

# Evaluation of the level of sense of coherence in mental disorders and stress – a literature review

Ocena poziomu poczucia koherencji w zaburzeniach psychicznych i stresie – przegląd literatury

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### ■ Abstract

**Introduction and Objective.** A sense of coherence is a global human orientation that expresses the level to which a person possesses a piercing and enduring yet dynamic sense of certainty that the stimuli that occur during the course of life from the external and internal environment, are predictable, structured and explainable. Mental disorder is a term used to indicate the existence of a system of clinically-established behaviours or symptoms combined in most cases with suffering and impaired individual functioning. The aim of the study was to attempt to discover a relationship between the level of sense of coherence and mental disorders and stress, based on the available literature.

**Review Method.** Available literature was analyzed based on the English-language databases PubMed, Scopus, ScienceDirect, Medline, among others, using the Google Scholar search engine. The analysis included 30 articles of the 1,140 retrieved by the above method. Publications no older than 14 years were used as search criteria using the following key words: sense of coherence, mental disorders, stress.

Brief description of the state of knowledge. After analyzing the study, it was found that the level of sense of coherence affects the occurrence of stress and mental disorders. A higher level of sense of coherence is associated with a lower occurrence of mental disorders. When the level of sense of coherence is low, there is a higher risk of mental disorders. This relationship also applies to the level of feeling stressed. Summary. Numerous authors indicate that in people with mental disorders, the level of sense of coherence is lower than in people who have not been diagnosed with mental problems. The level of experiencing stress correlates with the level of sense of coherence.

## **Key words**

sense of coherence, mental disorders, stress

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### **■** Streszczenie

Wprowadzenie i cel pracy. Poczucie koherencji to globalna orientacja człowieka, która wyraża stopień, w jakim człowiek posiada dojmujące i trwałe, choć dynamiczne, poczucie pewności, że bodźce, które napływają do niego w ciągu życia ze środowiska zewnętrznego i wewnętrznego, są przewidywalne, ustrukturyzowane i wytłumaczalne. Zaburzenia psychiczne to termin użyty w celu wskazania istnienia układu klinicznie stwierdzonych zachowań lub objawów połączonych w większości przypadków z cierpieniem i zaburzeniami funkcjonowania indywidualnego. Celem pracy była próba znalezienia związku pomiędzy poziomem poczucia koherencji a zaburzeniami psychicznymi i stresem – na podstawie dostępnej literatury.

**Metody przeglądu.** Przeanalizowana została dostępna literatura, czego dokonano na podstawie anglojęzycznych baz danych PubMed, Scopus, ScienceDirect, Medline oraz innych, przy wykorzystaniu wyszukiwarki Google Scholar. Analizie poddano 30 artykułów spośród 1140 wyszukanych powyższą metodą. Jako kryterium wyszukiwania przyjęto publikacje nie starsze niż sprzed 14 lat, używając następujących słów kluczowych: "poczucie koherencji", "zaburzenia psychiczne", "stres".

**Opis stanu wiedzy.** Po przeanalizowaniu badań stwierdzono, że poziom poczucia koherencji wpływa na występowanie stresu i zaburzeń psychicznych. Wyższy poziom poczucia koherencji wiąże się z mniejszym występowaniem zaburzeń psychicznych. W momencie gdy poziom poczucia koherencji jest niski, istnieje wyższe ryzyko zaburzeń psychicznych. Zależność ta dotyczy również poziomu odczuwania stresu.

**Podsumowanie.** Liczni autorzy wskazują, że u osób z zaburzeniami psychicznymi poziom poczucia koherencji jest niższy niż u osób, u których nie zdiagnozowano problemów psychicznych. Poziom odczuwania stresu koreluje z poziomem poczucia koherencji.

### Słowa kluczowe

poczucie koherencji, zaburzenia psychiczne, stres

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### INTRODUCTION

The term 'sense of coherence' (SOC) was introduced by A. Antonovsky, according to whom it is the global orientation of a person, expressing the level to which this person has a piercing and persistent, yet dynamic, sense of certainty that the stimuli occurring in the course of life from the external and internal environment, are predictable, structured and explainable [1, 2]. This is because the resources that are available to the individual meet the demands of these stimuli. These demands are a challenge worth the effort and commitment. Coherence contains three components that are inextricably linked: comprehensibility, manageability and meaningfulness.

A sense of Comprehensibility. This signifies the level at which the world around us is perceived as predictable, orderly and consistent, regardless of whether it is favourable and friendly or, on the contrary, hostile to the individual.

A sense of Manageability. This is the belief that a person has sufficient resources to cope with unfavourable circumstances or the demands of the environment. Personal resources can be listed, i.e. those that a person has at his or her own disposal, and those available to others. Manageability is a person's subjective sense of having the ability to cope with demands, and the ability to influence the situation in which one finds oneself. When the need arises, it is the sense that a person can find support in someone or something.

