

# Older people's beliefs about cancer care in Poland

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## Abstract

The occurrence and morbidity of cancer increase with age. The aim of the study was to ascertain the beliefs of older people about the access to and quality of cancer care in Poland and to determine the impact of gender, age, education and SES variables on their beliefs. In 2012, a sample of 910 adult residents of Wrocław was studied by means of an interview questionnaire and quota sampling was applied. This paper presents only the data obtained from two of the six age categories researched ( $N = 329$ ; specifically the age categories: “55–64 years” and “65 and over”). It was established that more than half of the respondents evaluated the treatment conditions in hospitals negatively; most being critical of the access to the medical services for oncology. The results show a divergence between the assessment of the medical personnel's instrumental function and the care received. Although 75% of seniors positively assess the competence of oncologists, 45.29% evaluate their interpersonal skills negatively. It was found that criticism of oncological care increases with the age of the respondents and their lower financial state.

**Key words:** medical institutions, oncology, cancer, cancer fatalism, health beliefs, medical sociology, ageing

**Słowa kluczowe:** instytucje medyczne, onkologia, nowotwór, fatalizm nowotworowy, przekonania zdrowotne, socjologia medycyny, starzenie



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## Introduction

A range of social and health consequences arises in an ageing population. An inevitable effect of ageing is the increase in the incidence of age-related chronic diseases, including cancer. Epidemiological data for Europe and the US show that over 60% of cancer cases are recorded in patients aged over 65. The risk of cancer increases with age, reaching particularly high levels in those aged between 65 and 75 [1, 2]. According to forecasts for 2035, the number of cancer cases in people aged over 65 in both sexes will increase [3, 4]. Poland is among the countries having the highest incidence and mortality from cancer [5]. 75% of the deaths from cancer occur in people aged 60 years or older, and the peak incidence is for those aged 80 to 90 [6].

The ageing process causes a number of physiological changes in the body, often with the coexistence of diseases, which can then pose the threat of polypragmasia. Compared to the younger age groups, older people are usually socio-economically worse off and are more dependent on others. Very frequently ageing reduces people's overall competence and autonomy. It is apparent that cancer treatment often increases the symptoms of comorbidities, which can lead to reduced therapy benefits and a higher risk of serious complications [7]. Therefore, cancer prevention is very important, but as soon as a cancer is diagnosed, the patient should undergo treatment and adhere to the medical recommendations.

The principal reasons for the high incidence and mortality of cancer among older people is the inadequate availability of oncology medical services, prevention,

treatment, rehabilitation and the low quality of the services provided. Clearly, success in the fight against cancer depends on efficiency at all levels of the pro-health policy. As part of public health policy, strategies at the macro-structural level, the implementation of the National Cancer Programme, the statutory ban on smoking in public places, environmental pollution regulations, increased public funds for health promotion and treatment of cancer, screening programmes, etc. are being implemented. At the micro-structural level, the strategies focus on creating environments which are conducive to pro-health choices. Political decisions constitute the appropriate legal, administrative and economic conditions, which guarantee, or fail to guarantee, equal access to a healthy lifestyle and the resources needed to maintain good health. Studies show, however, that to date, actions to combat cancer in Poland, the health programmes and social campaigns, are not achieving satisfactory results [8, 9]. The activities of the Polish government in the context of anti-cancer public policy are given in one of the few Polish sociological analyses, ‘Cancer – a public priority?’ [10].

Two-thirds of the surveyed Poles believe that cancer, not heart disease or diabetes, should be a priority for the health care system. 43% of respondents believe that the National Health Fund does not provide good cancer care, emphasising unequal access to treatment to the detriment of the less affluent and those living in small towns. This study also demonstrated that about one-third of healthy individuals, 42% of patients and 50% of their families assessed the effectiveness of cancer treatment as poor or very poor. In addition, NGO representatives concerned with oncology indicated shortcomings in the functioning of the medical institutions. In their view the factors negatively influencing cooperation with oncology institutions include: excessive bureaucracy; difficulties in obtaining access to specialists; the ‘airtightness’ of the medical community; the focus on instrumental features and minimising the importance of psycho-social support for patients; the indifference of the medical personnel, their lack of involvement in patients’ problems and local communities; objectification of patients by the medical staff and their poor knowledge, or appreciation, of the patients’ actual needs [11].

