Efficiency of patients with carcinoma and acceptance of the disease

Wydolność pacjentów z chorobą nowotworową a akceptacja choroby

Marzena Kamińska[1], Agnieszka Pawlak-Warszawska[1], Bożena Baczewska[2], Agnieszka Bronikowska[1], Maria Ferańska[1]

[1]Clinical Oncology Ward, St. John's Cancer Centre, Lublin, Poland
 Head of Centre: Prof. Elżbieta Starosławska MD, PhD
[2]Department of Internal Medicine in Nursing, Medical University of Lublin, Poland
 Head of Department: Prof. Jadwiga Daniluk MD, PhD

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Słowa kluczowe: nowotwór, wydolność, akceptacja choroby.

Abstract

Introduction: Human functioning is based on physical, psychological, social and spiritual areas. The emergence of cancer and all types of problems affect these areas. Adapting to cancer is very important for the process of therapy, and acceptance of the disease is its determinant.
Aim of the research study: To determine the relationship between oncological patients physical fitness and their acceptance of the disease.
Material and methods: The following research techniques and tools have been used: a questionnaire survey, the Repta operation scale for assessing the functionality of patients in the course of the disease, a modified Pain Assessment Worksheet for evaluating the intensity of pain and its impact on daily activities and the AIS scale to assess the degree of acceptance of the disease.
Results: Most of the respondents were fully efficient in the field of the activities of daily living. The vast majority of respondents did not feel pain, or felt pain that could be taken lightly. Pain that made daily functioning difficult, particularly in mobility and locomotion, concerned only persons over 60 years old. In the study group there was dominantly an average degree of acceptance of the disease; a small group was marked by a high level, and only a few people showed a lack of acceptance of the disease. Independent people and people in need of assistance accepted the illness at a medium level, and vulnerable patients showed the lowest level of acceptance.
Conclusions: The efficiency of patients with cancer affects the level of acceptance of the disease. Cancer for the majority of respondents is not an obstacle in performing basic activities. Most respondents accept the disease, a small part selects a high level, and only a few people show a lack of acceptance of the disease.

Streszczenie

Wstęp: Człowiek funkcjonuje na płaszczyźnie fizycznej, psychicznej, społecznej oraz duchowej. Pojawienie się choroby nowotworowej i różnego rodzaju problemów z tym związanych powoduje, że wszystkie te sfery zostają zaburzone. Przystosowanie się do choroby nowotworowej jest bardzo ważne dla przebiegu procesu leczenia, a akceptacja choroby jest jego wyznacznikiem.
Cel pracy: Ustalenie związku pomiędzy wydolnością funkcjonalną pacjentów z nowotworem a ich akceptacją choroby.
Materiał i metody: Wykorzystano następujące narzędzia badawcze: kwestionariusz ankiety, skala funkcjonowania Repty przeznaczona do oceny funkcjonalnej pacjentów w przebiegu chorób nowotworowych, zmodyfikowany Arkusz Oceny Bólu służący do oceny natężenia odczuwanego bólu i jego wpływu na codzienną aktywność oraz skala AIS do oceny stopnia akceptacji choroby.
Wyniki: Ponad połowa (ok. 52%) badanych deklarowała brak bólu lub podawała, że dolegliwości bólowe nie utrudniały codziennego funkcjonowania. U ponad 13% chorych występował ból, który skupiał ich uwagę i przeszkadzał w codziennym funkcjonowaniu, a 2,19% pacjentów ból przeszkadzał w wykonywaniu czynności dnia codziennego. Ból zmuszający do leżenia lub przyjęcia leku przeciwbólowego był obecny u ok. 10% badanych osób. Większość pacjentów była w pełni wydolna w zakresie wykonywania czynności dnia codziennego. Przeważająca część badanych nie odczuwała dolegliwości bólowych lub odczuwała ból, który można lekceważyć. Silny ból występował tylko u osób po 60. roku życia i utrudniał ich codzienne funkcjonowanie, szczególnie w zakresie mobilności i lokomocji. W badanej grupie przeważał średni stopień akceptacji choroby. U niewielkiej części badanych zaznaczał się wysoki poziom, a tylko nieliczne osoby wykazywały brak akceptacji choroby. Poziom akceptacji choroby u osób samodzielnych i wymagających pomocy był średni, natomiast u osób niesamodzielnych niski.
Wnioski: Wydolność pacjentów z chorobą nowotworową wpływa na poziom akceptacji choroby. Choroba nowotworowa dla większości badanych nie była przeszkodą w wykonywaniu podstawowych czynności. Większość badanych akceptuje chorobę w stopniu średnim, niewielka część zaznacza wysoki poziom, a tylko nieliczne osoby wykazują brak akceptacji choroby.

