Original Papers

Helena Sęk*
Michał Ziarko**

Utilization of resources in coping with chronic illness

Research conducted to date has evidenced the importance of single resources for adaptation to illness. The aim of the presented study was to take into account many resources so as to determine their structure and the way of utilization in various patient groups. The Resourcefulness for Recovery Inventory (Celiński, Antoniazzi, 2001) measuring 18 personal and social resources was used for this purpose. Participants in the study were 115 patients (68 men, 47 women) suffering from cardiovascular or rheumatoid diseases, or from cancer. The patients were found to utilize cognitive, emotional and behavioral resources, as well as social support in their adaptation to illness. The highest level of resource utilization was found in the cardiac group, and the lowest – in cancer patients.

Introduction

The feature differentiating long-term or chronic diseases from other conditions is their duration, ranging from months and years to the entire lifespan. The category of chronic illness includes a variety of conditions, such as cardiovascular diseases caused by congenital heart defects, but also acquired disorders, such as hypertension, ischemic heart disease, or states following myocardial infarction. Moreover, rheumatoid diseases, asthma, diabetes, skin diseases, and many disorders of the nervous system – epilepsy, Parkinson's disease, Alzheimer's disease, and sclerosis multiplex should be listed here as well. It is impossible to describe all the chronic illnesses together with their complete psychological characterization, even though such an endeavor would be most useful.

It should be noted however, that many chronic conditions are called civilizational illnesses and they undoubtedly present a very serious social problem (Heszen & Sęk 2007; Kopczyński, 1999).

Despite a considerable differentiation in psychological aspects of chronic diseases, a few of their shared characteristics can be distinguished and some general regularities outlined. The former include the duration of illness and the way it affects everyday life of the patient and people around him. In a majority of chronic diseases the prognosis is unfavorable or the further course is not clear. Besides, chronic illness requires that the patient is in contact with the doctor and undergoes regular check-ups, sometimes associated with hospitalization. Such diseases usually necessitate a very strict regimen and long-term pharmacotherapy, not indifferent to health due to possible side effects of medication. The quality of the doctor-patient relationship and the way of communicating are most important, since they determine the patient's compliance with doctor's orders (Ockene, 2001).

Some diseases are characterized by periodic remissions or relapses, others – by a stabilized disability level, while still other ones – by a risk of further deterioration of health. These properties of the course of chronic diseases have a great impact on the individual's psychological functioning. Moreover, a number of other factors are of some significance, such as the time of onset of the disease, i.e. whether it is a congenital or childhood condition, or one acquired at various stages in adulthood. The time of onset affects the individual's aspirations, life goals and plans, as well as their attainment. The type of chronic disease involves varying degrees of disability and impaired functioning of various body systems, which may impede the individual's everyday life, study, work, social contacts and participation in the community life. Some conditions, e.g. diabetes, require from the patient not only the ability of self-control, but also acquirement of many new competences. Generally, the necessity of a

*   Warsaw School of Social Sciences and Humanities, Faculty in Wrocław, e-mail hsek@swps.edu.pl
** Institute of Psychology, the Adam Mickiewicz University in Poznań, Department of Health and Clinical Psychology, Poland

continuous adaptation is inherent in all chronic diseases.

Chronic illness undoubtedly represents a complex difficult situation: difficult from the cognitive, emotional, and existential perspective. The patient, and frequently also his nearest have to cope with these difficulties. Psychological consequences of chronic disease are analyzed in terms of the transactional model developed by Lazarus and Folkman (1984), adapted to the situation of long-term illness (De Ridder, 2004; Heszen, Sęk, 2007).

The situation resulting from illness may be appraised as a harm/loss, threat to the individual's further life and highly appreciated values, or may elicit appraisals in terms of challenge. These primary appraisals depend undoubtedly on objective criteria of the disease, but also on the patient's personality traits and on his sense of own competence or incompetence. The situation may lead to a considerable distress often accompanied by various negative emotions such as apprehension, fear, anxiety, feelings of harm, sadness and depressed mood, but also irritation, anger and aggressive attitudes. Chronic illness is not infrequently associated with pain. Chronic pain constitutes a very heavy burden – since it is sometimes resistant to pharmacological treatment, psychotherapeutic methods are used and patient pain management is encouraged (Skevington, 2004).

