



Psychological help in oncology practice

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Abstract

Background. The psychological effects of cancer and its treatment on the patients, their families, and healthcare workers point the need to develop a program of psychological interventions for use in oncology practice.

Methods. The study was conducted at the Kyiv City Clinical Cancer Center during 2014-2016 years and had an observational design. It included 422 cancer patients: 80 patients – diagnostic stage, 187 - primary treatment and 155 - secondary treatment caused by cancer progression; 218 family members: 79 – relatives of patients on primary treatment (Gp), 68 - secondary treatment (Gs), 71 - palliative care (Gpal). In the study also participated 50 oncologists. We used Hospital Anxiety and Depression Scale (HADS), Big Five Personality Questionnaire (5PFQ), Dealing with Difficult Life Situations (developed by W. Janke, H. Erdmann), Type Attitude to the Disease Questionnaire (TOBOL), Quality of Life Index (developed by J. E. Mezzich, N. Cohen, J. Liu, M. Ruiperez, and G. Yoon). Oncologists were evaluated for emotional burnout symptoms by Maslach Burnout Inventory.

Results. Cancer has caused a significant influence on patients' mental state, reflected in personal, behavioral and psychosocial levels. HADS showed more pronounced anxious versus depressive symptoms ($p < 0.05$), although the symptomatic structure among different patients was similar. On diagnostic stage, depression and anxiety were higher ($p < 0.05$). In patients were noted destructive personal patterns (12,7%), ineffective coping strategies (24,6%), maladjusted reactions on disease (62,8%). The main types of reactions on the disease were: anosognostic (13,0%), anxious-sensitive (11,4%), ergopathic-anxious (10,4%), sensitive (7,8%), anxious (7,6%) and hypochondriac (6,4%). Patient's relatives experienced high levels of stress due to cancer diagnosis. The high levels of distress were noted in 92,4% relatives - in Gp, 86,8% - Gs and 91,5% - Gpal. Emotional exhaustion in oncologists was estimated at $16,1 \pm 9,1$, depersonalization - $6,0 \pm 4,5$ points, professional achievements - $35,4 \pm 7,5$ points. In 34% oncologist from 1 to 3 components of burnout were present.

Conclusion. According to the results, psychological help is a major component of cancer management. Due to high levels of distress and emotional burnout, it must be provided not only to patients but to their relatives (caregivers) and oncologists. The results of this study could help in the creation of a new complex program of psychological interventions for these individuals.

Keywords: psychological help, psychoeducation, psychocorrection, cancer, caregivers, oncology, oncologists, Psycho-Oncology

1 Background

Cancer is complex medical, psychological and social problem. Ukraine showed the highest cancer incidence compared with international standards - 384.9 vs. 229.3 per 100 thousand [1]. Treatment of cancer requires the high medical professional's skills, modern equipment, and expensive anticancer medications. The disease leads to the disability due to the chronic progressive course in every 6th patient. Mortality in oncology is 51.30%; not living a year after diagnosis 31.40%; the death rate is 188.40 per 100 thousand of the population. 40.00% of cases among men and 26.60% among women are people in efficient age, forming a dominant part of the population that is excluded from active social life [1].

Cancer is one of the most difficult areas of somatic medicine. The threat to life, side effects of anticancer therapy, constant alertness about possible relapse, all of these can contribute to the development of a wide range of maladaptive conditions and mental disorders [2],[3],[4],[5]. Cancer often changes patient's major life goals, shifting treatment and struggle with the disease on the first place [6]. As a result of cancer patients' relatives are often get psychologically traumatized [6],[7]. On average about 7 family members are involved in the assistance of cancer patient. Chronic illness excludes family members from social life, reduces their physical and mental well-being. A cancer diagnosis causes "wavering effect" in the family (fear, uncertainty, violation of plans, changes in lifestyle, interpersonal communication, anxiety, increased family stress) [8], [9].

Work in oncology is also associated with high levels of stress due to the interaction with sick people who experience physical and psychological suffering. One of the most well-known adverse effects of occupational stress is emotional burnout. According to the observational data, oncologists have showed high levels of emotional exhaustion - 15 - 25%, depersonalization - 4 - 15%, underassessment of personal achievements - 30 - 65% [10], [11].

Psychological cancer consequences and its treatment effects on a patient, his family members, healthcare professionals also need management. The study aimed to evaluate the mental health of cancer patients, their family members, and medical professionals and identify tasks for psychological care in oncology.

2 Materials and Methods

The research was conducted at the Kyiv City Clinical Cancer Center (2014 – 2016) and had an observational design. Study included 422 cancer patients: 80 - in stage of diagnosis and anticancer therapy selection (G1), 187 - primary (G2) and 155 - re-treatment due to cancer progression (G3); 218 – patients' family members: 79 - during their initial treatment (Gp), 68 – re-treatment (Gs), 71 - palliative care (Gpal). Also in the study participated 50 oncologists, in which emotional burnout symptoms were assessed.