A sense of Meaningfulness. Defined as an emotional-motivational component and is expressed in the belief that it is worthwhile to engage and invest energy in one's life, and worth fighting for something. A person who has a high sense of meaningfulness perceives difficult moments as a challenge rather than a threat. For such a person, the tasks of life are perceived as challenges on which it is worth spending time and effort to achieve.

The SOC are three very important components that remain in a dynamic relationship with each other. According to Antonovsky, the most important component of the SOC is the motivational component of meaningfulness; without this, a high sense of manageability or understanding will be unsustainable. The comprehensibility component also plays a big role, since a high sense of manageability depends precisely on comprehension. The sense of manageability is also important because without the individual's belief in his or her resources, the sense of meaningfulness decreases, and thus with it the effort to support the process of dealing with difficult situations. Dealing with difficult situations depends on the SOC as a whole. We shape the level of coherence all our lives, as it is not an innate property, and depends mainly on the pattern of life experiences [2]. The term 'SOC' is mainly used in health psychology and defines a preventive factor for maintaining health.

Although health is very important in human life, it has not been precisely defined. The World Health Organization (WHO) defines health as 'complete physical, mental and social well-being, not just the absence of disease or infirmity'. In 1984, the WHO presented a supplemented definition of health to include public and spiritual dimensions. Contemporary concepts frame health as a process or characteristic. In the first perspective, health is a person's ability to achieve his

or her full potential, mentally, physically and socially, and respond to the challenges of the environment. In the second perspective, it is the process of seeking and maintaining a constantly broken balance. Health 'is the process of using biological, psychological and social potentials to meet external and internal demands, and achieve individual and social goals without chronic disruption of the dynamic balance' [3].

Although mental disorders are classified by the World Health Organization, the term is not strict and has been used to indicate the existence of a system of clinically-established behaviours or symptoms, combined in most cases with suffering and impaired individual functioning. In scientific publications, the term 'mental illness' is disappearing, replaced by the term 'mental disorder', and is beginning to assume an over-arching role in relation to medical conditions in general [4].

According to Jan Strelau, 'stress is a specific relationship between a person and the environment that is assessed by the person as burdening or exceeding his or her resources and threatening well-being' [5].

The aim of this research was to establish a correlation between the extent of sense of coherence and mental disorders, as well as the incidence of stress, drawing from the existing body of literature.

### **MATERIAL AND METHODS**

The available literature was analyzed based on the English-language databases PubMed, Scopus, ScienceDirec and Medline, among others, using the Google Scholar search engine. The analysis included 30 articles from the 1,140 retrieved by the above method. Publications no older than 14 years were used as the search criterion using the following key words: mental disorders, SOC, stress.

# **RESULTS**

After scrutinizing the review, it was determined that the magnitude of SOC exerts an influence on the manifestation of both stress and mental disorders. A heightened SOC corresponds to a diminished prevalence of mental disorders; conversely, when the SOC is diminished, the susceptibility to mental disorders increases. This pattern similarly extends to the perceived level of stress.

### DISCUSSION

A study on SOC by Wiatrowska in girls with anorexia and bulimia nervosa, determined that girls with eating disorders had a significantly lower SOC and its components; the girls were characterized by a poor sense of comprehensibility, manageability and meaningfulness. They were unable to cope with the various demands and difficulties directed toward them from their environment. They perceived the stimuli they receive during their lives from the external and internal environment as inexplicable, chaotic and random. They believed that life was without meaning and significance, and that the demands they made on themselves were only a burden. A low SOC did not promote health-promoting

behaviours, and thus could cause deterioration of health and make the treatment process more difficult.

After analyzing the results, Wiatrowska indicates that a sense of meaningfulness, the motivational component of SOC which is related to the sense of value of life, had the lowest value. However, confirmation of these results requires a study on a larger population. Similar resilience resources and adaptability are found in girls with bulimia and anorexia nervosa. From the point of view of prevention and treatment of girls with eating disorders, determining the level of SOC and exactly their components seems to be particularly important [2].

Witkowska-Łuć conducted a study on schizophrenia with the aim of investigating the correlation between SOC and the amelioration of symptoms, serving as a determinant in the recuperative journey of individuals with disorders within the schizophrenia spectrum. From the analysis it was evident that an elevated sense of comprehension corresponds to a decline in the intensity of adverse symptoms, and the general psychiatric symptomatology as measured by the Positive and Negative Syndrome Scale at the initiation of hospitalization. In addition, those with higher levels of SOC have a lower severity of negative symptoms at the time of hospital admission. Higher levels of sense of understanding and SOC co-occur with a smaller difference in the severity of psychopathological symptoms [6]. A study by Kurowska et al. on the role of support and SOC in struggling with schizophrenia, determined that support scores increased as SOC increased. The study was conducted on a group of 102 patients hospitalized for schizophrenia, and had average levels of social support and levels of coherence. Among the patients, the highest perceived emotional support was received from medical staff and loved ones [7].

