Suboptimal perception of illness due to self-realization constraints impairs psychological welfare in surgical patients†

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Abstract

OBJECTIVE: Recognizing patients’ psychological problems and understanding their social needs constitute important tasks for medical personnel, because these issues substantially contribute to overall outcome of treatment. People afflicted with surgical diseases need to determine the sense of everyday pursuits and activities and balance it against the therapeutic process. The aim of the study was to assess the relationships between the perception of illness, satisfaction with life and meaning of life among surgical patients.

METHODS: A total of 225 patients undergoing surgical treatment in the thoracic surgery department were enrolled in the questionnaire study using Multidimensional Essence of Disease and Illness Scale (MEDIS), Satisfaction With Life Scale (SWLS) and Life Meaningfulness Scale (LMS). Relationships between variables were assessed with Pearson’s correlation.

RESULTS: The analysis disclosed negative correlations between the perception of the disease in the light of self-realization constraints and the feeling of satisfaction with one’s life ($R = -0.25; P < 0.01$), an affective component of the LMS ($R = -0.29; P < 0.001$) and the total result of the LMS ($R = -0.21; P < 0.01$). Similar relationships were observed between the MEDIS dimension describing a disease as a social withdrawal and the total result of the SWLS ($R = -0.21; P < 0.05$) and the affective component of the LMS ($R = -0.23; P < 0.01$).

CONCLUSIONS: Suboptimal hospitalization-related perception of the disease due to self-realization constraints profoundly impairs psychological welfare of patients and may exert negative impact on the overall outcome of treatment. We believe that surgical patients require early psychological, social and spiritual support to prevent these harmful psycho-social consequences of illness and hospital stay. Preoperative clinical application of presented scales may be useful to select patients who require more psychological attention in providing information about planned surgical treatment and expected outcomes.

Keywords: Disease • Illness • Psychology • Self-realization • Hospitalization • Perception

INTRODUCTION

Understanding patients’ social and psychological needs constitutes an important task for medical personnel. The key psychological issue for people afflicted with severe diseases is to find out the sense of everyday pursuits and activities. It is especially important for their future ability to restart social life and to perform specific functions in the society, e.g. their family or workplace. It is worth to make an attempt to define relations between the way in which people with chronic diseases perceive what it is like ‘to be ill’ and their perception of meaning and satisfaction of life. This attempt has been made by Toombs [1] who, in her theoretical conception of illness, has made use of phenomenological conceptual framework in order to emphasize that illness means to a patient much more than a mere sum of physical symptoms.

A phenomenon of illness is associated with constraining, even to some low degree, personal freedom of a human being. Physical disability is not the only element of this constraint. Another essential element of personal freedom is spiritual freedom. Even major physical impairment is not necessarily associated with the loss of spiritual freedom, or the impossibility of expressing oneself and perceiving meaning of one’s life. The best known and the most creative theory of life meaning is the one developed by Frankl [2]. The author of the theory referred to the three levels of human functioning: biological, psychological and spiritual. In this framework, the sense of life meaning is a subjective state of satisfaction related to activity aimed at values. At present, one of the most frequently cited notions is Reker and Wong’s ‘concept of personal meaning’ [3, 4]. The sense of meaning of life may, to some degree, be associated with positive
emotions and satisfaction with achievements to date. It should be noted that the psychology of health indicates at least three important elements of well-being, namely the presence of positive emotions, absence of negative emotions and satisfaction of life achievements [5].

Medical literature contains many reports on various aspects of the quality of life [6-9], but so far there are no publications about meaning of life among thoracic patients. Furthermore, there are few studies on satisfaction with life in surgical patients [10, 11], particularly among patients undergoing thoracic surgery [12]. The aim of the study was to assess the relationships between the perception of illness, satisfaction with life and meaning of life among thoracic surgical patients. Undertaking this research on the satisfaction and meaning of life in a group of patients treated surgically, we set up a hypothesis that more beneficial perception of the condition of ‘being ill’ is associated with greater satisfaction of life and feeling of meaning of life.

