



# Hope of patients in the terminal phase of cancer and place of residence

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## Abstract

**Objective.** The aim of the study is to compare the hope of rural and urban inhabitants in the terminal stage of a neoplastic disease covered by stationary hospice care.

**Materials and method.** The study was carried out among patients in the terminal phase of a neoplastic disease. They were patients of both 24-hour and daily palliative and hospice care units throughout the country. The study group consisted of 246 patients, average age – 59.5, the youngest respondent was 18 and the oldest – 90. The B. L. Block (NCN-36) test, prepared for people struggling with serious life-threatening diseases, was used. Comparison of the results with regard to the place of residence was based on the test Friedman ANOVA and Kendall compatibility factor. The general comparison of hope in individual dimensions and globally with the division into the degree of urbanization, was based on the Kruskal-Wallis test.

**Results.** On the basis of factor analysis, 4 scales constructed from 8 items branch were distinguished. The following scales are used to study hope in the situational dimension – health, the telek-temporal dimension – goals, the spiritual dimension – religious beliefs and in the emotional-affective (affective) dimension – motivations.

**Conclusions.** The strength of hope in people in the terminal phase of cancer, residing in villages, settlements, small, medium and large cities, was similar and depended on its magnitude. Of all the manifestations of hope, the greatest variation in results occurred in the subjects when they encountered serious problems and difficulties. The inhabitants of medium-sized cities were characterized by a higher hope at that time.

## Key words

cancer, hope, patients, terminal illness

## INTRODUCTION

Hope is a state of expecting something good in the future. It affects the quality of life of a sick person as it restores optimism, motivates to action and makes it easier to overcome difficulties [1]. The fear of death, helplessness and loss of hope exhaust the internal psychic energy needed to face the problem [2].

Patients staying in hospital come from different communities; some from urban communities with a high degree of urbanization and high anonymity, and often isolated from contact with nature. That is why they often feel alienated in their communities and why they may experience their hope differently in the health-threatening diseases than people living in the countryside or in small communities where they are not anonymous, but know and help each other. They live more often in the extended families, are often more religious than people living in big urban agglomerations.

The authors were therefore guided by the idea of how to support both groups of patients in their fears which arise from confrontation with their own death. The authors wanted to investigate whether the place of residence is important for the way they experienced hope, and how to save both groups

of patients from losing hope and descending into despair. It is important whether each group experiences differently the hope of recovery. Additionally, the practical purpose of this study is to help with the and care treatment of the patient.

The theoretical aim of the study is original, never having been carried out previously in Poland, and is therefore exploratory and idiographic. The cognitive aim is to describe a phenomenon not yet described in the professional literature, to fill this gap, and open further possibilities for investigating the subject and issues arising.

Struggling with cancer is a challenge for the patient as well as the relatives. It is stressful for the patient's family, often even stronger than the stress experienced by the patient [3]. The closest family of the patient also suffer which is manifested in their helplessness, all kinds of deeply hidden fears, and the fear of death. They often cannot express what they feel and frequently experience pain with a sense of loneliness [4]. The feeling of powerlessness accompanies sick people, the more severe it becomes the more a person suffers [5]. In opposition to the total suffering that accompanies a patient's struggle with illness, palliative reaches out to meet it. It helps the family to cope with the illness of a close person, and later provides support during bereavement and mourning [6].

The worldwide psychological literature includes the concepts of Frankl [7], Cohen and others [8], M. L. Nowotny [9], C.L. Nekolaichuk [10] and Scioli A., Biller H.B. [11], who conducted similar studies, deserve attention.

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## OBJECTIVE

The aim of the study research is to compare the hope of people in the terminal stage of a neoplastic disease covered by the stationary hospice care and who are rural or urban inhabitants.

## MATERIALS AND METHOD

The study was approved by the Bioethics Committee at the Medical University in Lublin, Poland (Opinion No. KE-0254/225/2010). Its implementation was undertaken by a research team led by Dr Bogusław Block and carried out among 246 patients with diagnosed neoplastic disease in the terminal phase. They were patients of hospice and palliative care units throughout the country. The criterion for selection for research was the age of 18 and agreement to participate in the study. Before the start of the study, each patient was informed about their anonymity and expressed their consent. A standardized interview was used which, apart from diagnostic purposes, also allowed the implementation of therapeutic activities. During the study, a friendly atmosphere prevailed, the honest patient responses were also supported by the ambient conditions. The tests were carried out in rooms where only the researchers and the patients were present. Some subjects had difficulty in understanding the questions and required additional information. The questioned patient did not have to complete the questionnaire personally, this was done by the person conducting the research, and the time of the meeting was adjusted to the patient's individual capabilities, efficiency, and need for support. Quite often, the interview turned into a therapeutic conversation with the patient.