It should be noted that in the course of coping with chronic illness a spiral of loss can ensue, i.e. the disease might result in the patient's job loss, deterioration of his economic status, etc. It follows from the theory by Hobfoll (2006) that this process can and should be prevented.

In the process of coping with chronic illness a number of strategies are utilized, including these aimed at information seeking, development of the patient's own concept of the disease, and solving life's problems as well as these specific to his disease. A very important role of strategies aimed at emotion regulation and at eliciting positive affect is emphasized (cf. Heszen & Sęk, 2007). There are specialized centers for coping with chronic illness, where a number of evidence-based strategies are recommended for coping with a given disease, such as developing acceptance for irreversible facts, seeking possibilities of regaining control over one's own life, acquiring knowledge about the disease and opportunities for remedial activities - both on the patient's own and in co-operation with health professionals, mobilizing and maintaining interpersonal bonds and social support networks. Moreover, it is recommended that the meaning of illness should be periodically redefined and its positive consequences discovered, e.g. for personality development; hope and joys of everyday life should be cultivated. It is also pointed out that chronic physical illness neither precludes creative activity nor puts limits on it. This type of adaptation in order to be feasible requires that the individual has, develops and protects his resistance resources.

The consensus of opinion among most authors focusing their interest on resources (e.g. Antonovsky, 1995; Hobfoll, 2006; Heszen & Sęk, 2007) is that these properties are helpful in coping with life demands (stressors). From the psychological viewpoint, their health- and adaptation-enhancing function may take different forms, such as: avoiding stressors, minimizing their effect, or increasing the coping process efficacy. Resources are then something valuable and beneficial. The individual strives to develop, maintain and renew his resources throughout his life (Hobfoll, 2006). Resources can be said to include objects in the individual's possession, material goods, all personal traits as well as characteristics of interpersonal relations and social environment that are propitious to development.

In the psychology of stress these properties have been commonly known for a long time as resistance traits of the body and mind, and as features of social structures. Owing to such congenital and acquired characteristics the individual can also adapt to prolonged stress, protect his health, and overcome illness. In numerous studies on the role of resources in stress adaptation not only personal traits, but also characteristics of interpersonal relations and the social environment, and particularly - the sources of social support were investigated. An attempt was made by Celiński and Antoniazzi (2002) to summarize these research findings taking into account a wide range of resources, as well as the perspective of physicians in charge of patients with chronic diseases. The latter authors' research was an inspiration for the study presented in this paper.

Problem and hypothesis

The aim of the study was to find out whether utilization of resources differentiates between patients suffering from cancer, cardiovascular diseases, or rheumatoid diseases. On the grounds of the knowledge about strategies of coping with various diseases the type of illness can be hypothesized to be of importance for resources utilization. Thus, we assume that utilization of resources will be differentiated by the type of chronic disease.

Methods

Since no comprehensive research has been conducted so far investigating a wide range of differentiated resources, the *Resourcefulness for Recovery Inventory, RRI* (Celiński & Antoniazzi, 2002), in the Polish adaptation (Ziarko & Sęk, in press) was used in the study. The questionnaire consists of 239 items measuring 18 resources that facilitate coping with chronic illness. The resources were divided into five categories: (1) emotional competences, (2) competences of control, choice and coping (causative agency and resourcefulness), (3) health-related knowledge and beliefs, (4) self-presentation, (5) social support. The respondents'

task was to estimate the appropriateness of each item using a 6-point rating scale with the extreme answers defined as follows: „0" – I definitely disagree, and „6"- I definitely agree. The number of items for the measurement of particular resources varied[1]. A high score on a given scale denoted a considerable availability of the relevant resource, while a low score – its limited availability.