Researchers, who study measures to fight cancer, often indicate the importance of taking the lay perspective into account for both cancer research and anti-cancer strategies established on the basis of research results. Lay persons often interpret health and illness, the etiology of the disease, diagnosis, the methods of treatment, etc. on the basis of their beliefs, values, and preferences rather than the scientific criteria [12]. Whether people take advantage of the medical services not only depends on the type and severity of symptoms or their psychological traits but largely on the social environment in which they live [13–15]. Thus, it is vital to take into account the socio-cultural determinants of attitudes and health behaviour. As participants in the culture of a particular social group, through socialisation, people assimilate certain beliefs and ideas about diseases, in-

cluding – cancer [16, 17]. Beliefs, in turn, affect attitudes, decisions and specific behaviour that are initiated in response to health problems [18–20]. In addition to analysing the issues related to cancer, attention should be paid to the prevalent societal themes, including cancerophobia [21–23].

People’s beliefs about oncology care, which range from assessing the treatment conditions and the quality of medical services to an assessment of the availability of medical oncology services, may exacerbate, or minimise, fatalistic attitudes about cancer and thereby influence the behaviour and attitudes they have about health. Fatalistic beliefs [21, 24–26] act as a barrier to cancer prevention [27–29], screening, [27, 30, 31] consulting a physician after experiencing distressing symptoms [22, 24, 32], adhering to medical recommendations [33], continuing treatment [33] and consequently have a negative impact on the chance of survival [25, 34, 35]. One of the few Polish studies on beliefs related to cancer, based on a representative sample of healthy adult, is Chojnacka-Szawłowska’s research [36]. Her aim was to discover the correlation between general views on cancer and the patterns of health behaviour related to primary and secondary prevention. Another example undertaken on a representative sample of Polish women is Ostrowska’s [8] research on prevention. Her analysis of the data revealed the existence of fatalistic beliefs, but mainly among older and less educated women.

In literature, relatively few analyses exist which take into account the age variable in the context of oncology [1, 30]. Research has shown that older people often have negative and erroneous beliefs about their health. Even after treatment, they tend to identify their health problems as being the natural aspects of ageing. Older people can treat their symptoms as inevitable, not susceptible to treatment, so that assessment or medical intervention is not required [37, 38] and may claim that cancer is incurable [39]. Consequently, such beliefs lead to the formation and strengthening of a passive attitude to health and illness [8, 40]. Compared to the other age categories, there is a higher incidence of fatalistic beliefs among older people [25, 27]. There is a lack of research based on a sample of older people, to assess their opinion of the functioning of oncology institutions and medical personnel. Older people have limited or no access to screening [41] or optimal diagnosis in clinical trials and receive substandard treatment [42]. Conducted analysis has confirmed the comparable effectiveness of cancer treatment for younger and older patients [43, 44]. The limited participation of older patients in clinical studies and the small number of studies on this group make it difficult to obtain the scientific data needed to develop standards of conduct [45]. The forecast that cancer among older people is increasing, as noted by R. Yancik and A.L. Ries [1], indicates that there is a necessity to develop appropriate research strategies in the fight against this group of diseases.

A study conducted in Poland confirmed that obtaining access to medical specialists is difficult for the poorest people [46], which can strengthen their passivity and not

seeking medical help. Moreover, fatalistic beliefs about cancer are often widespread among those of lower SES [25, 26, 47, 48]. It is worth noting that the problem of poverty often affects older people, who constitute the majority of cancer patients. They are often less knowledgeable than the younger age categories. Analysing the situation of seniors in the context of cancer, it is apparent that they bear the negative consequences of inequalities in health care and disease prevention. The age and the associated lower economic status and lower level of education should not limit senior citizens' access to treatment, however, this is often the case. Therefore, the knowledge of older peoples' opinions about oncology care in Poland is important.

Understanding older peoples' beliefs about cancer care would be beneficial for developing effective strategies to fight cancer. A belief that the medical institutions are dysfunctional can deepen fatalistic opinions about the efficacy and relevance of pro-health actions. It is particularly important to determine how Polish oncology care is evaluated by non-specialists, as they make decisions regarding their health and influence other people's decisions concerning their own health.

So far, the analyses have highlighted that the age of the respondents is a very important variable in shaping peoples' attitudes and beliefs about cancer. The influence of the age variable on the beliefs discussed in this paper was also analysed for the total population studied ( $N = 910$ ). The results are given in the second part of the "Results" section.

