

Analysis of Influencing Factors of Sense of Coherence in Patients with Parkinson's Disease Based on Positive Psychology

Yang Liu

The First Affiliated Hospital of Dalian Medical University, Dalian, Liaoning, China

ABSTRACT

Parkinson's disease (PD) is a neurodegenerative disease that seriously threatens human health in contemporary society [1]. Sense of Coherence (SOC) is a concept in positive psychology. By reviewing the SOC of PD patients, this paper elaborates on the current status of SOC in PD patients based on positive psychology theory, explores the influencing factors of SOC in PD patients, and clarifies the important significance of improving the SOC level of PD patients. The study aims to enhance the SOC level of PD patients, improve their quality of life, and provide a theoretical basis for effective clinical interventions.

KEYWORDS

Parkinson's disease; Sense of Coherence; Positive Psychology; Research Status; Neurology Nursing; Review

1. INTRODUCTION

Parkinson's disease (PD) is a chronic progressive disease and the second most common neurodegenerative disease in the world. At present, available medication and surgical treatment can only alleviate the clinical symptoms of patients, with no radical cure available. Patients maintain good self-care ability in the early stage of the disease. However, in the middle and advanced stages, they often have poor independent living ability due to falls, freezing of gait, swallowing and language disorders [2]. Meanwhile, most PD patients suffer from psychological symptoms such as anxiety and depression, which leads to a gradual decline in their level of social participation and social withdrawal, ultimately affecting their health outcomes and quality of life [3]. Essentially, SOC is an inherent psychological trait of individuals and also their core callable coping resource, derived from the persistent and dynamic confidence of individuals in their self-beliefs and cognition [4]. Faced with pressures from the internal and external environment, it is transformed into a stable psychological protection mechanism, helping individuals understand and control life stress, rationally utilize effective resources, and clarify the overall meaning of life. For PD patients, a good sense of coherence can greatly optimize their life perception and cognitive state, and become a valuable positive force in promoting physical and mental rehabilitation [5]. With the gradual rise and development of positive psychology, people's thinking on psychological intervention has also been updated. Instead of relying solely on the perspective of negative psychology and focusing on solving patients' existing psychological problems, it has shifted to in-depth research on patients' positive qualities and internal strengths. By stimulating these advantageous resources, it helps patients tap their self-potential, enhance physical and mental health, and thus achieve the optimization of quality of life [6]. This study analyzes the influencing factors of sense of coherence in PD patients from the perspective of positive psychology.

2. PSYCHOLOGICAL CHARACTERISTICS OF PD PATIENTS

Literature retrieval shows that previous studies have mostly focused on the correlation between motor symptoms and quality of life. However, recent studies have found [7] that psychological symptoms have a greater impact on the quality of life of PD patients than motor symptoms, and also increase the risk of falls, the number of medical visits, the length of hospital stay, reduce the rate of Deep Brain Stimulation (DBS) treatment and increase the mortality rate. The Diagnostic Criteria and Treatment Guidelines for Depression, Anxiety and Psychotic Disorders in Parkinson's Disease issued by the relevant study group of the Chinese Society of Neurology [8] also points out that the common psychological characteristics of PD patients are mainly reflected in three core manifestations: first, depression, which can occur in all stages of the disease course even before motor symptoms, manifested as persistent low mood, loss of interest, sleep disorders, etc.; second, anxiety, mainly including generalized anxiety (excessive worry) and panic disorder (episodes of precordial discomfort, dyspnea, etc.); third, psychotic disorders, with visual hallucinations as the most common manifestation, and some patients are accompanied by illusions and delusions. In addition, combined with clinical research, patients may also experience inferiority and loneliness due to decreased motor ability and limited social interaction, or cognitive-related psychological distress such as inattention due to disease progression, which have a negative impact on their quality of life and prevent them from performing their social roles normally.

