

## Sense of Coherence in the Caregivers of Chronic Patients Exemplified by the Problem of Multiple Sclerosis

### Poczucie koherencji opiekunów osób przewlekle chorych na przykładzie stwardnienia rozsianego

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#### Abstract

**Introduction.** In the salutogenetic health concept the key idea is constituted by sense of coherence introduced by A. Antonovsky. Sense of coherence consists of three components: comprehensibility, manageability and meaningfulness. Taking care of a chronic patient may be related to sense of orientation to life.

**Aim.** The aim of the present research has been to determine the level of sense of coherence in the caregivers of patients suffering from multiple sclerosis.

**Material and Methods.** The study group has included 107 caregivers. The research has been conducted in the Department of Neurology with the Stroke Unit of the Regional Subcarpathian Hospital named after in Krosno as well as the Department of Neurology and Strokes and the Department of Neurological Rehabilitation in the Specialist Hospital named after L. Rydygier in Cracow, and the Helpful Hand Foundation in Cracow. The method of diagnostic survey using the Orientation to Life Questionnaire by Antonovsky and the authors' self-made questionnaire have been implemented in the research. The permission to carry out the research No 176/KBL/OIL/2018 has been obtained from the Bioethics Committee.

**Results.** The caregivers' orientation to life has been determined as low with respect to all the components. A significant statistical variation between the place of residence and meaningfulness has been identified, which accounts for  $p=0.0204$  ( $p<0.05$ ). Village inhabitants have been recognised as having a low sense of meaningfulness. Age, gender, marital status, education and income have not been considered statistically significant regarding the caregivers' sense of coherence.

**Conclusions.** Orientation to life is one the resources to cope with difficult and stressful situations related to the course of illness and it might be sensitive to various factors, including sociodemographic variables. Sense of coherence in the caregivers of multiple sclerosis patients has been low. (JNNN 2025;14(4):158–164)

**Key Words:** caregiver, multiple sclerosis, sense of coherence

#### Streszczenie

**Wstęp.** Kluczową rolę w salutogenetycznej koncepcji zdrowia stanowi wprowadzone przez A. Antonovsky'go pojęcie koherencji. Na poczucie koherencji składają się trzy komponenty: poczucie zrozumiałości, poczucie zaradności i poczucie sensowności. Sprawowanie opieki nad chorym przewlekle może mieć związek z poczuciem orientacji życiowej.

**Cel.** Celem badania było określenie poziomu poczucia koherencji opiekunów osób chorych na stwardnienie rozsiane.

**Materiał i metody.** Grupę badaną stanowiło 107 opiekunów. Badania zostały przeprowadzone w Oddziale Neurologii z Pododdziałem Udarów Mózgowych Wojewódzkiego Szpitala Podkarpackiego w Krośnie, Oddziale Neurologii i Udarów Mózgu oraz Oddziale Rehabilitacji Neurologicznej Szpitala Specjalistycznego im. L. Rydygiera w Krakowie i Fundacji Helpful Hand w Krakowie. Zastosowano metodę sondażu diagnostycznego z wykorzystaniem Kwestionariusza Orientacji Życiowej SOC-29 Antonovsky'ego i Autorskiego Kwestionariusza Ankiety. Na przeprowadzenie badania uzyskano zgodę Komisji Bioetycznej nr 176/KBL/OIL/2018.

**Wyniki.** Opiekunów cechował niski poziom orientacji życiowej we wszystkich komponentach. Wykazano istotną statystycznie różnicę między miejscem zamieszkania a sensownością  $p=0,0204$  ( $p<0,05$ ). Mieszkańców wsi wyróżniało wysokie poczucie sensowności. Wiek, płeć, stan cywilny, wykształcenie oraz dochody nie różnicowały istotnie statystycznie poczucia koherencji opiekunów.