MATERIALS AND METHODS

A total of 225 patients (117 women and 108 men) undergoing surgical treatment in the thoracic surgery department were enrolled in the study. Sociodemographic and clinical characteristics of patients are presented in Table 1. Questionnaire study using Multidimensional Essence of Disease and Illness Scale (MEDIS), Satisfaction With Life Scale (SWLS) and Life Meaningfulness Scale (LMS) were used in the study. The group had a mean age of M = 59.9 years (SD = 14.3). Mean time from making a preliminary diagnosis was 2.6 months (SD = 3.7). The sample consisted of 36 patients with lung cancer, 73 with lung tumour (without definitive diagnosis at the time of collecting the questionnaire), 63 with emphysema, 29 with hyperhidrosis and 24 with thoracic trauma. This non-homogeneous structure of the study group reflects the cross-section of diseases most frequently hospitalized in actual thoracic surgery wards. The survey was performed before surgical intervention.

The research was carried out anonymously, after obtaining informed consent to take part in the study from each individual. The approval KE-0254/224/2008 of Bioethical Committee (at Medical University in Lublin) was also provided before starting the research. The study was conducted from February 2009 to December 2010.

The MEDIS, developed by Sak [13], refers to the research strategies used in the psychology of health that aim to answer the question about common understanding of illness [14]. The MEDIS scale is designed to examine colloquial expressions in order to test general beliefs about the essence of an illness. The scale helps to evaluate what ‘to be ill’ means to a given respondent, without referring to any specific disease. The scale consists of 28 items assigned to five dimensions describing: self-realization constraints (ten items), mental dysfunction (five items), physical dysfunction (five items), infection (four items) and social withdrawal (four items). Because of the different numbers of items in the dimensions, the arithmetic mediums of results obtained from respondents were calculated separately for each of the five factors. A 5-point Likert-like scale (where 1 equals ‘strongly disagree’ and 5 equals ‘strongly agree’) assigned to each of the 28 items helps evaluate to what degree a respondent agrees with a given description of ‘being ill’. The higher medium (min. 1.0, max. 5.0) in a given dimension is, the more importance is assigned to the dimension in understanding the essence of ‘being ill’ [13].

The SWLS created by Diener et al. [15] is an instrument used to evaluate the feeling of satisfaction with living conditions and life achievements. The questionnaire consists of five statements that participants are asked to rate on a 7-point Likert scale. An enquired person assesses to what degree each of the five statements describes his/her life. The results are summed up and a total sum (ranging from 5 to 35 points) reflects the degree of satisfaction with one’s life.

The LMS, designed by Halama [16], is based on Reker and Wong’s concept of personal meaning of life [3, 16]. The LMS helps to diagnose the general sense of life meaning and three specific dimensions, namely an affective component (a feeling of satisfaction or fulfilment), a cognitive component (optimistic beliefs, cognitive frameworks and interpretations) and a motivational component (commitment to realized aims and a system of values). Surveyed people are asked to rate—5-point Likert scale where 1 equals ‘strongly disagree’ and 5 equals ‘strongly agree’—14 items (e.g. ‘I am satisfied with my life, even if it becomes tough sometimes’) with reference to their perception of a proper life.

All analyses of the collected data were performed using SPSS 14.0 software, the main statistical model was of correlational type. Relationships between variables were assessed with Pearson’s correlation. Additionally, Bonferroni’s adjustment was

| Table 1: Sociodemographic and clinical characteristics of surgical patients [N = 225; males = 108 (48%); females = 117 (52%)] |
|----------------|----------------|----------------|
| Age (years) | Time after diagnosis (months) | Length of stay (days) |
| Mean ± SD | Mean ± SD | Mean ± SD |
| Min–Max | Min–Max | Min–Max |
| Total group | 59.9 ± 14.3 | 2.6 ± 3.7 | 4.4 ± 2.3 |
| Lung cancer | 61.0 ± 9.5 | 5.4 ± 5.0 | 5.4 ± 2.9 |
| Lung tumour | 59.8 ± 6.1 | 3.2 ± 2.5 | 3.9 ± 1.5 |
| Emphysema | 68.0 ± 9.1 | 3.1 ± 3.1 | 3.3 ± 1.6 |
| Hyperhidrosis | 27.1 ± 9.5 | 2.4 ± 3.0 | 2.4 ± 1.3 |
| Thoracic trauma | 49.0 ± 21.8 | 0.9 ± 0.7 | 7 (19.4%) |
| Staging in patients with lung cancer, n (%) | | | |
| IA | 1 (2.8%) | 10 (27.7%) | 7 (19.4%) |
| IB | 6 (16.7%) | 9 (25%) | 2 (5.6%) |
| II | 117 (52%) | N | |
applied. This debatable method is widely used in biological sciences to counteract the problem of multiple comparisons [17]. A $P$-value of <0.05 was considered statistically significant.