Introduction

Humans function in the following fields: physical, mental and spiritual.

These spheres overlap, so the appearance of cancer threatens the biological, psychological and social fields. Chronic disease, such as cancer, is a heavy burden for people, forcing them to change their lifestyle, plans and active, professional life. As a result of cancer and applicable treatment, the quality of life of the patient decreases, and the problems concern not only the patient but also his/her family [1–5].

Depending on the symptoms related to oncological treatment appearance, we could observe a vast impact on human functioning.

Severe pain, acute or chronic, causes with its duration a decrease the patient's daily living activities up to a total lack of activity caused by the fear of pain [5–7].

In response to a physical disorder, negative emotional reactions may appear, such as anxiety, depression, anger or aggression, as a manifestation of mental disorders [8, 9]. Cancer involves a large number of stressful situations with elements of biological and psychological risks. The stress experienced by oncology patients, who have a chronic condition, can lead to the deterioration of the dynamics of life and fitness condition [9, 10]. Among the psychiatric disorders in the course of cancer, the most common are: maladaptive, depressive disorders, anxiety disorders and disturbances of consciousness.

Out of all these disorders the most common is depression. Currently, it is diagnosed in about 15–25% of patients with this disease. A number of factors contribute to its appearance, e.g. young age, female gender, poor financial situation, previous experience, physical exhaustion and physical symptoms that limit daily activities. The diagnosis is based on the so-called triad of depression (negative thoughts about yourself, negative thoughts about the surrounding situation and the future). In addition, in patients in the course of oncotherapy, the following symptoms are taken into consideration: depressed mood, feelings of helplessness and hopelessness, low self-esteem, feelings of worthlessness or guilt, inability to experience pleasure (anhedonia) and thoughts of suicide [11–14].

The appearance of carcinoma in human life affects the social functioning of the sufferer and of their family. This involves a significant reduction in professional activity because of the hospital treatment and consequent medication. A person afflicted with a disease has a sense of being dependent on other people, which can be a heavy burden to the sufferer as well as to their family [15, 16]. The problems of a spiritual nature relate to human spirituality. These are not only issues of faith in God and religion but also issues of philosophy, morals and morale. Having cancer raises questions about the meaning of life and the meaning of illness. Sufferers often try to resolve old conflicts and go through a process of self-examination of their life and experiences [2, 17, 18].