The following resources were included in the category of emotional competences[2]: (1) positive beliefs / negative beliefs (Nothing will stop me from getting better), (2) experiencing positive affect / experiencing negative affect (I cannot get over my anger and frustration about what has happened to me), (3) positive expectations, hope / negative expectations, hopelessness (I have faith that things will get better even though I do not exactly know how), 4) self-acceptance/ lack of self-acceptance (I have become used to living with my condition), (5) ability to express emotions / alexithymia (I am confused about how I feel), (6) loss minimization / loss maximization (I have lost everything that I valued in my life), (7) positive values / negative values (I believe in my goodness and the goodness of others).

The category of competences of control, choice and coping consisted of the following seven resources: (1) maintenance of control / lack of control (My condition has been getting worse no matter what I do), (2) intentionality / experiencing a lack of inner-directedness (My condition is so severe that I have no goals at this time), (3) belief about having freedom of choice / belief about having no freedom of choice (I see no choice but to follow what the doctors and others tell me to do), (4) orientation towards the present and the future / orientation towards the past (I already see myself returning to work in the future), (5) independence, self-responsibility/ dependence on others, lack of self-responsibility (I am looking to find a specialist who will finally cure me), (6) adequate, effective coping with stress / inadequate coping with stress (I handle problems by first imagining how I will take care of them). (7) a sense of integration / disintegration (Having come through this experience has made me stronger).

The category of health-related knowledge and beliefs included three resources: (1) having knowledge, awareness / shortage of information (I have benefited from reading books and other educational material to learn about coping with my condition), (2) taking care of one's health / neglecting health (I am careful about what I eat in order to be healthier), (3) positive relations with health care professionals / negative relations with health professionals (I am satisfied with the medical care and treatment that I am getting).

Two resources referred to self-presentation: (1) positive self-presentation (I like all people regardless of how different they are from me), and (2) negative self-presentation (I do

not care what other people think of me). And finally, the category of social support contained a single resource: (1) social support /lack of social support, isolation (I feel loved by my family).

Participants

The total of 115 patients (68 men, 47 women, aged 21-85, mean age = 55.45 years; SD = 12.96) participated in the study. They were treated for cancer (30 cases; 25 men, 5 women), rheumatoid diseases (26 cases; 10 men, 16 women) or cardiovascular conditions (59 cases; 34 men, 25 women) at the Poznań Medical University and the Province Hospital in Poznań. There were no significant differences between the patient groups[3] with respect either to age (M_1 = 57.04; M_2 = 51.61; M_3 = 55.87; SD_1 = 12.60; SD_2 = 17.72; SD_3 = 7.28; F = 1.581; p = 0.210), or duration of illness (M_1 = 7.06; M_2 = 10.50; M_3 = 9.30; SD_1 = 7.50; SD_2 = 9.76; SD_3 = 6.47; F = 1.780; p = 0.174), with the length of illness in the whole sample ranging from 1 to 40 years (M = 8.51; SD = 8.12).

Statistical analysis

In order to find out whether utilization of available resources was differentiated by the experience of various diseases: neoplastic, cardiovascular and rheumatoid, relevant patient groups were compared using one-way ANOVA (SPSS 11.0). The significance level of p = 0.05 was assumed for testing all the statistical hypotheses. A comparison of the utilization (standard scores) of the following competences: (1) emotional, (2) control of choice and coping; (3) health-related knowledge and beliefs, (4) social support, and (5) self-presentation, is shown in Table 1[4].

Results

Descriptive analysis. The descriptive statistics characterizing the sample under study are summarized in Table 1. The respondents utilized to a considerable degree positive self-presentation, positive affect, and planning behaviors aimed at recovery, while such resources as freedom of behavior choice, adequate coping and expression of emotions experienced were less available to them.

Type of illness vs. categories of resources utilized. Analyses of the obtained results indicated a general tendency in the utilization of recovery-facilitating resources: namely, they were utilized in the greatest degree by cardiac patients, less intensely by rheumatoid patients, and underutilized by

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3   Notations: M_1, SD_1; M_2, SD_2 and M_3, SD_3 refer to three groups of patients with: cardiac diseases, rheumatoid diseases, and cancer, respectively.

