Anthropological Review • Vol. 78 (3), 289–296 (2015)

Anthropological Review
Available online at: https://doi.org/10.1515/anre-2015-0022

Older people's beliefs on prevention and etiology of cancer in Poland. Implications for health promotion

Małgorzata Synowiec-Piłat

Department of Humanistic Sciences in Medicine, Wrocław Medical University

Abstract: Introduction: Poland is among the countries with the highest mortality rates from cancer, and 75% of deaths from cancer occur after the age of 60. In the case of cancer, particular attention should be paid to beliefs people have in society.
Aim of research: To learn about older people's beliefs about the importance of preventive oncology care, individual's responsibility for getting cancer, and the etiology of cancer. We analyzed the association between beliefs about cancer and the age of the respondents.
Materials and Methods: The study was carried out in 2012 with a sample of 910 adult residents of Wrocław. An interview questionnaire was used. The article presents data on older adults (aged older than 56 years) (N = 188).
Results: The vast majority of respondents recognize the need to engage in preventive oncology care. Only 5% of respondents hold fatalistic beliefs, 50% of older adults believe that "if someone is sick with cancer, it does not depend on them". An association was confirmed that the oldest adults (65 years and older) are more likely to agree with the above statement, 34% disagree with the belief that "if someone is sick with cancer it depends largely on the lifestyle and the environment".
Discussion: In developing strategies for cancer prevention aimed at older adults, special attention should be paid to raising awareness about the impact of lifestyle on cancer incidence, increasing the sense of responsibility for their health, and reducing older adult's "external locus of control" beliefs.

Key words: health beliefs, cancer, aging, health promotion, cancer prevention

Introduction

Poland is among the countries with the highest cancer mortality rates (EUROSTAT 2009). According to forecasts, by 2025 the number of deaths caused by cancer in our country will increase 1.5 times in comparison with 2006 (Didkowska et al. 2009). It is worth noting that the increase in the incidence of age-related diseases, which include cancer, is one of the consequences of aging pop-

Original Article Received: May 15, 2015; Accepted for publication: October 24, 2015
DOI: 10.1515/anre-2015-0022

ulation. Older people are at a 10 times greater risk of getting cancer than people under the age of 65 (Yancik and Ries 1994). Throughout Europe and the U.S., over 60% of the total incidence of cancer occurs in the elderly (≥65 years) population. In Poland, 75% of deaths from cancer occurs after the age of 60 (Wojciechowska and Didkowska 2014).

Therefore, there is a need to develop effective strategies to fight this group of diseases (Yancik and Ries 1994). In the case of the older adults, it is all the more important because it almost always co-exists with other age-related chronic diseases. Undoubtedly, it is necessary to intensify the activities at a macro-structural level, aimed at increasing the quality and accessibility of cancer services: treatment, rehabilitation and prevention. On the other hand, considering that cancer is primarily caused by environmental factors related to lifestyle, particular attention should be paid to the fact that cancer prevention is largely dependent on the individual; but also embedded in the socio-cultural context i.e. decisions regarding changing bad habits and tastes. The use of medical services depends not only on the type and severity of symptoms, psychological and socio-cultural characteristics, but also on the individual's immediate environment (Freidson 1970; Cornford and Cornford, 1999). Individuals take in certain beliefs and misconceptions about cancer from culture (Sontag 1999; Leventhal et al. 2003). These convictions represent a kind of "filter and interpretative schema," which is used by people when making decisions and implementing specific health behaviors in response to health problems (Hagger and Orbell 2003: 145). Taking into account the lay perspective on cancer- related issues seems all the more important considering that cancer prevention activities do not produce satisfactory results in the form of positive attitude change and health behaviors and do not reduce cancer morbidity and mortality rates (Ostrowska, 2011; Januszek-Michalecka et al. 2013). In-depth knowledge of people's beliefs regarding cancer and their impact on health behaviors and attitudes appears to be a promising way to develop effective strategies in the fight against cancer. There is an extensive scientific literature concerning beliefs about cancer in the EU (Beeken et al., 2011; Mayo et al. 2001) and the USA (Powe 2001). However, very few studies on this topic were conducted in Poland, where psychological research seems to dominate. This research focuses primarily on the fear of cancer and its consequences (Ohnishi 2001), and very rarely on the analysis of people's beliefs about cancer (Chojnacka-Szawłowska 2005). One of the few examples is research on colorectal cancer (Tobias-Adamczyk et al. 1999). The analysis consist mainly of sick patients (Chojnacka-Szawłowska et al. 2013), and in the case of healthy individuals it typically covers a very narrow group of research participants (Chojnacka-Szawłowska 2007). Existing research on beliefs about cancer most often focuses on their correlation with SES (Schwartz et al. 2003; Wardle and Steptoe 2003) and the impact of those beliefs on preventive behavior of individuals (Peek et al. 2008; Niederdeppe and Levy 2007). However, there are relatively few studies of this type conducted on a sample of healthy subjects and taking into account the age variable exist (Royer et al. 2009).