Patients are faced with the need to verify and re-evaluate their current values. Very often, human interests and values appear to be insufficient to fully eliminate this disease occurring in self-disability, injury, fear and loneliness. In these moments, religion and a spiritual relationship with God can give people hope and peace [9, 19]. The concept of "capacity" refers to the efficiency of human health, the overall health of a person. According to the literature, "the individual is efficient and physically fit when one has cardio-respiratory endurance, freshness of mind, reacts positively with others, has the desired level of fat, strength, flexibility and a healthy spine" [20]. Thus, the level of efficiency is expressed by the level of form that is conducive to the performance of tasks. Furthermore, efficiency is defined as the ability of the body to properly function [21]. However, the concept of self-efficiency is the body's ability to take independent actions in the activities of daily living, actions aimed at satisfying the basic needs of everyday life. These include activities such as eating, moving around, following hygiene and satisfying physiological needs [70, 80]. In the wider context of human autonomy, it is defined as the self-protective act. Self-care is the ability to act independently, initiated in a conscious way, carried out in relation to other people and the surrounding environment. Self-protective activities are undertaken in order to preserve life, maintain or improve health, and to maintain internal balance and integration with the environment. Self-service and self-care include attention to quality of life [21–23]. Human capacity may be affected by problems and constraints caused by cancer. Limited efficiency in the course of disease is the result of physical realm disorders that have a negative impact on the mental or social spheres. There are many problems causing loss of function in cancer patients, and they include: general weakness of the body, depressed mood, anxiety, depression, reduction of physical activity, the need for specialised equipment or apparatus, pain prevention while conducting normal activities, malnutrition and sleep disorders [23, 24].

Observations of the efficiency of oncology patients is important for the therapeutic process because maintaining functional efficiency contributes to better adaptation to the disease [25–27].

Acceptance of the disease, which is associated with less severe adverse reactions and emotions connected with the disease, is an important part of the process of adapting to life with the disease. It is a process that occurs on two levels: the emotional level and the cognitive-behavioural therapy level. In addition, acceptance of illness is linked with the activities set to re-establish the well-being of the patient (the phoenix

effect) and with a willingness to accept oneself as a patient [16, 28]. Acceptance of the disease increases the sense of security and reduces the severity of negative emotions and reactions associated with the disease, as well as the sense of discomfort. Studies show that the greater the degree of acceptance of the disease, the better the adaptation and less discomfort caused by the disease, the stress caused by the disease is lower and the sense of self-esteem is retained.

Aim of the research study

The following research problems have been established:

The main problem:

1. What is the relationship between the efficiency of patients with cancer and their acceptance of the disease?

Specific problems:

1. What is the relationship between the efficiency of patients with cancer in the performance of activities of daily living?
2. What is the influence of pain on activities in patients with cancer?
3. What is the influence of cancer on the mental functioning of the patients?
4. What is the degree of acceptance of the disease?
5. What is the relationship between the characteristics of the study group and functional efficiency, pain, depression and acceptance of the disease?

Material and methods

In this work we used the method of diagnostic survey, using the technique of a research-survey. As a research tool a questionnaire was used. The questionnaire was designed for a group of patients with cancer. It consisted of instructions explaining the purpose of research and personal specifications relating to shared demographic and social subjects. It also contained essential questions that concern everyday functioning [29]. This scale was developed and implemented by the mist and co-authors in the Upper Silesian Rehabilitation Centre in Repty. It is a universal tool and, although it was developed for the functional assessment of patients with damage to the nervous system, it is used for functional assessment of patients in the course of other diseases, including cancer. The Repty Functional Indicator does not address the issues of "social consciousness", which include relations, memory and problem solving, because they belong to the realm of psychological and sociological tests and do not add up in scoring. Self-service, sphincter control, mobility, locomotion and communication are the evaluated issues.

The minimum number of scored points was 15 and the maximum was 105. The scale allowed the patient to be qualified for a specific category of disability, de-

fining their independence in activities of daily living and any help required. The grading scale by Repta Functional Index is as follows:
• 105–75 points – full independence;
• 74–45 points – moderate dependence;
• 44–15 points – total independence.

The question sheet for the patient included questions on the implementation of activities of daily living. The test marked whether an action was performed alone, with the help of others or whether the patient was in fact dependent on the help of others. The questions related to activities such as self-service, sphincter control, mobility, locomotion and communication.

The assessment of pain intensity and its impact on daily activities was made using the Modified Sheet Pain Evaluation [30]. It is a verbal scale investigating whether and how pain affects the patient's activity.