4   In order to make the measured variables easily comparable, the scores on particular questionnaires were standardized and could range from 1 to 10.

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1   In order to make the measured variables easily comparable, the subscale scores were standardized and could range from 1 to 10.

2   Sample items for particular resources are given in brackets.

Table 1
Distribution of particular resources measured using the RRI questionnaire ($n = 115$).

| Variable	Minimum	Maximum	Mean	Standard deviation
EMOTIONAL COMPETENCES	3.42	9.07	6.36	1.19
Positive beliefs / Negative beliefs	2.60	9.80	6.60	1.58
Positive emotions / Negative emotions	3.82	9.82	6.52	1.41
Positive expectations, hope / Negative expectations, hopelessness	2.36	10.00	6.22	1.55
Self-acceptance / Lack of self-acceptance	2.77	9.85	6.10	1.30
Ability to express emotions / Alexithymia	1.56	9.11	6.04	1.38
Minimizing losses / Maximizing losses	3.20	9.80	6.52	1.29
Positive values / Negative values	3.91	9.39	6.52	1.09
COMPETENCES OF CONTROL, CHOICE AND COPING	3.78	8.87	6.07	0.99
Maintenance of control/ Lack of control	4.00	9.54	6.34	1.23
Intentionality / Lack of inner-directedness	3.69	9.54	6.68	1.26
Freedom of choice/ No freedom of choice	2.40	8.00	5.17	1.06
Orientation to the present and future / Orientation to the past	3.45	10.00	6.30	1.46
Self-reliance, responsibility / Dependence, lack of responsibility	3.27	9.45	6.07	1.12
Adequate, efficient coping with stress / Inadequate coping	2.43	8.57	5.59	1.13
Integration / Disintegration	3.08	10.00	6.35	1.34
HEALTH-RELATED KNOWLEDGE AND BELIEFS	4.27	9.20	6.40	1.11
Knowledgeability, awareness / Lacking in knowledge	3.40	10.00	6.32	1.22
Caring for health / Neglecting health	3.40	9.40	6.39	1.25
Relations with health care professionals: Positive / Negative	2.60	9.20	6.48	1.44
SOCIAL SUPPORT	3.08	10.00	6.35	1.34
SELF-PRESENTATION	3.39	7.81	5.13	0.81
Positive self-presentation	3.17	9.17	6.66	1.23
Negative self-presentation	0.73	7.82	3.61	1.53
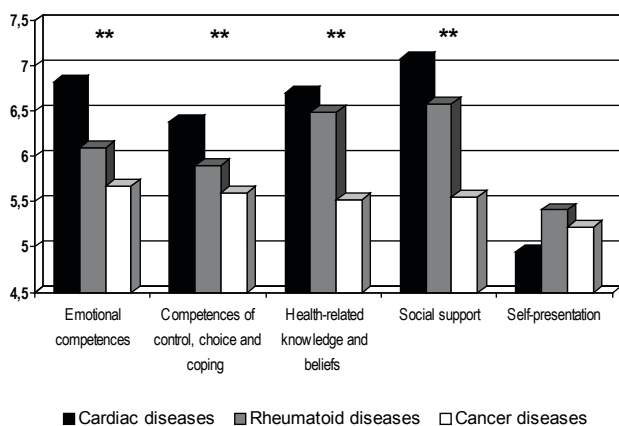
Figure 1. Type of illness and utilization of various resource categories in the compared groups of patients – between-group effects (one-way ANOVA – F (2, 112). $*p < 0.05$; $**p < 0.01$.

those with cancer (see Fig. 1). This regularity pertained to emotional competences ($M_1 = 6.82$; $M_2 = 6.10$; $M_3 = 5.67$; $SD_1 = 1.26$; $SD_2 = 0.99$; $SD_3 = 0.70$; $F = 12.24$; $p = 0.000$), competences of choice, control and coping ($M_1 = 6.39$; $M_2 = 5.90$; $M_3 = 5.60$; $SD_1 = 1.14$; $SD_2 = 0.71$; $SD_3 = 0.62$; $F = 7.46$; $p = 0.001$), as well as to health-related knowledge and beliefs ($M_1 = 6.71$; $M_2 = 6.49$; $M_3 = 5.52$;