The study group consisted of 246 patients, their average age was 59.5, the youngest respondent was 18 and the oldest was 90. All patients were of the Christian denomination. The smallest group was constituted by subjects aged up to 35 years – 14 people (5.69%). In the age range of 36–50 years there were 47 (19.11%) patients, from 51–65 years – 99 (40.24%) subjects, and people over 65 years – 34.96%. The most numerous group were those living in a big city – 92 (37.40%), in medium-sized cities – 40 (16.26%), and in small towns – 60 (24.39%) respondents. Villages and settlement dwellers accounted for 54 (21.95%) patients. Among the respondents there were more women – 150 (60, 98%) than men – 96 (39.02%). Together with the family lived – 155 (60.01%) of the respondents, 20 (8.13%) with other people, and over 1/4 lived alone – 71 (28.86%). The predominant group was constituted of husband and wife – 117 (47.56%) individuals. Over ¼ of respondents were widows or widowers – 67 (27.24%), and divorced persons – 32 (13.01%). A small group was made up of spinsters and bachelors – 30 (12.2%) people.

There were 59 people with basic and vocational education (24.22%); about 1/3 of the respondents had secondary education – 82 people (33.33%). There were 17 patients (6.91%) with higher partial or bachelor degree, and 29 people (11.79%) with higher education. One of the metrics questions contained in the Personnel Sheet required the respondents to assess their own financial situation. Nearly 1/3 of respondents described it as bad – 73 (29.67%), and as satisfactory – 111 (45.12%) patients. Every fourth respondent considered it as good – 52 (21.14%) and every 10th (4, 07%) as very good.

Most often, the patients assessed their overall mood as sadly agitated – 89 (36.18%) or cheerful balanced – 70 individuals (28.46%). Every fifth respondent described himself as sad – 51 (20.73%) individuals, and 36 (14.63%) as cheerfully agitated.

B. L. Block (NCN-36) test, prepared for people struggling with serious life-threatening diseases, was used. The scale was created empirically. The material for the construction of the test was collected from interviews conducted with people directly working among those dying of cancer, and from the broad literature on the subject. After development of the collected material, a preliminary version was created, which contained 50 test items provided with a seven-point Likert-type response scale. A pilot study was then carried among 197 people and the collected material subjected to statistical processing. By using factor analysis, i.e. analysis of the main components, four dimensions of hope were obtained. The test consists of 36 tasks, 4 of which are buffer questions. Each of them has 7 variants of the answer to choose from. On the basis of factor analysis, 4 scales constructed from 8 items branch were distinguished. The following scales are used to study hope in the situational dimension – health (Cronbach's alpha=0.84), the thelic-temporal dimension – targets (Cronbach's alpha=0.72), the spiritual dimension – with reference to religious beliefs (Cronbach's alpha=0.86), and in the feelings/emotional (affective) dimension – motivations (Cronbach's alpha=0.81). The reliability factor for the test was very high – Cronbach's alpha=0.92 [12].

**The situational dimension** is connected with the uncertainty of waiting for recovery and/or improvement in health, concerns about the effectiveness of the applied therapy, and associated with the level of trust in the therapy carried out by the doctor and belief in the effectiveness of medicine (scientific and unconventional). For the patient's hope largely depends on the broadly understood situation in which that patient finds himself. A healthy person will not hope to regain health because he already has it; it is only when he loses health that he begins to hope to recover. Dufault K., Martocchio B. C. shows that the more serious a disease and more threatening the loss of highly valued values, and health becomes harder to recover, the stronger become the dynamics of hope [13]. This situational dimension of hope seems to correspond with the thelic-temporal dimension, but is a separate factor. The space of hope for the sick is not limited to regaining health.

**Forecast-temporal dimension** is about the expected or desired goal, which is also the subject of hope. This dimension of hope exposes the attitude towards the future related to the attitude of the sick to what time can bring, what may actually be fulfilled and what its perspective will be. Patients perceive many reasons to live because they are convinced that there will be many more interesting things in store, they have important goals to achieve, unfulfilled dreams, plans or desires. This component of hope is indirectly the motivational function of hope, which prompts the patient to take action and make an effort to regain health. The patient cares about the progress of treatment, somehow they are motivated for better cooperation with the doctor and more precise adherence to medical recommendations.