The research results have been the inspiration for an in-depth study of older peoples' beliefs about cancer care. The ageing of a human body is a multi-stage process which takes place over many years. The WHO defines old age in the following way: premature old age (45–59 years), young-old (60–74 years), old-old (75–89 years) and long life (above 90 years) [49]. This study included two of the six age categories from the total population studied ( $N = 910$ ): people aged 55–64 years and 65+ ( $N = 329$ ). These age categories fall within the WHO age distribution range and are consistent with the categories employed by the Polish government statistics (Central Statistical Office). As a consequence, the first section of "Results" presents descriptive statistics and correlations only for older people ( $N = 329$ ). Additionally, according to the National Cancer Registry in Poland, the statistics between 2011–2013 show that mortality from cancer increased significantly in the 55–59 age category and was highest in the 60–64 and 65+ categories.

The aim of the reported study was to understand the beliefs that older people have about cancer care in Poland and in particular:

### ■ I. ( $N = 329$ )

(1) the treatment conditions of cancer in hospitals (oncology); (2) the competencies (knowledge, experience) of medical specialists (oncologists); (3) the implementation of care functions by medical personnel (providing emotional support to patients); (4) the access to: (a) on-

cology hospital treatment; (b) oncologists, oncology clinics; (c) cancer prevention trials; (d) rehabilitation after oncological treatment; (5) How does gender, economic status and level of education influence the respondents' beliefs about oncology care ( $N = 329$ )?

### ■ II. How does age influence the respondents' beliefs about cancer care? ( $N = 910$ )

#### MATERIALS AND METHODS

##### *Participants and methods*

From March to June in 2012, a survey was carried out on a sample of 910 adult residents of Wrocław, the capital of the Lower Silesia Region of Poland. The research was conducted as part of the statutory activities of the Department of Humanistic Sciences in Medicine of the Wrocław Medical University.

Quota sampling was applied. Quota sampling is a non-probability sampling technique where the assembled sample has partially the same proportions of individuals as the entire population, although people were not selected at random. The population in the study was composed of adult residents of Wrocław, aged 18 and over ( $N = 538,222,000$ ). Data on the size of the general population were estimated by the Central Statistical Office in Wrocław based on the results of the National Population and Housing Census [50]. Quota sampling pre-supposes the selection of individuals from specific subgroups. To minimize the uncertainty of the data and to ensure the credibility of the sample, the authors tried to maximise its similarity to the general population, by selecting participants identified by three characteristics: gender, age and level of education. These socio-demographic variables were most relevant for the problem in question as they mostly determine the beliefs associated with cancer care. The categories of age and level of education were consistent with the categories used for Polish government statistics (Central Statistical Office).

The cost of the research was also taken into account when determining the sample size ( $N = 910$ ), which can be considered as high. As a comparison, a sample of about 1,000 adults is used for representative national studies. The structure of the general population and the research sample on the basis of age, sex and education is presented in **Table I**. As the research sample is sufficiently large and closely reflects the structure of the population, it can be considered as meeting the requirements for a representative sample.

The research was carried out within the statutory activities of the Department of Humanistic Sciences in Medicine of the Wrocław Medical University and conducted with an interview questionnaire, which was anonymous in nature, designed by the researchers.

This research was a pilot study, aimed at testing the tools and research hypotheses, in order to prepare and implement national research on the basis of a representative sample.

		POPULATION						RESEARCH SAMPLE					
The population aged over 18 in Wrocław (Poland)		538,222						910					
Gender		Male: 0.456362 Female: 0.540638						Male: 0.4593341 Female: 0.540659					
<b>MALE</b>													
AGE	18-24	25-34	35-44	45-54	55-64	65+	18-24	25-34	35-44	45-54	55-64	65+	
EDUCATION	POPULATION	SAMPLE	POPULATION	SAMPLE	POPULATION	SAMPLE	POPULATION	SAMPLE	POPULATION	SAMPLE	POPULATION	SAMPLE	
Higher	0.005737	0.004396	0.050604	0.028571	0.017502	0.018681	0.018819	0.021978	0.019583	0.018681	0.019583	0.018681	
Secondary	0.033562	0.037363	0.036386	0.024176	0.026357	0.024176	0.02935	0.02967	0.022491	0.02967	0.022491	0.021978	
Primary/ Vocational	0.016073	0.016484	0.021199	0.021978	0.027201	0.026374	0.033445	0.02967	0.026052	0.02967	0.026052	0.02967	
<b>FEMALE</b>													
AGE	18-24	25-34	35-44	45-54	55-64	65+	18-24	25-34	35-44	45-54	55-64	65+	
EDUCATION	POPULATION	SAMPLE	POPULATION	SAMPLE	POPULATION	SAMPLE	POPULATION	SAMPLE	POPULATION	SAMPLE	POPULATION	SAMPLE	
Higher	0.010908	0.013187	0.067608	0.035165	0.022649	0.026374	0.022528	0.023077	0.017352	0.017582	0.017352	0.017582	
Secondary	0.034202	0.040659	0.026779	0.026374	0.036154	0.035165	0.049714	0.048352	0.045957	0.048352	0.045957	0.042857	
Primary/ Vocational	0.012692	0.012088	0.01646	0.015385	0.020185	0.017582	0.028412	0.02967	0.053052	0.02967	0.053052	0.048352	