The degree of disease acceptance was made with the use of the abbreviated injury scale (AIS). The scale was proposed by Felton, and Hinrichsen Revensson of the Centre of Community Research and Action, Department of Psychology, New York University in 1984. It was transferred and adapted to Polish by Juczyński [31]. The AIS scale consists of eight statements that describe the negative consequences of ill-health in order to evaluate the limitations imposed by the disease, a lack of self-sufficiency, a sense of dependence on others and lowered self-esteem.

In each of these claims the patient defined his/her current state with a five-point scale, where 1 means to strongly agree and 5 means to strongly disagree. Score 1, strongly agree, expresses poor adaptation to the disease, while strong disagreement, score 5, constitutes acceptance of the disease. A general measure of the acceptance of the disease is given by the sum of all points, and the range of points is between 8 and 40.

Scoring for the AIS Scale:
• 8–14 points, low level of acceptance of the disease;
• 15–32 points, average level of acceptance of the disease;
• 33–40 points, high level of acceptance of the disease.

A low test result means not accepting the disease, not adapting to it and a sense of mental discomfort. A high score indicates acceptance of the condition, which is manifested by the absence of negative emotions associated with cancer.

Statistical analysis

The results of this study were subjected to descriptive and statistical analysis. The analysed data of quantitative variables were characterized by means and standard deviations. For the relation characteristics of the values, cardinality and interests were used, respectively. The results are shown in the form of tables and graphs. To assess the relationship or differences

between the measurable data we used a homogeneity test or Pearson's χ^2 test. Furthermore, in order to find the correlation between the analysed variables, parametric or nonparametric correlation tests were used. The statistical analysis was performed with Statistica 10.1 Software, Stat Soft Inc. All analyses were completed for CI (confidence interval) = 95%.

Results

Characteristics of the analyzed group

The study involved 137 patients with cancer, hospitalised in St. John's Cancer Centre in Lublin. The respondents represented a diverse group in terms of age, sex, place of residence, education, marital status, employment and the type of treatment and duration of the disease. Socio-demographic characteristic of the analysed group are included in Table 1.

The table shows that the average age of respondents was 56.2 years. More than half (65.69%) were women, while men accounted for 34.31%. With regard to place of residence, most of the respondents were from rural areas (36.50%), far fewer were from small towns (34.30%), and there maining respondents were residents of large cities (29.20%). The highest percentage (36.50%) of the study group consisted of patients with secondary and vocational education (18.96% of the respondents), 17.52% had a higher degree, 13.87%

Table 1. Socio-demographic data of the study group

Feature		Number	Percentage
Age [years]	20–59	75	55
	60–89	62	45
	Total	137	100
	Average age	56.2	
Gender	F	90	65.69
	M	47	34.31
	Total	137	100
Place of residence	Country	50	36.50
	Town	47	34.30
	City	40	29.20
	Total	137	100
Education	Primary	19	13.87
	Vocational	26	18.96
	Secondary	50	36.50
	Higher school, BA	18	13.14
	Higher education, MA	24	17.52
	Total	137	100
Marital status	Single	13	9.56
	Married	100	73.53
	Divorced, widow(er)	22	14.91
	Informal relationship	2	2.00
	Total	137	100
Professional activity	Employed, student	16	11.68
	Medical sick leave	24	17.52
	Unemployed	11	8.03
	Pensioner, retired	86	62.77
	Total	137	100
Type of treatment	Chemotherapy	76	55.47
	Radiotherapy	61	44.53
	Total	137	100
Disease duration [years]	0–5	77	56.00
	5–10	47	34.00
	Above 10	13	9.00
	Total	137	100
	Medium disease duration	2.6	

had basic education, and the smallest percentage were those with higher education (13.14%). In terms of marital status, the largest proportion of respondents were in a formal relationship 73.53%, divorced people represented 14.91%, while a single persons represented 9.56%. The smallest group consisted of patients remaining in informal relationships (2%). Another criterion for differentiating respondents was professional activity. The largest percentage of respondents (62.77%) were persons with disability or retirement benefit. A much smaller number of respondents indicated that they were currently employed but on sick leave (17.52%). A much smaller group consisted of people working, studying or learning (11.68%). It is notable that unemployed persons accounted for only 8.03% of respondents. The patients were also receiving different types of treatment. Almost half of the patients underwent chemotherapy 55.47% and slightly less had radiotherapy 44.53%. Disease duration was also varied. In more than half (56%) of the patients, disease duration did not exceed 5 years; 34% of the respondents had the disease from 5 to 10 years; while 9% said that their illness had lasted for more than 10 years. Mean disease duration was 2.6 years.