**Hope of a spiritual – with reference to religious beliefs** has reference to the Higher Being, to a personal God whom they

trust and in whom they hope. This dimension of hope exposes a universal human reference to transcendence, to infinity, a desire for durability and immortality. The situation of a serious disease, especially a life-threatening one, provokes the dynamics of hope in this sphere of human experience. It is a response to the human search for meaning, for the significance of life, illness, suffering or death, which is discussed extensively by V.E. Frankl [7]. Those who have achieved high scores in this subscale will be willing to entrust their lives and their future to God, trust in His mercy and care, which will give them spiritual support and a sense of peace in the difficult experience of illness. For a person who has such a hope, the prospect of life does not end in temporality, but goes beyond the limit of death – into eschatological time. Strong hope in this dimension may not only favour the acceptance of one's life situation, but also hide an element of danger – passivity and apathy.

The affective component exposes the emotional component of the experienced hope, which makes the patient not subject to overwhelming fear, his attitude to the disease is characterized by bravery and courage, and thinking about the uncertain future he feels inner peace. This component of hope seems to counteract the feeling of sadness or depression and tension resulting from a difficult situation and an uncertain future.

Results in the affective dimension indicate the possibility of experiencing ambivalent feelings by people who are sick – fear of an uncertain tomorrow, suffering and death, and at the same time, an internal reconciliation with fate, or acceptance of death, about which Kübler-Ross spoke [14]. The results ranged from 1–7; interpretations were made on the basis of averaged results for which the following limits were adopted, indicating the intensification of hope:

- medium-range – 1.0–1.99: – hopelessness;
- medium: range 2.0–2.99 – very poor hope;
- medium-range: 3.0–3.99 – poor hope;
- medium: 4.0–4.99 – moderate hope;
- medium-range: 5.0–5.99 – strong hope;
- medium-range: 6.0–7.0 – very strong hope.

The global result indicates the strength of hope felt by the respondent. The results on each of the 4 scales form the patient's hope profile.

**Statistical analysis.** For the comparison, the global hopes were scaled down in individual dimensions and in detail, as

in concepts, including urbanization, an ANOVA I analysis of variance was used. The value of the F test function, mean, standard deviation was calculated. Comparison of the results with regard to the place of residence in these items was based on the test Friedman ANOVA and Kendall compatibility factor. The general comparison of hope in individual dimensions and globally with the division into the degree of urbanization was based on the Kruskal-Wallis test. Analysis was based on the use of the STATISTICA 13.1 programme. Significance was found at  $p < 0.05$ .

## RESULTS

Results of the study of the strength of hope in individual dimensions and globally among people in the terminal stage of a neoplastic disease, taking into account the place of residence, are presented in Table 1.

There were no differences in statistically significant individual dimensions of hope and globally depending on the place of residence of the respondents in the terminal phase of a neoplastic disease ( $p > 0.05$ ).

There were statistically significant differences ( $p < 0.00001$ ) in the range of comparisons of the strength of hope in particular items.

The greatest hope was felt by all patients, regardless of their place of residence, in the religious dimension. The global average for the whole group was at a strong level ( $M=5.34$ ). However, people in the situational dimension were poorly hopeless, regardless of where they lived ( $M=3.85$ ). The presented data was characterized by a coefficient of compatibility=0.30535, which was highly statistically significant ( $p < 0.00000$ ). The smallest variation of the results concerned the residents of small towns.

The results of the hope strength test in the situational dimension among people in the terminal stage of a neoplastic disease, taking into account the place of residence in the scope of particular items, are presented in Table 2.

The presented results indicate that the strength of hope in the entire group in the situational dimension was at a weak level ( $M=3.85$ ). The most numerous group – 2/3 of the respondents, felt hoped for intensification from very weak to strong (2.48–5.22,  $SD=1.37$ ). Moderate hope was felt by the inhabitants of small towns ( $M=4.15$ ), while in the remaining groups, it was at a low level – respectively, the residents of medium-sized cities ( $M=3.84$ ), villages/settlements ( $M=3.76$ )

**Table 1.** Strength of hope among people in a terminal phase of cancer with regard to place of residence

Hope NCN-36	CA (N=246)		Place of residence								F a)
			W/O (N=54)		MM (N=60)		ŚM (N=40)		DM (N=92)		
	M	SD	M	SD	M	SD	M	SD	M	SD	
health	3.85	1.37	3.76	1.42	4.15	1.32	3.84	1.38	3.72	1.35	0.274
aims	4.74	1.20	4.79	1.10	4.69	1.25	4.96	1.03	4.66	1.28	0.572
religious beliefs	5.34	1.16	5.34	1.12	5.28	1.16	5.57	0.98	5.27	1.26	0.556
motivation	4.15	0.62	4.06	0.61	4.20	0.63	4.16	0.63	4.16	0.61	0.706
<b>Total</b>	<b>4.52</b>	<b>0.79</b>	<b>4.49</b>	<b>0.78</b>	<b>4.57</b>	<b>0.78</b>	<b>4.63</b>	<b>0.73</b>	<b>4.45</b>	<b>0.82</b>	<b>0.588</b>

Friedman's ANOVA and Kendall's compatibility coefficient (New1a)  $\chi^2$  ANOVA (N = 246, df = 3) = 225.3452  $p = 0.00000$  coefficient of compatibility = 0.30535.