Wiatrowska conducted a study on SOC and locus of control versus severity of depression in women with eating disorders. The study included 50 women with anorexia and 50 diagnosed with bulimia. The results obtained indicated that depression was negatively associated with a general SOC and understanding in the group of women with eating disorders. A negative correlation between affective disorder and sense of manageability occurred in the patients with anorexia, while in the group of those with bulimia, there was a negative relationship between sense of understanding and depression. In addition, in women with bulimia, there was a very strong positive correlation between affective disorder and the locus of sense of control [8]. In another study by Wiatrowska on SOC and basic values in women with anorexia and bulimia nervosa, points out that it is reasonable to differentiate the women studied by the form of the eating disorder. In addition, knowledge of the hierarchy of values may be important in explaining the adaptive capacity of overall immune resources [9]. Wiatrowska also points out that women with mental gluttony are more likely than healthy women to use an evasive and emotional style in the form of engaging in vicarious activities, and significantly less likely to use a task-based life style. Women with bulimia are  $\,$ characterized by a lower SOC in the overall score as well as in individual measurements [10]. Kurowska et al. conducted a study on depression versus SOC in people with anxiety disorders. People with anxiety disorders have low levels of SOC and high levels of depression. Low levels of SOC and levels of depression have a strongly negative correlation; with a lower level of SOC, the level of depression increases, and *vice versa*. The results obtained in this study may significantly affect the level of understanding and acceptance of people with anxiety disorders [11].

A study by Rasmus et al. on SOC and the prevalence of post-traumatic stress disorder in a group of professional soldiers participating in military missions abroad, indicates that post-traumatic stress disorder is diagnosed in Polish soldiers. The sense of meaningfulness is able to differentiate between soldiers with and without a diagnosed posttraumatic stress disorder. Among the constituents of SOC, solely the factor of comprehensibility exhibited an adverse correlation with the extent of reoccurrence associated with symptoms of post-traumatic stress. The study points out that it is necessary to continue research on post-traumatic stress in a group of soldiers returning from missions abroad, and to build diagnostic and therapeutic networks adequate to the problem [12]. Czuba also conducted a study on SOC versus dealing with stress in a military organization. The military is a very difficult work environment for emotionally sensitive, neurotic, highly reactive people, and those with adaptation difficulties. (The military does not accept such people into its ranks. They would be useless). Performing as a soldier involves subordinating personal freedom and one's own needs to external goals, and requires a high amount of availability. It can be noted that Admirals and Generals are likely to be a group of soldiers with a very strong SOC. Although work dominated almost completely the time of their lives, despite the defeats they suffered, as well as the very difficult experiences of war, none of the commanders felt burnout. None of them complained that the costs of work exceeded the profits, and their manner of expression did not betray the anguish caused by active military service? [13]. Gasior, in a study on post-traumatic stress and attachment in female inmates?, noted that an SOC is negatively-related to the disadaptive functioning of parents. It strongly affects resilience, taken as the product of social and personal competence and caring for family relationships. It turned out to be significantly negatively associated with non-security dimensions of attachment [14].

The Moksness investigation presents proof that, concerning boys, stress linked to school performance was positively correlated with indications of both depression and anxiety. As for girls, stress tied to peer pressure, romantic involvements and school, exhibited a stronger connection with depressive indications. Significantly, a potent and inverse correlation was present between the SOC and emotional signs, notably anxiety among girls. Moreover, the SOC played a role in linking peer pressure stress with depressive signs in both genders. Hence, the study provides evidence for the link of SOC with stress and emotional signs during adolescence [15]. A systematic review and meta-analysis by del-Pino-Casado et al. on SOC, burden and mental health in caregiving, indicates that SOC is an important determinant in the well-being of caregivers and may protect them from high levels of psychological distress. Elevated degrees of SOC exhibited a correlation with diminished levels of subjective caregiver burden and improved mental health consequences. The comprehensive meta-analysis comprised a total of 35 studies [16].

Gómez-Salgado et al., observed substantial levels of psychological distress and SOC within a cohort of healthcare workers engaged in hospital settings during the SARS-CoV-2 health crisis. In contrast, primary care workers displayed lower levels of these measures. An interconnectedness was established, highlighting a connection between the manifestation of COVID-19 symptoms, heightened psychological distress, and diminished SOC. [17]. Schäfer et al. demonstrated that the mental health status of a German-speaking sample (n=1591) was mostly stable. A limited subset of participants, marked by diminished levels of SOC, encountered a rise in psychopathological symptoms after the outbreak of the pandemic, compared to their prior state. The utilization of SOC training presents a potential avenue for enhancing resilience to stressors [18]. In a separate investigation by Schäfer et al., the focus was placed on investigating the association between SOC and the gravity of symptoms linked to post-traumatic stress disorder at a meta-analytical level. The findings of the metaanalysis indicated a notable connection between SOC and the intensity of post-traumatic stress symptoms. A higher SOC level was correlated with reduced symptom severity. [19].

