physical, psychological, social, or behavioral. Chartogne et al. (2021) used the BIOCARE Factory method, consisting of an 18-month follow-up of 200 patients diagnosed with cancer, applied both during treatment and after its completion. Therefore, the aim of the research currently being carried out is to create a biopsychosocial model, which includes clinical, biological, anthropometric, psychological, and social parameters, to better understand and prevent the CRF (Cancer-Related Fatigue).

The transactional model of stress and coping offers a theoretical foundation. The psychological adaptation results from the dynamic interplay between situational demands, cognitive appraisal and coping responses. This perspective supports the development of interventions aimed at enhancing adaptive coping skills and promoting psychological adjustment.

Research shows that 35–45% of cancer patients experience clinically significant distress, including anxiety, depression and stress (Mitchell et al., 2011). These symptoms negatively influence treatment adherence, immune function and even survival (Pinquart & Duberstein, 2010). Consequently, psychological care has become a critical component of comprehensive oncology services. Nipp et al. (2016) found that the emotional support was the most frequently used coping strategy, along with high utilization of positive reframing, acceptance, and active coping, associating those coping strategies with better quality of life, and mood in oncologic patients. On the other hand, denial and self-blame (non-adaptive strategies) correlate with a lower quality of life and mood. Other studies demonstrated that psycho-oncological interventions can produce meaningful improvements in HRQOL, often comparable in impact to medical treatment adjuncts (Faller et al., 2013).

Coping strategies — defined as cognitive and behavioral efforts to manage stress—play a vital role in cancer adaptation. The use of adaptive coping strategies in oncological disease, which can pose a threat to the patient's life and cause the individual to make vital decisions regarding their own health, influences the patient's perception of their condition. Adaptive coping skills are important in managing the disease and maintaining the patient's quality of life, and are strongly linked to reduced distress, while certain maladaptive strategies, such as rumination, self-blame, or suppression of emotions, can be related to a low quality of mental health, but also physical and psychological health, equally (Nipp et al., 2016).

Psycho-oncological interventions typically incorporate psychoeducation, cognitive-behavioral methods, relaxation techniques, emotional expression and social support (Andersen et al., 2004). Group-based interventions, in particular, provide unique benefits: peer learning, normalization of experiences, emotional connection and shared coping resources (Helgeson et al., 2000).

2. Context and Rationale

In Romania, despite growing recognition of psycho-oncological needs, access to specialized psychological support is limited by the cultural barriers and systemic constraints that frequently impede the integration of psychological services into routine oncology. The present study addresses this gap by evaluating a multi-component psycho-oncological support program delivered across 12 Romanian urban centres, through a National Association of Patients with Chronic Diseases network.

3. Method

A pre–post intervention study was conducted to evaluate the effectiveness of psycho-oncological and social support services delivered through 12 structured support groups located in urban centres across Romania. Outcomes were measured at baseline and six months post-intervention using standardized, validated instruments.

4. Participants

The sample included 118 patients with chronic oncological conditions, representing various cancer types and treatment stages, recruited through the Patients' Association with Chronic Diseases network.

Demographic characteristics of participants:

- Gender: 110 females (95.7%), 5 males (4.3%)
- Age: Females: 39–72 years; Males: 40–60 years
- Employment status: 23 homeworkers, 42 employed, 45 retired
- Education: 73 secondary education, 37 higher education

From these, 78 patients have recently received an oncological diagnosis and were in different stages of medical therapy (chemotherapy/radiotherapy/hormone therapy/immunotherapy/surgery), and eight patients have completed medical therapy. Out of the total, 32 patients were declared survivors of the oncological disease, and three patients did not finish the study, because they were in convalescence after surgery (for them, psycho-oncological support interventions were carried out by psycho-oncologists of the medical clinics).

5. Intervention

The support groups organized in urban areas took place bimonthly throughout the year. The number of participants for each session was 7 to 10, and the duration of the meetings was 120 minutes each. The 115 study participants regularly attended the group meetings. The patients' support systems, apart from the counselling within the groups, were the family and friends, throughout the medical interventions and occasionally, the support of psycho-oncologists in medical institutions and of social work services, provided by the local Social Services. In the area of medical information, the attending physicians, or family doctors, played significant roles.

The psycho-oncological support program consisted of structured group sessions integrating several therapeutic components:

A. *Relaxation and Stress Management*

Participants learned:

- diaphragmatic breathing
- progressive muscle relaxation
- guided imagery

These techniques targeted reductions in stress, anxiety and depressive symptoms.