Due to the fact that cancer is largely caused by inadequate health behavior of an individual (failure to undergo early detection, high-fat diet, obesity, lack of

physical activity, smoking, alcohol abuse, etc.), it seems especially valuable to learn about beliefs concerning the importance of cancer prevention care, the etiology of cancer and the perceived responsibility of the individual for getting this disease.

Materials and Methods

From March to June of 2012, sociological research was carried out based on an interview questionnaire with a sample of 910 adult residents of Wrocław. A quota sample, reflecting the structure of the study population in terms of gender and age was used. In the present article, however, only data relating to older adults is presented (respondents 56 and older, N = 188).

The aim of the study was to answer the following research questions:

What are older adult's beliefs about: a) the importance of engaging in early prevention behavior b) individual's responsibility for getting cancer, and c) the etiology of cancer?

What is the impact of the age of the respondents (N = 910) on the above beliefs about cancer?

To evaluate the beliefs of 1. a multiple-choice closed-ended questions composed of five statements, with the possibility of choosing one answer were used. In contrast to evaluate the beliefs of 1. b–c participants were asked to respond to specific statements on a 4-point Likert like scale (the scale of forced choice). Descriptive statistics will concern the respondents aged 56 and older (N = 188. In this article, correlation between beliefs and the age of respondents is presented. Older adults accounted for one of the age categories considered throughout the study. Therefore, the analysis of the relationship between the variables will be presented for the entire study population (N = 910); of which older adults are part of, showing a general trend towards dependence. In order to examine whether there are associations between individual pairs of nominal variables, the value of chi-square was calculated. The strength of the relationship between variables was assessed on the basis of the V-Cramer (V) ratio. V values were at the level of 0.1–0.3, which in the case of random samples ensures significant relationship. The level of significance was set at p-value <0.05. For a thorough evaluation, correspondence analysis was used. Data was analyzed using Statistica v. 9.0. The article focuses only on the association of analyzed variables with the age of the entire study population (N = 910).

Results

The majority of respondents positively rated the significance of preventive oncology care: according to 63% one should also engage in it even if there are no symptoms; in the opinion of 25% – only in situations where there are some worrying symptoms; 6% believe that if there is nothing wrong there is no need for cancer prevention. Only 5% of respondents hold fatalistic beliefs: 3% said that "what will happen, will happen", and 2% that "if it's cancer nothing can be done" (1% – answered "hard to say") (Table 1).

To study the beliefs regarding one's responsibility for getting cancer participants were asked to respond to the following statements: „if we get cancer it doesn't depend on us", „ if a person becomes sick with cancer it is their fault" (Table 2). Half of the respondents think that: „ if we get cancer it doesn't depend on us" (21% strongly agree and 29% tend to agree with this belief). The rest

Table 1. The importance of engaging in early cancer prevention behavior (N=188)

Do you it's important to engage in early cancer detection behavior?	Number of responses	% of N=188
yes, also in a situation when everything is ok and there are no symptoms;	119	63
yes, only in a situation where there are some worrying symptoms;	46	25
there is no reason to do tests if everything is ok;	11	6
no, what will happen, will happen;	5	3
no, if it's cancer nothing can be done;	4	2
It's hard to say	3	1

Source: own research.

of the respondents disagree with this belief (38% somewhat disagree and 12% strongly disagree). An association between this belief and the age of the respondents was confirmed ($Chi^2=57.49$; *p*-value=0; V=0.14). Correspondence analysis showed that younger people (18–25) more often strongly disagree with this statement, respondents between 46–55 years often somewhat agree with this statement, and older adults (65 years and older) often strongly agree with the above belief. No association was found between other pairs of variables.

In addition, 90% of respondents do not agree with the belief that „if a person becomes sick with cancer it is their fault" (55% strongly disagree and 35% tend to disagree). Only 10% of respondents agreed with this belief (including 2% completely). No association between agreeing with this statement and the age of the respondents was found.

