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EVALUATION OF CANCER MANAGEMENT BY MEANS OF MINI-MAC SCALE IN PATIENTS RECEIVING PALLIATIVE CARE

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Abstract: The increase in cancer and chronic conditions incidence in Poland and worldwide necessitates an intensive development of palliative medicine and care. It is reflected predominantly in helping patients deal with somatic, psychological and spiritual problems, as well as satisfying the needs of the patients and their closest ones. Working with chronically ill patients involves mostly accompanying and being in touch with human suffering. The problem concerns not only the subjects, but also their caregivers. The disease and the physical, psychological, social and spiritual suffering related to it result in problems and a necessity of living in poor health. The most efficient way of helping patients and their caregivers is to actively support the disease management process.

The aim of this paper was the evaluation of cancer management of patients receiving palliative residential and home care by means of Mini-MAC scale.

The test method used was a diagnostic survey method with standardized Mini-MAC scale. The studied group comprised 120 patients with advanced cancer receiving palliative care in the Podlaskie voivodship.

Results. In the studied group, the destructive style, which was presented by the strategies of "helplessness-hopelessness" or "anxious preoccupation", slightly dominated over the constructive one: "fighting spirit" and "positive focus".

Conclusions. The results of the study show that, in the studied group, the dominating strategy was the "anxious preoccupation", the least chosen attitude towards fighting cancer was the "fighting spirit".

Key words: cancer, palliative care, management

Introduction

In Poland, there are over 160 thousand people suffering from cancer, 90 thousand of whom die. Diagnosis and treatment of cancer is connected with the appearance of many negative symptoms in the sensual sphere, the intensification of which can have a detrimental effect on the course of treatment and impede the adjustment process to the new situation.

With modern treatment methods, it is possible to cure a number of patients with malignant tumours or put them in a state of chronic illness controlled by pharmacological treatment. It is also possible to successfully alleviate and monitor the various conditions resulting from cancer development and treatment, that have a significant impact on the patients' quality of life. The most prevailing condition in cancer patients is fatigue. The lack of strict diagnostic guidelines makes the diagnosis of fatigue difficult, which, in consequence, hinders optimum aid for patients suffering from it [1].

In the course of cancer treatment, it often becomes apparent that the continuation of causative therapy will not yield the intended result. The patient enters pre-terminal and then terminal stage of cancer, in which diagnostic testing and causative therapy become ineffective. Evolutionary decrease in physical functionality, breakdown in the functioning of different systems, result in the patient entering the dying phase, which comprises the last days and hours of life.

The final phase of a terminal disease is agony, also referred to as active dying. In this phase, the functionality of respiratory and circulatory systems, as well as the senses performance become highly impaired. The care for patients in the advanced stadium of cancer is inherent to the caring model of medicine. Hospices have become an important element in developing this model [1].

The modern hospice movement was started by Cecily Sunders, who opened a St. Christopher Hospice in London in 1967. She pointed out that, in the advanced stage of cancer, the role of the medical world is to shift the focus from the cure system to the care system. According to Cecily Sunders' theory, trying to find the origin of the disease and attempts to cure the patient should be abandoned, instead, a noble aim would be to provide maximum comfort for the patient, ensuring a proper quality of life and the relation with their environment. The pioneer stated that intensive treatment of advanced cancer patients would be a highly unethical act, as it brings a lot of suffering [2, 3].

The position of people at the the end of their lives changes considerably the life-long learned structure of needs and thoughts. The most prominent become the biological needs, later the need for security, the need to accept yourself and the way of experiencing the disease and the suffering.

Fatigue is one of the most frequent and the least diagnosed symptoms related to the chronic cancer process, its diagnosis and treatment. Its prevalence is significantly different to the fatigue of healthy people, as it appears despite the sufficient amount of sleep and rest. The evaluation should be focused on the identification of each existing cause of fatigue, such as: pain, insomnia, emotional stress and anxiety. Fatigue can have a dramatic effect on the patient's ability to engage in every day activities and lead to misunderstandings between the patients and their caregivers. On the one hand, fatigue as a set of symptoms holds a strong position, whereas, from the other perspective, it opens an individual context of multidimentionality of feeling fatigue in the concept of the quality of life.