B. *Psychoeducation* - aimed to reduce uncertainty and enhance illness understanding.

Informal and structured information regarding:

- cancer and treatment processes
 - emotional responses
 - behavioral adaptation
- C. Social Integration Support**
Activities promoted:
- community involvement
 - family and professional reintegration
 - vocational counseling (including professional reconversion)
- D. Cognitive Restructuring and Coping Development**
Goal-directed psychological strategies helped participants:
- identify maladaptive cognitions
 - develop adaptive coping mechanisms
 - improve emotional regulation and functional adaptation

6. Measures

Depression, Anxiety, and Stress Scales–21 (DASS-21)

The DASS-21 (Lovibond & Lovibond, 1995) is a shortened, validated version of the original 42-item DASS instrument and assesses three distinct negative emotional states: depression, anxiety, and stress. The scale includes 21 items, divided into three 7-item subscales, each measuring the severity of one emotional dimension.

Items are rated on a 4-point Likert scale (0 = “did not apply to me at all” to 3 = “applied to me very much or most of the time”). Subscale scores are summed and then multiplied by two, to maintain comparability with the original DASS-42. Higher scores indicate greater symptom severity.

The DASS-21 demonstrates strong psychometric properties across clinical and oncological populations, including high internal consistency (Cronbach's α typically $> .85$) and good discriminant validity between depression, anxiety and stress constructs. Its sensitivity makes it particularly useful for detecting changes pre–post psychological interventions among cancer patients.

Functional Assessment of Cancer Therapy – General (FACT-G)

The FACT-G (Cella et al., 1993) is a widely validated 27-item instrument assessing health-related quality of life in oncology. It comprises four subscales:

- Physical Well-Being (PWB; 7 items)
- Social/Family Well-Being (SWB; 7 items)
- Emotional Well-Being (EWB; 6 items)
- Functional Well-Being (FWB; 7 items)

Items are scored on a 5-point Likert scale (0 = “not at all” to 4 = “very much”), with some items reverse-scored according to the manual. Subscale scores are summed to generate a total score ranging from 0 to 108, with higher scores indicating better quality of life. The FACT-G is one of the most frequently used instruments in cancer research globally due to its strong reliability ($\alpha > .85$), sensitivity to clinical change, and validation across diverse cancer types and cultural contexts, including European populations.

Coping Orientation to Problems Experienced (COPE)

The COPE Inventory (Carver et al., 1989) is a 53-item, theory-driven measure based on the transactional model of stress and coping (Lazarus & Folkman, 1984). It assesses 14

coping strategies, each represented by 4 items: Active Coping, Planning, Suppression of Competing Activities, Restraint Coping, Seeking Instrumental Social Support, Seeking Emotional Social Support, Positive Reinterpretation and Growth, Acceptance, Turning to Religion, Venting of Emotions, Denial, Mental Disengagement, Behavioural Disengagement, Substance Use. Respondents rate items on a 4-point Likert scale (1 = "I usually don't do this at all" to 4 = "I usually do this a lot"), producing continuous scores for each coping domain. The COPE is highly suitable for oncology because it distinguishes between adaptive vs. maladaptive coping patterns.

Analyses of data included: paired-samples t-tests (pre–post differences), Cohen's d (effect sizes), Pearson correlations and repeated-measures ANOVA (time × group effects). Significance was set at $p = .05$.

7. Results

Pre–Post Intervention Comparisons

Significant improvements were observed across all core psychological and functional domains (Table 1 and Table 2).

Descriptive Statistics: Pre- and Post-Intervention Table 1

Variable	Pre-Intervention			Post-Intervention		
	N	M	SD	N	M	SD
Depression	230	6.08	2.95	115	4.60	2.29
Anxiety	230	7.31	2.60	115	5.49	1.69
Stress	230	9.88	3.73	115	7.20	2.75
FACT-G	230	53.50	24.74	115	69.72	20.63
COPE	230	82.10	37.51	115	103.63	38.37

Paired-Samples t-test Results Table 2

Variable	M Pre	M Post	Δ	t(df)	p	d
Depression	6.08	4.60	–1.48	24.51(114)	< .001	2.29
Anxiety	7.31	5.49	–1.82	27.61(114)	< .001	2.57
Stress	9.88	7.20	–2.68	24.90(114)	< .001	2.32
FACT-G	53.50	69.72	+16.22	–26.98(114)	< .001	2.52
COPE	82.10	103.63	+21.53	–17.49(114)	< .001	1.63

All improvements were statistically significant, with large effect sizes (all $d > 1.6$), demonstrating strong clinical relevance. Anxiety showed the largest effect size, followed by improvements in Quality of Life and Stress Reduction. Pearson correlations showed that increased adaptive coping is strongly associated with improved quality of life ($r = .59$). Reductions in anxiety and stress correspond with higher QOL. All correlations are theoretically consistent.