RESULTS

The preliminary data analysis revealed no statistically significant differences in illness perception (MEDIS) between five subgroups of respondents (patients with lung cancer, lung tumour, emphysema, hyperhidrosis and thoracic trauma). Therefore, correlations between scales (MEDIS vs. SWLS and LMS) were determined with reference to the total group of surgical patients.

The analysis disclosed negative correlations (Table 2) between the perception of the illness in the light of self-realization constraints and the feeling of satisfaction with one’s life ($R = -0.25; P < 0.01$) (Fig. 1), an affective component of the LMS ($R = -0.29; P < 0.001$) (Fig. 2) and the total result of the LMS ($R = -0.21; P < 0.01$) (Fig. 3).

Other dimension of the MEDIS that correlated with the SWLS and the LMS was the factor describing a perception of ‘being ill’ in terms of mental dysfunction (Table 2). A negative correlation was observed between this factor and both the total result of the SWLS ($R = -0.20; P < 0.05$) (Fig. 4) and the affective component of the LMS ($R = -0.19; P < 0.05$) (Fig. 5).

Similar relationships were observed between the MEDIS dimension describing the illness as a social withdrawal and the total result of the SWLS ($R = -0.21; P < 0.05$) (Fig. 6), and the affective component of the LMS ($R = -0.23; P < 0.01$).

There were no significant relationships between both cognitive and motivational components of the LMS and individual dimensions of the MEDIS.

In reference to other variables, we identified statistically significant relation only between the age of surgical patients and self-realization constraints ($R = 0.21; P < 0.01$). There were no significant correlations between time after diagnosis, length of stay and dimensions of the MEDIS.

Bonferroni’s adjustment indicated that from the above-mentioned correlations, only four should be treated as significant and allowed to understand the interplay between illness perception and satisfaction with life and meaningfulness.

**Table 2:** Relationships between perception of illness, life satisfaction and meaning of life in the group of thoracic surgery patients (Pearson’s correlation and Bonferroni’s adjustment)

<table>
<thead>
<tr>
<th>The MEDIS factors</th>
<th>SWLS</th>
<th>Affective component (LMS)</th>
<th>Cognitive component (LMS)</th>
<th>Motivational component (LMS)</th>
<th>The LMS total result</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$R$</td>
<td>$P$-value</td>
<td>$R$</td>
<td>$P$-value</td>
<td>$R$</td>
</tr>
<tr>
<td>Self-realization constraints</td>
<td>$-0.25^{**}$</td>
<td>&lt;0.01</td>
<td>$-0.29^{***}$</td>
<td>&lt;0.001</td>
<td>$-0.04$</td>
</tr>
<tr>
<td>Mental dysfunction</td>
<td>$-0.20^{*}$</td>
<td>&lt;0.05</td>
<td>$-0.19^{*}$</td>
<td>&lt;0.05</td>
<td>0.05</td>
</tr>
<tr>
<td>Physical dysfunction</td>
<td>0.07</td>
<td>0.42</td>
<td>0.04</td>
<td>0.60</td>
<td>0.10</td>
</tr>
<tr>
<td>Infection</td>
<td>$-0.10$</td>
<td>0.27</td>
<td>0.02</td>
<td>0.76</td>
<td>0.03</td>
</tr>
<tr>
<td>Social withdrawal</td>
<td>$-0.21^{*}$</td>
<td>&lt;0.05</td>
<td>$-0.23^{**}$</td>
<td>&lt;0.01</td>
<td>$-0.07$</td>
</tr>
</tbody>
</table>

$^{a}$For calculating this statistic, simple interactive statistical analysis was used (http://www.quantitativeskills.com/sisa/calculations/bonfer.htm).

$^{b}$With no Bonferroni’s correction, the chance of finding one or more significant differences in five MEDIS factors was 0.23 (23%).

$^{*}P < 0.05$.

$^{**}P < 0.01$.

$^{***}P < 0.001$ (two-tailed).
Self-realization constraints in perception of illness significantly reduced satisfaction with life, affective component of meaningfulness and the global score of meaning in life. Similarly, disease perceived as social withdrawal contributed to decrease in feeling of satisfaction or fulfilment.

