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ORIGINAL ARTICLE

Key Factors Contributing to Quality of Life for Breast Cancer Patients in Latvia: Supplementing Quantitative Surveys with Qualitative Interviews

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Summary
Introduction. Health related quality of life is a much debated topic in medicine with much quantitative and qualitative research contributing to the understanding of how to improve the lives of patients, yet little has been published in relation to the quality of life of Latvian breast cancer patients.
Aim of the Study. To gather base measurements of subjective and objective quality of life factors for breast cancer patients in Latvia and discover which key factors contribute most to quality of life of Latvian breast cancer patients at the start of treatment.
Materials and Methods. This paper presents data collected from April 2010 to June 2011 at the Pauls Stradins Clinical University hospital on key factors influencing quality of life for breast cancer patients: health and physical well-being; state of surroundings and environment; social support and functionality; financial state, employment and leisure. Quantitative survey material has been supplemented with insight from qualitative in-depth interviews to better explain the objective and subjective implications for breast cancer patients' quality of life.
Results. Interviewed breast cancer patients rated their quality of life as being average or good at the beginning of treatment. Negative factors contributing to lowered quality of life were mainly linked to patient financial, social and emotional state at the first weeks of treatment and correspond to previous research done in Latvia on quality of life issues.
Conclusions. Further follow-up surveys will contribute to the evaluation of breast cancer patients' needs while undergoing treatment to further improve treatment strategies, especially if validated quality of life measurement surveys were to be implemented in Latvian hospitals.
Key words: quality of life, breast cancer, quantitative survey, qualitative interviews

INTRODUCTION

Current medicine recognizes that it is crucial to understand not just physiological imperatives, but also uncover social and psychological needs of patients to treat illness. To understand the development of particular ailments and overall improve population health - much attention is being paid to aspects contributing to patient quality of life as well as their subjective perception and attitudes towards treatment (1, 9).

Cancer affects one in three of Europe's population including Latvia's inhabitants. Incidence of cancers is dependent on many factors, including social, economic, geographic, and demographic. Successful cancer control programs include promotion of healthy lifestyles, preventive screening, high-quality treatment, palliative care, as well as psychological and social aspects. Yet in prior years, research has shown that the Latvian health care system is very taxing on the population with people having to put off medical examinations due to financial hardship which leads to a high rate of late detection for oncological diseases (3, 8, 13). Low income and limited access to health care contributes to reduced overall quality of life, which is characterized by the individuals' access to a certain level of consumption, range and quality of social services, ability to live a long and healthy life. Based on previous research Latvians can be characterized as being partially satisfied with their lives and their quality of life is impacted the most by the state of material prosperity, security, family and vocation (8). In medicine quality of life measurements help to assess which treatment methods improve and which reduce a patient's quality of life; when to choose palliative and when clinical treatments; evaluate the dynamics of different treatment methods to determine direct effects on patients' quality of life during treatment and after recovery (6, 12). Such measurements are useful to develop new treatment strategies, evaluate the efficiency of existing treatments, as well as determine which treatments are best suited for a patient or group of patients (15, 28). Generic surveys on population quality of life (8, 13) and more detailed qualitative and quantitative research on general population quality of life (2, 20) and health related quality of life for particular maladies (10, 18, 26) have been previously conducted in Latvia. Yet as of today, no standardized measures are being used in Latvia for breast cancer patient quality of life evaluation.

This paper presents data on patient quality of life from the on-going research, including analyses of data obtained from quantitative surveys and qualitative

in-depth interviews. Health related quality of life is analysed in light of the patient subjective evaluations of key standardized factors (5, 24) contributing to quality of life while taking into consideration the bio-psychological model of health (4). This research project is unique and no prior research on breast cancer patient social factors of this scale has been undertaken in Latvia.

AIM OF THE STUDY

Aim of the study is to gather base measurements of subjective and objective quality of life factors for breast cancer patients in Latvia and to discover which key factors contribute most to quality of life of Latvian breast cancer patients at the start of treatment.