Correlations Between Change Scores (Δ Values)

Table 3

Variable	Δ QoL	Δ COPE	Δ Anxiety	Δ Stress
Δ QoL	-			
Δ COPE	.59	-		
Δ Anxiety	-.30	-.31	-	
Δ Stress	-.20	-.23	.41	-

A repeated-measure ANOVA confirmed a significant main effect of time on all psychological outcomes. For Depression, time effect was $F(1,151) = 10.68$, $p = .001$, $\eta^2 = .066$; Group effect: $F(95,151) = 3.98$, $p < .001$, $\eta^2 = .20$, and Time \times Group interaction: $F(95,151) = 3.91$, $p < .001$, $\eta^2 = .20$. Additional ANOVA confirmed the significant change for depression: $F(1,341) = 4.04$, $p = .045$, $\eta^2 = .012$.

These findings indicate that the program improved outcomes consistently across participants. Some centers achieved greater improvements, likely reflecting contextual or facilitator differences. The strong interaction effect suggests variability in participant response, which is normal in psycho-oncological interventions.

8. Discussion

The findings provide robust evidence that the psycho-oncological support program produced significant improvements in patients' emotional well-being, coping abilities and quality of life. Reductions in depression, anxiety and stress were not only statistically significant but also demonstrated very large effect sizes, indicating meaningful clinical change. These notable reductions in emotional symptoms are consistent with extensive literature showing that structured psycho-oncological interventions effectively reduce psychological distress and enhance overall functioning, with the magnitude of improvement observed in this study exceeding typical minimal clinically important differences. Moreover, the improvement of more than 16 points in FACT-G scores reflects substantial enhancement across emotional, physical, functional and social domains, which is consistent with the multidimensional nature of the intervention that integrated psychoeducation, relaxation techniques, social integration support and cognitive restructuring strategies. The strong association between improvements in coping and quality of life further provides theoretical validation for the program's design, grounded in cognitive-behavioral and stress-coping models, suggesting that participants developed more effective strategies for managing illness-related challenges. These results align closely with international evidence demonstrating the effectiveness of group-based psycho-oncological interventions for cancer patients.

At the same time, repeated-measures ANOVA findings revealed variability in outcomes across centers and participants, pointing to the potential influence of moderator variables such as baseline distress, disease stage, cancer treatment type, facilitator training and levels of social support. From a practical perspective, the results offer actionable implications for healthcare providers and policymakers, supporting the integration of structured psycho-oncological programs into routine oncology care, demonstrating the scalability and feasibility of group-based delivery across multiple

centers, highlighting the cost-effectiveness of this format, and underscoring the value of holistic interventions that address emotional, cognitive and social needs alongside medical treatment.

Several limitations should be considered when interpreting the findings of this study. First, the pre–post design without a control group restricts causal inference, as observed improvements cannot be attributed solely to the intervention and may partly reflect natural psychological adaptation, medical treatment effects or regression to the mean. Second, although repeated-measures ANOVA was used to examine change over time and variability across support centers, assessments were conducted at only two time points (baseline and six-month follow-up), limiting conclusions regarding outcome trajectories and long-term maintenance of effects. Third, all outcomes were measured using self-report instruments, which may be subject to response bias, social desirability and shared method variance. Fourth, the sample was predominantly female, reducing the generalizability of the results to male cancer patients. Finally, heterogeneity in cancer diagnoses, treatment stages and group facilitation contexts may have contributed to variability in outcomes, underscoring the need for randomized controlled trials, longer follow-up periods and analyses of moderator and mediator effects in future psycho-oncological research.

Future research should build on these findings by employing randomized controlled trial designs to provide stronger causal evidence for the effectiveness of psycho-oncological interventions. Personalized approaches that identify predictors of treatment response would further enhance intervention tailoring and clinical utility. In addition, cost-effectiveness analyses are warranted to support broader implementation within healthcare systems, particularly in resource-limited settings. Longer-term follow-up assessments are needed to evaluate the durability of psychological, functional and quality-of-life improvements over time. Finally, future studies should examine facilitator-related and contextual factors influencing intervention delivery and outcomes, as these variables may account for variability in effectiveness across settings.

