Original paper

Health and coping styles including resources of close family members supporting leukaemia patients

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Introduction: Illness in the family is a new and difficult situation. Illness frequently causes radical changes both in patients' lives and in their closest family situation. It often threatens currently performed tasks or values pursued by patients and those who support them. The aim of the study was to determine the relationship between the health condition of people supporting leukaemia patients, strategies for coping with stress, and the level of subjective resources.

Material and methods: The research involved 100 people supporting leukaemia patients. The methods used in the research included a standardised interview, CISS SES, SOC-29 and ISCL-STAI questionnaires, as well as Bryant's perceived control of life questionnaire.

Results: The results show that the health of people supporting leukaemia patients is largely conditioned by emotion-focused style ($\beta = -0.276$, $p = 0.007$) and avoidant attachment style linked to social anxiety ($\beta = 0.444$, $p = 0.012$). As regards the resources, a significant negative health predictor in people supporting leukaemia patients is the anxious personality type ($\beta = -0.375$, $p = 0.001$), whereas a positive health predictor is the sense of support provided by others ($\beta = 0.281$, $p = 0.001$).

Conclusions: People supporting leukaemia patients point to the key role of the subjective resources possessed by an individual. Concentration on negative emotions and deficient resources, in particular the anxious personality, are definitely detrimental to health.

Key words: coping, resources, supporting people.

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Introduction

Despite the advances in cancer treatment, social reactions to this disease are still negative and characterised mostly by fear [1, 2]. This attitude can be attributed to a common belief that oncological diseases irrevocably end in death [2–4]. The fear of suffering and consequences of illness are experienced both by patients and their close families. There is insufficient information, in particular in the media, on the available prophylaxis and treatment methods of carcinomas, which in many cases, primarily in the early stage of detection, result in remission and recovery [5, 6]. Therefore, it is of utmost importance to promote positive knowledge of oncological diseases to minimise fear and change the belief that cancer is a fatal disease. The experience of anxiety related to a life-threatening situation is often connected with the sense of being stigmatised by the disease and the conspiracy of silence in the family. Such reactions may produce indirect anxiety in patients and their close relatives [5].

Illness is a special situation, which in most cases leads to changes in human life. The process of adaptation to illness covers not only treatment, but also the consequences of the disease process itself. Each somatic disease, in particular those with uncertain chances for full recovery, is accompanied by stress. Obviously, illness and treatment are infrequently connected with pain and suffering, deficits in meeting physiological needs, as well as the need for safety, achievement, or autonomy. Other disturbance invoked by illness is a change in the socioeconomic situation of the patient and his/her family, possible financial problems, disorganisation of family life, job loss, or difficulties in finding employment [7, 8].

Oncological disease not only tends to bring radical changes in patients' lives, but it also affects their families. One of the consequences is the reorganisation of the hitherto operating family system, which often disturbs the adopted pace and rhythm of life [9]. It may occur that the patient needs comprehensive support including basic nursing activities, assistance in moving around, making meals, etc. This situation may in turn induce conflicts, add to the overload that close family members have to deal with, and intensify ambivalent attitudes to the patient [10]. The research on families who experienced oncological diseases shows that families that openly demonstrate their emotions and manage to solve problems efficiently tend to be less often afflicted by depression [11].

In a difficult situation, such as the appearance of a disease in the family, people use different coping methods, i.e. cognitive, emotion-focused, and behaviour-focused strategies. Cognitive strategies include defence mechanisms, disregarding or downplaying the problem, or selective perception of its elements. By contrast, emotion-focused strategies rely on anxiety, depressive mood, panic, and helplessness. Finally, in behavioural strategies a continuum of activities may be observed from dynamic action to complete inaction [12].

