

Relationship between the quality of life and the meaning of life in cancer patient

Zależność między komfortem życia pacjenta chorego na raka a jego poczuciem sensu życia

Ľudmila Majerníková, Andrea Obročníková

Department of Nursing, Faculty of Health Care, University of Prešov, Slovakia

CORRESPONDING AUTHOR/AUTOR DO KORESPONDENCJI:

Ľudmila Majerníková
Faculty of Health Care, University of Prešov, Prešov; Slovakia
Partizánska 1 Prešov, 04001 Prešov Slovakia
tel. +421 51 7562 460
e-mail: ludmila.majernikova@unipo.sk
web. www.unipo.sk

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STRESZCZENIE

ZALEŻNOŚĆ MIĘDZY KOMFORTEM ŻYCIA PACJENTA CHOREGO NA RAKA A JEGO POCZUCIEM SENSU ŻYCIA

Wprowadzenie. Celem pracy było zbadanie wpływu poczucia sensu życia na komfort życia pacjenta chorego na raka.

Materiał i metody. Wybór uczestników badania był celowy. Obejmowało ono łącznie stu pacjentów chorych na raka poddawanych leczeniu (chemioterapii, radioterapii) w klinikach leczenia nowotworów na terenie Preszowa i Koszyc. W badaniu użyto dwóch standaryzowanych kwestionariuszy Światowej Organizacji Zdrowia WHOQOL-BREF 26 oraz Skali Sensu Życia (SSŻ).

Wyniki. Wyniki wskazały istotność statystyczną ($p < .001$) pomiędzy składowymi SSŻ oraz całkowitym wynikiem SSŻ. Dodatnia korelacja ($p < 0.001$) wystąpiła pomiędzy składowymi SSŻ a czynnikami takimi jak religijność, wsparcie społeczne, starszy wiek, płeć żeńska. Większe poczucie sensu życia zaobserwowano u kobiet chorych na raka, u pacjentów z wyższym poziomem wsparcia społecznego i w religijnych pacjentach. Dodatnią korelację odnotowano pod względem wpływu sensu życia na jego komfort w stosunku do całkowitego wyniku SSŻ oraz w stosunku do Domeny 2 – Domeny przeżycia i Domeny 3 – Relacji społecznych ($p < .05$), jak również do Q2 Zadowolenia ze zdrowia ($p < .001$).

Wnioski. Badanie wykazało zależność między sensem życia a jego komfortem u pacjentów chorych na raka. Wyniki mogą być podstawą do wdrażania strategii w praktyce pielęgniarstwa onkologicznego.

Słowa kluczowe: komfort życia, sens życia, pacjenci chorzy na raka, pielęgniarstwo

ABSTRACT

RELATIONSHIP BETWEEN THE QUALITY OF LIFE AND THE MEANING OF LIFE IN CANCER PATIENT

Aim. The goal of the study was focused on examining the impact of meaningfulness of life on the quality of life in cancer patients.

Methods. The selection of respondents was deliberate. The study involved together one hundred cancer patients undergoing anticancer therapy (chemotherapy, radiotherapy) in cancer care centers in the Prešov and Košice regions. We used two standardized World Health Organisation questionnaires WHOQOL-BREF 26 and The Life Meaningfulness Scale (LMS).

Results. The results show statistical significance ($p < .001$) between LMS dimensions and total score of LMS, a positive correlation ($p < .001$) was found between the dimensions of the LMS and factors - religiosity, social support, older age, female gender. A higher sense of life our sample was observable in the population of women with cancer, in patients with a higher level of social support and in religious patients. A positive correlation was recorded in terms of the meaning of life impact on the quality of life in relation to overall score LMS and in relation to Domain 2 Survival as well as Domain 3 Social relationships ($p < .05$) and Q2 Satisfaction with health ($p < .001$).

Conclusions. The study indicates the presence of relationship between the quality of life and the meaning of life in cancer patients. The results could form the basis for implementing strategies in oncological nursing practice.