**Table 1.** The comparison of Wrocław's population and the research sample.  
Source: Own study.

## Measures

The subjective (declared) level of respondents' different beliefs was studied. To assess the beliefs (**Tables II–VI**) a 4-point Likert scale was used (i.e. the scale of forced choice). The following categories were used to assessing individual beliefs: their evaluation of treatment conditions in Polish oncology hospitals: very good, good, poor, very poor; their assessment of oncologists' competence: very high, high, low, very low; the interpersonal skills of oncology medical personnel were assessed by responses to the question 'Do patients with cancer expect emotional support from doctors and nurses in a hospital?' (categories: strongly agree, agree, disagree, strongly disagree); assessment of access to oncology medical services: very good, good, poor, very poor.

When considering the relationships between the beliefs and the individual variables, the following were taken into account: age categories: 18–24 years, 25–34 years, 35–44 years, 45–54 years, 55–64 years, 65 years and over; gender (F, M); level of education categories: primary/vocational, secondary, higher education; economic status considering two aspects: objective – net income per family – categories: less than 500 PLN; 501 to 900 PLN, 901 to 1200 PLN; 1201 to 1500 PLN, higher than 1500 PLN; and subjective – self-assessment of the financial situation of the household categorised as: poor, average, good. The age categories, SES and education are consistent with the categories used in Polish research surveys and by the Polish Central Statistical Office. The research sample was based on these categories.

## Data analysis

Because of the particularly high rates of morbidity and mortality from cancer in older people, this article is specifically focused on and only presents data for these age categories. In part I of the Results section, descriptive statistics are provided in Tables II–V and the correlation analysis (**Table VI**) relates to respondents over the age of 54 ( $N = 329$ ; in the two age categories: "55–64 years" and "65 and over" extracted from the six age categories considered in the full survey). The paper illustrates the relationship between beliefs and the categorised variables of gender, level of education and the respondents' objective and subjective economic status.

In part II of the Results section, the relationship between the beliefs associated with cancer care and the age of respondents is presented. Older people are included within the entire examined population. Therefore, the analysis of the relationship between variables was reported for the entire population ( $N = 910$ , six age categories tested), of which older people comprise two of the categories showing a general tendency to dependence (**Table VII**).

The available methods for the analysis of qualitative data (categorical data analysis) were used. To establish if there were associations between individual pairs of categorical variables (nominal or ordinal), the value of chi-square was calculated. The strength of the relation-

ship between variables was assessed by the Cramér's  $V$  (V) ratio. V values were at the level of 0.1–0.3, which in the case of random samples ensures a significant relationship. Significant results were accepted at a  $p$ -value  $< 0.05$ . Because of the analysis of categorical variables to evaluate the association, correspondence analysis was used as the method of multivariate data analysis. The data were analysed using Statistica v. 9.0 (Dell Statistica, Tulsa, OK).

## Results

### Part I

#### I. Beliefs associated with cancer care

##### Assessment of treatment conditions in oncology hospitals

More than half (55.93%) of older people assess treatment conditions in oncology hospitals negatively, with 42.25% giving their assessment as poor and 13.68% as very poor (**Table II**).

Assessment of the conditions of cancer treatment is dependent on the economic status of the respondents – in the subjective dimension, the self-assessment of financial situation (**Table VI**). Based on a correspondence analysis it was confirmed that respondents who perceive their economic situation as good, more often evaluated the conditions of treatment as relatively good; while respondents who assessed their material situation as average, more often claimed that the conditions were relatively poor. There was no association between other pairs of variables ( $\chi^2 = 22.54187$ ;  $p$ -value = 0.00097; Cramér's  $V = 0.1112908$ ).

There was no association found between the assessment of the conditions of cancer treatment and gender, education and net income of respondents.

##### Assessment of oncologists' competence

75.68% of the respondents assessed the competence, knowledge and experience of most oncologists in Poland positively, with 69.60% giving an assessment of high and 6.08% as very high (**Table III**).

No association was found between the assessment of the competence of doctors and gender, education and the self-assessment of the financial situation of the respond-

Evaluation of treatment in Polish oncology hospitals	N (% in N = 329)
Very good	7 (2.13)
Good	138 (41.95)
Poor	139 (42.25)
Very poor	45 (13.68)

**Table II.** Evaluation of treatment conditions in Polish oncology hospitals ( $N = 329$ ).

Source: Own study.