A study by Länsimies et al. linked SOC to teenagers' health. They assessed quality of life, health behaviours, mental health, and family relationships. It was shown that applying the SOC approach to adolescents can provide a useful picture of their health during the transition phase to adulthood [20]. Lopez-Martinez et al., on the relationship between SOC and mental health in elderly caregivers, speculate that SOC may work well as a screening tool for mental health among elderly caregivers. (Elderly care givers or care givers of the elderly) Interventions to strengthen SOC may be needed to reduce the risk of negative emotional consequences of caregiving. Whether SOC is a measure that changes over time, like other measures of mental health, requires further research [21].

Haukkala et al. in a study on SOC, depressive symptoms, cardiovascular disease and mortality from any cause, determined that SOC was associated with mortality from any cause among men. The association with cardiovascular events was small. Measures for SOC and depressive symptoms were significantly correlated, which may result in overlapping associations with adverse disease outcomes and mortality [22]. Research by Alan Griffiths investigated SOC and its relationship to public health rehabilitation. The outcomes demonstrated that SOC significantly contributes to elucidating the trajectory of recovery among individuals grappling with mental health issues. Substantiating evidence indicates that SOC serves as a pivotal factor in navigating stressors within the scope of the rehabilitation and recovery journey. Moreover, it has relevance within the domain of mental health and psychosocial functionality. When the rehabilitation services adopt a salutogenic perspective and prioritize augmenting a patient's SOC, it can yield advantageous outcomes for both the rehabilitation process and the overall recovery experience [23].

Schäfer et al. determined that SOC appears to be the most important correlate of both overall mental health problems and post-traumatic stress symptoms in an Intensive Care Unit (ICU) and anesthesia department. Implementing interventions focusing on enhancing levels of coherence in training programmes for ICU and anesthesia unit staff may be a promising approach to preventing or reducing psychopathological symptoms [24]. Hartveit Svendsen et al. determined that there is a significantly statistical correlation between high levels of core self-disorders (subtle, non-psychotic disorders that can destabilize a person's sense of self, identity, physicality), and low levels of SOC.

Research indicates that the presence and level of selfdisorders can affect a person's ability to experience life as comprehensive, manageable and meaningful [25]. Badura-Brzoza determined that patients with a recurrent major eating disorder and depressive disorder had a lower SOC than patients with schizophrenia, bipolar disorder and anxiety disorders. High levels of SOC were associated with higher quality of life and fewer depression and anxiety symptoms in all psychiatric patients [26]. The Antosz-Rekucka study on SOC in healthy individuals with psychotic-like experiences determined that SOC is a significant factor negatively associated with psychoticlike experiences (PSEs) which occurr in healthy individuals [27]. Further research is needed to see if SOC can be a protective factor against PLEs because as the SOC increases, the risk of emotional disorders decreases. Denkiewicz's study examining SOC versus defence mechanisms, anxiety and repressed emotions in patients with neurotic disorders, determined that people with neurotic disorders showed a lower index in SOC, and higher levels of anxiety as a state and as a trait, and used neurotic and immature mechanisms to a greater extent than healthy individuals. Significant statistical distinctions were not observed between the groups concerning the levels of suppressed emotions and the utilization of mature defence mechanisms [28].

A preliminary investigation by Biczak et al. revealed that SOC, in conjunction with the facets of meaningfulness and manageability, may share a close connection with the psychophysical, psychosocial, and subjective dimensions of the quality of life among individuals dealing with schizophrenia. This held true for both patients experiencing long-term remission and those currently grappling with relapse. Statistical assessment indicated no variations in the perceived impact on the progression of the illness, SOC, and quality of life between patients in remission and those undergoing relapse. An evident relationship between SOC and quality of life was discernible within both of these patient subsets [29]. A Łata study of people with borderline disorders (compared to healthy individuals) determined the patients suffering from borderline personality disorder had lower scores on SOC [30]. The study was conducted on a group of 50 people without any psychiatric diagnosis and 50 people with borderline disorder

In study by Łata on a group of 50 people with borderline disorder and 50 people with no diagnosis of a psychiatric disorder, the former had lower scores on SOC [30].

### CONCLUSION

Numerous authors indicate that in people with mental disorders, the level of SOC is lower than in people who have not been diagnosed with mental problems, and the level of experiencing stress correlated with the level of SOC.

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