$SD_1 = 1.45$; $SD_2 = 1.02$; $SD_3 = 0.99$; $F = 9.26$; $p = 0.000$), but not to self-presentation. As regards the latter category of competences, the tendency to present one's strong points was most marked in rheumatoid patients, being the lowest in those with cardiac diseases ($M_1 = 4.95$; $M_2 = 5.41$; $M_3 = 5.22$; $SD_1 = 0.72$; $SD_2 = 1.02$; $SD_3 = 0.71$; $F = 3.22$; $p = 0.044$).

Type of illness vs. utilization of emotional competences. Out of the seven resources included in the category of emotional competences, six were found to significantly differentiate between patients with cancer, cardiac conditions and rheumatoid diseases.

The most pronounced differences were noted in health-related beliefs and perceived consequences of the disease for the patient's further functioning (see Table 2). Cardiac patients were relatively optimistic as regards both their state of health and the future prognosis, while the remaining two groups (i.e. patients with rheumatoid diseases and cancer) tended rather to believe that recovery was impossible, focused on negative consequences of their illness and had no hope for any positive developments in the future.

The compared groups differed also in respect of the experienced emotions and ways of coping with them. Cardiac patients experienced not only negative emotions

Table 2
Type of disease and self-reported utilization of resources (one-way ANOVA; *n* = 115; between-group *df* = 2; within-group *df* = 112).

	Cardiac diseases C	Rheumatoid diseases R	Cancer Ca	Between-group effects	*F* test	
	M (SD)	*M (SD)*	*M (SD)*		$F_{(2, 112)}$	*p*
EMOTIONAL COMPETENCES						
Positive beliefs/ Negative beliefs	7.32 (1.61)	6.25 (1.31)	5.49 (0.87)	C > R; C > Ca	18.41	.000
Positive emotions / Negative emotions	7.01 (1.57)	6.42 (1.24)	5.63 (0.52)	C > Ca	11.37	.000
Positive expectations, hope / Negative expectations, hopelessness	6.80 (1.63)	5.85 (1.46)	5.39 (0.91)	C > R; C > Ca	10.67	.000
Self-acceptance / Lack of self-acceptance	6.34 (1.50)	5.80 (1.14)	5.89 (0.91)	---	2.17	.119
Ability to express emotions / Alexithymia	6.50 (1.33)	5.91 (1.23)	5.26 (1.24)	C > Ca	9.38	.000
Minimizing losses / Maximizing losses	7.04 (1.31)	6.23 (1.13)	5.76 (0.91)	C > R; C > Ca	12.76	.000
Positive values / Negative values	6.76 (1.24)	6.24 (1.02)	6.28 (0.68)	---	3.18	.045
COMPETENCES OF CONTROL, CHOICE AND COPING						
Maintenance of control/ Lack of control	6.76 (1.36)	6.24 (0.92)	5.63 (0.79)	C > Ca	9.73	.000
Intentionality / Feeling of a lack of inner-directedness	7.00 (1.46)	6.57 (1.12)	6.16 (0.69)	C > Ca	4.76	.010
Freedom of choice / No freedom of choice	5.29 (1.22)	4.92 (0.93)	5.15 (0.81)	---	1.12	.332
Orientation to the present and future / Orientation to the past	7.00 (1.41)	6.16 (1.16)	5.05 (0.79)	C>R; C>Ca; R>Ca	25.52	.000
Self-reliance, responsibility / Dependence, lack of responsibility	6.26 (1.26)	5.64 (0.95)	6.05 (0.84)	C > R	2.92	.058
Adequate, effective coping with stress / Inadequate coping with stress	5.70 (1.22)	5.28 (1.14)	5.65 (0.93)	---	1.31	.274
Integration / Disintegration	6.71 (1.45)	6.49 (1.02)	5.52 (0.99)	C > Ca; R > Ca	9.26	.000
HEALTH-RELATED KNOWLEDGE AND BELIEFS						
Knowledgeability, awareness / Lacking in knowledge	6.51 (1.37)	6.20 (1.05)	6.05 (1.02)	---	1.59	.209
Caring for health / Neglecting health	6.88 (1.19)	6.39 (1.12)	5.43 (0.91)	C > R; R > Ca	16.89	.000
Positive relations with health care professionals / Negative relations with health care professionals	7.17 (1.08)	6.20 (1.72)	5.36 (0.98)	C>R; C>Ca; R>Ca	22.27	.000
SOCIAL SUPPORT AND SELF-PRESENATION						
Social support/Lack of social support, isolation	7.08 (1.35)	6.58 (1.12)	5.55 (0.87)	C > Ca; R > Ca	16.42	.000
Positive self-presentation	6.77 (1.13)	6.69 (1.31)	6.42 (1.37)	---	0.82	.441
Negative self-presentation	3.15 (1.44)	4.14 (1.64)	4.03 (1.39)	C < R; C < Ca	5.82	.004

