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Impact of colorectal carcinoma on patient lives according to the principles of conservation of personal and social integrity

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Abstract

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Aim: The aim of the paper was to identify the impact of colorectal carcinoma (CRC) on patient lives assessed according to the principles of conservation of personal and social integrity expressed in the model by M. E. Levine.

Sample and methods: The study was performed using quantitative strategy. Non-standardized questionnaires were filled out by patients with a CRC history. The data were analysed in two stages of classification. In the first stage, frequency tables were created, the absolute and relative frequencies, and mean values were calculated. In the second stage, contingency tables and the mark scheme were constructed. In the analysis of relations, the Pearson Chi-Square and Independence Test were used.

Results: The principle of the conservation of the personal integrity related to patients` negative feelings. The most common worries relate to possible colostomy. When exploring the social integrity, it was found out that an impaired psychical state can relate to the patient unemployment. However, our study found out that stoma did not create any problems at work.

Conclusion: M. E. Levine`s model can be used in the care of CRC patients. This concept enables nurses to get a scope for better understanding and assessment of patients. The lives of CRC patients bring about a number of changes, and, therefore, it is important for nurses to maintain patient integrity. The integrity is maintained thanks to the adjustment to changes caused by CRC using conservation principles.

Keywords: colorectal carcinoma, change, energy fields model, M. E. Levine

Introduction

The colorectal carcinoma (CRC) is one of many cancers appearing in the Czech Republic, 35.78 new cases per 100,000 persons were diagnosed for CRC in 2015 (Dušek et al., 2015). Worldwide, this disease occupies the third position with approximately 1,000,000 new cases every year (Pernot et al., 2014, p. 3739). Therefore, there is a need of good nursing care, which can be provided using conceptual models. Conceptual models facilitate nurses how to take nursing assessments, assess the influences of the family, community or culture relating to the treatment or preventive measures (Tóthova, 2017, p. 8). The nursing model by M. E. Levine, one of the models of energy fields, was chosen for this study. According to Wood (2013, p. 14-15), the model by Levine can be used for the following areas: burns, cancer, chronic pain, congestive heart failure, long-term care, stoma care, paediatrics, peri-operative care, and wound healing. According to Basabanthappa (2007, p. 243), the model deals with holistic care, conservation, integrity, and adaptation. The model of energetic fields contains 4 conservation principles. The first principle refers to the conservation of energy. This principle emphasizes the input and output of energy needed for patient life. The most energy is spent on the disease and wound healing. During the disease, energy is transferred, for the benefit of the therapy, to physiological functions. Therefore, patients may suffer from lethargy. To prevent high energy losses, nursing interventions need to be used focusing on vital organ systems. Another principle is the conservation of structural integrity. The structural changes result in the change of the function of organs. In this area, the possibility of the adaptation to the change in the whole organism is assessed. All the therapeutic processes depend on the conservation of the structure. If a tissue is damaged, it will respond by healing. However, the healing may not always lead to the restoration of the total function of the organ. Surgeries can be used to restore the structural integrity, e.g. in the case of cancer, the carcinoma is removed and the function of the organ is restored. On the other hand, if a stoma surgery is performed due to cancer, the organ function is changed. The principle of the conservation of personal integrity is focused on the individual`s psyche and emotions relating to the self-perception and self-esteem. The principle of the conservation of social integrity describes the development of social relationships and the individual`s integration in the society. The disease can cause the individual`s isolation from his/her environment (Levine, 1967, p. 45-59). An individual's psychic can negatively affect cancer. Research shows that patients with cancer suffer from anxiety or depression (Lindon et al., 2012; Akyol, 2015). The optimal solution to these negative changes is not yet known (Smith, 2015, p. 1509). Patients with CRC may also suffer from starvation from the stoma. After the patient's stoma, they can discover shy feelings and alienation to themselves (Deboild, 2016, p. 38). These feelings can be reflected in the social life of man. The individual may feel isolated. That is why is

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needed to use the right assessment tool. The scope of the topic is too large, therefore, the principles of personal and social integrity will be only discussed to meet the goal of this study.

Sample

As the structure of individuals in CZ with CRC diagnosis is not known with regard to sex, age and region, the representativeness signs could not be determined. The criterion for the selection was a CRC history. The sample of the quantitative part consisted of 300 patients. The patient participation was voluntary. The respondents had been made acquainted with the use of the results. The study was not subject to the approval by an ethic committee. Participants in the study expressed their consent verbally, no written informed consent was needed. The study was performed anonymously.