Key words: quality of life, meaning of life, cancer patients, nursing

INTRODUCTION

Over the past years, the number of people diagnosed with cancer has increased. Cancer can be a threat to life itself, but also to the individual's perception of the quality of life. The question of what contributes to a clinically significant change or difference in the perceived quality of life remains unanswered. Hope is frequently referred to as important for coping with a disease such as cancer. It enables people to deal with difficult and stressful situations and with suffering. Nevertheless, hope is seldom highlighted in definitions of the quality of life of cancer patients and discusses on the relationship between hope and quality of life as also rare. Hope can be regarded as a coping strategy. From existing theory, hope can be seen as a variable that positively contributes to the experience of quality of life. Future research should empirically explore to what extent hope contributes to the adaptive process that maintains the quality of life at an acceptable level despite having cancer [1]. Quality of life is an individuals' perception of their aims, expectations, interests and ideas, satisfaction, happiness and values as a whole [2]. Quality of life is the effect of patients' physical (movement, physical activities and ability to succeed in work and in family responsibilities), social (social activities, being beneficial, body image, anxiety and depression) and psychological (life satisfaction, social support need and role function) factors necessary for well-being. Symptoms of disease and therapy are pain, breathing difficulties, nausea, alopecia, impotence and, of course, side-effects. [3,4]. Many factors affect quality of life positively or negatively. Those of them like tiredness, anxiety, concern for the future and the family, difficulties in meeting basic demands or changes in body influencing the appearance worsen the quality of life of cancer patients [5, 6]. Others, like social support, economic security and faith in recovery improve the quality of life [7, 8, 9]. We were focused in our study on examining the impact of survival meaningfulness of life on the quality of life in cancer patients.

AIM

The aim of our study was to determine and compare the level of the meaning and quality of life evaluation in oncological patients in terms of physical, psychological, spiritual, and socio-economic areas.

MATERIALS AND METHODS

Sample

In the study as many as one hundred cancer patients undergoing anticancer therapy in cancer care centers (chemotherapy, radiotherapy) in the Prešov and Košice regions were included. Respondents who fulfilled the criteria, which were age of maturity, diagnosed oncological disease and compliance with arrangement of the research, were included in the study.

Data collection

The study was being carried out between September and December 2016. In the research, we used the standardized questionnaire from the World Health Organisation WHOQOL-BREF (short version), which is comprised of 26 items of the Likert scale. The questionnaire covers two individual items, which are an evaluation of the general quality of life (general satisfaction with quality of life and health), and four quality of life domains:

- *Area of health* - includes daily activity, determines the need for medical assistance, adequate sleep, capacity to work, general mobility of the individual.
- *Psychological aspects* - determines concentration span, positive emotions, negative emotions, physical appearance, spirituality, self-evaluation.
- *Social relations* - personal relationships, sexual activity, social support.
- *Surrounding factors* - financial resources, living conditions, transportation, access to services, safety, free-time activity [10].

The range in individual items is 1-5, where a higher score means better quality of life. The scale in the domain is between 4 and 20, where a higher score also means a better quality of life. The results of the questionnaires were evaluated individually and with the help of domain scores which represent approximate average score totals for corresponding items, including transformation to scale 4-20 according to the methodology of Dragomirecká a Bartoňová [10]. The questionnaire was completed based on demographic and basic information about the respondents - age, sex, duration of disease, level of education. The questionnaire was anonymous.

The Life Meaningfulness Scale (LMS) [11] is an original Slovak measure drawn from Reker's and Wong's three-component model of meaning mentioned above. It has 18 items and measures the general level of meaningfulness as well as three dimensions – level of meaning in cognitive, motivational and affective areas. Equivalence of these two scales was assumed on the basis of a previous high mutual correlation (0.77) found in the Slovak samples. The total scores are reaching the value of 36-90 (score may be in the range 18-90) [11].

Data analysis

To analyse the results of the research, we used the statistical methods of descriptive statistics – calculation of frequency (n) and percentage values (%), calculation of the average scale values (M), standard deviation (SD). For statistical processing of our data, we used STATISTICA 13 software. All the tests were performed at the significance level . To determine relations between variables, we used nonparametric Spearman correlation coefficient.

Ethical requirements

Participation in the study was voluntary and anonymous. Each person was informed about the objective of the survey and the way of completing the questionnaires. Then, informed consent for participation in the study was signed by each of them. The survey procedure was in accordance with the Declaration of Helsinki.

RESULTS

In the study 100 respondents (50% male, 50% female) have participated. The prevailed group of respondents included older adults (aged 51-65 years - 45%, 41-50 years - 35%). An average age was 45.2 ± 9.26 years. Most patients have suffered from oncological disease for less than six months (60%) and 40% of respondents over half a year (up to 2 years - 25%, up to 5 years - 15%). The average duration of disease was 1.09 ± 0.45 year (Table 1). The majority of respondents reported they had social support from family and friends (65%), some reported they had support from self-help groups (30%). Without social support was 15% of respondents.

Our respondents in comparison to populace standard rates evaluated their quality of life worse in all monitored domains (Table 2). The worst evaluated was Domain 1 Physical health (13.06 ± 2.05), the best rated was Domain 2 Perception (14.62 ± 2.75).

■ Tab. 1. Characteristics of respondents.