Assessment of oncologists' competence	N (% in N = 329)
Very high	20 (6.08)
High	229 (69.60)
Low	64 (19.45)
Very low	16 (4.86)

**Table III.** Assessment of oncologists' competence (N = 329).

Source: Own study.

ents. An association was found between the assessment of oncologists' competence and the objective dimension of economic status (Table VI). It was established that the assessment of competence increased with the income level of the respondents ( $\chi^2 = 36.31275$ ;  $p = 0.00029$ ;  $V = 0.1918099$ ).

### Interpersonal skills of oncology medical personnel

A little over half, 54.71%, believe that a cancer patient in a hospital should receive emotional support from medical personnel, 6.69% – strongly agreed and 48.02% agreed (Table IV).

The assessment of the interpersonal skills of medical personnel is also influenced by the economic situation of the respondents (Table VI). In the opinion of respondents with an income in excess of 1500 PLN, patients with cancer can count on emotional support from medical staff during hospitalisation. In contrast, respondents with a low income of less than 500 PLN and from 501 to 900 PLN often believed that hospitalised patients cannot definitely count on emotional support ( $\chi^2 = 25.42136$ ;  $p = 0.01295$ ; Cramér's  $V = 0.1604874$ ). No association was found between other pairs of variables.

No association was found between the assessment of interpersonal skills of the medical personnel and gender, education and self-assessment of financial situation.

### Assessment of access to oncology medical services

64.74% of respondents rated access to oncology hospital treatment negatively: 48.02% responding poor and 16.72% as very poor. Only 35.26% of respondents perceived access to oncology medical service positively: only 1.52% very good and 33.74% saying good (Table V).

Access to:	Very good	Good	Poor
Oncological hospital treatment	5 (1.52)	111 (33.74)	158 (48.02)
Oncologists. oncology clinics	5 (1.52)	105 (31.91)	158 (48.02)
Cancer prevention trials	7 (2.13)	120 (36.47)	150 (45.59)
Rehabilitation after oncological treatment	5 (1.52)	70 (21.28)	167 (50.76)

**Table V.** Assessment of access to oncology medical services (N, % in N = 329).

Source: Own study.

Do patients with cancer expect emotional support from doctors and nurses in hospital?	N (% in N = 329)
Strongly agree	22 (6.69)
Agree	158 (48.02)
Disagree	110 (33.43)
Strongly disagree	39 (11.85)

**Table IV.** Assessment of interpersonal skills of oncology medical personnel (N = 329).

Source: Own study.

Additionally, access to oncologists and oncology clinics in Poland was assessed similarly (Table V) 66.56% of respondents believe that it is unsatisfactory, with 48.02% considering it as poor, and 18.54% as very poor.

Slightly better, but also assessed negatively by the majority of respondents, is the access to cancer prevention trials (Table V). In this case, 61.40% of respondents believe that it is inadequate (45.59% – poor, 15.81% – very poor).

Access to rehabilitation after cancer treatment was rated the worst. More than three-quarters of respondents, 77.20%, felt that access to the service is unsatisfactory with 50.76% responding poor and 26.44% as very poor (Table V).

There was no relationship found between the assessment of the access to medical oncology services and gender and the income level of the respondents (Table VII).

The perception of respondents' financial situation influenced their assessment of the access to oncology medical services (Table VI). Data analysis confirmed that:

- People who perceived their material conditions as good, more often evaluated access to oncological hospital treatment as relatively good; while respondents who assessed their economic situation as average, often believed that the access is rather poor ( $\chi^2 = 24.39768$ ;  $p\text{-value} = 0.00044$ ; Cramér's  $V = 0.1157813$ ). There was no association found between the poor assessment of the material situation of respondents and the other pairs of variables.
- Respondents who perceived their economic status as good, more often evaluated access to oncologists and oncology clinics as relatively good; while respondents who viewed their material situation as average, belie-

ved that access is rather poor ( $c^2 = 13.00759$ ;  $p$ -value = 0.04292; Cramér's  $V = 0.0845401$ ). There was no association found between the poor assessment of the respondents' material situation and the other pairs of variables.

There was no association found between the perception of the economic situation of respondents and the assessment of access to cancer preventive examination and rehabilitation after cancer treatment.

In conclusion, it can be stated that the worse the perception of respondents' own financial situation, the worse was their evaluation of access to oncology medical services (not prevention and rehabilitation).