CA – Strength of hope in the entire group; W/O – village/settlement; MM – small town; ŚM – medium city; DM – big city; M – average; SD – standard deviation; Fa – F value calculated and p given with the use of variance analysis. The results presented in Table 1 indicate that the global hope strength of the studied patients was at a moderate level ( $M = 4.52$ ). Also in individual groups, distinguished by their place of residence, the global average values were within the limits of moderate hope



**Table 2.** Strength of hope for recovery among people in the terminal stage of cancer with regard to place of residence

NCN-36 Heath	CA (N=246)		Place of residence								p a)
			W/O (N=54)		MM (N=60)		ŚM (N=40)		DM (N=92)		
	M	SD	M	SD	M	SD	M	SD	M	SD	p
1	3.44	1.92	3.22	1.88	3.78	1.84	3.48	2.05	3.32	1.92	0.399
2	3.68	2.02	3.63	2.06	4.25	1.85	3.55	2.00	3.40	2.08	0.082
3	4.45	1.70	4.50	1.69	4.33	1.60	4.45	1.69	4.42	1.79	0.995
4	3.42	1.98	3.85	1.97	3.85	2.02	3.63	2.07	3.09	1.88	0.115
5	3.73	1.95	3.76	1.87	4.15	1.89	3.65	2.06	3.48	1.96	0.221
6	5.28	1.57	5.07	1.46	5.13	1.58	5.38	1.41	5.45	1.68	0.454
7	3.59	2.00	3.39	2.02	3.90	1.95	3.50	1.93	3.55	2.04	0.553
8	3.22	1.93	3.13	1.78	3.67	2.05	3.10	1.81	3.04	1.96	0.234
Total	3.85	1.37	3.76	1.42	4.15	1.32	3.84	1.38	3.72	1.35	0.274

Friedman's ANOVA and Kendall's coefficient of compatibility (New 1a)  $\chi^2$  ANOVA (N = 246, df = 3) = 225.3452 p = 0.00000 coefficient of compatibility = 0.30535

CA – Strength of hope in the entire group; W/O – village/settlement; MM – small town; ŚM – Medium city; DM – big city; M – average; SD – standard deviation; Fa) – F value calculated and p given with the use of variance analysis

**Table 3.** Strength of hope in the telephonic-temporal dimension among people in the terminal stage of cancer with regard to the place of residence

NCN-36 aims	CA (N=246)		Place of residence								F a)
			W/O (N=54)		MM (N=60)		ŚM (N=40)		DM (N=92)		
	M	SD	M	SD	M	SD	M	SD	M	SD	p
1	3.80	1.98	3.63	1.93	3.97	1.89	4.10	1.98	3.67	2.07	0.551
2	3.94	1.93	4.06	1.87	3.88	1.89	4.28	1.87	3.77	2.03	0.545
3	4.65	1.84	4.87	1.76	4.52	1.95	4.93	1.61	4.50	1.90	0.459
4	4.67	1.91	4.93	1.79	4.92	1.73	4.90	1.85	4.26	2.06	0.078
5	5.10	2.21	4.91	2.28	4.73	2.18	5.28	2.05	5.38	2.25	0.286
6	5.11	1.73	5.39	1.43	5.12	1.71	5.25	1.85	4.87	1.84	0.330
7	5.37	1.56	5.20	1.56	5.32	1.48	5.53	1.48	5.42	1.65	0.758
8	5.31	1.83	5.35	1.89	5.08	1.91	5.45	1.65	5.38	1.84	0.729
Total	4.74	1.20	4.79	1.10	4.69	1.25	4.96	1.03	4.66	1.28	0.572

Friedman's ANOVA and Kendall's coefficient of compatibility (New 1a)  $\chi^2$  ANOVA (N = 246, df = 7) = 257.3259; p = 0.00000, coefficient of compatibility = 0.14943

CA – Strength of hope in the entire group; W/O – village/settlement; MM – small town; ŚM – Medium city; DM – big city; M – average; SD – standard deviation; Fa) – F value calculated and p given with the use of variance analysis

felt it, large cities (M=3.72). The place of residence of patients in the terminal phase of a neoplastic disease had no impact on the level of hope of the respondents in terms of individual items in the situational dimension (p > 0.05).