**Wnioski.** Orientacja życiowa jest jednym z zasobów pozwalających na radzenie sobie w sytuacjach trudnych, stresowych, związanych z przebiegiem choroby, które może być warunkowane różnymi czynnikami, w tym zmiennymi socjodemograficznymi. Poczucie koherencji opiekunów osób chorych na stwardnienie rozsiane było niskie. (PNN 2025;14(4):158–164)

**Słowa kluczowe:** opiekun, stwardnienie rozsiane, poczucie koherencji

## Introduction

Multiple sclerosis is one of chronic illnesses. It is characterised by irreversible, progressive changes in the human body. Typical symptoms of multiple sclerosis include blurred vision, sensory disturbances, sphincter control disorders, coordination disorders and constant tiredness [1]. With the disease in progress, neurological symptoms and a patient's disability get more serious, which makes the problem go beyond the clinical aspect.

Diagnosis of a chronic illness influences daily family functioning becoming a traumatic experience for both patients and their caregivers, putting them in a difficult and stressful scenario. It often leads to readaptation to a new reality, reformulation of aims and reorganisation of life [2,3]. Illness of a family member requires from a caregiver the ability to implement adaptation mechanisms which may help them cope with stress in the situation. Due to diversity of the clinical course and the symptomatology of multiple sclerosis, the way to cope with it is dynamic and undergoes changes depending on the effectiveness of treatment, the phase and the illness progression [4]. The factors which have an impact on a caregiver's behaviour include a strategy to manage a difficult situation and sense of coherence [5]. Orientation to life may be a kind of buffer in confrontation with a stress-inducing stimulus.

On the scale of health and illness continuum people experience stress displaying a personal characteristic called sense of coherence. It allows to identify stress-inducing factors and mechanisms to cope with it, i.e. discovering ways to interact with the environment, the body and the social system surrounding a patient with the use of some resistance resources. In the salutogenetic health concept A. Antonovsky introduced the idea of coherence [6]. Coherence is a constant human ability thanks to which a person quickly recovers after experiencing some stress-inducing factors [7]. There are three components of coherence: comprehensibility — when a person

recognises information as logical and consistent; manageability (controllability) — when a person feels that there are some internal and external resources and they let them deal with difficulties; meaningfulness — determines to what extent a person believes their life is purposeful and worth both effort and involvement [8].

It is more likely that a person with a strong sense of coherence will see a problem as a challenge and will deal more effectively with difficulties trying to get to the source and the meaning of the issue. They will also correctly assess the range and the nature of the problem and, from many resources available, they will choose those which might be better implemented in the difficult situation. Caregivers with a strong sense of coherence can identify and recognise their emotions, thanks to which they understand themselves, live purposefully, and skillfully make use of all their resources [6]. A high orientation to life makes them set up goals and aim at achieving them, feel resourceful (not helpless) and see the point in taking care of a relative [9]. A strong sense of coherence leads to a better adaptation to the function of a caregiver and facilitates some effective behaviours which improve the quality of care [10,11].

In contrast, in the case of an illness in the family, caregivers with a low sense of coherence show indifference and apathy, and when it comes to care activities — they are passive, perceiving life as dull and monotonous. They sometimes display aggressive behaviour towards a patient and quite often they do not know what to do in a new, unfamiliar situation, losing the sense and the purpose of life [12]. A low sense of coherence determines a high level of tiredness and failure of implemented actions [7]. Taking care of a chronically-ill patient may be related to sense of orientation to life.

The aim of the present research has been to determine the level of sense of coherence in the caregivers of multiple sclerosis patients.

## Material and Methods

The research was carried out between 2018 and 2020 among the caregivers of multiple sclerosis patients, treated in neurological departments of the hospitals in Krosno and Cracow as well as in the Helpful Hand Foundation in Cracow. The study group consisted of 107 caregivers of patients suffering from multiple sclerosis. In order to conduct the research the method of diagnostic questionnaire was implemented and in order to measure sense of coherence the Orientation to Life Test SOC-29 was used. This tool allows to determine the general level of sense of coherence and its three components: comprehensibility, manageability and meaningfulness. The accuracy of each questionnaire statement has been assessed with the scale ranging up to 7 points. The total number of points is 203 and indicates a high level of sense of coherence. Each subscale has also been assessed.