To study the beliefs regarding the etiology of cancer, participants were asked to respond to the following specific statements: "whether we get sick with cancer largely depends on our lifestyle and the environment," and „if someone in the family was sick with cancer, I will certainly get sick as well" (Table 3). The majority of respondents (66%) agree with the statement „it depends on our lifestyle..." (19% strongly agree and 47% somewhat agree). One-third of respondents (34%) do not share this belief (7% strongly disagree). No association between agreeing with this statement and the age of the respondents was found. Nearly a quarter of the elderly (24%) is convinced that "if someone in the family was sick ... " (3% strongly agree, and 21% somewhat agree). Almost half of respondents

Table 2. Beliefs about individual's responsibility for getting cancer (N=188)

Beliefs about individual's responsibility for getting cancer	Strongly agree		Agree		Disagree		Strongly disagree	
	Number of responses	% of N=188	Number of responses	% of N=188	Number of responses	% of N=188	Number of responses	% of N=188
„if a person gets cancer it does not depend on them"	39	21	54	29	71	38	24	12
„if a person is sick with cancer it is their fault"	4	2	16	8	65	35	103	55

Source: own research.

Tabele 3. Beliefs about the etiology of cancer (N=188)

Beliefs about the etiology of cancer	Strongly agree		Agree		Disagree		Strongly disagree	
	Number of responses	% of N=188	Number of responses	% of N=188	Number of responses	% of N=188	Number of responses	% of N=188
'if someone in the family was sick with cancer, I will certainly get sick as well'	5	3	40	21	93	49	50	27
'whether someone is sick with cancer depends largely on their lifestyle and environment'	36	19	89	47	50	27	13	7

Source: own research.

(49%) do not share this belief. On the other hand, 27% of respondents strongly disagree with this statement. An association between agreeing with this statement and the age of the respondents was confirmed ($chi^2=33.26$; p-value=0.004; V=0.11): more often younger respondents (18–25 years) strongly disagreed with this statement; people aged 36–45 and 46–55 somewhat disagreed with this statement, while older adults (65 years and older) often somewhat agreed with this statement. No association was found between other pairs of variables.

Discussion

Research shows that individuals have a multi-faceted cognitive representation of various diseases that consists of various beliefs regarding the causes, symptoms, effects, and treatment of the disease (Lykins et al. 2008). Beliefs regarding the disease can affect whether and what steps the person will take to reduce the risk of developing the disease and minimize the risks associated with its duration (Leventhal et al. 1980, Lau et al. 1983). Fatalistic beliefs often go together with cancer. Fatalism, an outlook that events are controlled by external forces and humans are powerless to influence them, has been proposed as a barrier to cancer prevention, (Straughan et al. 1998, Lannin et al. 1998) screening, (Straughan et al. 1998, Michielutte et al. 1996) and negatively affect survival (Chavez et al. 1997, Mayo et al. 2001). Fatalistic beliefs are characterized by pessimism, helplessness, and confusion regarding ways to avoid getting cancer (Straughan et al. 1998). Wide dissemination of fatalistic beliefs about cancer prevention was confirmed among the adult population of Americans, half of who believe that "everything causes cancer" and that "little can be done to prevent cancer" (Niederdeppe et al. 2007). It has been proven that fatalistic beliefs about cancer are more prevalent among the poor (Freeman 1989, Freeman 1991) and with lower levels of education (Michielutte et al. 1996, Mayo et al. 2001). However, there are hardly any studies on the beliefs that take into account the age variable. Western studies show the existence of a number of negative and often erroneous beliefs of older adults on health issues. Older people, including those after treatment,

tend to identify their health problems with the natural aging process, treating the symptoms as something inevitable, not suitable for treatment, and therefore not requiring assessment or medical intervention (Heidrich et al. 2006; Morgan et al. 1997). Royer et al. (2009) have shown that older women suffering from breast cancer described their symptoms as incurable and not subject to examination. In other studies comparing older patients suffering from breast cancer and healthy women it has been shown that older women – regardless of the "history of cancer," associated their disease symptoms with aging rather than cancer or other diseases (Heidrich et al. 2006). Given the above issues, it is worth noting that in the group of older people surveyed, only 5% manifested fatalistic beliefs. The vast majority of respondents recognize the need to undergo preventive oncology care: 63% believe one should also do it, even if there are no symptoms and 25% – only in situations where there are some worrying symptoms. Awareness of the importance of prevention potentially increases the likelihood of early detection. However, a deeper analysis is needed to examine the direction of the association between older adult's beliefs about prevention and the actual implementation of preventive practices.