Methodology

The study was organized by the GAJU 048/2015 grant project called "*Use of Conceptual Models in Clinical and Community Practice*". This survey was performed as a quantitative descriptive study. A non-standardized questionnaire was used for the data collection. The questionnaire was based on the dialogues with patients with a CRC history. It contained 104 questions, and was divided into 7 categories: identification data, case history, health state, information, social support, perception, and stoma. The questionnaire prevailingly employed close-ended questions rated by the 5-point Likert scale. In cooperation with the Czech ILCO club and stoma nurses, 360 questionnaires were distributed. 291 of them were returned (return of 80.8 %). The remaining 9 questionnaires to reach the number of 300 were achieved by Snow Ball technique using contacts to particular patients from February to March, 2016. The sample was determined, due to the lack of data needed for the basic sample, to include 300 respondents. The basic requirement was a CRC history. The obtained data were statistically processed by SASD and SPSS software. The data were analysed in two stages of classification. In the first stage, frequency tables were created, the absolute and relative frequencies, and mean values were calculated. In the second stage, contingency tables and the mark scheme were constructed. In the analysis of relations, the Pearson Chi-Square and Independence Test were used. Testing was performed at significance level α = 0.05; 0.01 and 0.001.

Results

The study included 156 men and 143 women. The most respondents recruited from the age group of 71+ (37 %). The age groups of 61 to 70 years and 51 to 60 years included 34.4 % and 19.2 %, respectively. 9.4 % of the respondents were 50 years old or younger. 56.1 % of the respondents were stoma patients Out of the total number of 300 respondents, 0.7 % were on parental leave, 1.7 % were unemployed, 8.1 % drew disability pension, 8.4 % were self-employed, 17.5 % were employed, and 62.3 % were retired.

The issues concerning the conservation of personal integrity included negative feelings caused by CRC treatment, fear of possible stoma, and information provided by healthcare professionals and individuals with CRC (Tab.1.).

Tab. 1. The area of the conservation of personal integrity

Area of conservation of personal integrity	Not at all	Mild (a little)	Moderate	High (much)	Maximal	I have a stoma
Importance of information provided by healthcare staff	1.0 %	3.7%	19.9 %	34.5 %	40.5 %	X
Importance of information provided by CRC individuals	23.4 %	15.0 %	16.1 %	23.4 %	22.0 %	X
Fear of stoma	6.4 %	9.5 %	9.5 %	8.8 %	14.9 %	50,8 %
Negative feelings regarding the treatment	10.6 %	27.7 %	27.7 %	20.2 %	13.7 %	X

Legend: X – not evaluated

Since the goal of the study was to survey subjective views of individuals, the concept of negative feelings (fear, anxiety, depression, etc.) caused by the treatment was not explained to the respondents. For the question "How much are you troubled by negative feelings relating to treatment?", the answers "a little" and "moderately" were both given by 27.7 % of respondents. The treatment is associated with the possibility of a temporary or permanent stoma, 14.9 % of respondents are "maximally" afraid of stoma. The question concerning information provided by healthcare professionals was most commonly answered with "maximally" by 40.5 % of respondents. The same number of patients (23.4 %) answered "not at all" and "much" for the question concerning the information provided by patients who had experience with CRC.

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In the area of social integrity, the respondents` psychological condition, the limitations caused by their appearance, financial changes due to CRC, sexual life, exercise and travelling were studied (Tab. 2.).

Tab. 2. The area of the conservation of social integrity

Conservation of social integrity	Not at all	Mild (a little)	Moderate	High (much)	Maximal
Limitation by appearance	29.7 %	35.5 %	20.3 %	10.5 %	4.0 %
Financial changes	50.3 %	17.1 %	15.1 %	10.3 %	7.2 %
Exercise with a stoma	14.5 %	36.4 %	30.9 %	10.9 %	7.3 %
Travelling and CRC consequences	21.4 %	25.1 %	25.8 %	15.9 %	11.9 %