Following Kossakowska [4], clinical and health psychologists treat chronic illness as long-lasting stress that prevails in time and progresses according to specific stages. Lazarus and Folkman [5] state that this kind of stress is dynamic and undergoes constant changes "resulting from the transaction between the person (patient) and their widely understood environment". The authors created a relative concept of stress, according to which stress (stressful event) is an emotionally negative experience followed by biochemical, physiological, cognitive and behavioral changes.

In consequence, the changes result in the modification of the stressor, or the person's adaptation to its effects. When the stressor is a chronic disease, its modification becomes difficult [5]. If the patients have a feeling of control over the disease, they follow doctors guidelines, notice the effects of treatment, then they acquire a sense of self-efficacy and influence on the course of the disease, which results in better adaptation. However, if the disease progresses with a changing dynamic, its causes are not well established, and the treatment does not yield desired results, then the patients do not have a sense of influence or control over their disease, and, consequently, over their own life. All of this makes the adaptation to a stressor, such as a disease, especially a chronic one, extremely difficult and requires a lot of efforts from the patient [5].

Lazarus and Folkman [5] mention four basic categories of stress management:

- direct action (all activities, excluding the cognitive, that help to alleviate the effect of stress);
- refraining from action (activities that, in particular circumstances, could impede the stress management process);
- searching for information (all additional information that could increase the probability of taking all important aspects of a given situation into consideration, which, consequently, enables the person to make rational decisions);
- intrapsychological processes (used to improve the mood by reducing or minimizing negative emotions, including coping mechanisms).

According to Lazarus and Folkman [5], there two functions that work as remedial action:

- instrumental, or task-oriented, which is used to improve the relationship between the subject and the environment;
- emotional self-regulation, that is meant to decrease the level of tension and alleviate negative emotional states.

Neither of these function are fully independent and in a stressful situation, like, for example, during illness, they intertwine and interact with each other. In certain situations, the same form of management can be used to fulfill both functions [5].

According to Marmurowska-Michalowska [6], finding yourself in the face of problems related to disease symptoms, the discomfort and their tendency to relapse, as well as various situations arising from the certain view of the society on the disease, requires from the affected person to use specific adaptive mechanisms that enable him/her to keep their integrity as a person and to work on effective strategies to manage the disease. What seems important is that to get adapted to the new health and social situation related to the disease and, consequently, decrease the level of negative emotions, it is necessary to accept the life in the "new reality" with the disease. It is obviously not easy, due to, among others, the fact that for many patients, it means that their self-esteem and social status decrease significantly [6].

What seems important for the affected person during illness, which is a type of stressor, is the feeling of control that works as a prerequisite for evaluating the scale of the threat and using certain strategies of stress management [7,8]. Juczynski [9] exemplifies two types of feeling of control related to one's health condition: internal, which is the expression of the person's perception of having direct influence on their health, and internal,when the person is convinced that their health condition depends on external factors [9].

From the clinical point of view, working with a somatic patient requires the identification of psychological factors that could determine the process of adaptation [10]. Moreover, what appears meaningful is to assess whether certain psychological indicators co-exist with medical parameters, which indicate the severity of symptoms. Adaptation plays a significant role, especially in the case of chronic diseases, which require a different approach to the patient and considering such aspects as self-acceptance [11].

Throughout the course of the disease, the patients establish a specific adaptive style, which is a constellation of cognitive functions, emotional reactions and behaviour stereotypes, and use it in all stages of the disease, including the terminal stage [12–14].

The aim of the study

Was the evaluation of cancer management in patients receiving palliative residential and home care by means of Mini-MAC scale.

The method material

The study group comprised 120 patients with advanced cancer receiving palliative care in the Podlaskie Voivodship. The study was conducted in the period of four months.

The test method used was a diagnostic survey with standardized Mini-MAC scale.

The scale (Polish version) includes 29 statements and measures four management strategies: anxious preoccupation, fighting spirit, helplessness-hopelessness, positive focus. The person being surveyed evaluates, with a four degree scale, to what degree the given statements relate to him/her at the moment. The results are calculated separately for each of the strategies. Each strategy contains 7 statements. The range of possible results fits between 7 and 28 points. The higher the outcome, the higher the intensity of behaviours characteristic of a given cancer coping strategy.