Illness in a close person may also mean experiencing considerable somatic and mental overload. Consequently, the supporting person may develop burnout syndrome [13] characterised by physical and emotional symptoms that appear due to chronic stress [14]. The usual response to different types of difficult experiences affecting the human psyche is the appearance of somatic symptoms. The literature shows that stress may lead to decreased immune function, while the interaction between emotional and biological factors may result in disease development [15]. Obviously, oncological disease in the family, irrespective of the age of the person afflicted, constitutes an existential experience to all family members. It continues to be a social symbol of fear and the undermining of life. Cancer induces changes in thinking, feeling, activity, and family mood. These changes usually depend on the stage of oncological treatment [16].

Contemporary psychology considers coping with stress to be the key element of a stressful transaction. When experiencing stress, an individual activates in order to get rid of a stressor and reinstate homeostasis. The choice of stress coping strategy largely accounts for the costs incurred by the subject [17]. Coping may be understood as a process, a strategy, and a style [18, 19].

When understood as a process, coping denotes all actions undertaken by an individual in a stressful situation. The process of coping is complex, dynamic, often extensive, and changing over time [20].

Coping may be task-oriented (instrumental) or focused on emotions [21]. Problem solving may be achieved by changing stressful circumstances or focusing on "oneself", i.e. introducing changes in one's behaviour. Regulatory coping may reduce emotional tension, which hinders activity or stimulates emotions motivating to action [22].

In addition, Endler *et al*. defined avoidance-oriented coping. It is characterised by the tendency to undertake actions with the view to redirecting one's attention from experiencing or thinking about a stressful situation. Passive waiting for a stressful situation to come to an end is also referred to as avoidance [23].

To cope with stress, people use both task-oriented and emotion regulation strategies. Accordingly, problems can be solved by means of task-oriented and cognitive strategies. The latter enable us to look at the problem and ourselves from a different perspective [24].

According to Wrona-Polańska [25, 26], health is construed as a function of creative coping with stress. Contrary to the pathogenic approach, the author proposes a salutogenic model of health. Health is considered from the holistic and functional perspective, which results from its systemic understanding, taking into account the complexity and varying conditions that health entails.

The author of the functional health model also points to the significant role of resource levels in the context of health. She emphasises the roles of biological, subjective, cognitive, and behavioural resources as well as situational (material and social) factors. In line with the functional health model, coping is a function of resources. The level of such resources determines coping with stress. A higher level of resources entails using task-oriented strategies, concentration on problem solving, positive reevaluation, and lower stress level as well as higher satisfaction with the work being done. Stress demonstrates disproportions between demands and possibilities, the latter being equivalent to the resources possessed by an individual. Imbalance between demands and possibilities, i.e. high demands and low resources, leads to increased stress level [25, 26].

Material and methods

The research was conducted individually and included 100 adults supporting leukaemia patients from the Haematology Clinic of the Jagiellonian University *Collegium Medicum* and persons under the care of Urszula Smok's Podaruj Życie Foundation. The study included the closest family members supporting patients with diagnosed leukaemia. In the control group, women outnumbered men (66 females). The average age in the control group was 47 years with a standard deviation of 13.58. The average illness coping time for a family member was 2 years.

The following questionnaires were used in the research: the CISS questionnaire by Endler *et al*. adapted by Strelau *et al*., a standardised interview based on the stressful events questionnaire (SEQ) by Wrona-Polańska [25] to measure the sense of health and support provided by other people, the sense of own efficiency in coping with a close person's illness, the Rosenberg self-esteem scale (SES), the sense of coherence scale (SOC-29) by Antonovsky, the state-trait anxiety inventory (ISCL-STAI) by Spilberger *et al*., the Wrześniewski X-2 scale, and Bryant's perceived control of life questionnaire.

Results

Linear regression analysis was carried out to determine whether the strategies of coping with stress are health predictors. The results of this analysis are presented in Table 1.

Regression analysis showed that the health of people supporting leukaemia patients is explained by 2 variables, i.e. emotion-focused style ($\beta = -0.276$, $p = 0.007$) and avoidant attachment style linked to social anxiety ($\beta = 0.444$, $p = 0.012$), where emotion-focused style has a negative impact, while seeking social contact has a positive one. The multiple determination coefficient was $R^2 = 22.6\%$, which suggests that approximately 23% of the respondents' general health is determined by coping styles. This model matches the $F(5.90) = 5.254$ and $p < 0.000$ variables.

