ECONOMIC AND SOCIO-DEMOGRAPHIC PROFILE OF CANCER SURVIVORS ACCORDING TO DEGREE OF RESILIENCE[1]

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ABSTRACT: The aim of this paper was to describe the economic and socio-demographic profile of cancer survivors, seen by the Oncology College Hospital Service of the Federal University of Pelotas, Rio Grande do Sul, Brazil according to their degree of resilience. It is a descriptive cross-sectional study, carried out with 264 cancer survivors under medical evaluation from March to June 2010. Data collection occurred through interviews, application of the Brazilian version of Wagnild and Young's Resilience Scale and consultation of the patients' hospital notes. The results indicate the prevalence of females (67.8%), older adults (47.4%), married persons (52.6%), whites (83.3%) and those whose main income is benefits or pension (75.4%). The high degree of resilience was greater among men (47.1%), older adults (44.8%), single people (47.9%), non-whites (52.3%) and those employed (55.6%). It was ascertained that the characterization of this population is relevant, because it will contribute to identifying factors which promote high resilience.

DESCRIPTORS: Health profile. Survival. Psychological resilience. Neoplasms.

PERFIL SOCIODEMOGRÁFICO E ECONÔMICO DOS SOBREVIVENTES AO CÂNCER SEGUNDO O GRAU DE RESILIÊNCIA

RESUMO: O objetivo deste trabalho foi descrever o perfil sociodemográfico e econômico dos sobreviventes ao câncer segundo o grau de resiliência, atendidos no Serviço de Oncologia do Hospital Escola da Universidade Federal de Pelotas, Rio Grande do Sul. Trata-se de um estudo descritivo, de corte transversal, desenvolvido com 264 sobreviventes ao câncer em avaliação médica no período de março a junho de 2010. A coleta de dados ocorreu mediante entrevistas, aplicação da versão brasileira da Escala de Resiliência de Wagnild e Young e consulta nos prontuários. Os resultados indicam o predomínio do sexo feminino (67,8%), idosos (47,4%), casados (52,6%), da raça branca (83,3%), renda principal o benefício/aposentadoria (75,4%). O alto grau de resiliência foi maior entre os homens (47,1%), os idosos (44,8%), os solteiros (47,9%), os não brancos (52,3%) e os que possuem emprego (55,6%). Constatou-se que a caracterização desta população é relevante, pois poderá contribuir para a identificação dos fatores promotores da elevada resiliência.

DESCRITORES: Perfil de saúde. Sobrevivência. Resiliência psicológica. Neoplasias.

PERFIL SOCIODEMOGRÁFICO Y ECONÓMICO DE LOS SOBREVIVIENTES DE CANCER SEGÚN EL GRADO DE RESILIENCIA

RESUMEN: El objetivo del trabajo fue describir el perfil sociodemográfico y económico de los sobrevivientes de cáncer según el grado de resiliencia, atendidos en el Servicio de Oncología del Hospital Escuela de la Universidad Federal de Pelotas, Rio Grande do Sul. Se trata de un estudio descriptivo, de corte transversal, hecho con 264 sobrevivientes de cáncer en evaluación médica durante el período de marzo a junio de 2010. La colecta de informaciones ocurrió mediante entrevistas, aplicación de la versión brasileña de la Escala de Resiliencia de Wagnild y Young y consulta a los prontuarios. Los resultados indicaron el predominio del sexo femenino (67,8%), ansíanos (47,4%), casados (52,6%), de la raza blanca (83,3%) y renta principal beneficio/jubilación (75,4%). El alto grado de resiliencia fue mayor entre los hombres (47,1%), los ansíanos (44,8%), los solteros (47,9%), los no blancos (52,3%) y los que poseen empleo (55,6%). Se constató que la caracterización de esta población es relevante, pues podrá contribuir para la identificación de los factores promotores de la elevada resiliencia.

DESCRIPTORES: Perfil de salud. Supervivencia. Resiliencia psicológica. Neoplasias.

