Health-related quality of life in women after cancer treatment

Introduction
Cancer survivorship [48] is the term used to represent the state or process of living with cancer or living after diagnosis of cancer and is defined as the experience of "living with, through or beyond cancer". The new "cancer survivor role" is experienced by individuals in relation to their social networks and the norms attached to the cancer survivor role (sick role described by T. Parsons [37].

Living with cancer or living after cancer - are conditions characteristic to an increasing number of long-term survivors ("society of remission"); health-related quality of life in these individuals is an important indicator of successful treatment and patient’s satisfaction. Health-related quality of life in oncological patients has remained one of the main topic of research. The present paper reviews psychosocial outcomes in breast cancer (female disease) and gender-related differences in health-related quality of life in colon cancer survivors.

Breast cancer diagnosis is usually associated with several expected psychosocial consequences like psychological variables like body image, fear, satisfaction with treatment and cosmetic evaluation may improve general will to live. Women who perceive support from family and friends have better coping and psychological adjustment, while lack of social support is a risk factor for anxiety and depression. Colon cancer remains an important medical and social problem in Poland; polish data showed the following gender-related differences: in patients with stoma, women reported lower level of psychological well-being than men, reported increasing level of stress and loss of control over emotions and behaviours.

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Traditionally, psychosocial studies concentrated on psychosocial consequences of cancer diagnosis in relation to the symbolic meaning of cancer as “killer”. Sontag described metaphors associated with cancer showing that military terminology is used: cancer “invasion” and treatment as “the war on cancer”, “kill cancer cells” [43].

Sontag [44] mentioned that “Getting cancer is sometimes understood as the fault of someone who has indulged in “unsafe” behavior; the alcoholic with cancer of the esophagus, the smoker with lung cancer: punishment for living unhealthy lives - in contrast to those obligated to perform unsafe occupations, like the worker in a petrochemical factory who gets bladder cancer”. Over the years biomedical model presented a traditional medical approach in which successful treatment was defined as 5-year survival in cancer patients. For the last four decades this traditional approach has given way to a new biopsychosocial model measuring the therapeutic outcomes by the patient’s ability to perform different psychosocial activities. The key element in the biopsychosocial model is health-related quality of life, described as the effect that a medical condition or its treatment has on a person.

Quality of life among long-term (5+ years) adult cancer survivors has rapidly become a topic of investigation in such cancer sites as breast, ovarian, cervical, prostate, colorectal, head and neck, Hodgkin’s disease survivors, but different domains have been measured with various frequency: the physical domain was the most frequently measured, while the spiritual domain was measured very rarely [4].

The explanations of living with cancer given from the theoretical point of view have referred to such paradigms as stigma [18], uncertainty in cancer [10], chronic illness and the mobilisation of resources [10, 11], loss of self [14], living with restricted life [14], disablist [41].

**Health-related quality of life - the concept**

Health-related Quality of Life (HRQOL) as a point in healthcare research provides a subjective dimension to health status assessment [8]. A broad range of models based on needs theory or life satisfaction and patient’s satisfaction have been widely used to explain the interaction of objective and subjective dimensions. Ann Bowling considered quality of life in relation to the health status has traditionally been based on a “pathology” model of health and dependency, and has focused on the measurement of physical and mental decline, impaired role and social functioning”.

A new approach has been defined using the “gap theory”, whereby the conceptualized health-related quality of life is seen as the gap between the present health and functional status and one’s aspirations, based on social expectations and comparisons with others. This positive approach has been presented in the definition developed by the WHO Quality of Life Group as “an individual’s perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations and concerns - affected in a complex way by the person’s physical health, psychological state, level of independence, social relationships and their relationships to salient features of their environment” [46]. Changes in HRQOL are a recognized major health outcome of cancer treatment. Individual’s overall life satisfaction, perception of their health status and the ability to take part in valued activities are all components of HRQOL.

QOL refers to the patients’ subjective view of their current physical, social, emotional and cognitive functioning as well as psychological parameters of fear, body image, satisfaction with health care and attitudes towards the cosmetic results of the surgery treatment. Functional limitations or activities of daily living are part of the physical domain of quality of life, anxiety or depression are specific aspects of the domain of psychological functioning, while participation in social activities explains the domain of social functioning.