In the area of perception of their own current psychological condition, the respondents used a 10-point scale, while 1 stood for very poor and 10 for very good. The most frequent scores (in 32.2 %) were 5, 6, which was classified as an average, 31.9 % of the respondents felt somewhat well (items 7 and 8), and the condition of 19.4 % was somewhat poor (items 9 and 10), 10.5 % felt very well (items 9 and 10) and 6.1 % felt very badly (items 1 and 2). It was also studied how much the respondents were limited by their appearance. The most frequent answer was "a little" (35.5 %), 4.0 % of the respondents answered "maximally". The area of social integrity included financial changes caused by CRC. The question "How much has the disease influenced your financial situation?" was answered "not at all" by 50.3 % of the respondents. The financial situation was maximally influenced in 7.2 % . With regard to the quality of sexual life, the respondents answered that their sexual life is excellent" (1.1 %), good (13.1 %), "neither good nor bad"(38.8 %), "poor" (20.8 %), and "very poor" (25.9 %). Social life definitely includes the possibility of exercise and travelling. Most frequently (36.4 %), stoma patients are "a little" limited in exercise. The question "How much are you limited by the consequences of your disease in travelling?" was most frequently answered by "moderately (on average)" (25.7 %).

Relating to the principle of the conservation of social integrity, it was focused on the changes in psychical state in association with working life, and changes caused by stoma in the area of working life, financial burden, travelling, perception of one`s own appearance, sexual life and sexual problems (Tab. 3.).

Tab. 3. The area of the conservation of social integrity – correlations among categories

Conservation of social integrity	X^2	P
Psychical condition and limits of working life	11.748	$p < 0.05$
Stoma and working life	1.995	$p = 0.850$
Stoma and financial burden	15.672	$p < 0.01$
Stoma and travelling	7.882	$p = 0.096$
Stoma and appearance limits	17.161	$p < 0.01$
Sexual life and stoma	56.787	$p < 0.001$
Appearance limits and sexual problems	23,056	$p = 0,112$

Legend: X^2 – chi-square; p – independence test

The correlation between the assessment of one`s own psychical condition and the fact how much the respondents are limited in their current working lives was identified. The respondents who assess their psychical condition as worse significantly more frequently state that they do not work. Furthermore, it was explored whether patients without a stoma had smaller problems in their working life than stoma patients. No significant correlations were proven. This also relates to travelling as a way of spending leisure time. It was studied whether stoma patients had impaired travelling conditions. In this hypothesis it was not proven that stoma patients had worse travelling conditions than respondents without stoma. Furthermore, it was discussed whether stoma patients were limited by their appearance. The results show that stoma patients feel to be more limited by their appearance than patients without stoma. The appearance definitely relates to sexual life and problems in sexual life. In this respect, it was proven that respondents who perceive their sexual life as "very poor" mention more significantly that stoma limits their sexual life. However, stoma patients who are limited by their appearance did not perceive limitations in their sexual life.

Discussion

The aim of the study was to survey the CRC impact on individuals from the point of view of the principles of the conservation of personal and social integrity. The principle of the conservation of personal integrity relates to the individual`s identity (system of values, perception, thought processes, etc.), it relates to the individual`s personality and conservation of his/her identity (Machová, 2015, p.166). Some studies show the influence of cancer on the development of anxiety or depression (Lindon et al., 2012; Akyol, 2015). In this study, it was found out that more than 50 % of the respondents perceive their negative feelings on the scale as "slight" (a little) and "moderate". These feelings can be prevented by means of social support, as confirmed by Gonzales Saenz de Tejada et al. (2016, p. 1263), who found out that social support resulted in patient`s improvement of depression and anxiety. The improvement of these negative feelings is also associated with the improvement of physical, cognitive and social functions. However, Smith (2015, p. 1509) means that an optimum therapy of anxiety has not been known yet. The interventions used for the care of individuals with depression and anxiety differ in individual patients. They can include psychosocial therapy or pharmaco-therapy. However, due to the shortage of studies, their optimum combination is not known. Therefore, an attention needs to be paid to all negative feelings which can be caused by the actual disease or the treatment.

In addition, it was surveyed whether respondents were afraid of possible stoma. 14.9 % of respondents admitted "maximal" fear of stoma. The fear may be caused by the actual change of elimination, by the necessity to adapt oneself to the life with a stoma, and by the changed body image. This may result in the feeling of shame and in alienation to oneself (Diebold, 2016, p. 38). Anxiety and fear can be prevented by a suitable communication with the patient. Almost 50 % of our sample perceive the information from healthcare professionals as highly important. This is also confirmed by the study by Poland et al. (2017, p. 4), who found out that patients and their carers needed to obtain as much as possible information from healthcare professionals. Healthcare professionals educate patients and their significant ones in accordance with their needs, particularly in the preoperative phase. The information obtained from other CRC patients plays a similar role. This study revealed that the answers "not at all" and "much" were given by the same number of respondents. Deibold (2016, p. 36) means that talks with other patients can reduce anxiety. Differences in the evaluations of getting information from other patients may be caused by the need to manage the disease alone or just with the help of the family. Another explanation may be the fact that the patient has not been offered this opportunity.