INTRODUCTION

Data shows there to be a growing number of cancer survivors. Around three million people had had cancer in the United States of America (USA) in 1971, and by 2008 this number had risen to 11.9 million. Most of the cancer survivors had been diagnosed over five years previously, and approximately 15%, at least 20 years previously.[1]

In Brazil, however, there is a shortage of records and epidemiological data on cancer survivors.[2] Although incipient, greater emphasis on studies addressing such subjects is found in the USA. In addition to this, Brazilian studies generally evaluate the survival of the oncology patient and, in most cases, relate it to a specific organ, such as prostate or lung cancer, among others,[3-4] and to the staging at the time of diagnosis and treatment.[4-5]

It is interesting to observe that, although the evidence from the numbers points to an increase in cancer survivors' longevity, such results do not effectively translate the repercussions that this disease causes in these subjects' lives.[6] In the face of this, one may observe the existence of other characteristics which go beyond early diagnosis and the improvement in the efficacy of treatments, and which contribute to the individual's becoming a cancer survivor. These attributes may be internal, such as when the subject confronts stressful experiences and responds positively; or external, constructed with the support of social networks such as the family, friends, religion or the health care system, among others.[7] This conception supports the concept of resilience understood as a skill of individuals in facing, and responding positively to, experiences which have a high potential for risk to their health and development.[8]

In this way, it is important to study the factors which promote cancer survivors' resilience, as such studies can explain how, in the face of chronic illness, the people can act productively and efficiently.[9] Equally, one should consider that resilience can be learnt, and that health professionals – with emphasis in this study on those in nursing – on learning the characteristics of resilience, will be able to develop support interventions for those with low resilience, with the aim that these should achieve higher levels in this capacity.

The relevance of undertaking this study is also highlighted by the scarcity of scientific production on the characteristics of users of oncology services.[10] There is little research referent to the quantification, in a systematic or scientific way, of resilience in oncology patients[11] and little investigation of resilience in oncology nursing.[12] In addition to this, epidemiological profile studies benefit the development and carrying-out of actions for health promotion, prevention of harm to health, or health interventions, as they allow the investigation of a specified population's real needs. In this way, they are aimed at developing comprehensive care, through the establishment of health actions which are more efficient and appropriate for that population.[13]

In the face of the above, the present work aims to describe the socio-demographic and economic profile of cancer survivors, attended by the Oncology Service of the Teaching Hospital of the Federal University of Pelotas (HE/UFPel), according to their degree of resilience.

METHOD

This is a descriptive, cross-sectional study, undertaken based on data from a research project titled "Resilience as a coping strategy for cancer survivors",[7] carried out in the Oncology Service of the HE/UFPel.

The sample was made up of 267 cancer survivors, aged 18 or over, able to maintain a dialog so as to respond to questions during the administration of the instrument, who had finished the treatment(s) for the cancer – chemotherapy, radiotherapy, and surgery (with the exception of hormone therapy) – and who remained under medical evaluation in the above-mentioned service. Hormone therapy is excepted because this treatment is undertaken for an unspecified time by survivors of prostate cancer, breast cancer and endometrial cancer, among others.[14]

The data collection instrument was a questionnaire structured with pre-codified questions. The Brazilian version of the Resilience Scale[15] and the instrument for collecting data from oncological patients' hospital notes form part of the questionnaire.

In this research, the cancer survivors' resilience was measured using the Brazilian version of the Resilience Scale,[15] proposed by Wagnild and Young; its 25 items have Likert-type responses, varying from 1 (totally disagree) to 7 (totally agree), and it measures the level of positive

psycho-social adaptation in the face of important life events.[16] This scale's score can vary from 25 to 175 points: values greater than 145 indicate moderately high to high resilience, 125 to 145 refer to moderately low to moderate levels of resilience, and values equal to or lower than 124 points correspond to low resilience.[17]

Thus, on this scale, the theoretical model of resilience covers two factors: factor I, termed "personal competence", which is related to self-confidence, independence, determination, invincibility, control, resourcefulness and perseverance; and factor II, termed "acceptance of oneself and of life", which represents adaptability, balance, flexibility and a balanced view of life.[16]

Data collection was undertaken by a team of twelve interviewers, all student nurses who are part of the Center for Chronic Conditions and their Interfaces (NUCCRIN), at the UFPel.