Subsequently, the assumption that there is a relationship between health and subjective resources was verified.

The analysis of regression equations revealed (Table 2) that one of the major negative predictors of health in people supporting leukaemia patients is anxious personality ($\beta = -0.375$, $p = 0.001$), while the positive one is the sense of support from others ($\beta = 0.281$, $p = 0.001$). Another observation made about people supporting leukaemia patients is that the less inclined they are to perceive life situations as potential threats and the more support they receive, the higher their sense of general health. This model appeared to match the $F(6.88) = 16.123$ and $p < 0.000$

Table 1. Summary of linear regression for the strategies of coping with stress as predictors of health in people supporting leukaemia patients

Parameters	Unstandardised coefficients		Standardised coefficients		
	B	Standard error	β	*t*	Significance
Constant	63.765	12.896		4.944	0.000
Task-oriented style	-0.010	0.173	– 0.006	–0.056	0.955
Emotion-oriented style	–0.362	0.131	–0.276	–2.762	0.007
Avoidance style	–0.332	0.383	–0.209	–0.866	0.389
Getting engaged in substitutive activities	0.149	0.519	0.052	0.288	0.774
Searching for social contact	1.664	0.652	0.444	2.552	0.012

R = 0.475 R ^ 2 = 0.226, adjusted R2 = 0.183
F(5.90) = 5.254, p < 0.000, standard error of the estimate: 12. 141

Table 2. Linear regression summary for subjective resources as health predictors

Parameters	Unstandardised coefficients		Standardised coefficients		
	B	Standard error	β	*t*	Significance
Constant	54.461	15.886		3.429	0.001
A sense of coherence	0.017	0.070	0.029	0.237	0.814
Self-esteem	–0.192	0.289	–0.073	–0.666	0.507
General sense of control	0.321	0.180	0.194	1.787	0.077
Anxiety personality	–0.564	0.160	–0.375	–3.522	0.001
A sense of effectiveness in dealing with the disease of a close relative	0.626	0.358	0.146	1.748	0.084
A sense of support from others	1.244	0.367	0.281	3.391	0.001

R = 0.724 R ^ 2 = 0.524, adjusted R2 = 0.491
F (6.88) = 16.123, p < 0.000, standard error of the estimate: 8.976

variables. The multiple determination coefficient was $R^2 = 0.524$, which indicates that the variables used in the model account for approximately 50% of the general health variable.

Discussion

Following Wrona-Polańska [25], it was assumed in this study that health is a multidimensional value. The holistic and functional approach to health is based on the relationship between the person and the surrounding world. Health is a process that entails the maintenance of a dynamic balance between a range of external demands and the possibilities to deal with such demands by an individual. In this research model a special role was attributed to subjective and cognitive resources (i.e. the sense of coherence, the sense of control, self-appraisal, the sense of support, the sense of self-efficacy, and low level of dispositional anxiety), which directly and indirectly condition health. As can be seen from the results, maintenance of health by people supporting leukaemia patients is largely dependent on avoiding concentration on negative emotions, which contributes to tension accumulation and threatens health. The respondents' health benefits from the style focused on seeking social interactions. Regression analysis also showed that the stronger the sense of support from others received by the respondents supporting leukaemia patients, the better their sense of general health. The anxious personality type is definitely a negative predictor of the respondents' health.

Conclusions

The results of the tests given to the respondents supporting leukaemia patients demonstrated that it is the subjective resources of an individual that are the most crucial to maintain health. Anxious personality is a deficit that threatens the subjective resources of an individual and effective management of stress. Consequently, it may lead to health loss [25, 26]. Direct caregiving to the oncological patient is a highly stressogenic situation [27]; thus, it may threaten the health of those who provide support. The burden of cancer affects the whole family. The load of illness that the supporting person has to deal with depends largely on the condition of the patient (psychosomatic functioning), but also on the caregiver (ability to cope with stress, social support, and emotional condition) [28].

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