There are two styles of coping with a disease, one passive, destructive – represented by helplessness-hopelessness and anxious preoccupation, second active, constructive – characterised by the fighting spirit and positive focus strategies. The sums of points of the two constructive style strategies and two representing the destructive style, after being transformed into standardized units, get evaluated according to the sten scores. Results in the range from 1 to 4 sten are treated as low, from 7 to 10 sten as high. The results in the range from 5 to 6 are treated as average [15].

In order to perform the research, the following methods of quantitative data analysis have been used:

1. Descriptive statistics (arithmetic average, minimum, maximum, standard deviation) – surveyed variables have been described and their distribution have been characterised.
2. The differences between the compared groups have been evaluated on the basis of a severity test for qualitative variables – Pearson's chi-squared test.
3. T-student test – the method helps to establish the average confidence interval.
4. Multiple logistic regression – performed in order to determine the effect of numerous variables on the results.

The results having the statistical significance of $p<0.05$ have been described as statistically significant.

Study group characteristics

The study was performed in a group of 120 patients receiving palliative residential and home care in the Podlaskie Voivodship.

Men constituted the more numerous group of patients – 54.2%, the women – 45.8%. In the analysed group, 65.8% of the patients were a little under 65 years old. Among the rest of the studied patients 34.2% – over 65 years old, 9.2% – over 74 years old.

The place of conducting the study for half of the patients was a home hospice, whereas, for 18.3% it was a residential hospice and for 32.5% a palliative care centre. The patients with vocational education represented the most numerous group – 38.3%, with higher education – 16.7% and primary education – 5.8%. Most of the respondents were married – 61.7%. One in five people were widowed – 20.8%. In the remaining group of respondents, single people constituted 8.3%, divorced 7.5%, separated – 1.7%.

In the studied group, professionally active people accounted for 17.5%. The remaining patients – 32.5%, were not working, 29.3% had pensions, and 20.8% were retired.

Results

The dominating strategy in the studied group was the "anxious preoccupation" strategy, and the least adopted strategy among the respondents was the "fighting spirit" strategy (Table 1).

Table 1: Evaluation of disease coping strategies in the studied group with Mini-MAC scale.

Parameter	**Anxious Preoccupation**	**Fighting Spirit**	**Helplessness-hopelessness**	**Positive focus**
Average	**22,97**	**17,58**	**20,68**	**20,91**
Standard deviation	3,79	4,28	4,31	2,24
Minimum	10,00	7,00	7,00	16,00
Maximum	28,00	27,00	28,00	26,00
Lower quartile	21,00	15,00	18,00	19,00
Upper quartile	26,00	21,00	24,00	22,00

It has been found that men have adopted the "anxious preoccupation" and "helplessness" strategies significantly more often than women, and women have more ofter adopted the "fighting spirit" attitude (Table 2).

Table 2: Disease coping strategies according to gender.

Studied group	Anxious preoccupation	Fighting Spirit	Helplessness-hopelessness	Positive focus
Women	22,18	18,45	19,38	21,18
Men	23,63	16,83	21,77	20,68
P	0,036	0,038	0,002	0,220*

**insignificant p≥0,05*

It has been found that age did not bear much significance while adopting cancer coping strategies ($p \geqslant 0.05$) (Table 3).

Table 3: Disease coping strategies according to age.

Studied group	Anxious preoccupation	Fighting spirit	Helplessness-hopelessness	Positive focus
Under 65	23,10	17,39	20,57	21,22
From 65 to 74	23,20	17,73	21,43	20,20
Over 74	21,36	18,45	19,36	20,64
P	0,301*	0,435*	0,844*	0,090*

**insignificant p≥0,05*

It has been found that the "fighting spirit" strategy was characteristic of patients at the palliative care centre, whereas the "helplessness-hopelessness" attitude was significantly more often adopted by patients at the residential hospice (Table 4).

Table 4: Disease coping strategies according to the place of survey.