The target population was approached in the waiting room in the Oncology Service of the HE/UFPel, between March and June 2011, between Mondays and Saturdays, during the work shifts of the service studied, observing the anticipated schedules.

The data was collected according to the cancer survivors' availability and acceptance to participate, by means of a structured questionnaire with pre-codified questions. These were administered individually, the Resilience Scale being self-administered. Other information related to the cancer survivors' treatment was collected from these subjects' hospital notes by one of the interviewers in the HE/UFPel's Medical and Statistical Archiving Service.

The procedures adopted for controlling and reducing errors related to the typing of the data occurred: in each interviewer's checking at the end of the interview; through double-checking undertaken by the supervisors on receiving the questionnaire; in the replication of 10% of the interviews held; in the inputting of data, when double-keying was undertaken, followed by comparison of the databases and corrections of inconsistencies.

For data analysis, resilience was considered a dependent variable, and nine independent variables were considered, which cover the cancer survivors' socio-demographic and economic characteristics: sex, age range, marital status, schooling, race, origin, religion, main source of income, and family income.

The information was entered into a database constructed using the Epi-Info 6.04 software, with the univariate analyses being undertaken with the same program, using measurements of central tendency (mean), dispersion (standard deviation), and frequency distribution.

The study observed the precepts of the National Health Council's Resolution 196/96 and n. 251/97, and was approved by the UFPel's Faculty of Nursing's Research Ethics Committee, under decision n. 31/2009. All the participants signed the Terms of Free and Informed Consent, and were ensured anonymity and the right not to participate or to withdraw their consent at any time during the research.

RESULTS

Of the cancer survivors who were attended by the health service studied in the period March–June 2010, three dropped out of the research (1.13%) due to lack of time on the part of the interviewees. The sample was therefore made up of 264 cancer survivors, of whom 179 (67.8%) were female and 85 (32.2%) male.

Table 1 presents the description of the variables and the distribution of the population regarding the degree of resilience according to some socio-demographic variables of the cancer survivors studied.

The mean age was 58.4 (SD=12.1), varying between 20 and 84 years, with the men's mean age being 61.7 (SD=12.6) and the women's, 56.8 (SD=11.5). Most people in the sample are aged 60 or over (47.4%).

When asked about marital status, the majority (52.6%) stated that they were married or had a partner. Schooling varied between those who had not gone to school and those who had nine years or more of education; there was a concentration of those with between five and eight years of study (38.6%). In relation to race, 220 (83.3%) stated that they were white. Regarding religion, 244 (92.4%) mentioned practising it.

In relation to resilience, a mean score of 141.2 (SD=18.2) was identified, with a minimum score of 35 and a maximum of 175. The greater frequency of a high degree of resilience was found among the men (47.1%), while most women showed moderate resilience (46.9%).

A high degree of resilience was also greater among: cancer survivors aged 60 or over (44.8%),

single people (47.9%), those who had studied for between one and four years (44.3%) and five and eight years (44.1%), non-whites (52.3%) and those who did not practise a religion (55.0%).

Table 1 - Frequency of degree of resilience according to the socio-demographic characteristics of cancer survivors, attended in the Oncology Service of the HE/UFPel, March–June 2010. Pelotas-RS, 2011

Characteristics	Total (n=264)		Low resilience (n=29)		Moderately low to moderate resilience (n=122)		Moderately high to high resilience (n=113)	
	n	(%)	n	(%)	n	(%)	n	(%)
Sex								
Male	85	32.2	7	8.2	38	44.7	40	47.1
Female	179	67.8	22	12.3	84	46.9	73	40.8
Age range								
20 to 39 years	18	6.8	5	27.8	6	33.3	7	38.9
40 to 59 years	121	45.8	10	8.3	61	50.4	50	41.3
60 years and over	125	47.4	14	11.2	55	44.0	56	44.8
Marital status								
Married/with partner	139	52.6	9	6.5	70	50.3	60	43.2
Single	48	18.2	8	16.7	17	35.4	23	47.9
Widowed	40	15.2	9	22.5	16	40.0	15	37.5
Separated/divorced	37	14.0	3	8.1	19	51.4	15	40.5
Schooling								
Did not study	25	9.5	5	20.0	11	44.0	9	36.0
1 to 4 years	79	29.9	12	15.2	32	40.5	35	44.3
5 to 8 years	102	38.6	11	10.8	46	45.1	45	44.1
9 years or more	58	22.0	1	1.7	33	56.9	24	41.4
Race								
White	220	83.3	23	10.5	107	48.6	90	40.9
Non-white	44	16.7	6	13.6	15	34.1	23	52.3
Origin								
Urban	177	67.1	17	9.6	81	45.8	79	44.6
Rural	87	32.9	12	13.8	41	47.1	34	39.1
Religion								
None	20	7.6	2	10.0	7	35.0	11	55.0
Has	244	92.4	27	11.1	115	47.1	102	41.8