The Orientation to Life Questionnaire (SOC-29) doesn't follow any established parameters [9,13]. The analysis of the findings has been based on average norms provided by the caregivers' study group. It has been assumed that a high level of sense of coherence is represented by a value higher than the average of all the caregivers' results whereas a low level of sense of coherence is a value lower than the average. Respectively, high and low levels of sense of coherence in the components of comprehensibility, manageability and meaningfulness have been determined. The questionnaire produced by the authors has made it possible to collect information defining the course of illness as well as the caregivers' sociodemographic data. The permission to carry out the research No 176/KBL/OIL/2018 has been obtained from the Bioethics Committee.

Statistical analyses were performed using Statistica 13 software. A p-value of  $p < 0.05$  was considered statistically significant. Descriptive statistics were presented as means with standard deviations and medians. Between-group differences in quantitative variables were evaluated using the Mann–Whitney U test.

## Results

The study group of caregivers has consisted of 55 women (51.4%) and 52 men (48.6%). 65 of the respondents (60.7%) have declared to be city dwellers whereas 42 of them (39.3%) — village inhabitants. With respect to age, the caregivers of multiple sclerosis patients have been classified into the following groups:

- aged 60+ — 48 respondents (44.9%),
- aged 40–49 — 24 respondents (22.4%),
- aged 50–59 — 19 respondents (17.8%),
- aged below 40 — 16 respondents (14.9%).

The majority (63.6%) of caregivers (68 respondents) has declared not to work professionally whereas the remaining group (33.4%=39 respondents) has been professionally active. Nearly half of the respondents (47.7%=51 respondents) have declared secondary education, 30.8%=33 respondents — university education and 21.5%=23 respondents — elementary or vocational education. 84 respondents (78.5%) have declared insufficient income whereas 23 respondents (21.5%) — sufficient one. 71 respondents (66.4%) have had a partner or a spouse whereas 36 respondents (33.6%) have been single, divorced or widowed (Table 1).

**Table 1.** Sociodemographic characteristics of caregivers of multiple sclerosis patients

Variable	N	%
Gender		
Women	55	51.4
Men	52	48.6
Place of residence		
City	65	60.7
Village	42	39.3
Age		
Under 40 year	16	14.9
40–49 years	24	22.4
50–59 years	19	17.8
60 years and more	48	44.9
Work status		
Professionally active	39	66.4
Unemployed	68	63.6
Education		
Primary/vocational	23	21.5
Secondary	51	47.7
Higher	33	30.8
Income		
Sufficient	23	21.5
Insufficient	84	78.5
Marital status		
In a relationship	71	66.4
Single/divorced/widow/widower	36	33.6

N — number of observations; % — percent

## Findings Based on the Orientation to Life Questionnaire

The study group members tested with the Orientation to Life Questionnaire have achieved an average score of 95.23 points (median=23, min=36, max=191). In the

questionnaire subscales the results have been established as follows:

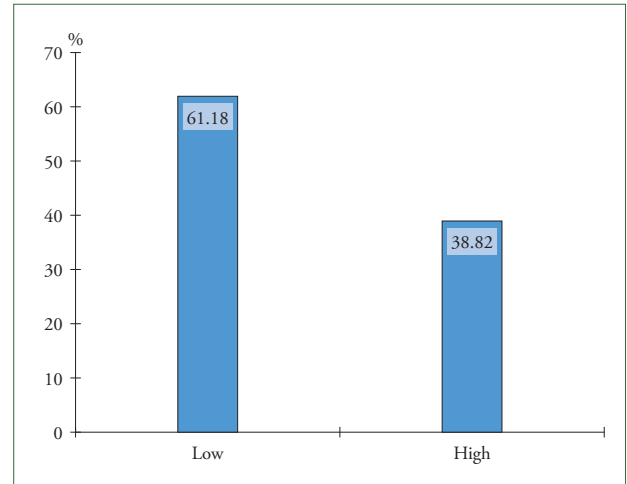
- comprehensibility — average: 33.74 points (median=32, min=12, max=73),
- manageability — average: 30.38 points (median =24, min=11, max=67),
- meaningfulness — average: 31.11 points (median =29, min=13, max=55) (Table 2).