Quality of life can be further defined as a person’s sense of well-being that stems from satisfaction or dissatisfaction with aspects of life that are important to him/her. Thus, quality of life encompasses the interaction of four domains: health and functioning, socioeconomic, psychological/spiritual and family [40].

**The aim of the paper**

Health-related quality of life in oncological patients has remained one of the main topic of research. The present paper reviews psychosocial outcomes in breast cancer (female disease) and gender-related differences in health-related quality of life in colon cancer survivors.

**Breast cancer survivors**

Breast cancer - female specific disease is placed at the top of the structure of cancer incidence by situ (22.2%) and remains the first cause of cancer incidence in women and second cause of cancer mortality in women. Breast cancer survivors represent 22% of the estimated 10.1 million cancer survivors and 40% of all female cancer survivors [26].

“Descriptive review of the Literature on Breast Cancer Outcomes: 1990 through 2000” [29] showed that health-related quality of life was among the most frequently reported nonbiomedical outcome in breast cancer (61% of the studies). The importance of the breast as a symbol of sexuality and femininity in many contemporary cultures has been widely documented. In many cultures the breast is often referred to as the body part that is most strongly associated with women’s maternal role and sexuality [45].

Current discussion concentrates on a very important question “Is breast cancer still a stigmatizing condition”? Many studies support the idea that breast cancer is no longer perceived as a stigmatizing health condition because in recent decades it has become a highly visible and well-funded disease, which in turn has led to the disappearance of stigma, secrecy and blame previously attached to breast cancer. Women with breast cancer today are openly honoured as “survivors”; their growing number in modern society exerts an important influence upon cultural images of breast cancer, helping replace the pessimistic with the optimistic and successful.

Breast cancer diagnosis is usually associated with several expected psychosocial consequences like psychological distress (fighting spirit and denial (avoidance) coping style - associated with longer survival), uncertainty, hopelessness, reduced health-related quality of life, changes in mood and lack of ability to cope with psychological stress, influence on marital, family and social relationships at home and work, changes in body image, sexual activity, poor future perspectives (fatalistic attitudes toward future).

QOL concept with breast cancer specific psychological variables like body image, fear, satisfaction with treatment and cosmetic evaluation may improve general will to live.

Breast cancer survivors suffer from fear of recurrence, normative mood changes (worry, sadness, frustration, anger) feelings of loss, concerns about body image, self-concept and sexuality, and emotional distress related to the role adjustment and family response. Incidence of PTSD has been reported by 4%-19% of breast cancer survivors [15, 26].

Quality of Life Model for Breast Cancer Survivors presented by Knobf [26] showed that Quality of Life in these women has been significantly influenced by 4 dimensions: physical well-being (functional ability, fatigue/vitality, physical health, menopause symptoms, fertility, bone loss, comfort, lymphedema, weight gain); psychological well-being (interpersonal factors, uncertainty, fear of recurrence, anxiety/depression, cognition/attention, communication, information, emotional support, isolation, abandonment); social well-being (family, roles and relationships, affection/sexuality, self-concept/appearance, enjoyment/leisure, social support, financial concerns, employment); and spiritual well-being (meaning of illness, religiosity, transcendence, hope inner strength). Quality of life is a multidimensional construct that changes over time and must be connected with text [26].

Current studies on health-related quality of life in breast cancer survivors include subdomains of life quality dimensions - pain and symptoms; 2. functional ability; 3. family well-being; 4. emotional well-being; 5. spirituality; 6. treatment satisfaction, including financial impact of illness; 7. future orientation; 8. sexuality, intimacy and body image; 9. social functioning; 10. occupational functioning and 11. preferences [29]. A significant reduction in physical well-being, functional well-being was obtained after surgical treatment, no significant change was observed in social and emotional well-being as a result of social support. QOL was poorer among women undergoing mastectomy [36].

The theoretical model of Quality of Life
developed for research focus on long-term cancer survivors is based on cancer impact (as a chronic and life-threatening illness) and its treatment on physical, psychological, social and spiritual domains.