The principle of the conservation of social integrity is focused on the social life. The quality of life can influence the correlation between cancer and a mental disease (anxiety and depression). These mental diseases can cause complications during the treatment of most cancers. The symptoms of anxiety and depression impair the prognosis of cancer patients (Christensen, Drago, 2016, p. 516). Our study revealed that impaired mental state impaired the individual`s working life. McGrath et al. (2016, p. 6) found that 27 % of 171 CRC patients had not returned to work. This was, e.g., caused by physical problems, loss of strength, psychological changes and undesirable drug effects. The loss of a job results in threat to financial security. The disease increases costs that can be divided into direct healthcare costs (medicaments, tools, alternative medicine, etc.), and indirect costs associated, e.g., with the decrease of income of the patient`s carers (Longo, 2007, p. 500). Patients may have a stoma, which, according to McGrath et al. (2016, p. 4), can be the cause of the patient`s leaving the job. Our study did not prove any influence on the problems at work. However, this result may be caused by the fact that more than 50 % of the respondents were in retirement age.

Exercise is an integral part of the life; it determines the quality of our lives. Exercise keeps our bodies in good condition. Furthermore, exercise reduced the risk of CRC (Slattery, 2004, p. 239). Shmerling (2015, p. 1) performed a long-term study in 1,400 men who did exercise. The results show that in 44% men, the probability of development of CRC is lower thanks to their physical activities. The same study proved that the tested men who had been the fittest had also in 32 % lower mortality for CRC, lung carcinoma or carcinoma of prostate. There are studies (e.g. Courneya et al., 2003, p. 350-354) which draw the attention to the influence of exercise after developing CRC. CRC patients who restored their physical activities live longer. In addition, exercise reduces the risk of recurrence. For further prevention of CRC, patients need to be educated about a suitable lifestyle, which includes not only regular exercise but also different nutritional habits (Brown et al., 2003, p. 268). Unrestricted exercise is a predisposition for travelling. However, Femke et al. (2015, p. 1692) state that due to the rectum resection, patients may have problems (e.g. limitation of the ability to sit or ride a bicycle). Our patients answered that stoma did not cause them any problems during travelling, probably thanks to a longer time period which enabled them to live and travel with a stoma.

Stoma patients need to cope with both the CRC diagnosis and a dramatic change of their body image (Marquis, Marrel, Jambon, 2003, p. 49). Our study also showed that stoma patients felt more limited by their appearance than patients without a stoma. Sexual life and problems associated with sexual life are definitely influenced by the perception of one`s body image. It was found out that patients who perceived their sexual life as poor mentioned significantly more frequently that stoma limited them in sexual life. This is also confirmed by the study by Anaraki et al. (2012, p. 176), who found in a sample of 102 respondents that before the creation of a stoma 81.4 % of them had been sexually active while after the creation of a stoma, only 33.3 % of them restored their sexual activity. This finding also corresponds with the study by Usher, Perz, Gilbert (2015, p. 7), who found out that 78 % women and 76 % men had decreased sexual activity after being diagnosed with cancer.

Conclusion

In the care of CRC patients, energy fields by M. E. Levine can be used. Thanks to this conception, nurses can get a tool for better understanding and assessment of a patient with this disease. This model is also used in the area of education to complete the needs of stoma patients. This theory enables students to get necessary information usable in practice. A patient with CRC will not be considered as a mere disease but also as a being that may have problems with social and personal integrity. Our study shows that the most common problem of social integrity relates to the influence of patient psychological condition on the working life, stoma patients feel to be limited by their appearance and stoma represents an obstacle in the financial sphere. Current medicine shows little interest in these areas. In the area of personal integrity, patients experience negative feelings associated with the treatment. Therefore, suitable communication is needed on the part of the whole team taking care of the patient. This theory provides a nursing care background for the whole multidisciplinary team.

The results of this study show that CRC considerably influences the patient`s life. Nurses have a high potential to understand the individual`s complexness and prevent the development of problems which would result in the loss of the wholeness and poor adjustment to CRC consequences.

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