Health behavior is also influenced by how responsible we feel for our health. Psychological research shows that when people shift the responsibility for their health „outside" (e.g. external locus of control), they are less active in making health-related decisions. Besides, it can reduce the sense of self-efficiency (Straughan et al. 1998) and motivation to perform preventive behaviors (Underwood 1992). Each of these may decrease the likelihood of an individual engaging in behaviors that reduce cancer incidence or mortality (Steptoe 2001). The fact that half of the surveyed older adults think "if someone is sick with cancer, it does not depend on them" is worrying. It was also confirmed that the older the respondent, the more frequently causes of cancer are attributed to factors beyond the control of the individual. In addition, precisely those aged 65 years and older more often – than respondents in other age groups – completely agree with the above belief.

It would also seem important to understand, to what extent do we realize that it is our lifestyle and environment (e.g. pollution, exposure to carcinogens, etc.) which may contribute to the development of cancer. It is disturbing that one-third of respondents (34%) do not notice the correlation between certain elements of their lifestyle and the environment in which they function, and the possibility for getting cancer. Lack of awareness is likely to result in inaction in changing their lifestyle. Understanding people's beliefs about cancer helps in designing more efficient health promotion and cancer prevention programs. Based on the analysis of the research materials, it can be stated that in developing strategies for cancer prevention aimed at older adults, special attention should be paid to raising awareness about the impact of lifestyle on cancer incidence, increasing the sense of responsibility for their health, and reducing older adult's "external locus of control" beliefs.

Furthermore, due to a small survey sample further research is needed on a representative sample of Polish society.

Conflict of interest

The author declare that there is no conflict of interest regarding publication of this paper.

Corresponding author

Małgorzata Synowiec-Piłat, Department of Humanistic Sciences in Medicine, Wrocław Medical University, Mikuliczа-Radeckiego 7, 50-368 Wrocław
e-mail address:
m.synowiecpilat@gmail.com

References

Beeken RJ, Simon AE, von Wagner C, Whitaker KL, Wardle J. 2011. Cancer fatalism: deterring early presentation and increasing social inequalities?. Cancer Epidemiol Biomarkers Prev. 20(10):2127–31.

Chojnacka–Szawłowska G. 2005. Opinions about cancer and health–related behaviour in the Polish society. In: T Maliszewski, WJ Wojtowicz, J Żerko, editors. Anthology of Social and Behavioural Sciences. Linkoping: Linkoping University. 393–401.

Chavez LR, Hubbell FA, Mishra SI et al. 1997. The influence of fatalism on self-reported use of Papanicolaou smears. Am J Prev Med. 13(6):418–24.

Chojnacka–Szawłowska G. 2007. Poczucie zagrożenia chorobą nowotworową przez palących i niepalących. In: G Chojnacka–Szawłowska, B Pastwa-Wojciechowska, editors. Kliniczne i sądowo – penitencjarne aspekty funkcjonowania człowieka. Kraków: Oficyna Wydawnicza IMPULS. 135–47. (in Polish)

Chojnacka–Szawłowska G, Kościelak R, Karasiewicz K, Majkowicz M, Kozaka J. 2013. Delays in seeking cancer diagnosis in relations to beliefs about the curability of cancer in patients with different disease locations. Psychol Health. 28(2):154–70.

Cornford CS, Cornford HM. 1999. „I'm only here because of my family". A study of lay referral network. British Journal of General Practice 49:617–20.

Didkowska J, Wojciechowska U, Zatoński W. 2009. Prediction of cancer incidence and mortality in Poland up to the year 2025. Warszawa: Centrum Onkologii, Instytut M. Skłodowskiej-Curie.

European Commission EUROSTAT. 2009. [pdf] Available at: http://epp.eurostat.ec.europa.eu/statistics [Accessed 29.10.2013].

Freeman HP. 1991. Race, poverty, and cancer. J Natl Cancer Inst. 83:526–7.

Freidson E. 1970. Profession of medicine: a study of the sociology of applied knowledge. Chicago: University of Chicago Press.

Hagger MS, Orbell S. 2003. A meta–analytic review of the Common Sense Model of illness representations. Psychology and Health 18:141–84.

Heidrich SM, Egan JJ, Hengudomsub P, Randolph, SM. 2006. Symptoms, symptom beliefs, and quality of life of older breast cancer survivors: A comparative study. Oncology Nursing Forum 33:315–22.