There were statistically significant differences (p < 0.00001) in the range of comparisons of the strength of hope in particular items. All respondents, regardless of their place of residence, obtained the highest average in item 6 and the lowest in item 8. (coefficient of compatibility=0.16617; p < 0.00001).

Regardless of place of dwelling, the hopes of the patients in the doctor under their care were shaped at a strong level (M=5.28). The patients had little hope in the effectiveness of unconventional medicine (M=3.22).

In the tele-temporal dimension in the whole group studied, the hope was global on a moderate level (M=4.74), as well as in individual groups of persons distinguished by their place of residence. The majority of patients, 2/3, felt hope for strength from weak to strong (3.54–5.94, SD=1.20).

In the examined dimension, no statistically significant differences were found in particular items due to the place of residence (p > 0.05). There were statistically significant

differences (p < 0.00001) in the range of comparisons of the strength of hope in particular items. The respondents living in small, medium and large cities obtained the highest average in terms of item 7. The lowest average was obtained by the inhabitants of rural areas and medium and large cities in terms of item 1 (compliance ratio=0.1493; p < 0.00000).

Inhabitants lived every day with many small, ordinary, but strong hopes (M=5.37). The respondents, with the exception of residents of medium-sized cities, were poorly prepared to implement many of their intentions for the future (M=3.80).

Based on the results presented in Table 4, it can be concluded that globally the strength of hope in the whole group in the spiritual and religious dimension was on a strong level (M=5.34). Also in individual groups, distinguished by their place of residence, the average was in limits of strong hope. Two in three respondents felt from moderate to very strong hopefulness (4.18–6.50, SD=1.16). In the spiritual-religious dimension of the place of residence of patients in the terminal phase of a neoplastic disease, did not influence the level of hope of the respondents in the scope of particular items (p > 0.05).

**Table 4.** Strength of hope in the spiritual and religious dimension among people in the terminal stage of cancer with regard to the place of residence.

NCN-36 Religious beliefs	CA (N=246)		Place of residence								F a)
			W/O (N=54)		MM (N=60)		ŚM (N=40)		DM (N=92)		
	M	SD	M	SD	M	SD	M	SD	M	SD	
1	6.08	1.36	6.11	1.28	6.17	1.67	6.20	1.18	5.96	1.58	0.720
2	5.77	1.45	5.81	1.43	5.67	1.47	6.05	1.17	5.68	1.55	0.540
3	5.48	1.56	5.41	1.50	5.50	1.55	5.65	1.42	5.42	1.67	0.870
4	5.24	1.73	5.17	1.59	5.32	1.60	5.60	1.69	5.08	1.91	0.431
5	5.39	1.58	5.46	1.37	5.28	1.66	5.60	1.46	5.33	1.69	0.743
6	4.83	2.11	4.63	2.28	4.85	2.17	5.33	1.93	4.72	2.04	0.400
7	5.46	1.59	5.44	1.48	5.42	1.48	5.63	1.25	5.41	1.84	0.907
8	4.44	1.88	4.65	1.70	4.00	2.00	4.53	2.06	4.58	1.80	0.211
Total	5.34	1.16	5.34	1.12	5.28	1.16	5.57	0.98	5.27	1.26	0.556

Friedman's ANOVA and Kendall's coefficient of compatibility (New 1a)  $\chi^2$  ANOVA (N = 246, df = 7) = 239.4184 p = 0.00000 coefficient of compatibility = 0.13904

CA = Strength of hope in the entire group, W / O -village/ settlement, MM-small town, ŚM-Medium city, DM-big city, M-average, SD-standard deviation, Fa) – F value calculated and p given with the use of variance analysis

**Table 5.** Strength of hope in the affective dimension among people in the terminal stage of cancer with regard to the place of residence

NCN-36 Motivations	CA (N=246)		Place of residence								F a)
			W/O (N=54)		MM (N=60)		ŚM (N=40)		DM (N=92)		
	M	SD	M	SD	M	SD	M	SD	M	SD	
1	4.54	1.78	4.26	1.81	4.80	1.77	4.50	1.83	4.57	1.75	0.450
2	3.51	1.92	3.35	1.75	3.83	2.03	2.93	1.70	3.64	1.99	0.101
3	4.16	1.91	3.80	1.83	4.37	1.88	4.25	1.98	4.21	1.95	0.425
4	4.44	1.79	4.56	1.80	4.02	1.79	5.08	1.77	4.37	1.73	<b>0.031</b>
5	3.69	1.81	3.93	1.75	3.58	1.83	3.90	1.96	3.52	1.79	0.488
6	3.89	1.90	3.85	1.84	4.02	1.92	3.45	1.88	4.01	1.93	0.424
7	4.75	1.84	4.74	1.70	4.75	1.84	4.85	1.70	4.72	2.01	0.986
8	4.20	1.73	4.04	1.64	4.22	1.75	4.30	1.90	4.23	1.72	0.889
Total	4.15	0.62	4.06	0.61	4.20	0.63	4.16	0.63	4.16	0.61	0.706