For emotional state evaluation, we used Hospital Anxiety and Depression Scale (HADS). For personality and behavioral patterns - Big Five Personality Questionnaire (5PFQ), Dealing with Difficult Life Situations, developed by W. Janke, H. Erdmann (SVF120). For interaction in the treatment process and the types of response to disease - Type Attitude to the Disease Questionnaire (TOBOL). For psychosocial functioning - Quality of Life Index, developed by J. E. Mezzich, N. Cohen, J. Liu, M. Ruiperez, and G. Yoon. For assessing the professional burnout - Maslach Burnout Inventory (MBI). Statistical analysis was carried out using IBM SPSS.

3 Results

The study revealed the prevalence of depressive and anxiety disorders in cancer patients. Symptoms structure in various stages of treatment was similar (Table 1). The leading symptoms of anxiety were anticipation anxiety, inner tension, and worrying thoughts. Depressive symptoms - anhedonia, pessimistic perception of the future and decrease in vitality. The most pronounced anxiety symptoms were noted in G1 patients.

Table 1: Severity manifestations of anxiety and depression for the HADS, mean ± SD.

Subscale	G1	G2	G3
Anxiety	14,2 ± 3,31!	12,9 ± 2,97!	13,4 ± 3,37
Depression	12,4 ± 2,8!	11,5 ± 2,63 *!	12,7 ± 2,91 *

*Significance of difference at p <0.05 between G2 and G3,! - between G1 and G2.

The patients that received anticancer treatment for the first time experienced a prolonged psychological stress due to the therapy. These patients had lack of information about cancer, treatment methods; they didn't have experience in combating cancer and associated physical and mental stress. A large amount of patients focused on the social myths about cancer.

The patients waiting for surgery were tied to the planned operative treatment, its effects and postoperative period. Patients that received a combined or integrated anti-tumor therapy had worries about therapy additional chemotherapy and radiation therapy, which were associated with a poorer prognosis with greater mental, physical and material cost. Patients assigned to chemotherapy or radiotherapy were depressed about the inability to get rid of the tumor radically as soon as possible. These patients experienced adverse impact of information about treatment side effects and the need for long-term hospitalization, which provokes intense negative feelings.

Patients hospitalized due to cancer progression or recurrence often were retraumatized. In this group was observe a growth of physical functioning decline and decreased. However, these patients were more informed about their illness and treatment, had experience in coping with psychological stress caused by illness.

The evaluation showed maladaptive personality profile in 12.7%, low coping skills - 24.6%, maladaptive response to the disease - in 62.8%, combined forms (personal and interpersonal maladjustment) - in 16.6% of patients. Most prevalent reaction to the diagnosis were anosognostic (13,0%), anxiety-sensitive (11,4%), ergopathic (10,4%), sensitive (7,8%), phobic (7,6%) and hypochondriac (6,4%).

Cancer patients had significantly reduced the quality of life, that was reflected in a psycho-emotional and physical condition, as well as in interpersonal relations. At each anticancer treatment stage, was observed worsening in quality of life. This was accompanied by increased duration of illness and its negative impact (Table 2).

Major psychosocial problems in cancer patients included social activity reduction, increased interpersonal tension, changed social interactions quality, communication difficulties, stigma and low self-esteem.

Cancer also affected the patient's relatives psycho-emotional state. Changes in mental state that reached a high manifestation level was observed among 92.4% family mem-

bers in - Gp, 86.8%, - Gs, 91.5% - Gpal. Moderate and low level - 7.6%, 13.2% and 8.5% of respondents, respectively. High scores in family functioning (high score reflect worse functioning) were noted in 88.6%, 85.3%, and 93.0% and moderate/low scores - 11.4%, 14.7% and 7.0% of patients, respectively. These data indicate the need to help family members experiencing the embarrassment, confusion, difficulties in communication with patients.

In Gp, Gs, and Gpal relatives, low and moderate difficulties in interactions were observed only in 11.4%, 14.7%, and 7.0%. Others experienced severe problems in communications with their ill relative.

During the cancer treatment course in family members was formed specific behavioral style that was implemented through behavioral and emotional involvement in the treatment process. Hyperprotection model among Gp, Gs, and Gpal relatives was estimated at 58.3%, 47.0%, and 54.9%, distancing model - 13.9%, 11.8% and 16.9%, and balanced model - 27.8%, 41.2% and 28.2%, respectively. Low involvement in patient treatment among Gp, Gs, and Gpal relatives was noted in 11.4%, 10.2%, and 0%, moderate - 58.2%, 70.6% and 64.8%, high - 30.4%, 19.2% and 35.2% cases, respectively .

The physicians' survey showed high demand for information about psycho-oncology (84%) and practical skills (88%). Oncologists were more interested in information about psychological problems in health care workers (42%), prevalence and characteristics of mental disorders in cancer patients (38%), communication and interaction with patients and their family (36%), practical recommendation in management of mental health problems in patients (30%), basic knowledge of the cancer patients' psychology (30%), reporting unfavorable news (30%). Among psychological skills of professional activities most relevant for oncologists were coping skills training (54%), communication and behavior in conflict situations (54%), professional communication (48%), assertiveness (48%), self-awareness of mental state (44%).