There was also a relationship between the assessment of access to oncological prophylaxis and the older person's level of education: people with secondary education tend to rate access to prevention as rather weak, while those with higher education generally rate it as quite good. No association was found between the remaining pairs of variables ( $\chi^2 = 10.76784$ ;  $p$ -value = 0.02930; Cramér's  $V = 0.1279238$ ).

## II. Influence of respondents' age on the beliefs about cancer care (N = 910)

Analysis of the data for the entire study population (N = 910) confirmed the existence of the relationship between the assessment of cancer treatment conditions in Polish hospitals and the age of the respondents ( $c^2 = 30.18479$ ;  $p$ -value = 0.01128; Cramér's  $V = 0.1051508$ ). A negative

evaluation of cancer treatment conditions increased as the age of the respondents increased (Table VII).

Moreover, the analysis of data for the entire study population (N = 910) showed that the evaluation of access to rehabilitation after cancer treatment is associated with age ( $\chi^2 = 25.79955$ ;  $p = 0.00402$ ; Cramér's  $V = 0.1190612$ ) (Table VII). Based on a correspondence analysis it was apparent that older people more often assessed the access to rehabilitation as poor when compared to younger respondents.

No association was found between the age of the respondents and the assessment of oncologists' competence, the assessment of the interpersonal skills of medical personnel and the assessment of access to: hospital treatment, oncologists, oncology clinics and cancer prevention trials.

## Discussion

The data highlight the prevalence of negative beliefs about Polish oncology by older people. The majority of respondents negatively evaluated the conditions of treatment in oncology hospitals and were critical about access to oncology medical services in Poland. Although three-quarters of seniors highly value the knowledge and experience of oncologists, 45.29% of the respondents considered that the medical staff had poor interpersonal skills. It was established that the age of respondents, their economic status and level of education influenced their beliefs about cancer care.

	Gender	Education	Net income	Self-assessment of financial situation
Evaluation of treatment in Polish oncology hospitals	ns	ns	ns	$\chi^2 = 22.54187$ ; $p$ -value = 0.00097; Cramér's $V = 0.1112908$
Assessment of oncologists' competence	ns	ns	$\chi^2 = 36.31275$ ; $p$ -value = 0.00029; Cramér's $V = 0.1918099$	ns
Assessment of interpersonal skills of oncology medical staff	ns	ns	$\chi^2 = 25.42136$ ; $p$ -value = 0.01295; Cramér's $V = 0.1604874$	ns
ASSESSMENT OF ACCESS TO ONCOLOGY MEDICAL SERVICES				
Oncological medical treatment	ns	ns	ns	$\chi^2 = 24.39768$ ; $p$ -value = 0.00044; Cramér's $V = 0.1157813$
Oncologists, oncology clinics	ns	ns	ns	$\chi^2 = 13.00759$ ; $p$ -value = 0.04292; Cramér's $V = 0.0845401$
Cancer prevention trials	ns	$\chi^2 = 10.76784$ ; $p$ -value = 0.02930; Cramér's $V = 0.1279238$	ns	ns
Rehabilitation after oncological treatment	ns	ns	ns	ns

ns – not significant.

**Table VI.** The association between beliefs about oncology care and gender, education and SES (income level and self-assessment of financial situation) (N = 329).

Source: Own study.

	Age
Evaluation of treatment conditions in Polish oncological hospitals	$\chi^2 = 30.18479$ ; $p\text{-value} = 0.0112$ ; Cramér's $V = 0.1051508$
Assessment of oncologists' competence	ns
Assessment of interpersonal skills of oncology medical staff	ns
ASSESSMENT OF ACCESS TO ONCOLOGY MEDICAL SERVICES	
Oncological medical treatment	ns
Oncologists, oncology clinics	ns
Cancer prevention trials	ns
Rehabilitation after oncological treatment	$\chi^2 = 25.79955$ ; $p\text{-value} = 0.00402$ ; Cramér's $V = 0.1190612$

ns – not significant.

**Table VII.** The association between beliefs about oncology care and age ( $N = 910$ ).

Source: Own study.

Understanding society's attitude towards health care, the beliefs about the quality of oncology medical services and access to them is crucial. Knowledge of people's attitudes and beliefs could assist for the reorganisation of health care services to increase efficiency in the fight against cancer. Additionally, programmes could be created to motivate individuals to speedily consult a doctor if distressing symptoms are noticed and to continue treatment in the event of an unfavourable diagnosis. Particularly significant in this context are older people, not only because the risk of morbidity and mortality from cancer increases with age, but also because they face social inequalities in health care and disease treatment compared to the younger age categories. This means unequal opportunities for both, a healthy lifestyle and access to health care services arising from two important variables – age and the associated economic status.