Note: The Tukey post-hoc test was used in the analysis of between-group effects. Assumed significance level for differences between means: p < 0.05.

(anger, irritation, depressed mood, anxiety), but since they were able to notice positive aspects of life in illness, they reported also positive feelings due to small everyday joys. The remaining two groups did so to a much lesser degree, experiencing more negative emotions. Cardiac patients as compared to both the remaining groups were most aware of the emotions they experienced and most capable of emotional expression. The latter competence was the lowest in cancer patients.

Cancer patients were characterized by brooding over their life losses due to their illness. This tendency was much less pronounced in the other two patient groups, with cardiac and rheumatoid diseases, who tried to focus rather on competences in their possession and on resources unimpaired by their condition.

Cardiac patients were the group most hopefully looking forward to positive events in their life, believing and trusting other people, and expecting interpersonal contacts to help

them to enjoy life. Such beliefs were shared to a smaller extent by rheumatoid and cancer patients, who besides expected that the oncoming events and contacts with other people would not always be positive.

The only emotional competence that did not differentiate between the compared groups was the ability of self-acceptance, which turned out to be similar in all the patients.

Type of illness vs. utilization of competences of control, choice and coping. This category of competence included also seven resources, but the utilization of only four of them was found to significantly differentiate between patients suffering from various diseases.

Among cardiac patients a belief predominated that symptoms of their illness could be effectively relieved by their own behavior, i.e. by appropriately choosing and ranking health-related objectives and life goals, and by determination in working towards them. Patients in this

group declared they set themselves health-related goals worth striving for. It can be said they ascribed to themselves co-responsibility for the course of treatment and tried to control the course of their illness. These beliefs were much weaker among patients with rheumatoid diseases and those with cancer, who tended rather to consider coping with illness as something beyond their control; they did not believe one's behavior could have an influence on one's health. Therefore, their ability of setting themselves health-related goals was limited, even though this would be helpful in their coping with illness.

The compared patient groups differed with respect to their temporal orientation - to the present/future or to the past. While cancer patients more often brooded over their problems, past failures or losses caused by the illness, tended to analyze errors committed before the disease had been diagnosed, and believed their life was ruined, cardiac patients more often focused on planning their future and on changes in their family life and career likely to result from their illness. They attempted to prepare for that, and were planning how to modify their functioning. Rheumatoid patients brooded over the past, but also thought about their future.

The three patient groups differed also in their ability to integrate the chronic illness into their life history. This ability was the lowest in cancer patients, who perceived their illness as a threatening event hardly compatible with their experience. They had a feeling that their illness involved so great a change that it would be extremely difficult to adapt to. On the other hand, cardiac patients were bound to believe that they gained a new outlook on their life, learned what is really important in life and to what sphere of functioning (family, career, public affairs) they would like to devote their efforts on recovery.

No intergroup differences were found as regards: freedom of choice in dealing with the experienced disease, perceived own competences allowing to cope with illness, and utilized ways of coping with stress.