Our results

Assessment of functional capacity of patients with cancer based on the Repta Functional Index. To assess the functional capacity of patients in this study the Repta Functional Index was used. After collecting the questionnaires from respondents, analyses were carried out, and on the basis of the points attained therein, the level of functional capacity of patients are illustrated in detail in Table 2.

As can be seen, the vast majority of patients were independent in performing activities of daily living. Over 90% of respondents independently performed activities such as eating, taking care of body and mouth hygiene, bathing, dressing and using the toilet. Well over 90% of the patients satisfied their physiological needs alone, moving from bed to chair or wheelchair, entering the bath or shower. A similar proportion of patients walked alone to a wheelchair. Also, over 80% of respondents had no problems with understanding and speech.

Less than 5% of all the patients required assistance in performing activities of daily living. These patients required assistance especially in activities such as

Table 2. Functional efficiency of the respondents

Every day duties	Execute safely and quickly		Execute with assistance		I need help		I am dependent on another entirely		Total	
	n	%	n	%	n	%	n	%	n	%
Self-service										
Consumption of meals	126	91.97	2	1.46	5	3.65	4	2.92	137	100
Care of external appearance and personal hygiene	120	87.59	4	2.92	9	6.57	4	2.92	137	100
Bathing	117	85.40	7	5.11	10	7.30	3	2.19	137	100
Overhead dressing body part	120	87.59	3	2.19	9	6.57	5	3.65	137	100
Bottom dressing body part	119	86.86	5	3.65	10	7.30	3	2.19	137	100
Morning toilet	121	88.32	4	2.92	7	5.11	5	3.65	137	100
Sphincter control										
Urination	128	93.43	2	1.46	4	2.92	3	2.19	137	100
Defecation	123	89.78	5	3.65	6	4.38	3	2.19	137	100
Mobility										
Transitioning from bed to chair or wheelchair	125	91.24	6	4.38	3	2.19	3	2.19	137	100
Sitting down on toilet	123	89.78	8	5.84	3	2.19	3	2.19	137	100
Taking a shower or entering a bathtub	114	83.21	12	8.76	4	2.92	7	5.11	137	100
Moving										
Walking, wheelchair	120	87.59	10	7.30	4	2.92	3	2.19	137	100
Stairs	112	81.75	20	14.60	3	2.19	2	1.46	137	100
Communication										
Perception	115	83.94	20	14.60	2	1.46	0	0.00	137	100
Verbal communication	123	89.78	6	4.38	7	5.11	1	0.73	137	100

swimming (5.11%), using the toilet (5.84%) or entering the shower or bath (8.76%). These patients also needed help with walking or operating a wheelchair (7.30%). The highest percentage of patients needing help were those who needed help from others in walking up stairs (14.60%). 14.60% of the patients also had a problem understanding verbal commands and conducting conversations.

More than 1% were completely dependent somebody else. This relationship manifested in all activities of daily living: eating, hygiene activities, satisfying physiological needs, dressing, mobility and movement. A small percentage of respondents had serious problems communicating (0.73%).

Based on the points attained on the Repta Functional Index, the respondents were divided into three groups depending on their degree of independence. The classification is presented in Table 3. The table shows that almost all respondents (94.16%) independently performed activities of daily living. Only about 5% of the patients needed assistance in daily functioning, and patients depending on the help of others constituted a small percentage of the study group (1.46%). The average score obtained in this study was 98.83 points (min. 23, max. 105).