Friedman's ANOVA and Kendall's coefficient of compatibility (New 1a)  $\chi^2$  ANOVA (N = 246, df = 7) = 98.80147 p = 0.00000 coefficient of compatibility = 0.05738

CA – Strength of hope in the entire group; W / O – village/ settlement; MM – small town; ŚM – Medium city; DM – big city; M – average; SD – standard deviation; Fa) – F value calculated and p given with the use of variance analysis.

There were statistically significant differences ( $p < 0.00001$ ) in the range of comparisons of the strength of hope in particular items.

The respondents from all groups received the highest average in terms of item 1. The lowest results were obtained by the respondents in terms of item 8 (compliance ratio=0.13904;  $p < 0.00000$ ). The exception were the residents who obtained the lowest average in item 6.

The greatest hope of all studied groups lay in Jesus Christ who, for them, was their source of hope. On average, this was at a strong level ( $M = 6.08$ ). The lowest strength of hope was characteristic of city residents when they thought about what might happen to them after death, and which caused them great anxiety and fear. For the whole surveyed group globally in this item, the hope was at a moderate level ( $M = 4.44$ ). Those studied did not treat death as the end of everything, but rather, closer to the fact that it gave birth to a better life. However, the village residents obtained a lower average in this respect than the others ( $M = 4.63$ ).

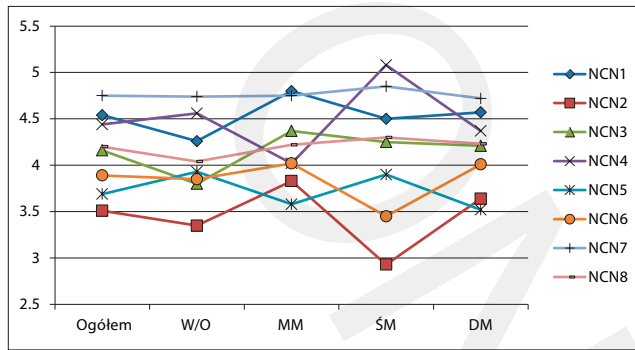
The results presented in Table 5. prove that the strength of hope in the affective group in the global dimension was on a moderate level ( $M = 4.15$ ), as well as in individual groups

of patients distinguished by their place of residence. Most respondents – 2 / 3, had from weak to moderate intensity of hope (3.53–4.77,  $SD = 0.62$ ).

The place of residence of patients in the terminal phase of a neoplastic disease had an impact on the level of hope of the respondents in the field of item 4 in the affective dimension ( $p = 0.031$ ). In the encountered problems and hardships, the highest level of hope was a characteristic of the inhabitants of medium-sized cities ( $M = 5.08$ ). On the other hand, the lowest level of hope for overcoming problems and difficulties was experienced by the inhabitants of small towns ( $M = 4.02$ ).

There were statistically significant differences ( $p < 0.00001$ ) in the range of comparisons of the strength of hope in particular items.

Respondents living in villages and large cities were not worried about the future, they had a strong hope that everything would work out. The lowest average was obtained by respondents from villages and medium-sized cities who thought of the future with fear rather than with hope and courage. Patients in small and large cities believed that their future was completely uncertain (concordance ratio=0.5738;  $p < 0.00000$ ).



**Figure 1.** Comparison of average levels of hope in the affective dimension among people in the terminal stage of cancer with regard to place of residence

The data depicted in Figure 1 shows that the greatest differentiation of average results in particular items was characteristic of middle-city residents. Distribution of the strength of hope of the respondents in individual dimensions and globally, depending on the place of residence, is shown in the Tables 6–10.

Analysis of the data collected in Tables 6–10 shows that the observed differences in the intensity of hope among rural residents/settlements, small, medium and large cities, were not statistically significant ( $p > 0.05$ ).