**DISCUSSION**

Our results indicate that patients undergoing surgical treatment with the lower degree of satisfaction of life tend to perceive their illness as leading to some important self-realization constraints. Similar relationships were observed between self-realization constraints and both the affective component of the LMS and the total result of the scale. The more fulfilled and satisfied with their lives people with chronic diseases are, the lesser significance they attach to perceiving a state of ‘being ill’ as a mental dysfunction and social withdrawal.

It should be noted that even though there are some significant relations between the feeling of being fulfilled and the tendency to perceive the state of ‘being ill’ as less burdensome existentially, there are no statistically significant relations \(P<0.05\) between the cognitive and motivational components of the LMS. Such a structure of results may be the effect of the fact that the cognitive component (describing positive beliefs and cognitive frameworks) and the motivational component (reflecting respondent’s commitment to life goals) may be dependent on a patient’s subjective ‘world of illness’ [1, 3]. These two components, unlike the affective component, describe ill individual’s attitude to the future and not to his/her private past. The affective component refers mainly to the past achievements of the patient. Medical practice confirms the observation that patients undergoing surgical treatment who have changed their perception of an illness into a more positive one become more optimistic about their life too. This optimism appears in their willingness to make plans for the future and to implement them. With regard to the affective component of the LMS (i.e. the feelings of fulfilment and satisfaction with one’s life), we may suppose that its dependence on the perception of patient’s illness is weaker. Indeed, the dependency seems to be reverse, namely the perception of ‘being ill’ appears to be conditional on previous life experiences, including individual’s achievements. It thus may be concluded that a feeling of satisfaction with one’s life is a kind of ‘vaccine’ against pessimism and doubt about one’s existential possibilities in disease.

As an example useful in our daily practice, it should be emphasized that patients expressing greater satisfaction with life are less vulnerable to human relation destruction, i.e. the social
withdrawal. The probability of such a conclusion seems to be dependent on the way we interpret the relation between the self-realization constraints and the total result of the LMS. The question is to what degree the result is conditional on the affective component alone and to what degree it is as well dependent on other factors of the LMS. The existence of a substantial relation between the MEDIS factor describing the self-realization constraints and the LMS affective component seems to be insufficient to provide an unequivocal answer to the question. There are some other variables that were not covered by our study and the interpretation needs to take into account that they may have some kind of influence on the results. It is conceivable that some personality factors may influence the perception of an illness as well as the feeling of satisfaction with life.

The results of the study may be the essential guidelines for medical personnel who deal with sick people on an everyday basis. It is common that patients are lonely in their attempt to create the perception of their condition. In the pursuit to feel less insecure, they search for information that would help them understand what has happened to them and what the possible consequences of a given disease are. All too often, the collected information is incomplete, unverified or—what is equally disadvantageous—completely unclear. Such a situation fails to help regain the lost integrity of one’s body and self [1]. The medical personnel should be aware of the fact that their duty is not only to treat a patient, but also to provide honest information about a disease (the information expressed in a language clear for the patient) and to provide some psychological support. With regard to this support, it seems reasonable to take into account some forms of assistance available in the associations of patients undergoing surgical treatment. It is well known that no one would understand an individual better than another person with an analogous disorder. Such a clinical support strategy may help the patient to create an adequate clinical presentation of the disease and to reduce the risk of unjustified fear. Having an adequate (and not fictional) presentation of the illness may be of great importance for the patient’s decisions and plans, and for assessing his/her ability to implement them successfully. The information given by medical personnel to a patient may have direct influence on the individual’s feeling of meaning of life. Thus, it is important in medical practice not to leave a patient with some obscure information in the living space that is limited by a disease, but to provide some psychological and spiritual support. Besides, our results indicated that non-homogeneous aetiology of the disease is not reflected in the common understanding of illness.

In conclusion, our results showed that suboptimal hospitalization-related perception of the disease due to self-realization constraints profoundly impairs psychological welfare of patients and may exert negative impact on the overall outcome of treatment. We believe that surgical patients require early psychological, social and spiritual support to prevent these harmful psycho-social consequences of illness and hospital stay. Preoperative clinical application of LMS or SWLS scales may be useful to select the patients who require more psychological attention in providing information about planned surgical treatment and expected outcomes. We notice the need of conducting further interdisciplinary research (also longitudinal studies) on illness perception among surgical patients including other variables (e.g., health believes, type of personality, chronic pain, morbidity, mortality).

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**REFERENCES**