Evaluation of the impact of pain on the activity of the study group with the Modified Pain Questionnaire

In order to assess the impact of pain on patients undergoing active study the Modified Pain Questionnaire was used. This allowed you us to determine whether the pain experienced by the respondent interfered with their daily functioning.

Table 3. Oncology patient classification by Repta Functional Index

Efficiency of patients	Number	Percentage
Unassisted patient	129	94.16
Assisted patient	6	4.38
Dependant patient	2	1.46
Total	137	100

The Table 4 below summarises the results of the evaluation sheet of the Modified Pain Questionnaire. The data contained in the table indicate that about 30% of the respondents declared no pain, approximately 22% of patients said that their pain could be taken lightly, and a similar sized group (21.17%) of respondents declared pain but with no impact on daily functioning. More than 13% of patients reported pain that interfered in everyday functioning, while 2.19% of patients said that pain interfered with the performance of activities of daily living. The presence of pain forcing respondents to lie down or take of analgesics occurred in approximately 10% of those surveyed.

The degree of acceptance of the disease

We analysed the relation between the level of acceptance of cancer patients and the age of the study population. In the analysed population, the relationship of the previously mentioned factors was not statistically significant ($p = 0.141$). Detailed information relating to this issue is listed in the Table 5.

The listed data indicate that in the group of respondents aged 20–59 years an average level of accep-

Table 4. The influence of pain on the activity of oncology patients

Pain assessment	Number	Percentage
Absence of pain	42	30.66
Presence of easily disregarded pain	30	21.90
Presence of non-ignorable pain, without influence on daily functions	29	21.17
Presence of pain that forces focus on itself and interferes with normal life	19	13.87
Presence of pain that interferes with all daily activities apart from basic (meals, toilet)	3	2.19
Presence of pain that forces to take medicine and/or to lying	14	10.22
Total	137	100.00

Table 5. Distribution levels of acceptance of disease in individual age groups

Level of the acceptance of the disease	Patient'sage			
	20–59		60–89	
	n	%	n	%
Low level of acceptance of the disease	8	10.67	15	24.19
Medium level of acceptance of the disease	36	48.00	42	67.74
High level of acceptance of the disease	31	41.33	5	8.06
Total	75	100	62	100

tance of the disease dominated (48%), similarly as in the group of patients aged 60–89 years (67.74%). There were significant differential stresses in the presentation of high acceptance of the disease. In the younger group (20–59 years) a high level of acceptance was declared by 41.33%, while in the group aged 60–89 years, only 8.06% of the respondents stated this. The difference was also for the low level of acceptance of the disease. The low level of acceptance of the disease was significant for patients aged 60–89 years (24.19%), and a significantly lower proportion of patients with low level of acceptance of the disease was seen in the group of 20–59-year-old (10.65%).

Conclusions

The majority of respondents were fully competent in the performance of activities of daily living. Only a few people needed help with everyday activities or were dependent on others. The majority of respondents did not feel pain, or felt the pain that could be taken lightly. Pain was an issue only for persons over 60 years of age, and this group had particular difficulty with daily functioning in terms of mobility and locomotion. The main condition caused by cancer in subjects was mild depression; several persons had moderate to severe depression. In the analysed group an average degree of acceptance of the disease was dominant. A small proportion was marked by a high level of acceptance, and only a few people showed a lack of acceptance of the disease. Use of self and acceptance of illness requiring assistance is at a medium level with dependents level of acceptance is low. Those most self show symptoms of mild depression. Moderate and severe levels of depression were significant for people who required help with daily functioning or were dependent on the assistance of others.

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Address for correspondence:

Marzena Kamińska MD
Chemotherapy Ward, St. John's Cancer Centre
ul. Jaczewskiego 7, 20-090 Lublin, Poland
Phone: +48 607 234 462
E-mail: mkaminska0@vp.pl