**Table 2.** Sense of coherence in caregivers (N=107)

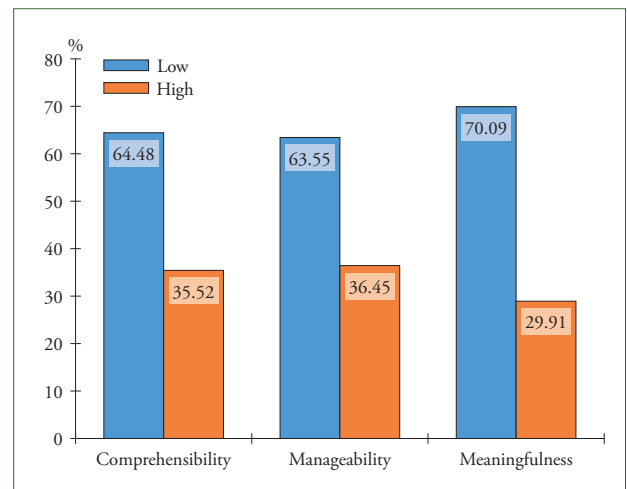
SOC-29	Results of the Orientation to Life Questionnaire SOC-29				
	x	SD	Me	Min	Max
Comprehensibility	33.74	10.97	32.00	12.00	73.00
Manageability	30.38	13.09	24.00	11.00	67.00
Meaningfulness	31.11	8.98	29.00	13.00	55.00
Totality	95.23	30.93	83.00	36.00	191.00

SOC-29 — Orientation to Life Questionnaire; N — number of observations; x — arithmetic average; SD — standard deviation; Me — median; Min — minimum value; Max — maximum value

The caregivers of multiple sclerosis patients have been characterised by a low sense of coherence. In accordance with the criteria 66 respondents (61.18%) have been identified as having a low orientation to life (Figure 1). Detailed analysis of the questionnaire findings has made it possible to determine the level of sense of coherence in the caregivers of multiple sclerosis patients with respect to the components of comprehensibility, manageability and meaningfulness. A low level of orientation to life has been recognised in all the components (Figure 2).



**Figure 1.** SOC-29 sense of coherence in caregivers



**Figure 2.** Sense of coherence in caregivers in the subscales of SOC-29

**Table 3.** Place of residence and Orientation to Life in SOC-29

Place of residence	Orientation to Life Questionnaire						
	N	x	SD	Me	Min	Max	
City	65	90.89	29.32	81.00	36.00	191.00	
Village	42	101.95	32.50	99.50	42.00	180.00	
Statistical significance	p=0.1143						
Place of residence	SOC-29 Orientation to Life subscales						
	N	x	SD	Me	Min	Max	p
<b>Comprehensibility</b>							
City	65	32.23	9.94	31.00	12.00	73.00	0.1406
Village	42	36.07	12.16	33.00	13.00	71.00	
<b>Manageability</b>							
City	65	29.08	13.07	22.00	11.00	67.00	0.1920
Village	42	32.40	13.03	28.00	11.00	63.00	
<b>Meaningfulness</b>							
City	65	29.58	8.44	28.00	13.00	54.00	0.0204
Village	42	33.48	9.39	30.00	18.00	55.00	

SOC-29 — Orientation to Life Questionnaire; N — number of observations; x — arithmetic average; SD — standard deviation; Me — median; Min — minimum value; Max — maximum value; p — statistical significance (Mann–Whitney U test)

## Relations Between Variables

The components of sense of coherence have shown a significant statistical variation between the place of residence and meaningfulness, which is  $p=0.0204$  ( $p<0.05$ ). City dwellers have been identified as having a low sense of coherence, which is supported by the average general score ( $x<95.23$  points) and the average in the subscales of comprehensibility ( $x<33.74$  points), and manageability ( $x<30.38$  points) (Table 3).

Analysis of the relations between gender, age, education, marital status as well as the caregivers' income and orientation to life has not shown any statistically significant variables.

## Discussion

Family existence of the caregivers of chronic patients is one of the most important areas of research in psychology [14]. General resistance resources which, in the course of life undergo evolutionary processes, help to cope with stress-inducing factors resulting from taking care of chronically-ill patients and in consequence, allow for satisfactory functioning [15].