Studied group	Anxious preoccupation	Fighting spirit	Helplessness-hopelessness	Positive focus
Residential hospice	23,14	15,09	22,41	20,45
Home hospice	23,32	17,47	20,49	21,10
Palliative care centre	22,33	19,13	19,97	20,87
P	0,329*	<0,001	0,047	0,620*

**insignificant p≥0,05*

It has been found that the level of education had no significant effect on the cancer coping strategy being adopted (Table 5).

Table 5: Disease coping strategies according to education.

Studied group	Anxious preoccupation	Fighting spirit	Helplessness-hopelessness	Positive focus
Primary	21,57	17,14	20,14	19,00
Vocational	22,79	17,19	20,91	20,83
Secondary	23,76	17,63	21,11	21,28
Higher	22,05	18,50	19,30	20,90
P	0,779*	0,271*	0,421*	0,134*

**insignificant p≥0,05*

It has been found that the marital status had no significant effect on the adopted cancer coping strategy (Table 6).

It has been found statistically significant that the patients, who were professionally active, adopted the "positive focus" strategy more often (Table 7).

Table 6: Disease coping strategies according to education.

Studied group	Anxious preoccupation	Fighting spirit	Helplessness-hopelessness	Positive focus
single	19,80	19,10	18,70	21,40
married	23,16	17,80	20,54	21,03
Divorced	23,89	18,11	19,89	20,22
Widowed	23,16	16,40	21,88	20,92
separated	25,00	14,00	24,00	17,00
P	0,123*	0,055*	0,051*	0,153*

**insignificant p≥0,05*

Table 7: Disease coping strategies according to occupation status.

Studied group	Anxious preoccupation	Fighting spirit	Helplessness-hopelessness	Positive focus
Not working	23,46	17,33	20,82	21,67
working	20,24	18,62	17,38	20,38
pension	24,09	17,23	21,94	20,74
retired	22,92	17,56	21,44	20,40
P	0,713*	0,949*	0,154*	0,030

**insignificant p≥0,05*

It has been found that disease duration had no significant effect on the adopted cancer coping strategy (Table 8).

Table 8: Disease coping strategies according to disease duration.

Studied group	Anxious preoccupation	Fighting spirit	Helplessness-hopelessness	Positive focus
Up to 10 months	22,95	18,27	20,27	20,77
10-20 months	22,85	17,90	20,26	21,00
Over 20 months	23,11	16,41	21,59	20,97
P	0,866*	0,054*	0,182*	0,680*

**insignificant p≥0,05*

It has been found that treatment duration had no significant effect on the adopted cancer coping strategy (Table 9).

Table 9: Disease coping strategies according to treatment duration.

Studied group	Anxious preoccupation	Fighting spirit	Helplessness-hopelessness	Positive focus
Up to 5 months	22,55	17,74	19,84	20,66
5-15 months	23,09	18,26	20,81	21,02
Over 15 months	23,26	16,49	21,40	21,03
P	0,426*	0,228*	0,122*	0,476*

**insignificant p≥0,05*

It has been established that the chosen disease coping style correlated with the patient's place of treatment. The patients at the residential hospice significantly more often presented the destructive style, wheres, those at the palliative care centre – constructive style. Respondents, who were single, considerably more often presented the constructive style, while the patients, who were widowed or in separation – the destructive style (Table 10).

Table 10: Average results for the constructive and destructive cancer coping style according to Mini-MAC style.