MATERIALS AND METHODS

Health related quality of life is a term used to explain the complex state of patients by investigating physical, psychological and social aspects that influence them. Quality of life is determined by a person's experience, beliefs, expectations and perceptions (14, 27). Quality of life must be analysed through both objective factors and subjective interpretations, thus quantitative methods are used to establish base measures, and qualitative methods to explain underlying processes (7).

This paper is based on a survey of breast cancer patients conducted from April 2010 until June 2011, during this time 150 interviews were collected and among those 135 answers to the quality of life section. Also during this period 9 hereditary breast cancer gene carriers were interviewed from May 2011 until September 2012. This study was approved by the Ethical Comittee of Riga Stradins University and all patients involved signed informed consent forms.

The quantitative interviewer administered survey of breast cancer patients was conducted at the Pauls Stradins Clinical University Hospital, where all patients after a mastectomy surgical operation were approached, informed about the study and asked to participate. In most cases the survey was realized on the next day after the operation. The 10 page questionnaire was constructed to include crucial information on patient demographics, reproductive health, life-styles, experience with and information on medical check-ups, as well as quality of life. A new generic quality of life tool was modeled after the WHOQoL-BREF measurement system (22, 29). This part of the questionnaire consists of questions evaluating overall quality of life, state of health, emotional state and 4 groups of standardized factors – a) health and physical state, b) functional and social state, c) financial state and leisure time, d) surroundings/environmental state. Additional questions are included to evaluate the importance of the factors used for determining the quality of life of each patient.

The qualitative in-depth interviews were carried out with hereditary breast cancer gene carriers from different typological groups and cities in Latvia after random selection from the BRCA gene carrier database. The interviews took place at a hospital or in patients' homes. An audio recording was made of each interview and a semi structured questionnaire was used as the research instrument.

Descriptive statistical data in this paper are presented as means, frequencies, proportions and percent of included patients was calculated by MS Office Excel and SPSS. Reported confidence intervals and standard deviations are shown with '±' and were calculated at a 95% confidence level, correlations are reported for Pearson's r value and statistical significance is reported with the two tailed p value.

RESULTS

Respondents' profile

The national cancer register in the year 2010 recorded 1,057 breast cancer patients (25) and at Pauls Stradins Clinical University hospital in 2010 a total of 195 breast operations were performed. During the period between April 2010 and June 2011 a total of 150 patients were interviewed, one was male and the rest female. The age of patients ranged from 28 to 86 years with mean age of 62 (±13; standard error 1). Approximately half of the patients were the age of 65 and older (48±8%), and the other half younger. Majority of patients (47.3±8%) had a general secondary or vocational secondary education, more than one third (34.7±7.6%) had a university degree, while 18±6.1% had primary and lower education, yet among patients 65 and older this was characteristic of 33±7.5% (a moderate correlation between age and level of education; r=0.441, p=0.00000002). Nearly half of patients (47±8%) were retired and living from state pensions, while 34±7.6% were working, 5±3.5% were housewives and 8±4.3% were permanently disabled. Compared to the national level of 17% on average, only 4% of respondents were unemployed.

On average the minimum consumer basket per capita as recorded by the Central Statistical Bureau of Latvia during the period of data acquisition was 169 LVL (16). The average income per family member each month noted by the patients undergoing breast cancer surgery was 187.50 LVL (±107.64 LVL, standard error 9.20), though more than half (60%) of the patients in this study aged 65 and older were living below the state minimum consumer basket (small correlation between age and income level; r=-0.169, p=0.047).

Quality of life

Quality of life for patients was measured using an original questionnaire as part of a larger survey. From 150 surveyed patients, 135 replied to the quality of life questionnaire section. Additional insight was gained during in-depth interviews with hereditary breast cancer patients.