	N (100)	%
Gender		
Male	50	50
Female	50	50
Age (A ± SD)	45.2 ± 9.26	
18- 30 year	10	10
31- 40 year	10	10
41- 50 year	35	35
51- 65 year	45	45
Duration of disease (A ± SD)	1.09 ± 0.45	
Up to 6 months	60	60
Up to 2 years	25	25
Up to 5 years	15	15
Type social support		
Family and friends	65	65
Family	35	35
Friends	0	0
Self group	30	35
Without social support	15	15
Religion		
believers	69	69
non-believers	31	31

N – number, A – average, SD – standard deviation

■ Tab. 2. Differences between domains WHOQOL-BREF of monitored respondents and populace standards.

Evaluation in areas	Respondents N (100)		Populace standards *	
	A	SD	A*	SD*
Domain 1 Physical health	13.06	2.05	15.55	2.55
Domain 2 Perception	14.62	2.75	14.78	2.43
Domain 3 Social relationships	13.84	3.02	14.98	2.89
Domain 4 Environment	12.90	2.32	13.30	2.08
Q1 Quality of life	3.15	0.85	3.82	0.72
Q2 Satisfaction with health	3.28	0.84	3.68	0.85

A – average, SD – standard deviation, populace standards * by Dragomirecká, Bartoňová, 2006

■ Tab. 3. Differences between LMS dimensions of monitored respondents.

Dimensions	Respondents N (100)		
	A	SD	Min-max
D1 Cognitive dimension	24.08	2.72	22-29
D2 Motivational dimension	24.01	2.68	22-28
D3 Affective dimension	25.11	2.73	21-28
LMS overall score	74.10	9.72	35-90

A – average, SD – standard deviation, Min-max – minimum and maximum value

LMS overall score of respondents stood at 74.1, with the highest possible score reached 90. In various domains patients reached the average values above 24 (the highest possible score reached 30) in the D1 Cognitive dimension and D2 Motivational dimension. The highest average value was reached in D3 Affective dimension 25.11 ± 2.73 (Table 3).

In terms of correlation relations, our sample of respondents showed statistical significance at the $p < .001$ between individual dimensions (D1, D2, D3) and their total score LMS. Also, a positive correlation on the level $p < .001$ was found between the dimensions of the meaning of life and the following factors - religiosity, social support, older age, female gender. The highest sense of life in our sample population showed women with cancer, patients with a higher level of social support and religious patients (Table 4).

In terms of correlation relations between the domains of the WHOQOL-BREF 26 and LMS, we found some interesting facts. A positive correlation was recorded in terms of impact of the meaning of life on the quality of life in relation to overall score LMS and Dom 2 Survival, Dom 3 Social relations ($p < .05$) and Q2 Satisfaction with health ($p < .001$). In other areas we have not shown significant correlation relationship (Table 5).

DISCUSSION

Quality of life, as a dynamically changing state, affects a complex of clinical, personal and social factors. Its support becomes the aim of the therapeutic and treatment interventions, where a holistic, therefore a complete approach in perceiving the patient as an individual bio-psycho-social and spiritual being is used, thereby equalizing subjective and objective criteria. The concept of quality of life should be multidimensional, meaning that it should include subjective comfort as an emotional component, satisfaction as a cognitive component, social functioning as a productive component and meaning of life as a spiritual component [12]. Meaning in life is considered as a binary construct having both existential and positive psychological characteristics. Existential philosophers and psychologists have argued that the experience of meaning in life lies at the heart of human existence. Most of the researchers defined meaning in life as a belief of an individual which is in a purposeful pattern of the universe and sense that life is meaningful [13].

In our study, we focused on the relationship between the quality of life of cancer patients and their level of the meaning of life. The quality of life was assessed by the

■ Tab. 4. Correlations between LMS and demographic factors.

	Age	Type of social support	Duration of disease	Religion	Gender	D1	D2	D3	LMS overall score
Age	1.0								
Type of social support	0.301	1.0							
Duration of disease	-0.154	-0.072	1.0						
Religion	0.301	1.0	-0.072	1.0					
Gender	0.301	1.0	-0.072	0.321	1.0				
D1	0.380*	0.883***	-0.133	0.884***	0.886***	1.0			
D2	0.419**	0.845***	-0.139	0.846***	0.846***	0.843***	1.0		
D3	0.439*	0.835***	-0.216	0.835***	0.835***	0.927*	0.869**	1.0	
LMS overall score	0.423*	0.873***	-0.119	0.873***	0.873***	0.915***	0.965***	0.918***	1.0

* p < .05; ** p < .01; *** p < .001

■ Tab. 5. Correlations between LMS and WHOQOL-BREF.