Source: database of the research "Resilience as a coping strategy for the cancer survivor", Pelotas-RS, 2010.

The study's results show that three quarters (754%) of the interviewees mentioned having benefits or a pension as their principal source of income. In relation to the 'family income' variable, variation was observed between up to one minimum salary through to four minimum salaries or more, with the majority receiving between one and three minimum salaries (51.9%) (Table 2).

Although it was the smallest proportion of cancer survivors who defined their job as their principal source of income (10.2%), the majority of these had high resilience (55.6%). Further, of the 137 cancer survivors who mentioned a family income of between one and three minimum salaries, 72 (52.5%) fitted into the high degree of resilience.

Table 2 - Frequency of degree of resilience, according to the economic characteristics of cancer survivors attended at the HE/UFPel Oncology Service. March–June 2010. Pelotas-RS, 2011

Characteristics	Total (n=264)		Low resilience (n=29)		Moderately low to moderate resilience (n=122)		Moderately high to high resilience (n=113)	
	n	(%)	n	(%)	n	(%)	n	(%)
Principal source of income								
Job	27	10.2	-	-	12	44.4	15	55.6
Family income	38	14.4	5	13.2	20	52.6	13	34.2
Benefits/pension	199	75.4	24	12.1	90	45.2	85	42.7
Family income								
Up to 1 minimum salary*	51	19.3	9	17.6	24	47.1	18	35.3
1 to 3 minimum salaries	137	51.9	12	8.8	53	38.7	72	52.5
4 minimum salaries or over	76	28.8	8	10.5	45	59.2	23	30.3

* Value of minimum salary between March–June 2010: RS 510.00.
Source: Database of the research "Resilience as a coping strategy for the cancer survivor", Pelotas (RS), 2010.

DISCUSSION

Socio-demographic and economic profile

In the study's sample, women predominated. This finding is similar to that found in an American study in 2007, which identified that of the total of 11.7 million cancer survivors, 54% were women.[18] In a study carried out in the Oncosinos/Hospital Regina in Novo Hamburgo-RS, in which the researchers analyzed the degree of resilience of 48 oncology patients during chemotherapy treatment, it was identified that 70% of them were women.[11]

The cancer survivors' mean age is also similar to that found in the above-mentioned study, in which the mean age was 52 years old, with the minimum age being 19 and the maximum, 76.[11] Still in relation to age, it was identified in the present study that the largest proportion of cancer survivors was aged 60 or over. The age range of the total of cancer survivors in 2008 in the USA was similar to that found in this study – approximately 60% were aged 65 years old or over.[1] It must be taken into consideration that age is the principal risk factor for developing cancer.[18]

In relation to marital status, most of the cancer survivors stated that they were married or had a partner. In two other studies, however, higher proportions were identified; the first was a cross-sectional study carried out with 86 older adults (60.5% of whom were married) resident in Porto Alegre-RS, which researched this population's resilience.[19] The second was a longitudinal study carried out in the USA, which examined the resilience of 398 cancer survivors in relation to a random sample of 796 subjects, and whose evaluations were concluded between 1995–1996 and 2004–2006, finding a significant number of married people: 65.6%.[20]

The highest frequency of cancer survivors was defined as having between five and eight years of schooling. A study carried out with 86 older adults in Porto Alegre-RS, on the other hand, researching that sample's resilience, showed that the majority (76.7%) had less than eight years of schooling.[19] However, a longitudinal study involving cancer survivors, undertaken in the USA, is mentioned, which diverges from the data obtained in the present research, finding higher proportions of levels of schooling, these being: 10.6% had less than 12 years of study, 28.6% had finished junior high school, 27.4% had studied at university level, and the greatest proportion, 33.7%, had concluded a post-graduate degree.[20] It stands out that older adults generally have less schooling and, irrespective of being a cancer survivor, the population of the USA has a higher degree of schooling when compared to that of Brazil.