Type of illness vs. utilization of health-related knowledge and beliefs. While the level of knowledge about their respective diseases was similar in all the patients, they differed in attitudes toward the diagnosis, medical recommendations, and health-related behaviors. Cardiac patients declared more care for their physical health attained through physical activity, abstaining from substances, and appropriate balancing of their diet. Patients in this group had more trust in the medical diagnosis and displayed greater compliance with medical advice. Both the rheumatoid and cancer patients less often tried to influence their health through health-related behaviors, and less often adhered to medical advice.

Type of illness vs. utilization of social support and self-presentation. The level of perceived social support varied across the three groups: patients with cancer reported little

support, while those with cardiac diseases received the highest level of support. The level of support received by rheumatoid patients was significantly higher than that in the neoplastic group, but lower than in cardiac patients. However, no significant intergroup differences were noted as regards the way of self-presentation, which was similar in all the patients.

Discussion

The study has evidenced that in the process of adaptation to chronic illness various resources are used. The declared levels of possessed and utilized emotional, cognitive, and causative agency resources as well as social support seem to be relatively high, either approaching or even exceeding the mean standardized rating scale scores. Therefore, the study confirmed our hypothesis that in coping with illness, particularly with chronic illness, patients would utilize a wide range of various resources (De Ridder, 2004; see also Heszen & Sęk, 2007; Poprawa, 1996).

Besides the commonly known and investigated personal, material and social resources (Antonovsky, 1995, Heszen & Sęk, 2007; Hobfoll, 2006), the resources and competences directly related to coping with illness were taken into account, including the levels of the patient's awareness and knowledge of his illness, caring and self-responsibility for his health, as well as support targeted at the disease, as exemplified by the following items: *To improve my health I imagine/visualize that my treatment ends successfully, and my body heals. People with similar health problems have given me ideas how to cope with them.* Moreover, the type of relationship with health care professionals was explored, which is expressed, among others, by the following statements: *My doctors and therapists can help me only when at some moment I bring into effect what I have learned from them. I trust the diagnosis made by my doctor.*

However, the resource categories were distinguished on the grounds of a theoretical analysis. In further research the categorization should be verified empirically - using e.g. cluster analysis it should be checked whether corresponding configurations of resources can be found in reality. Besides, the levels of subjective health or general wellbeing should be measured as indicating the patients' life satisfaction despite their illness. The findings of this study should be then regarded as preliminary in this research area.

Interestingly, the resource utilization levels were relatively high even in patients with cancer. Thus, a question arises about the possible role of variables associated with the course of the disease, such as symptom severity or symptom stabilization level, objectively measured activity limitations, or the degree of threat to life. The three groups of patients in our study seem to considerably differ in this

respect. Among other factors, this might have contributed to the significant intergroup differences in the available resources. Psychological research suggests that both cardiovascular (especially cardiac) diseases and cancer are regarded by patients as dangerous and anxiogenic (Heszen-Niejodek, 1992; Heszen, 2005). Nevertheless, it is in the cardiac patients that the highest levels of positive resource utilization were noted. Besides severity and life-threatening quality of the disease, perhaps an important role may be played here by recent advances in medicine (Tymińska-Sędek, 2004), reflected in the patients' awareness and indirectly leading to higher levels of optimism about their treatment efficacy and better prognosis.

Rheumatoid patients turned out to occupy the intermediate position between the other two groups in this study. This numerous category of patients has been relatively seldom the object of interest to psychologists. However, according to rheumatologists, the levels of health maintenance and counteracting effects of this insidious illness depend to a large extent on the patients' coping activity. Therefore, in the future more attention should be paid to psychological problems of this patient group.

Not surprisingly, cancer patients were found to average the relatively lowest scores. However, most disquieting is the fact that this was partly due to a shortage of social support and their rather unsatisfactory relationship with health care workers. As regards this group of patients, the variables related to the cancer process features and consequences, as well as to the treatment type and side effects should be controlled particularly carefully.

Although the issues of psychological response to long-term diseases have a very long history in both medical and health psychology, they have gained a new perspective in this holistic approach to resource utilization in the process of adaptation to chronic illness.

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