	D1	D2	D3	LMS overall score	Dom1	Dom2	Dom3	Dom4	Q1	Q2
D1	1.0									
D2	0.843***	1.0								
D3	0.927***	0.869**	1.0							
LMS overall score	0.915***	0.965***	0.918***	1.0						
Dom1	-0.099	-0.140	-0.069	-0.125	1.0					
Dom2	-0.056	-0.026	-0.073	0.385*	0.758***	1.0				
Dom3	0.375*	0.016	-0.056	0.335*	0.491*	0.314	1.0			
Dom4	0.096	0.280	0.283	-0.013				1.0		
Q1		0.198	0.538*	0.448*	1.0				1.0	
Q2	-0.220	0.108	0.037	0.087	0.758***	0.491*	0.319	0.432*		1.0
	-0.093	-0.089	-0.091	0.597***	0.545***	0.179	0.461*	0.394*	0.597****	1.0

* p < .05; ** p < .01; *** p < .001

respondents at a lower level in all domains of WHOQOL BREF than the population norm. Reduced quality of life in cancer patients in Slovakia was found out in the author Sadovska's study [14]. The mean of the global quality of life score on 5-point scale (WHOQOL-BREF) was 3.34, respectively 4.38 on 7-point scale (QLQ C30). Palliative patients achieved worse score in the global QL and domain of physical functioning in comparison to norms for healthy subjects, while score in emotional and social functioning were comparable to healthy population and score in environment domain was even better than in healthy subjects. Strong positive significant correlation was found only between Karnofsky Performance Status Scale and domain of physical functioning of quality of life, while correlations between performance status and other domains of quality of life were weak or insignificant. Patients with performance status at the level of 40 had the worst score in all domains of the quality of life, even worse than patients with performance status at the level of 30 or 20. A significant correlation between global quality of life and symptoms of advanced disease was found only in fatigue [14].

Our respondents showed a higher degree of sense of life as measured by the LMS (74.1 ± 9.72). A positive correlation was recorded in terms of impact of the meaning of life on its quality in relation to overall score LMS

and to Dom 2 Survival, Dom 3 Social relations (p < .05) and Q2 Satisfaction with health (p < .001). Positive correlation (p < .001) was found out between the dimensions of the meaning of life and the factors - religiosity, social support, older age, female gender.

Pasarra and Kleftras [15] assessed the role of meaning in life and depression in adaptation to physical disability. The sample (N=511) was quite heterogeneous having various types of physical disability and also with wide age range from 19 to 78 years. For measurement the meaning in life, the Greek version of the Revised Life Attitude Profile consisting of 48 items was used. Results indicated that meaning in life reduced the physical disability and made people easy to adapt towards physical disability.

Kernan & Lepore in the study presented in a longitudinal study on women (N=72) primarily diagnosed with breast cancer, revealed that at a base line level, a higher level of search for meaning in life was found to be associated with a higher level of negative affect. Women, who engaged in an ongoing unresolved search for meaning from baseline to follow-up, also had a significantly higher level of negative affect at follow-up than women who infrequently or never engaged in a search for meaning over time [16].

Saraf, Singh and Khurana [17] performed an investigation on Indian sample of cervical cancer patients

to measure the association of meaning in life with long term treatment, recovery and survivorship of female patients (N=10, age 35-60 years) being at their post treatment stage. A semi-structured interview was designed to measure the meaning in life before the diagnosis of cancer, in the current situation, experiences and significant others that influenced the patients since the diagnosis of cancer, change in perception of life since cancer diagnosis and their recovery, role of spirituality since cancer diagnosis and recovery, and purpose, hopes and future plans. The Thematic Apperception Test was used to assess the purpose of the study. The findings were interpreted in terms of themes (for example, distress during treatment, post treatment distress, renewed meaning in life, support system, faith and religiosity, hope and purpose) that were come out on the narratives from the life experiences of the subjects. The patients experienced their lives being predestined and guided by fate. In a few cases, the realization of immortality resulted in peace and satisfaction. This transformed meaning was strongly mediated by faith in God and increased religiosity which facilitated hope and resilience. Strong support systems further enhanced meaning in their lives. However, underlying factors like fatigue, fear of recurrence of the disease and perceived burden continue to be worrying factors for them. On the other hand, few subjects who sensed a preoccupation with somatic complaints and ambivalent feelings toward God, experienced a sense of meaninglessness, lack of purpose and diminished hope. They most often used defence mechanisms such as sublimation, reaction formation, undoing, displacement and projection.

CONCLUSION

The study indicates the presence of relationship between the quality of life and its meaning in cancer patients. The results could form the basis for implementing strategies in oncological nursing practice. The limit of the study is the choice of sample patients in selected localities of the Prešov and Košice region in Eastern Slovakia.

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