Overall the interviewed breast cancer patients rate their quality of life as being average or good at the beginning of treatment (see Table 1). A 3rd of the interviewed patients thought that their health prior to the treatment was good, while from the three overall ratings the emotional state received the most critical evaluation.

Negative factors contributing to lowered quality of life ratings were mainly linked to breast cancer patient financial and emotional state at the first weeks of treatment. Greater insight was gained through in-depth interviews.

Table 1. Quality of life assessment in the last 2 weeks prior to surgery - Overall, Health and Emotional state

	Very bad	Bad	Partial	Good	Very good	NA
How would you rate your quality of life?	5.9%±4,0%	14.1%±5,9%	33.3%±8,0%	38.5%±8,2%	5.2%±3,7%	3.0%±2,9%
How would you rate your state of health?	8.9%±4,8%	23.0%±7,1%	28.1%±7,6%	34.8%±8,0%	3.0%±2,9%	2.2%±2,5%
How would you rate your emotional state?	16.3%±6,2%	21.5%±6,9%	26.7%±7,5%	28.1%±7,6%	4.4%±3,5%	3.0%±2,9%

(N=135, confidence level 95%)

The following part of this article focuses on the analysis of factors most influencing quality of life for patients after diagnosis of breast cancer where quantitative survey data has been supplemented with qualitative interview material.

Health and physical well-being

Previous research established that Latvians do not associate care for quality of life with care for health - during interviews health care specialists and citizens admitted that health is a potential aspect that can be sacrificed through hard work to attain a qualitative life (19). Recent research shows that 4.6% of respondents characterised their health as *very good*, 44% as *good* and 16.2% in total as *bad* or *very bad*. When considering age groups it must be noted that among those aged 65 and over 45% rated their health as *bad* or *very bad* (13).

Table 2. Quality of life assessment in the last 2 weeks prior to surgery - Health and Physical state

	Not at all	A little	Partially	A lot	Completely	NA
To what extent did physical pain prevent you from doing what you need to do every day?	50.4%±8,4%	17.0%±6,3%	11.1%±5,3%	8.9%±4,8%	11.1%±5,3%	1.5%±2,0%
How well were you able to get around physically?	3.0%±2,9%	12.6%±5,6%	8.1%±4,6%	11.1%±5,3%	65.2%±8,0%	-
How satisfied were you with your sleep?	14.8%±6,0%	18.5%±6,6%	11.9%±5,5%	23.0%±7,1%	31.1%±7,8%	0.7%±1,4%
How much did you need the support of others to do what you need to do every day?	68.9%±7,8%	9.6%±5,0%	8.1%±4,6%	3.0%±2,9%	5.2%±3,7%	5.2%±3,7%
How well were you able to concentrate?	1.5%±2,0%	9.6%±5,0%	13.3%±5,7%	11.9%±5,5%	60.7%±8,2%	3.0%±2,9%
Did you have enough energy for everyday life?	6.7%±4,2%	12.6%±5,6%	22.2%±7,0%	13.3%±5,7%	43.0%±8,4%	2.2%±2,5%
How satisfied were you with your physical appearance?	3.7%±3,2%	7.4%±4,4%	24.4%±7,2%	23.0%±7,1%	17.0%±6,3%	24.4%±7,2%

(N=135, confidence level 95%)

In our survey *health* was rated as the most important of factors influencing quality of life with 92.2% patients rating it as absolutely important, yet *access to health services* was absolutely important only to 54% of patients (see Table 2 and 6). When asked to rate their health in the last few weeks, 3% of patients said their health was *very good*, 1/3 rated it as *good* (34.8%) while 31.9% thought it was *bad* or *very bad*. Among patients 65 and older health was rated as *bad* or *very bad* by 37±12% (a small correlation; r=-0.243, p=0.004). Half of the patients (50.4%) noted not suffering from any pain at all, but the majority (72±7%) was suffering from other chronic health problems prior to the diagnosis of cancer. Nearly all patients that did not have prior chronic illnesses still suffered from some sleep loss (94.5%) and fatigue (97.3%) in the prior weeks to surgery due to an enhanced negative emotional state after receiving a diagnosis of cancer.