According to Antonovsky, the level of sense of coherence is established around the age of 30 [16] but some dramatic, crisisgenic life events may shape changes in sense of coherence later in life [17]. Particularly difficult experiences such as a serious illness or disability, death of a relative or a burden caused by taking care of a chronically-ill family member may lower the level of sense of orientation to life and so may anger, fear, despair or depression. Experiencing such negative emotions from a patient may intensify frustration, bitterness, helplessness or apathy in caregivers [18].

The findings of the authors' self-made questionnaire have confirmed a low sense of coherence in the caregivers of multiple sclerosis patients. They may have resulted from the caregivers' belief that a patient would remain disabled till the end of their life. The awareness and perspective of constant, long-term care over a family member and exposure to chronic stress may lower sense of coherence in caregivers.

Similar findings concerning sense of coherence in mothers of hospitalised children have been established by Kurowska and Żurek. The global SOC score has been 108 points and defined a low sense of coherence in the mothers-respondents. The average results of the orientation to life components have shown that the highest level of coherence has been achieved by the women with respect to comprehensibility (41.3 points), a little bit lower in manageability (37.6 points) and the lowest — in meaningfulness (29.9 points) [19]. Thus, it may be assumed that sense of coherence in caregivers

lowers as a result of direct and long-term care over chronically-ill or disabled patients. The findings of the authors' self-made study have not shown any significant statistical variations between gender, age, education, marital status as well as a caregiver's income and orientation to life. The place of residence has made a significant statistical variation in the caregivers' orientation to life, with village inhabitants feeling a strong sense of coherence.

The research by Kurowska and Żurek shows that with an increase in the mothers' age there has been a tendency to a lower general sense of coherence. The variable which has been statistically significant with respect to comprehensibility, manageability, meaningfulness and global orientation to life has been marital status. A low sense of comprehensibility has been characteristic for widows (20 points) and divorced mothers (29 points) whereas the highest sense of comprehensibility has been determined in married mothers (44.1 points). Divorcees have displayed a high sense of manageability (43.8 points) and so have widows (40.8 points) whereas a low sense of manageability has been discovered among married mothers (36.2 points) and the lowest — among widows (29 points). Widows have also been identified as having the lowest sense of meaningfulness (25 points), followed by married mothers (29.07 points), single-parent mothers (32 points) and divorcees (34.1 points) who have represented the highest sense of meaningfulness. The mothers' manageability has been statistically varied by education. The respondents with vocational education (40.7 points) have been more manageable than those with elementary (37.7 points) and secondary education (30.7 points) whereas the lowest sense of manageability has been determined in mothers with university education (33.47 points). Also, there has been a statistical variable between financial status of the respondents and the components of comprehensibility and manageability. The higher the mothers' status, the higher their sense of comprehensibility (46.33 points). The respondents with a low financial status have been more manageable (42.28 points) compared to those with a high financial status (35.71 points) [18].

The research by Ruszkiewicz and Eldridge conducted in the group of volunteers supporting chronic patients confirms that an increase in the general sense of coherence has been accompanied with a higher sense of effectiveness in taking care of patients and a lower feeling of dissatisfaction with voluntary work. Similarly to the authors' self-made study there has been no significant statistical variable between the respondents' gender, age and orientation to life. However, there have been some significant statistical variables between education and sense of coherence. The respondents with university degree and postgraduate studies have represented a high orientation to life (143.57 points) [7].

The findings by B. Grabowska-Fudala referring to a burden in the caregivers of stroke patients have presented a high sense of coherence of caregivers and have been incompatible with the authors' self-made research. The general SOC score has been 142 points, with the highest value in comprehensibility (53 points), then manageability (52 points) and meaningfulness (36 points) [20].

Kachaniuk has determined that 42.3% of caregivers have had a high sense of coherence, 25.5% — medium one and 32.1% — low [12]. The findings have been based on the research conducted with the application of the sense of coherence test by Brodziak and Osmulka in the group of caregivers of senior patients.