Most of the people sampled studied defined themselves as white. It is believed that this data was found because the resident population in Pelotas-RS, where this research was undertaken, is predominantly white, as revealed by the Preliminary Results of the 2010 Demographic Census, which showed that 80.2% of the total of 328,275 people of Pelotas defined themselves as white.[21]

This result is even greater in a longitudinal study carried out in the United States, which involved 398 cancer survivors, aged between 25 and 74 years old, who participated in the National Survey of Midlife Development in the United

States, and 796 interviewees, aged between 34 and 84, who had no history of cancer. The percentage found in this population of white ethnicity was 92.2%.[20]

A substantial number of cancer survivors studied practise some sort of religion. Hence, research undertaken in the Santa Rita de Cássia Hospital, in the city of Vitória in the State of Espírito Santo, whose objective was to describe the socio-demographic and clinical profile of 270 women diagnosed with breast cancer, identified data with higher values: 97% mentioned having a religion.[22]

The main source of income mentioned by the cancer survivors was pension/benefits. One must consider that this data is related to the characteristics of the population studied. They receive benefits because they have a chronic illness which very often stops the individual from working, and the pension is explained by the fact that a large proportion of the sample is elderly.

This finding was also found in two studies, the first longitudinal, carried out with cancer survivors in the USA, which identified that 48% were retired.[20] The second study, undertaken in Brazil, which was cross-sectional, measuring older adults' resilience, found that the majority (75.6%) had their pension as the main source of income.[19]

Still in relation to source of income, in the present study the smallest proportion defined it as a job. In the USA, however, it was found that the proportion of cancer survivors who worked (35.4%) was three times higher.[20] It is suggested that the percentage found occurred because since the 1990s the USA has passed federal laws defining that employers must support cancer survivors who want to work.[14]

In the sample studied, it was identified that the most frequent family income was between one and three minimum salaries. At this point, a study may be mentioned which found different data. Its objective was to investigate resilience in 852 young people resident in the Federal District-DF. In that population, it was identified that 35% of the participants had an income of between one and two minimum salaries; 22% between over two, and up to three minimum salaries; while 18.7% reported an income over three minimum monthly salaries.[23]

Degree of resilience

Regarding the resilience, the average score for the cancer survivors was similar to that found in a study which reviewed 12 studies which had applied Wagnild and Young's Resilience Scale in different populations, finding a score between 140 and 148.[17]

On stratifying the cancer survivors studied by gender, it was ascertained that the men are more resilient than the women. Although some authors define that there is no relation between gender and resilience,[19,24] others have found this association,[25-26] as shown by a study undertaken with 599 older adults, which found a greater degree of resilience in the male population.[26] In contrast, a study stands out which was carried out with 997 adolescents from the state school system of São Gonçalo-RJ, which analyzed the resilience of that population. The data from the above-mentioned research showed that the variable of gender was the only one to be associated with resilience, with the girls presenting higher levels of ability to overcome difficulties than the boys.[25]

In relation to age range, it is believed that resilience increases with age,[20] as the highest frequency of a high degree of resilience was found among the older adults from the study on cancer survivors. This data is ratified by a validation study of the Wagnild and Young Resilience Scale in Swedish, involving a sample of 1,719 Swedes aged between 19 and 103 years old. Although the evaluation of resilience was not the objective of the study, the study estimated it as being relatively high, there being a significant relationship between age and resilience, the value being increased by 0.134 units for each year of life.[24]