While health is of the utmost importance and 73±7% admitted to undergoing regular health check-ups, only 49±8% regularly made the annual gynecological examinations and 29±7% a mammography. Among these patients the majority (55±9%) admitted they had not gone for check-ups because there had been no symptoms and complaints. Despite the fact that people are aware that regular health check-ups can reduce the risk of cancer, most choose to visit the doctor only when they are confronted with the effects of the disease or if there are serious health problems. Patients related general confusion regarding available diagnostics and distrust of medical intervention.

In a way I let it go – I really didn't want there to be anything, when I visited the oncologist after my gynaecologist sent me. He asked me – how do you feel? Well, how could I feel? Nothing was hurting. He said that there is something there, but then – don't worry, come back after half a year. […] His attitude was

so careless. But since I wanted to hear that there is nothing wrong, I left his office with a light heart. If I had known then that you can puncture and take a biopsy, I would have done it, if there had been any suggestion! How could I have known about this method?! (Woman, age 48)

Complete satisfaction with their *outer appearance* was rated by only 17% with ¼ of patients not wanting or being able to give an answer, but in general *outer appearance* was not seen to be that important for quality of life with only 28% rating it as absolutely important (see Table 2 and 6). Among patients ≤44 *outer appearance* was rated the highest with 33% being completely satisfied, while for patients ≥65 more than a 1/3 chose not to answer this question. More than half (54%) of patients 44 and younger rate *outer appearance* as a completely important factor for quality of life after a mastectomy operation while for each older group the importance seems to decline, but due to the low number of responses for this particular question data can not be assumed statistically significant. Patients have a choice to undergo reconstructive surgery, but the expenses are often too great, and the physical distortion can put emotional strain on younger women.

He accepts me as I am, but in quiet he has mentioned that I could have the reconstruction done. Of course, what man doesn't want a woman lying next to him with both breasts? We have talked about this, we have discussed that it is a difficult operation and that right now it costs a lot of money. (Woman, 44)

Social support and functionality

Table 3. Quality of life assessment in the last 2 weeks prior to surgery - Functional and Social state

	Not at all	A little	Partially	A lot	Completely	NA
How satisfied were you with your ability to perform your daily living activities?	7.4%±4,4%	5.2%±3,7%	9.6%±5,0%	14.8%±6,0%	58.5%±8,3%	4.4%±3,5%
How satisfied were you with your capacity to work to make a living?	3.7%±3,2%	2.2%±2,5%	7.4%±4,4%	10.4%±5,1%	27.4%±7,5%	48.9%±8,4%
To what extent did you feel your life to be meaningful?	4.4%±3,5%	3.7%±3,2%	9.6%±5,0%	18.5%±6,6%	54.8%±8,4%	8.9%±4,8%
How satisfied were you with yourself?	5.2%±3,7%	0.7%±1,4%	16.3%±6,2%	21.5%±6,9%	45.2%±8,4%	11.1%±5,3%
How satisfied were you with your personal relationships?	0.7%±1,4%	3.7%±3,2%	6.7%±4,2%	28.1%±7,6%	54.1%±8,4%	6.7%±4,2%
How satisfied were you with the support you got from your family and friends?	3.0%±2,9%	4.4%±3,5%	8.9%±4,8%	14.8%±6,0%	66.7%±8,0%	2.2%±2,5%

(N=135, confidence level 95%)

The need for emotional and psychological support was acknowledged by 67±8% of patients. The need for emotional support was more prominent among older patients, respectively 59±11% among younger than 65 years and 75±10% among older patients (a small correlation; r=-0.136, p=0.095).

Research on breast cancer narratives shows that for most women the diagnosis of cancer is unanticipated (21). In such cases there is a great need for psychological support. The stress leading up to treatment is also reflected in our survey, 16% of patients evaluated their emotional state two weeks before surgery as *very low* (see Table 3).