Different aspects of breast cancer survivorship have been carefully explored [34, 13, 32, 7, 16, 23, 31, 17, 9, 25, 12]. Studies on short-term and long-term survivors of breast cancer well document both the process of ageing – and breast cancer - its physical, psychological, social and spiritual well-being and quality of life in survivorship (also influenced by ageing). Quality of life in older breast cancer survivors within the first year was found to be positive [28]. With increasing age, breast cancer survivors reported better social and emotional functioning and future perspectives, but poorer physical and sexual functioning and diminished sexual enjoyment [1]. Among younger women (less than 50yrs old) number of days of work or usual activity missed in the 3 months after diagnosis consistently related to QOL. Those who reported missing all 3 months had lower QOL compared with those who did not miss any days [2].

Age at diagnosis, which is an approximation of life stage, can be a significant predictor of long-term quality of life in survivors in breast cancer: women who received diagnosis at an older age (>65 years) reported significantly poorer physical well-being than women diagnosed at a younger age. On the other hand, older women reported better social well-being than younger ones [15]. Evaluation of health-related quality of life is generally the lowest at the end of therapy and associated with reported physical symptoms. Older women have established a strong social network, have more life experiences with health and illness, have developed coping strategies and have more experience with health care system than younger women.

Changes in the breast may not necessarily interfere with women's physical ability to have sexual intercourse, however, it is strongly associated with sexual well-being, body image and feminine identification. Studies of the prognostic effect of psychological status and PROQOL in breast cancer have yielded inconsistent and largely negative results [19].

Based on literature review J. Bloom [5] showed that breast cancer survivors generally reported lower physical domain of QOL and poorer functional status (arm pain, fatigue, lower level of vitality) than healthy women, also such psychological complaints as being overly stressed, worried about future, depression and Post Traumatic Stress Disorder. In social domain of QOL breast cancer survivors confirmed poorer sexual functioning and low satisfaction were risk factors for social domain (lack of interest in sexual activity, inability to relax), also reduction in role functioning at home, at work and during leisure activities; in spiritual domain more often to be reported by breast cancer survivors. Uncertainty in breast cancer survivors significantly influenced their adaptive behavior.

Women seeking immediate reconstruction at the time of mastectomy show a relatively higher incidence of psychosocial impairment and functional disability and contrary women who seek delayed reconstruction after a prior mastectomy reported less psychosocial disorders [39].

Women who perceive support from family and friends have better coping and psychological adjustment, while lack of social support is a risk factor for anxiety and depression. Communication between partners is an important factor influencing psychological outcomes [11]. Good communication and open interaction is associated with lower emotional distress and better marital satisfaction.

The positive role of social support for women with breast cancer, coming from spouse/partner, family, friends has been well documented, but incidence of social distance to women with breast cancer diagnosis has also been confirmed [6]. Strong family and social support significantly influenced no change in overall QOL in women immediately after the surgery [36].

Patients with Breast Conserving Treatment/Therapy (BCT) reported better physical and social functioning, better body image, more satisfaction with surgical treatment and perceived cosmetic results more positively.

Health-related quality of life has prognostic effects on survival in breast cancer patients - quality of life is a predictor of survival dependent on stage (effect in advanced stages not in early stage).

Colon cancer - gender-related differences

Colon cancer remains an important medical and social problem in Poland, posing serious health challenges at all levels of society.

Data additionally shows that a majority of colorectal cancer cases and deaths can be observed in women. Mortality and incidence trends in the Polish population also show a growing risk of colorectal cancer among men. In fact, compared to all other types of carcinoma, the greatest increase in colorectal cancer diagnoses has been noted in Polish men [47].

Treatment combining surgical resection with chemotherapy and/or radiotherapy has been shown to be successful in an ever-increasing number of patients. In reality, different types of surgical procedures and dependence on stoma may also significantly impact the quality of life of such patients. Medical interventions aimed at qualitatively and quantitatively increasing survival have measured health-related quality of life as the summary judgments people make in describing their experiences of health and illness [21, 30, 33].

Bekkers et al. [3] describes the amount of time needed to adapt to stoma, where, four months after surgery, patients with stoma reported more problems than non-stoma patients, especially in regards to sexuality and work. However, these differences lost their significance one and four years following surgery.