So far, empirical analyses have confirmed that older people have limited access to cancer prevention [41] and diagnostics [42]. The age of respondents, and possibly because of their difficulty in gaining access to medical services, has an impact on their assessment of the functioning of oncological care. In the analysed study, it was confirmed that the older the respondents, the more critical they were when assessing the conditions of treatment in oncology hospitals and access to rehabilitation after cancer treatment ( $N = 910$ ). The results confirm, as have other studies, that there is a stronger tendency for older people to hold fatalistic beliefs concerning cancer than younger people [25, 27].

The study also confirmed that access to oncology medical services is also difficult for people of low economic status [46]. In addition, the material status of respondents has an impact on their beliefs about cancer. Many empirical studies have confirmed that fatalistic beliefs about cancer are more prevalent among the poor [8, 33, 47, 48, 51, 52]. Analysis of the data presented in this paper confirmed the existence of a relationship between beliefs about cancer care and the economic

situation of the respondents, both in objective terms (the amount of income) and in subjective terms (an assessment of their own financial situation) ( $N = 329$ ). Generally, the worse the economic situation of the respondents, the more critical they were in their assessment of the conditions of treatment in oncology hospitals (subjective dimension SES); assessment of oncologists' competence (objective dimension SES); assessment of interpersonal skills of oncology medical personnel (objective dimension SES); access to hospital treatment (subjective dimension SES) and oncologists and oncology clinics (subjective dimension SES).

Another variable influencing the perception of quality of oncological care is the level of education of the respondents. Empirical studies confirm also that fatalistic beliefs are associated with lower levels of education [25, 31]. In this study it was also confirmed that respondents with lower levels of education evaluate the access to cancer prevention as being poor.

It is important to remember that the critical perception of the conditions of treatment and access to cancer services by older people may perpetuate the already high rate of inactivity in them seeking medical help when experiencing distressing symptoms that may indicate a cancerous condition [8, 40]. In connection with the existence of high rates of morbidity and mortality from cancer among the elderly, this trend appears to be particularly unfavourable given the activities carried out to combat this group of diseases. Strategies to solve this problem should be implemented at a macro-structural level through the creation and implementation of improved social and health policies. They should be aimed, firstly, at improving the conditions of oncology treatment and accessibility to medical oncology services, and secondly, designed to enhance older people's socio-economic status (objective dimension SES) and thereby increase their feeling of financial security (subjective dimension SES).

To enhance the efficiency of strategies to fight cancer at the macro- and micro-structural level (medical insti-



tutions, non-governmental organisations) it is essential to know how medical personnel are perceived by older people. In addition to the instrumental function and care provided by medical staff, their emotional support and communication skills should be assessed. Studies undertaken in this area refer to the analysis of socio-cultural conditions of the decision of cancer patients to use medical help [23] and the quality of physician-patient communications [53]. In such studies, it is noted that older cancer patients usually have the lowest awareness of health issues and often suffer from poor doctor-patient communication [54, 55]. Consequently, this may lead to their poor understanding and assessment of the risks and benefits of prevention and treatment [54].

The beliefs about the physician-patient relationship and communication are of particular importance for cancer care because of the highly threatening nature of the disease [56]. Patients must cope with serious diagnoses and the physically and mentally demanding treatment, which has a profound effect on their daily functioning and their future. In addition, they need to understand complex information and take difficult medical decisions. Perceiving medical staff as a supportive and trustworthy group, because of their high competence and professional experience, can have a positive influence on the health behaviour of oncological patients and healthy people (prevention).

According to Salmon and Young, patients with life-threatening illnesses may have a more positive perception of doctors because they “subjectively construct an image of a specialist to meet their own safety and dependency needs” [57]. Establishing a social bond between a physician and a patient allows a common emotional plane to be found that can lead to better co-operation and to the optimal treatment process.

The doctor-patient relationship is characterised by an imbalance. The physician, as a representative of the medical system, has the knowledge and power [58] and the patient is institutionally subject to it. It should be recognised that a patient, while wanting to participate in the treatment process as a partner, is still a lay person, under the authority of a specialist doctor. Therefore, the knowledge and competence of the doctor must be trusted. The patient also has to trust the physician to use his or her skills to provide treatment and care to a person suffering and in need of support. Therefore, the patient needs to take into account two issues: the doctors’ professional competence (knowledge, technical skills, work experience) and their social and communication skills, and whether medical staff are acting in the best interest of the patient (honesty, confidentiality and care with respect) [59, 60].