But the most important - contact with other people, because if you are alone, you get even more depressed. We need a lot of contact. (Woman, 53)

Personal relationships were the second most important factor influencing quality of life of the patients with 81% seeing it as an absolute priority (see Table 6). Completely satisfied with support from family and friends were 66%.

It is important to keep hold of yourself, think positive thoughts. Day to day it's important to see the people around you who understand and support you, help to reduce stress. (Woman, 52)

Ability to do housework and *ability to be physically active* were evaluated with top most importance by more than half of the patients (respectively 68% and 59%) (see Table 6). Positive ratings were common for *functional* and *social state* (see Table 3). Patients noted that it is important to keep active.

I knit and crochet different pretty crafts, I really like it when I can see the result of my work and teach other people. I go to the forest, and keep a garden, so you might say that I have bad thoughts very rarely since I'm always busy. (Woman, 53)

Financial state, employment and leisure

The lowest ratings among the factor groups in our research were allocated to *financial state and leisure time* (see Table 4). With nearly half of the patients being retired and the average income per family member was barely above the state minimum consumer basket value, the financial situation was *completely* satisfactory for 18%, while 30% together were *not at all* or *a little* satisfied with their finances. Older patients put a lot less significance on finances with only 28% of patients ≥75 rating it as a priority, while among those aged ≤44 - 69% rated finances with utmost importance for quality of life. A moderate correlation can be reported for age

and the significance of finances for quality of life (r=-0.319; p=0.0009), but the sample isn't large enough for the influence to be statistically significant. Other research done in Latvia shows that financial well-being is one of the main drivers of care for health in elderly, but they put much greater value in family ties (20).

Table 4. Quality of life assessment in the last 2 weeks prior to surgery - Financial state and Leisure time

	Not at all	A little	Partially	A lot	Completely	NA
To what extent did your financial situation meet your needs?	13.3%±5,7%	16.3%±6,2%	25.9%±7,4%	26.7%±7,5%	17.8%±6,4%	-
How available to you was the information you need in your daily life?	-	3.0%±2,9%	8.1%±4,6%	11.1%±5,3%	73.3%±7,5%	4.4%±3,5%
How much did you enjoy life?	21.5%±6,9%	8.9%±4,8%	18.5%±6,6%	20.7%±6,8%	18.5%±6,6%	11.9%±5,5%
To what extent did you have the opportunity for leisure activities?	29.6%±7,7%	10.4%±5,1%	15.6%±6,1%	20.0%±6,7%	17.0%±6,3%	7.4%±4,4%

(N=135, confidence level 95%)

In our research more than half (58±8%) of the surveyed patients were more or less able to pay for the necessary breast cancer treatment. However among patients aged below 65 years there were 31±10% that weren't able to or found it hard to pay their medical expenses, while among patients 65 and older - 43±11% (a small correlation; r=0.178, p=0.028). The fact that financial support is needed during treatment at the hospital was noted by 51±8% of patients. Yet for breast cancer patients' treatment and diet requires additional expenses. In many cases a patient's income per capita was just above the poverty level and they did not qualify for financial social support.

It is a choice between dying or getting treatment, there are only two options. If you work, then you're fine. But if you don't work, and have to survive only on 100 lats, then that's it. It is simply a mockery of people. Realistically with this money I can only cover my utility bills. I have to choose - am I getting treatment or paying my utility bills. (Woman, age 44)

State of surroundings and environment

When considering the four groups of factors, the surveyed patients evaluated most positively questions related to *surroundings and state of environment* with the top two highest values generating over 80% for each section (see Table 5). Of this block of questions the lowest ratings were in relation to the satisfaction of accessibility to health care services (5% *not at all*, 8% *a little*, 10% *partially*).