## DISCUSSION

The strength of hope of the sick, examined in individual manifestations, did not depend on the place of residence. Patients in the terminal phase of cancer had a similar strength of hope. Only in the situation of encountered problems and difficulties, the inhabitants of medium-sized cities had a significantly higher level of hope than the other respondents. Analysis of the situational results showed that the respondents had a poor belief in the effectiveness of unconventional medicine methods, and placed strong hope in trusting the therapist. However, the strongest hope, regardless of place of residence, was the trust in God. Placing hope in God gave real mental support to the patients and resulted in less concern about what tomorrow will bring [6].

From the experiences of Sadowska and Prejzner, gained during the performance of a Samaritan ministry in a home hospice, it appears that in chronically ill patients there are both negative and positive mental reactions. Positive emotional states, such as hope, faith and love, are born in patients as a result of self-acceptance, as a spiritual human being capable of love and experiencing God in a transcendent dimension. In their opinions, the patient should be told the truth in order to save in hopefully, death is but a crossing of the threshold beyond which the arms of the Father will be extended. For the suffering patient, the sacramental service of the priest becomes extremely important, which prepares the dying patient to calmly close the time of “being on the road”; it becomes an act of reconciliation and forgiveness, an act of devotion to God [15].

**Table 6.** Distribution of the strength of hope for health depending on the place of residence (f – cardinality).

NCN-36 health	CA N=246		W/O N=54		MM N=60		ŚM N=40		DM N=92	
	f	%	f	%	f	%	F	%	f	%
1–1.99	17	6.91%	3	5.56%	2	3.33%	3	7.50%	9	9.78%
2–2.99	52	21.14%	14	25.93%	12	20.00%	8	20.00%	18	19.57%
3–3.99	67	27.24%	13	24.07%	13	21.67%	14	35.00%	27	29.35%
4–4.99	50	20.33%	12	22.22%	13	21.67%	7	17.50%	18	19.57%
5–5.99	38	15.45%	8	14.81%	15	25.00%	3	7.50%	12	13.04%
6–7.00	22	8.94%	4	7.41%	5	8.33%	5	12.50%	8	8.70%
<b>Total</b>	<b>246</b>	<b>100.00%</b>	<b>54</b>	<b>100.00%</b>	<b>60</b>	<b>100.00%</b>	<b>40</b>	<b>100.00%</b>	<b>92</b>	<b>100.00%</b>

Kruskal-Wallis Test:  $H(3, N = 246) = 4.316840$   $p = .2292$

**Table 7.** Distribution of the magnitude of hope strength for the future depending on the place of residence (f – cardinality).

NCN-36 future	CA N=246		W/O N=54		MM N=60		ŚM N=40		DM N=92	
	f	%	f	%	f	%	F	%	f	%
1–1.99	5	2.03%	1	1.85%	1	1.67%	0	0.00%	3	9.78%
2–2.99	16	6.50%	2	3.70%	6	10.00%	2	5.00%	6	19.57%
3–3.99	31	12.60%	7	12.96%	9	15.00%	2	5.00%	13	29.35%
4–4.99	89	36.18%	20	37.04%	20	33.33%	17	42.50%	32	19.57%
5–5.99	63	25.61%	16	29.63%	13	21.67%	13	32.50%	21	13.04%
6–7.00	42	17.07%	8	14.81%	11	18.33%	6	15.00%	17	8.70%
<b>Total</b>	<b>246</b>	<b>100.00%</b>	<b>54</b>	<b>100.00%</b>	<b>60</b>	<b>100.00%</b>	<b>40</b>	<b>100.00%</b>	<b>92</b>	<b>100.00%</b>

Kruskal-Wallis Test  $H(3, N = 246) = 1.570089$   $p = .6662$

**Table 8.** Distribution of the magnitude of hope in the spiritual and religious dimension depending on the place of residence (f – cardinality).

NCN-36 religion	CA N=246		W/O N=54		MM N=60		SM N=40		DM N=92	
	f	%	f	%	f	%	f	%	f	%
1–1.99	2	0.81%	0	0.00%	0	0.00%	0	0.00%	2	2.17%
2–2.99	10	4.07%	1	1.85%	3	5.00%	0	0.00%	6	6.52%
3–3.99	17	6.91%	6	11.11%	6	10.00%	2	5.00%	3	3.26%
4–4.99	48	19.51%	12	22.22%	11	18.33%	10	25.00%	15	16.30%
5–5.99	85	34.55%	18	33.33%	19	31.67%	13	32.50%	35	38.04%
6–7.00	84	34.15%	17	31.48%	21	35.00%	15	37.50%	31	33.70%
<b>Total</b>	<b>246</b>	<b>100.00%</b>	<b>54</b>	<b>100.00%</b>	<b>60</b>	<b>100.00%</b>	<b>40</b>	<b>100.00%</b>	<b>92</b>	<b>100.00%</b>

Kruskal-Wallis Test H (3, N= 246) =1.157824 p =.7631

**Table 9.** Distribution of the size of the strength of hope in the affective dimension depending on the place of residence (f – cardinality).