9. Conclusion

This study provides compelling evidence for the effectiveness of a structured psycho-oncological support program delivered across 12 Romanian urban centers. The intervention produced significant and clinically meaningful improvements in psychological distress, quality of life and adaptive coping among cancer patients. The findings demonstrate substantial reductions in depression, anxiety and stress with very large effect sizes, alongside improvements in quality of life across all domains. Strengthening of coping strategies appeared to mediate psychological adjustment, while the multi-component, group-based delivery model proved both feasible and impactful. Overall, the results align with international research and strongly support the integration of structured psychosocial interventions into routine oncology care.

References

- Andersen, B. L., Yang, H.-C., Farrar, W. B., Golden-Kreutz, D. M., Emery, C. F., Thornton, L. M., DeMoor, C., & Carson, W. E., III. (2008). Psychologic intervention improves survival for breast cancer patients: A randomized clinical trial. *Cancer*, 113(12), 3450–3458. <https://doi.org/10.1002/cncr.23969>
- Carlson, L. E., Zelinski, E. L., Toivonen, K. I., Flynn, M., Qureshi, M., Piedalue, K. A., & Specia, M. (2019). Mind-body therapies in cancer: What is the latest evidence? *Current Oncology Reports*, 21(1), Article 6. <https://doi.org/10.1007/s11912-019-0755-0>
- Chartogne, M., Leclercq, A., Beaune, B., Boyas, S., Forestier, C., Martin, T., Thomas-Ollivier, V., Landry, S., Bourgeois, H., Cojocarasu, O., Pialoux, V., Zanna, O., Messonnier, L. A., Rahmani, A., & Morel, B. (2021). Building a biopsychosocial model of cancer-related fatigue: the BIOCARE FACTORY cohort study protocol. *BMC Cancer*, 21(1), 1140. <https://doi.org/10.1186/s12885-021-08831-3>
- Engel, G. L. (1977). The need for a new medical model: A challenge for biomedicine. *Science*, 196(4286), 129–136. <https://doi.org/10.1126/science.847460>
- Faller, H., Schuler, M., Richard, M., Heckl, U., Weis, J., & Küffner, R. (2013). Effects of psycho-oncologic interventions on emotional distress and quality of life in adult patients with cancer: Systematic review and meta-analysis. *Journal of Clinical Oncology*, 31(6), 782–793. <https://doi.org/10.1200/JCO.2012.45.7158>
- Helgeson, V. S., Cohen, S., Schulz, R., & Yasko, J. (2000). Group support interventions for women with breast cancer: Who benefits from what? *Health Psychology*, 19(2), 107–114. <https://doi.org/10.1037/0278-6133.19.2.107>
- Holland, J. C. (1998). History of psycho-oncology: Overcoming attitudinal and conceptual barriers. *Psychosomatic Medicine*, 60(2), 206–221.
- Holland, J. C., Jacobs, W., & Reznik, I. (2018). *Psycho-oncology* (3rd ed.). Oxford: Oxford University Press.
- Holland, J. C., (2018) Psycho-oncology: Overview, obstacles and opportunities. *Psychooncology*, 27(5), 1364-1376. <https://pubmed.ncbi.nlm.nih.gov/29749682/>
- Lovibond, P. F., & Lovibond, S. H. (1995). The structure of negative emotional states: Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Beck Anxiety Inventories. *Behaviour Research and Therapy*, 33(3), 335–343. [https://doi.org/10.1016/0005-7967\(94\)00075-U](https://doi.org/10.1016/0005-7967(94)00075-U)
- Mitchell, A. J., Chan, M., Bhatti, H., Halton, M., Grassi, L., Johansen, C., & Meader, N. (2011). Prevalence of depression, anxiety, and adjustment disorder in oncological, haematological, and palliative-care settings: A meta-analysis. *The Lancet Oncology*, 12(2), 160–174. [https://doi.org/10.1016/S1470-2045\(10\)70412-5](https://doi.org/10.1016/S1470-2045(10)70412-5)
- Nipp, R. D., El-Jawahri, A., Fishbein, J. N., Eusebio, J., Stagl, J. M., Gallagher, E. R., Park, E. R., Jackson, V. A., Pirl, W. F., Greer, J. A., & Temel, J. S. (2016). The relationship between coping strategies, quality of life, and mood in patients with incurable cancer. *Cancer*, 122(13), 2110–2216.
- Pinquart, M., Duberstein, P. R. (2010). Depression and cancer mortality: a meta-analysis. *Psychological Medicine*, 40(11), 1797–1810. <https://doi.org/10.1017/S0033291709992285>

Other information may be obtained from the address: lauragiurgiu31@yahoo.com