Table 5. Quality of life assessment in the last 2 weeks prior to surgery - Surroundings and Environment

	Not at all	A little	Partially	A lot	Completely	NA
How satisfied were you with the conditions of your living place?	1.5% ±2,0%	2.2%±2,5%	11.9%±5,5%	24.4%±7,2%	56.3%±8,4%	3.7%±3,2%
How safe do you feel in your daily life?	3.0% ±2,9%	5.2%±3,7%	9.6%±5,0%	25.2%±7,3%	55.6%±8,4%	1.5%±2,0%
How healthy is your physical environment?	-	5.9%±4,0%	5.9%±4,0%	23.7%±7,2%	61.5%±8,2%	3.0%±2,9%
How satisfied are you with your access to health services?	5.2% ±3,7%	8.1%±4,6%	10.4%±5,1%	20.7%±6,8%	54.1%±8,4%	1.5%±2,0%
How satisfied are you with your access to transportation?	3.7% ±3,2%	3.7%±3,2%	8.9%±4,8%	14.1%±5,9%	65.9%±8,0%	3.7%±3,2%

(N=135, confidence level 95%)

The quality of health care services was not always satisfactory; patients note not getting enough support from general practitioners (locally known as family doctors) and gynaecologists.

She isn't a family doctor; I don't know what she is. A family doctor has to be more versatile and that's why she can't have so many patients at one time. She is a pharmaceutical trader, a middleman, that's what she could be. (Woman, 61)

A research conducted in 2006 showed that respondents were not satisfied with public health care quality and did not trust medical personnel believing that doctors act in their own interest and not the patients (17). Our research shows that patients avoid medical examinations and treatment also due to state of medical facilities and the attitude of medical personnel.

And I don't like it a little, not a little, but I try to avoid going in. [In the hospital?] Yes, […] if you haven't gone for long, then it's unpleasant. You can feel how it affects your body. […] the space is so narrow, so uncomfortable, it's very depressing. (Woman, 61)

Table 6. Quality of life assessment in the last 2 weeks prior to surgery – Quality of Life Factor Importance

Rank	Factor	Rating	Not at all	A little	Partially	A lot	Completely	NA
1	Health	505	-	-	1.9% ±2.6%	5.8% ±4.5%	92.2% ±5.2%	-
2	Personal relationships with family and friends	476	-	-	2.9% ±3.2%	12.6% ±6.4%	80.6% ±7.6%	3.9% ±3.7%
3	Ability to do housework	459	-	1.0% ±1.9%	8.7% ±5.4%	19.4% ±7.6%	68.0% ±9.0%	2.9% ±3.2%
4	Financial state	454	1.0% ±1.9%	-	14.6% ±6.8%	26.2% ±8.5%	58.3% ±9.5%	-
5	Being physically active	450	1.0% ±1.9%	4.9% ±4.2%	9.7% ±5.7%	25.2% ±8.4%	59.2% ±9.5%	-
6	Being useful to your family	446	2.9% ±3.2%	2.9% ±3.2%	4.9% ±4.2%	17.5% ±7.3%	68.0% ±9.0%	3.9% ±3.7%
7	Accommodations and environmental conditions	444	-	-	12.6% ±6.4%	34.0% ±9.1%	51.5% ±9.7%	1.9% ±2.6%
8	Access to health care services	426	1.0% ±1.9%	-	14.6% ±6.8%	24.3% ±8.3%	54.4% ±9.6%	5.8% ±4.5%
9	Access to information and media	404	3.9% ±3.7%	3.9% ±3.7%	7.8% ±5.2%	45.6% ±9.6%	35.0% ±9.2%	3.9% ±3.7%
10	Access to transporation	335	2.9% ±3.2%	5.8% ±4.5%	18.4% ±7.5%	26.2% ±8.5%	30.1% ±8.9%	16.5% ±7.2%
11	Physical appearance	335	4.9% ±4.2%	1.9% ±2.6%	14.6% ±6.8%	33.0% ±9.1%	28.2% ±8.7%	17.5% ±7.3%
12	Enertainment and leisure activities	333	10.7% ±6.0%	6.8% ±4.9%	23.3% ±8.2%	37.9% ±9.4%	15.5% ±7.0%	5.8% ±4.5%
13	Abilty to improve yourself	307	25.2% ±8.4%	3.9% ±3.7%	10.7% ±6.0%	24.3% ±8.3%	27.2% ±8.6%	8.7% ±5.4%
14	Ability to do a paid job	280	25.2% ±8.4%	2.9% ±3.2%	5.8% ±4.5%	4.9% ±4.2%	40.8% ±9.5%	20.4% ±7.8%
15	Being useful for society	268	33.0% ±9.1%	1.9% ±2.6%	9.7% ±5.7%	19.4% ±7.6%	23.3% ±8.2%	12.6% ±6.4%