As the results show, there is a divergence between the assessment of medical personnel’s instrumental function and care. 75% of respondents positively assessed the competence (knowledge, experience) of oncologists, but 45.29% negatively evaluated the interpersonal skills of medical personnel when implementing their care function. They also considered that cancer patients in hospital do not receive any emotional support from medical personnel.

Mechanic and Meyer determined that the most frequently identified aspect of the relationship with medical staff was interpersonal competence, which included caring, attention and compassion [60]. Although technical competence had a high priority, it was often assessed on the basis of the doctor’s reputation or interpersonal cues. However, in cancer cases, it was revealed that patients have to deal with a multi-dimensional medical relationship, distinguishing aspects such as competence, fidelity, honesty and caring [61].

Positive beliefs about the interpersonal skills of physicians and nurses largely build patients’ trust in the staff in medical institutions. The results of this study, which confirm seniors’ low assessment of the emotional support and care given by oncology medical staff, should be an important message for those making and implementing anti-cancer strategies; the public health representatives, the health promoters and the medical staff themselves. Particular attention should be paid to the interpersonal needs of older people from lower socio-economic groups. It was confirmed that the lower the economic status of the respondents – in objective dimensions ( $N = 329$ ), the more critical was their assessment of oncologists’ competence and the interpersonal skills of medical personnel. The relationship between a low economic situation and the greater criticism of physicians has been recognised by other Polish, European [62, 63] and American studies [64].

It is, therefore, necessary to develop and enhance the positive image of medical personnel by older people. Thus, macro-structural measures are required, focused on building a positive social image of medical institutions: by improving the conditions and quality of treatment and cooperation with medical staff and enable them (or persuade them) to develop their competence related to communication with patients – both in medical school and during their professional life.

Measures to improve the image of healthcare personnel, such as improving the interactions between medical staff and patients, and to provide social support for patients and their families should be undertaken at the micro-structural level. Such initiatives should be implemented primarily at all levels of management in local government institutions and in medical institutions. These should include mandatory, periodic courses to enhance communication skills; ensuring welcoming environmental conditions in medical facilities; implementing procedures to facilitate more rapid patient appointments at doctors’ surgeries or at hospitals, etc. In this respect, national or local, social campaigns aimed at improving the image of medical institutions and strengthening trust in the medical staff can have a positive influence.

It is also important to build support systems for older people, both for those in good health and for patients at all stages of cancer care, especially for those of lower economic status. It is important to consider three complementary areas: the patient’s close family, the medical staff and volunteers (e.g. NGO; “patient for patient” movement). Because of the prevalence of negative beliefs about cancer care, doctors and nurses should improve their competence regarding doctor-patient communica-

tion, establish and maintain partnerships with patients and their families, especially with the elderly and the less affluent.

## Conclusions

The negative assessment of cancer care can deepen the already high level of fear about cancer and reinforce cancerophobia and fatalistic beliefs in society. Related to the critical evaluation of Polish oncology with the increasing rates of morbidity and mortality from cancer, it is necessary to intensify macro-structural measures aimed at enhancing the quality and availability of medical services. Additionally, there is a need to educate physicians to improve their competence and interpersonal skills, so they can provide patients with quality care and social support. This would contribute to an increased level of confidence in physicians and general medicine by older people.

It is also necessary to create and implement policies aimed at overcoming inequalities in health care, in this case, associated with old age and low economic status. Additionally, it is important to take into account lay perspectives when creating strategies to fight cancer.

The impact of beliefs about cancer care on health behaviour should be more broadly analysed on the basis of representative samples.

The results, especially after the inclusion of the above empirical issues, may have practical applications in the design and implementation of effective anti-cancer strategies developed specifically for Polish society. Understanding the beliefs about cancer would appear to be the right approach for designing effective health promotion and cancer prevention strategies.

## Limitations

This study has various limitations. The first concerns the type and size of the research sample. It would be advisable to carry out similar studies on a representative sample of all adults in Poland. Secondly, it would be interesting to learn what impact cancer beliefs have on the preventative behaviour of respondents (participation in preventative actions, adherence to the principles of healthy living – not smoking, not drinking alcohol, having a healthy diet, physical activity, etc.). Thirdly, further research is needed on the cancer population to determine the impact of anxiety and cancer beliefs on patients' health behaviour, accepting and continuing treatment and adhering to medical advice. Finally, it is also important to undertake research on the attitudes and beliefs of medical personnel regarding the role of the patient in the treatment process, as well as on the relationship and communication between the physician and the patient.

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