Studied group	**DESTRUCTIVE STYLE**		**CONSTRUCTIVE STYLE**	
	Arithmetic average	*Standard deviation*	*Arithmetic average*	*Standard deviation*
IN TOTAL	**43,64**	**7,40**	**38,48**	**5,34**
GENDER	***P=0,004***		***P=0,029***	
Women	41,56	8,34	39,64	5,46
Men	45,40	6,03	37,51	5,07
AGE	***P=0,519****		***P=0,935****	
Before 65	43,67	7,52	38,61	5,62
From65 to 74	44,63	6,84	37,93	5,13
Over 74	40,73	7,96	39,09	3,88
PLACE OF SURVEY	***P=0,098***		***P=0,002***	
Residential hospice	45,55	4,96	35,55	4,56
Home hospice	43,81	6,38	38,58	5,57
Palliative care centre	42,31	9,58	40,00	4,81
EDUCATION	***P=0,746****		***P=0,130****	
Primary	41,71	5,15	36,14	4,10
Vocational	43,70	7,30	38,02	5,02
Secondary	44,87	7,52	38,91	5,77
Higher	41,35	7,84	39,40	5,43
MARITAL STATUS	***P=0,047***		***P=0,027***	
Single	38,50	10,42	40,50	6,43
Married	43,70	7,57	38,82	5,46
Divorced	43,78	6,51	38,33	2,78
Widowed	45,04	5,21	37,32	4,92
In separation	49,00	1,41	31,00	2,83
PROFESSIONAL ACTIVITY	***P=0,309***		***P=0,338****	
Not working	44,28	6,68	39,00	6,19
Working	37,62	8,95	39,00	4,94
Pension	46,03	5,72	37,97	5,15
Retirement	44,36	6,84	37,96	4,62
DISEASE DURATION	***P=0,428****		***P=0,335****	
Up to 10 months	43,23	8,58	39,05	4,32
10-20 months	43,10	6,52	38,90	5,30
Over 20 months	44,70	6,83	37,38	6,36
TREATMENT DURATION	***P=0,389****		***P=0,172****	
Up to 5 months	42,39	8,68	38,39	4,55
5-15 months	43,89	6,44	39,28	5,44
Over 15 months	44,66	7,12	37,51	5,95

What arises from the data analyses is that also professional activity had a significant impact on the presented disease coping style. The unemployed, retired and pensioners considerably more often presented the destructive style. It has been found that the factors, such as age, education level, disease and treatment duration did not bear a significant effect on the disease coping style.

Discussion

Palliative medicine and care have been actively developing in the last dozen or so years. They represent a holistic and active form of care for patients, who can no longer be treated in a causative way. It involves managing pain, dyspnea, hunger and other symptoms, including psychological, social and spiritual problems of the patient. Its main objective is to achieve the best possible quality of life for the patients and their families.

It is known that patients with advanced cancer suffer from numerous conditions, not only pain. Until recently, pain was perceived as the worst symptom of cancer. When WHO introduced the standards of analgetic treatment and how to use them properly, the quality of life of patients has significantly improved. Better management of somatic symptoms, arising from pharmacotherapy development, resulted in symptoms, such as pain or nausea, giving way to fatigue, weakness, symptoms that were treated as "normal" during the course of a severe disease. Nowadays, according to the patients, fatigue is seen as the most destabilizing symptom in the course of cancer [16].

Adjustment pays a significant role in chronic diseases, however, its conceptualization requires taking numerous circumstances into consideration, including the level of acceptance of one's disease or the attitude towards the information about the disease [17].

The results of our study indicate that, in the studied group, the predominant strategy was the "anxious preoccupation", and the least often chosen cancer coping strategy was the "fighting spirit".

Another studied factor that could relate to cancer management was the duration of oncological treatment. In the studied group of patients with the shortest treatment duration – up to 5 months, it was significantly higher than the average of patients treated for more than 15 months. In terms of evaluating one's level of fatigue, the respondents with the shortest treatment period achieved a considerably better result. It has been found that treatment duration had a considerable impact on the judgment relating to fitness and quality of life of cancer patients. However, it has been noticed that the disease duration had a significant effect on the presence and intensity of fatigue in cancer patients – the longer the treatment period, the more severe the fatigue.

The studied references have not indicated any information on the relation between these two variables. Presumably, it is not the disease duration, but the type of cancer and symptoms arising from its presence that show greater importance in fatigue progress [18].

According to the subject literature, people with greater amicability and openness are straightforward, modest and full of trust, which could be the reason why they are more eager to fulfill treatment requirements and doctors recommendations. As they are altruists, they may be less focused on themselves and their condition, and, therefore, less often demonstrate the symptoms and poor adaptation to the disease. Open people are interested in the phenomena of the outside as well as the inside world, they are more creative and unconventional [19].

Conclusions

1. The findings of the study demonstrate that the predominant strategy in the studied group was the “anxious preoccupation”, the least often chosen cancer coping strategy was the “fighting spirit”.
2. The destructive style was significantly more identifiable in men then in women, and conversely, women considerably more often than men adopted the constructive style.

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