The research in the area of chronic mental illness, carried out by Kasperk-Zimowska among the caregivers of adult schizophrenic children, has shown that the average general sense has been 136.58 points, with the subcomponents of comprehensibility accounting for 47.74 points, manageability — 49.22 points and meaningfulness — 42.1 points, which has demonstrated a medium sense of coherence among the caregivers in the study group [21]. Dymecka has introduced similar findings in the group of caregivers of young cancer patients. The SOC score in the study group has accounted for 130.84 points, which can be described as medium [22]. The caregivers' medium level of orientation to life might have been related to the constant nature of the problem. It is likely that a cancer patient may function in a similar way to a healthy person or they may even be cured. However, multiple sclerosis leading to a patient's disability results in a caregiver's stress, which is related to lowered orientation to life.

Sense of coherence has also been measured in professional caregivers. The research to establish sense of coherence, burnout, involvement and manageability of nurses in South Africa has confirmed that a high sense of coherence facilitates greater involvement in taking care of a patient and also helps to experience lower levels of stress, cope effectively and seek support. On the other hand, a low sense of coherence is correlated with the caregivers' feeling of depersonalisation, emotional exhaustion and burden. Caregiving activities performed by nurses with a low orientation to life have been pointless and bound to fail and their work environment has been perceived as incomprehensible [23]. The research conducted by Basińska in the study group of social workers has demonstrated that with an increase in sense of coherence there has been a decrease in professional burnout and a growth in job satisfaction [24].

Sense of coherence is an area of research in medicine in relation to difficult situations connected with the course of illness. It is measured not only among the closest caregivers of a patient but, according to scientific studies, among professionals taking care of chronically-ill patients.

## Conclusions

Orientation to life is one of the measures helping to cope with difficult and stressful situations related to the course of illness, which may be conditioned by various factors, including sociodemographic variables. Sense of coherence in caregivers of multiple sclerosis patients has been determined as low.

## Implications for Nursing Practice





Experiencing chronic illness within the family and providing long-term care for a loved one — most often a family member — is a situation that is mentally, physically, and emotionally exhausting. Informal caregivers, who frequently lack professional training, face ongoing stress, uncertainty, and the burden of numerous responsibilities. According to a review of the relevant literature, particular importance is placed on life orientation, especially the sense of coherence, as a key resource that supports coping with caregiving-related challenges. Strengthening this sense can contribute to improved caregiver functioning and help mitigate the effects of chronic stress.

To enhance their competence and psychological resilience, it is recommended to organize regular workshops and training sessions covering the course of multiple sclerosis, its treatment and rehabilitation, as well as to provide up-to-date scientific knowledge and practical care tools. It is also worth establishing local support groups and ensuring access to psychological assistance for caregivers. Comprehensive efforts of this kind can significantly improve the quality of life of both caregivers and patients, positively impacting the entire informal care system.

## References

- [1] Rejdak K., Betscher E. Objawy kliniczne. W: Bonek R. (Red.), *Stwardnienie rozsiane od chemokin do przeciwciał monoklonalnych*. Wyd. Lekarskie PZWL, Warszawa 2020;75–107.
- [2] Leśniak B. *Życie ze stwardnieniem rozsianym. Adaptacja osób dotkniętych chorobą do życia małżeńskiego, zawodowego i społecznego*. Wyd. Difin, Warszawa 2020.
- [3] Betscher E. Aspekty społeczne. W: Bonek R. (Red.), *Stwardnienie rozsiane od chemokin do przeciwciał monoklonalnych*. Wyd. Lekarskie PZWL, Warszawa 2020;427–436.
- [4] Gitto L. Living with Multiple Sclerosis in Europe: Pharmacological Treatments, Cost of Illness, and Health-Related Quality of Life Across Countries. In Zagon I.S., McLaughlin P.J. (Eds.), *Multiple Sclerosis: Perspectives in Treatment and Pathogenesis*. Codon Publications, Brisbane 2017;17–37.