NCN-36 uczucia	CA N=246		W/O N=54		MM N=60		SM N=40		DM N=92	
	f	%	f	%	f	%	f	%	f	%
1–1.99	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
2–2.99	5	2.03%	1	1.85%	1	1.67%	1	2.50%	2	2.17%
3–3.99	87	35.37%	22	40.74%	20	33.33%	15	37.50%	30	32.61%
4–4.99	134	54.47%	26	48.15%	33	55.00%	21	52.50%	54	58.70%
5–5.99	18	7.32%	5	9.26%	6	10.00%	2	5.00%	5	5.43%
6–7.00	2	0.81%	0	0.00%	0	0.00%	1	2.50%	1	1.09%
<b>Total</b>	<b>246</b>	<b>100.00%</b>	<b>54</b>	<b>100.00%</b>	<b>60</b>	<b>100.00%</b>	<b>40</b>	<b>100.00%</b>	<b>92</b>	<b>100.00%</b>

Kruskal-Wallis Test: H (3, N= 246) =2.293807 p =.5137

**Table 10.** Distribution of the magnitude of hope power in the global dimension depending on the place of residence (f – cardinality).

NCN-36 global	CA N=246		W/O N=54		MM N=60		SM N=40		DM N=92	
	f	%	f	%	f	%	f	%	f	%
1–1.99	1	0.41%	0	0.00%	0	0.00%	0	0.00%	1	1.09%
2–2.99	7	2.85%	2	3.70%	1	1.67%	0	0.00%	4	4.35%
3–3.99	45	18.29%	9	16.67%	13	21.67%	6	15.00%	17	18.48%
4–4.99	125	50.81%	29	53.70%	26	43.33%	24	60.00%	46	50.00%
5–5.99	62	25.20%	13	24.07%	19	31.67%	8	20.00%	22	23.91%
6–7.00	6	2.44%	1	1.85%	1	1.67%	2	5.00%	2	2.17%
<b>Total</b>	<b>246</b>	<b>100.00%</b>	<b>54</b>	<b>100.00%</b>	<b>60</b>	<b>100.00%</b>	<b>40</b>	<b>100.00%</b>	<b>92</b>	<b>100.00%</b>

Kruskal-Wallis Test H (3, N= 246) = 1.135723 p =.7685

The transmission of inauspicious information should be carried out done in such a way so as not to destroy the hope of the patient, while not giving any illusive, false and unjustified hopes. It should not happen incidentally, but be a process for simultaneously providing the patient with mental, social, moral and spiritual support [6, 13, 16, 17, 18].

The study by Kandel deals with the issue of a patient's right to decide what will happen to his body, honouring the individual's wishes in his last moments when there is no hope of recovery, and when death is only a question of time [19].

Our own research shows that the patients had poor hope for the implementation of their plans for the future; they focused more on small ordinary ordinances which they lived on a daily basis and from which they drew joy and hope.

Research conducted in recent years indicates that the effect of trauma resulting from the cancer disease experience may not only be negative, but also positive changes revealed in the form of post-traumatic growth. Their occurrence depends on many factors, including the patient's personal resources. In the process of emerging positive post-traumatic changes resulting from the experience of cancer, personal resources play an important role. These include personality traits as well as beliefs and expectations, such as optimism of life, self-esteem and effectiveness, hope, and spirituality. Resources related to the cognitive functioning of an individual include cognitive schemas, their susceptibility to changes and ruminations. There are possibilities to stimulate post-traumatic growth in oncological patients [20]. An important

resource conducive to the occurrence of post-traumatic development, according to studies by Mazurkiewicz and Makara-Studzińska, is basic hope. A higher level of basic hope may be associated with greater appreciation of life and a greater level of change in the improvement of relationships with others [21].

## CONCLUSIONS

1. The strength of hope in people in the terminal phase of cancer, inhabiting villages, settlements, small, medium and large cities, was similar and depended on its magnitude.
2. The greatest hope in the religious and spiritual dimension was found mainly in patients living in medium-sized cities, and the lowest hope in the situational dimension, mainly in the inhabitants of large cities.
3. Of all the manifestations of hope, the greatest variation in results occurred in the patients when they encountered serious problems and difficulties. The inhabitants of medium-sized cities were characterized by a higher hope at that time.
4. The respondents-patients placed strong hope in trusting in God and the physician conducting the therapy. They had a weak hope that they would be able to recover through unconventional medicine.

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