Grumann, et al. [20] found that, following a colostomy procedure, women tended to score better than men in terms of their general quality of life. Gender-related differences in the quality of life were also the topic of other studies. For example, Ross [38] showed gender-related differences in the quality of life of patients with and without stoma. A two-year follow-up study showed that sexual functioning, sexual enjoyment, and female sexual problems were not significantly influenced by the presence of stoma. However, male patients with stoma had more sexual problems than those without. The results also showed differences between men and women in terms of rating control over their own lives. For patients without stoma, men, more than women, were characterized by a greater degree of control over their emotions and behaviors.

In a follow-up study performed at 3, 6, 12, and 24 months in 249 colorectal cancer patients, including both those treated with and without stoma, Ross et al. [38] found poorer quality of life in stoma patients. Patients with stoma had significantly higher levels of anxiety and depression, a poorer level of social functioning, more problems with body image, poorer future perspectives, micturition problems, and a worse experience of the side effects from chemotherapy. Alternatively, this group reported fewer problems with constipation than did non-stoma patients. Ross et al. [38] also showed the significant role played by the time of having stoma. This was reflected in a poorer quality of life in patients whose stoma was made some time after the initial operation, compared to patients having a stoma made during the primary procedure. The impact of disease and treatment on quality of life can be minimized by helping patients to adjust their expectations and adapt to their changed clinical status [22, 21, 30]. Patient expectations are learned from different experiences and therefore highly specific, varying between individuals. Gender-related differences in social, psychological, socio-economic, demographic, and other cultural factors. Expectations about quality of life are closely related to one's relationship with their environment.

According to Sharpe and Curran [42] understanding the process by which most individuals adjust to illness may offer an important insight into also show the effects of interventions that facilitate psychological adjustment. Social identity and self-concept are central to human social conduct and both are related to the body [24]. Adjustment is defined here as a response to a change in the environment that allows an
organism to become more suitably adapted to that change occurring over time. Kuzu, et al. [27] showed that patients from low social classes, low income levels, and with poor education may have a problem managing their stoma due to a lack of proper supportive care. The same study also mentioned that the presence of stoma may influence the religious practices of patients, possibly leading to social stigma, impairing their social life, and causing psychological distress.

Sharpe and Curran [42] report that the quality of life or psychological distress can be independent of illness, resulting instead from other life issues. A positive evaluation of chronic conditions may occur as a result of successfully managing the trauma or letting go of unattainable struggle. Personality traits, such as hardness and optimism, predict post-traumatic growth by providing the resources to face challenges constructively and purposefully.

Data coming from studies performed on health-related quality of life in colon cancer patients showed: poorer quality of life in stoma patients, gender-related differences in sexual functioning - more problems reported by male patients, men characterized by a greater degree of control over their emotions and behaviours than women, significant role played by time of having stoma [38], gender-related differences in quality of life [20].

The aim of the study performed by Department of Medical Sociology Chair of Epidemiology and Preventive Medicine JUMC, was to examine different dimensions of quality of life in the group of 172 colon cancer survivors after surgery treatment with and without stoma, and to study how demographic and social factors affect different dimensions of subjective health. HRQOL was measured with The RAND Mental Health Inventory (post-operative measurement) and COOP Charts (pre- and post-operative measurement). Data showed the following gender-related differences: in patients with stoma, women reported lower level of psychological well-being than men. 30 months after surgical treatment or later, women reported increasing level of stress and loss of control over emotions and behaviors, while in men the level of both these dimensions of HRQOL was decreasing along with time. Women reported the decrease of positive affect and emotional ties along with the increase of time after surgical treatment, while men reported the increase of HRQOL in both dimensions.

In patients without stoma, women were characterized by higher level of depression, loss of control over behaviors and emotions, and stress than men. These women were also characterized by lower level of psychological wellbeing and total score of RAND Mental Health Inventory. Based on the empirical experiences with data on health-related quality of life in colon cancer survivors the two separate models have been developed (Model 1 and Model 2).

Model 1
Determinants of health-related quality of life in colon cancer survivors.

Model 2
From “sick role” to normality based on colon cancer survivors.

References