The Swedish version's findings are confirmed by a study carried out with 3,265 healthy participants, which aimed to complete the psychometric analyses of Wagnild and Young's Resilience Scale adapted to Dutch, which showed a significant positive association between age and score on the scale.[27]

In the present research, the marital status of being single presented the greatest frequency of high resilience for the cancer survivors. One should mention, however, a study which contrasts this finding, carried out with 2,540 women in Germany, which defined that the presence of a partner is related to the promotion of resilience.[28]

The larger proportions of high resilience found among the cancer survivors who had studied for between one to four years and five to eight years was also observed in a cross-sectional study undertaken in Brazil with 86 older adults, which identified that there is no association between the

level of schooling and the degree of resilience as, even though a larger proportion of high resilience was found in the sample, the majority (76.7%) had low schooling, that is, they had less than eight years of study.[17]

Regarding race, a counterpoint was found, as although the minority of cancer survivors identified themselves as non-white, a greater proportion of them presented high resilience. Due to the impossibility of finding studies which address this relationship, and considering that there are significant correlations between coping (the capacity to face stressful situations) and resilience,[29] mention can be made of a prospective study carried out with 131 women: African-Americans (n=8), Hispanic women (n=53) and white non-Hispanics (n=70), who were undergoing treatment for early-stage breast cancer. This study identified that the Hispanic women had better levels of recuperation and coping, when compared to the white, non-Hispanic women.[30]

In relation to religion, the majority of the cancer survivors practise it – however, a higher proportion of high degree of resilience was found among those who do not practise religion. The study which investigated the resilience which 852 young people in the Federal District showed in the face of situations which were unfavorable to their development opposes this finding, defining that the majority (62%) consider religion very important, and that this contributes to the acquisition of resilience.[23]

In the present study, the greatest frequency of high resilience was found among cancer survivors who had jobs. This finding was also found in research carried out with a stratified random sample of the female German population (n=2,540), which defined a job as a factor which promotes resilience in this population.[28]

In relation to family income, it was observed that there was a predominance of high degree of resilience in the cancer survivors who receive between one and three minimum salaries. This being so, a study carried out with 140 senior high school students in a state school in Porto Alegre-RS, aiming to investigate that population's resilience, identified that the greater the family income, the lower the resilience.[31]

On this matter, it is asserted that divergences exist in relation to socio-economic level and resilience, as some authors affirm that these are not related, poverty being an unacceptable condition of life which does not impede the development of this attribute.[17,29] On the other hand, other authors argue that individuals belonging to social class A are favored in the learning of resilience, when compared to those of class E, because they have easier access to the factors which promote resilience.[32] Nevertheless, according to the results presented by the cancer survivors studied, it is believed that resilience may be developed by all the subjects of different socio-economic levels.

FINAL CONSIDERATIONS

This study's findings evidence the predominance of cancer survivors who are female, elderly, married, with between five and eight years of schooling, white, religious, who have benefits/pension as their main source of income, and who receive between one and three minimum salaries.

However, considering the resilience scale mentioned, the cancer survivors with a high degree of resilience are those who have personal competence and acceptance of themselves and life, and who, because of this, are able to have more success than those with lower scores.

In this way, in the present study, the high degree of resilience was more frequent among men, older adults, single people, with between one and four years of schooling, non-whites, who do not have a religion, and who have, as their main source of income, a job, receiving between one and three minimum salaries.

It stands out that the characterization of cancer survivors according to their degree of resilience is relevant, as in addition to extending the current levels of knowledge on this human capacity in this population, it can contribute to the identification of factors which promote high resilience.

It is important to emphasize that, in Brazil, publications which address the subjective perception of resilience predominate, with quantitative research on the issue being scarce, which makes it difficult to compare the results obtained in this study with other national data, making it relevant.

In relation to the results obtained in this research, it is considered that generalizations cannot be made from them, as they focus on a specific oncology service. For this reason, further studies are suggested, with different designs and including larger samples, and with the statistical power to study associations.

In light of the above, it is believed that health professionals, in particular those of nursing, on becoming familiar with the profile of cancer survi-

vors, will be able to encourage the strengthening of potential and promote new ways of facing difficulties positively in those individuals who have low resilience, in the same conditions of the pathology.

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