(N=103, confidence level 95%)

DISCUSSION

Overall the interviewed breast cancer patients rate their quality of life as being average or good at the beginning of treatment. Negative factors contributing to lowered quality of life are mainly linked to patient financial, social and emotional state at the first weeks of treatment and corresponds to previous research done internationally and in Latvia on quality of life issues.

Emotional distress at the start of treatment seems based in the shock of an unexpected diagnosis. Respondents note not being prepared to deal with the idea of a potentially terminal illness and face a lack of emotional and social support from doctors, colleagues and family members. Patient' primary needs are related to the confusion about how breast cancer can develop and how it will affect their lives in short and long term. After first receiving an oncological diagnosis nearly all patients acknowledged suffering from emotional distress that lead to some loss of sleep and fatigue in the 2 weeks prior to surgery. At the early stages of treatment this is the primary issue that can be addressed by medical staff to support patients and improve their quality of life. Moral support should be available from the primary surgeon, family physician and nursing staff, or alternatively patients should be directed to a councillor or support group. There is a need to improve availability of verified and expert approved information about the illness, treatment options and financial support for breast cancer patients.

Finances in general were a problem for the majority of surveyed patients, with only a third being employed and most living on pensions or social support. The added medical expenses were taxing for at least a half of the respondents, yet many were still unaware of what costs to expect from further treatment and what kind of social support is available for cancer patients in Latvia. Over time it could be possible to improve financial support for patients undergoing breast cancer treatment, with prolonged sick leave and treatment coverage, and improve patients' awareness of the illness and diagnosis so that it can be treated at an earlier stage with lower expenses. The improvement of these factors for patients can be addressed at a national and medical facility level. This research was based on a relatively small sample of surveys that were gathered in an ongoing research project. Multifactorial analysis at this point is not statistically viable, but certain trends could be observed and will be tested further once a representative sample of patients has been attained. The topic of *physical appearance* and its influence on breast cancer patient quality of life in particular needs further investigation since many patients avoided talking about this subject having just undergone mastectomy surgery.

CONCLUSIONS

At the start of treatment breast cancer patient quality of life is influenced primarily by social, emotional and financial factors which should be addressed by medical institution, staff and national policy makers to improve patient treatment strategies and outcomes.

When trying to evaluate and improve different types of treatment for breast cancer patients in Latvia, it seems

important to take into account differences among age groups. Divergent factors influence quality of life for older and younger patients. All age groups place health and personal relationships as priorities for their quality of life, yet when it comes to physical function, outer appearance, finance, leisure and the environment - importance varies. Older patients even prior to surgery were more likely to suffer from physical complaints and were lacking in social and financial support to cope with medical demands and everyday tasks. Younger patients felt greater emotional distress that could lead to biographical disruption.

Data about Latvian breast cancer patient needs affecting quality of life is much too limited at this point. It is particularly important to implement in Latvian hospitals validated quality of life questionnaires that would be carried out with patients of different demographical groups on a regular basis. Further investigation in this area should contribute to the evaluation of breast cancer patients' needs while undergoing treatment and improve the development of effective treatment strategies.

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