Januszek-Michalecka L. et al. 2013. Effectiveness of the National Population-Based Cervical Cancer Screening Programme in Poland – Outcomes, problems and possible solutions 7 years after implementation. Annals of Agricultural and Environmental Medicine 20(4):859–64.

Jemal A, Siegel R, Ward E. et al. 2009. Cancer statistics. CA Cancer J. Clin 59:225–24.

Lannin DR, Mathews HF, Mitchell J, Swanson FH, Edwards MS. 1998. Influence of socioeconomic and cultural factors on racial differences in late-stage presentation of breast cancer. JAMA 279:1801–7.

Lau RR, Hartman KA. 1983. Common sense representations of common illness. Health Psychol. 2:167–85.

Leventhal H, Brissette I, Leventhal E.A. 2003. The Common Sense Model of self-regulation of health and illness. In LD Cameron, H Leventhal, editors. The self-regulation

of health and illness behavior. London: Routledge. 42–65.
Leventhal H, Meyer D, Nerenz D. 1980. The common sense representation of illness danger. Medical Psychology 2:7–30.
Lykins ELB, Graue LO, Brechting EH, Roach AR, Gochett CG, Andrykowski MA. 2008. Beliefs about cancer causation and prevention as a function of personal and family history of cancer: a national, population-based study. Psycho-Oncology 17:767–774.
Mayo RM, Ureda JR, Parker VG. 2001. Importance of fatalism in understanding mammography screening in rural elderly women. J Women Aging 13:57–72.
Michielutte R, Dignan MB, Sharp PC et al. 1996. Skin cancer prevention and early detection practices in a sample of rural women. Prev Med. 25:673–83.
Morgan R, Pendleton N, Clague JE, Horan MA 1997. Older people's perceptions about symptoms. British Journal of General Practice 47:427–30.
Niederdeppe J, Levy AG. 2007. Fatalistic beliefs about cancer prevention and tree prevention behaviors. Cancer Epidemiol Biomarkers Prev. 16:998–1003.
Ohnishi H. 2001. Mental distress in cancer patients. Masui 60(9):1024–31.
Ostrowska A. 2011. Profilaktyka zdrowotna: interpretacje, definicje sytuacji, racjonalności (przypadek profilaktyki ginekologicznej kobiet). Studia Socjologiczne 3(202):73–94. (in Polish)
Peek ME, Sayaa JV, Markwardt R. 2008. Fear, fatalism and breast cancer screening in low income African-American women: The role of clinicians and the health care system. J Gen Intern Med. 23(11):1847–53.
Powe BD. 2001. Cancer fatalism among elderly African American women: predictors of the intensity of the perceptions. J Psychosoc Oncol. 19:85–95.
Royer HR, Phelan CH, Heidrich SM. 2009. Older breast cancer survivors' symptom beliefs. Oncology Nursing Forum 36:463–70.
Schwartz KL, Crossley-May H, Vigneau FD, Brown K, Banerjee M. 2003. Race, socioeconomic status and stage at diagnosis for five common malignancies. Cancer Causes Control. 14(8):761–66.
Sontag S. 1999. Choroba jako metafora. AIDS i jego metafory. Warszawa: PIW. (in Polish)
Steptoe A, Wardle J. 2001. Locus of control and health behavior revisited: a multivariate analysis of young adults from 18 countries. Br J Psychol. 92:659–72.
Straughan PT, Seow A. 1998. Fatalism reconceptualized: a concept to predict health screening behavior. J Gend Cult Health 3:85–100.
Tobiasz-Adamczyk B, Szafraniec K, Bajka J. 1999. Zachowania w chorobie. Opis przebiegu choroby z perspektywy pacjenta. Kraków: Collegium Medicum UJ. (in Polish)
Underwood S. 1992. Cancer risk reduction and early detection behaviors among black men: focus on learned helplessness. J Community Health Nurs. 9:21–31.
Wardle J, Steptoe A. 2003. Socioeconomic differences in attitudes and beliefs about healthy lifestyles. J Epidemiol Community Health. 57(6):440–3.
Wojciechowska U, Didkowska J. 2014. Zachorowania i zgony na nowotwory złośliwe w Polsce. Krajowy Rejestr Nowotworów, Centrum Onkologii – Instytut im. Marii Skłodowskiej – Curie. Available at: http://onkologia.org.pl/raporty. [Accessed 30.12.2014] (in Polish)
Yancik R, Ries LA. 1994. Cancer in older persons. Magnitude of the problem – how do we apply what we know? Cancer 1;74(7 Suppl):1995–2003.