Oncologists demonstrated the high levels of emotional burnout. Mean MBI scores on emotional exhaustion, depersonalization, and self-evaluation of professional achievements were $16,1 \pm 9,1$, $6,0 \pm 4,5$, and $35,4 \pm 7,5$ points respectively. Every 3-rd physician showed signs of occupational stress, and every 7th specialist experienced intense work stress with adverse consequences for the health.

4 Discussion

We have summarized the study results into short recommendations for management of mental health problems in cancer patients. Primary objectives of such treatment should include the weakening of mental distress, learning ways to reduce emotional stress, the formation of realistic ideas about cancer and adaptive behaviors during the treatment process. Psychological assistance should be proposed to all hospitalized patients. Recommendations can be summarized as:

- Psychological support for patients during the diagnostic stage.
- Facilitation of psychological stress, development of coping skills on reducing psycho-emotional stress, and formation of realistic treatment goals for all patients after a cancer diagnosis.
- Interventions for reducing maladaptation behavior patterns, social readaptation and destigmatization for patients with cancer progression or relapse.
- Psychoeducation for cancer patients' relatives.

Cancer patients had different needs during distinct stages of treatment. Psychological education was more relevant for patients, who faced cancer for the first time. Psychological interventions should be intensified during crisis periods (i.e., recurrence, progression, the transition to palliative

care, the emergence of chronic pain). Duration of psychological interventions should depend on the physical condition of cancer patients.

Psychological should be performed for patients, that undergo surgical treatment, concerning treatment period (i.e., psychological preparation for surgery, pre- and postoperative phenomena of anxiety). During chemotherapy and radiotherapy can be recommended psychological training procedures, increase motivation for treatment, reduction of emotional and physiological stress during therapy, correcting misconceptions on anticancer therapy, modeling behavior to overcome the adverse effects of the treatment.

An important practical challenge is to create a positive attitude and motivation for participation in psychological interventions. The significant factors include the availability of psychological care, patients' awareness about such interventions, scheduled activities, and psychoeducation.

The effective psychological assistance should also include work with patients' family and health-care professionals. As for relatives, the study showed the need for working with their emotional state, identifying thoughts and beliefs behind anxiety, correct irrational ideas about cancer, facilitate communication between patients and their relatives/caregivers. During psychological work, one should keep in mind repeated contact with the disease and anticancer treatment by family members. They have to achieve a balance between responsibility for the situation, formulating strategies to overcome the consequences of disease (i.e.,

Table 2: Quality of life in cancer patients at different stages of the treatment, Mean ± SD.

Characteristics	G1	G2	G3
Physical well-being	6,21 ± 0,77 * ^{'''}	6,60 ± 0,56 *!	5,97 ± 0,70! ^{'''}
Psychological well-being	6,23 ± 0,78 *	6,42 ± 0,60 *!	6,02 ± 0,80!
Independence	8,43 ± 1,11 ^{'''}	8,47 ± 0,96!	7,92 ± 1,19! ^{'''}
Efficiency	7,28 ± 1,01 ^{'''}	7,35 ± 0,78!	6,84 ± 0,82! ^{'''}
Interpersonal interaction	7,20 ± 1,00	7,20 ± 0,87	7,20 ± 1,03
Socio-emotional support	7,15 ± 0,89	7,13 ± 0,81!	6,95 ± 0,85!
Public support and service	6,94 ± 0,70	6,96 ± 0,69!	6,77 ± 0,69!
Self-fulfillment	7,03 ± 0,93	7,02 ± 0,87	6,99 ± 1,05
Spiritual Values	6,73 ± 0,86 ^{'''}	6,78 ± 0,77!	6,97 ± 0,84! ^{'''}
The overall perception of quality of life	6,69 ± 0,88 ^{'''}	6,74 ± 0,59!	6,32 ± 0,91! ^{'''}

*Significance of difference at p <0.05 between groups: * - G1 and G2; ! -H2 and G3; ^{'''} - G1 and G3.

redistribution of responsibilities, budget), identify forms of participation and the degree of involvement in the treatment process, establishing cooperation with medical staff. The forefront of the palliative stage includes growing importance of experiences with existential nature, i.e., a sense of guilt, hyperprotection, significant difficulties in communicating with patient.

The frontier of psychological help for oncologist should include emotional burnout prevention and minimization of its consequences. It can be recommended a development of skills for coping a professional stress, enhancing communicational competence and increasing control over emotional exhausting. Professional stress influence can be reduced by structuring leisure and working activities and stress coping skills training. Regarding communication with patients, it is important to increase physicians' competence in reporting unfavorable news, dealing with a patient in regard to his attitude toward the disease, and improving patient motivation to anticancer treatment.

General principles of psychological care organization in oncology include consistency, orderliness, clinical validity, flexibility in the forms and methods in accordance with the terms of implementation.

5 Conclusions

Cancer has a significant impact on the patients', as well as on relatives' mental health. At various treatment stages, there is a need for specific psychological assistance. Moreover, high burnout rates in oncologists indicate the need for such interventions for them. The results of these study could be used for development of a targeted psychological interventions for cancer patients, their relatives, and physicians.

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