- [5] Odrobińska I. *SM i emocje. Podstawowe informacje o stwardnieniu rozsianym*. Polskie Towarzystwo Stwardnienia Rozsianego, Warszawa 2007;4–25.
- [6] Kołtuniuk A., Podsiadły A., Jankowska-Polańska B. Poczucie koherencji a jakość życia pacjentów z niewydolnością serca. *Wsp Piel Ochr Zdr*. 2017;6(1):15–18.
- [7] Ruszkiewicz M., Eldridge E. Rola duchowości i poczucia koherencji jako czynników chroniących przed wypaleniem zawodowym wśród wolontariuszy opieki paliatywnej. *Psychoonkologia*. 2015;2:64–73.
- [8] Heszen-Celińska I., Sęk H. *Psychologia zdrowia*. PWN, Warszawa 2020.
- [9] Antonovsky A. *Health, Stress and Coping*. Jossey-Bass Publishers, San Francisco 1985.
- [10] Stecler B. Jakość życia i integracja psychiczna. W: Wołowicka L. (Red.), *Jakość życia w naukach medycznych*. Wyd. AM, Poznań 2001;117–127.
- [11] Tang S.T., Cheng C.C., Lee K.C., Chen C.H., Liu L.N. Mediating effects of sense of coherence on family caregivers' depressive distress while caring for terminally ill cancer patients. *Cancer Nurs*. 2013;36(6):E25–33.
- [12] Kachaniuk H., Fidecki W., Wysokiński M. i wsp. Poczucie koherencji a styl radzenia sobie opiekunów osób starszych w trudnych sytuacjach. *Gerontol Pol*. 2011;19(1):53–57.
- [13] Prazmowska B., Matuszyk D., Sibiga E., Wojciechowska K. Poczucie koherencji a wsparcie społeczne kobiet w położu. *Pielęg XXI w*. 2010;3–4(32–33):21–24.
- [14] Bowen C., MacLehose A., Beaumont J.G. Advanced multiple sclerosis and the psychosocial impact on families. *Psychol Health*. 2011;26(1):113–127.
- [15] Kurowska K., Kołodziejaska K. Orientacja życiowa i poziom wsparcia wyznacznikiem zapotrzebowania rodzin na domową opiekę hospicyjną. *Współcz Onkol*. 2008;12(10):455–460.
- [16] Antonovsky A. *Rozwikłanie tajemnicy zdrowia. Jak radzić sobie ze stresem i nie zachorować*. Instytut Psychiatrii i Neurologii, Warszawa 2005.
- [17] Terelak J.F. *Człowiek i stres. Koncepcje — źródła — reakcje — radzenie sobie — modyfikatory*. Oficyna Wydawnicza Branta, Bydgoszcz–Warszawa 2008.
- [18] Jabłoński M. Poczucie koherencji a ryzyko rozwoju depresji u chorych na ostrą białaczkę. *Psychoonkologia*. 2009; 1–2:1–10.
- [19] Kurowska K., Żurek D. Poczucie koherencji a wsparcie społeczne okazywane matkom hospitalizowanych dzieci. *Now Lek*. 2011;80(2):84–90.
- [20] Grabowska-Fudala B., Jaracz K. Obciążenie osób sprawujących opiekę nad chorymi po udarze mózgu — wyniki wstępne. *Udar Mózgu*. 2007;9(1):24–31.
- [21] Kasperek-Zimowska B., Chądzyńska M. Poczucie koherencji i style radzenia sobie ze stresem wśród rodziców dorosłych dzieci z rozpoznaniem schizofrenii. *Psychiatr Pol*. 2011;45(5):643–652.
- [22] Dymecka J. Poczucie koherencji a style radzenia sobie ze stresem rodziców dzieci z chorobą nowotworową. *Psychoonkologia*. 2018;22(2):41–49.
- [23] van der Colff J.J., Rothmann S. Occupational stress, sense of coherence, coping, burnout and work engagement of registered nurses in South Africa. *SA J Ind Psychol*. 2009;35(1):1–10.
- [24] Basińska M.A., Andruszkiewicz A., Grabowska M. Nurses' sense of coherence and their work related patterns of behavior. *Int J Occup Med Environ Health*. 2011;24(3): 256–266.

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