3. CURRENT STATUS OF SENSE OF COHERENCE IN PARKINSON'S DISEASE PATIENTS

A number of studies have shown that the SOC of PD patients is lower than that of healthy people. For example, a 1-year follow-up study of 91 PD patients [9] found that the patients' SOC scale scores decreased significantly, indicating that with the progression of the disease, patients' ability to cope with stress-related problems may decrease. Another study comparing PD patients with patients with other chronic non-neurological diseases also found [10] that PD patients had lower SOC scores, which were positively correlated with depression scores and negatively correlated with mental health, stigma, social support, cognition and communication, well-being and other related factors. All these indicators are closely related to quality of life, that is, the lower the SOC score of PD patients, the lower their quality of life. These findings are also reflected in a cross-sectional study by Annalisa Gison et al. [11], which showed that SOC was significantly positively correlated with quality of life and significantly negatively correlated with emotional distress, and its multivariate regression analysis also confirmed the positive impact of SOC on quality of life.

4. SENSE OF COHERENCE AND POSITIVE PSYCHOLOGY

As a core protective concept in the field of positive psychology, SOC was proposed by Aaron Antonovsky in the 1970s, which provides a unique perspective for understanding how humans maintain health and well-being in stressful environments [12]. Different from traditional pathology that focuses on the causes of diseases, Antonovsky's Salutogenesis pays more attention to the question of "how people maintain health", and defines SOC as an individual's perception of life order and the ability to integrate psychological resources to cope with pressure [13]. Under this framework, as a key psychological resource, sense of coherence is closely related to positive psychological qualities such as self-identity, optimism, resilience and self-confidence [14]. Studies have shown that sense of coherence can not only directly promote mental health, but also indirectly improve individuals' well-being and quality of life by enhancing other positive psychological resources [15].

5. INFLUENCING FACTORS OF SENSE OF COHERENCE IN PARKINSON'S DISEASE PATIENTS BASED ON POSITIVE PSYCHOLOGY

5.1. Self-efficacy

Self-efficacy refers to an individual's belief in their ability to successfully complete a specific behavior in a specific situation, and it is one of the core concepts of positive psychology [14]. Studies have shown that sense of coherence is closely related to self-efficacy, and the two play a synergistic role in maintaining mental health [14]. A national survey in Denmark [16] showed that there is a clear and stable positive correlation between self-efficacy and sense of coherence, with a correlation coefficient of 0.39 ($P < 0.0001$), indicating that the higher the self-efficacy, the higher the sense of coherence. In addition, Zuo Jing et al. also found in their study on rehabilitation nursing of PD patients [17] that if nursing measures focusing on improving self-efficacy are adopted in the nursing process, it can not only effectively improve patients' psychological state and promote the rehabilitation process, but also make their internal feelings more consistent with external behaviors, thus helping to improve their sense of coherence.

5.2. Social Support

Social support refers to the help, care, love and support that individuals obtain from social relationships, including material support, emotional support, information support and companionship support [18]. For PD patients, sufficient social support can make them feel the warmth and care of society and enhance their confidence in rehabilitation [19]. Emotional support and companionship support in social support can make patients feel the meaning and value of life and improve their sense of coherence. For example, studies have shown that family and social support are an indispensable part of the rehabilitation process of PD patients, which can provide spiritual support and encouragement for patients, promote the rehabilitation process, and thus improve the sense of coherence [20].

5.3. Optimism

Optimism refers to an individual's tendency to hold positive expectations for the future, and it is another important positive psychological resource. Studies have shown [14] that sense of coherence is highly correlated with optimism. Studies have indicated [21] that PD patients with a high level of optimism are more likely to adopt positive coping strategies, such as actively participating in rehabilitation training and maintaining a healthy lifestyle. These behaviors help them better manage the disease and thus improve their sense of coherence. Another study also showed [22] that a high level of optimism is an important predictive factor for a low level of depression and a high level of life satisfaction in PD patients, and a good mental state helps to enhance the sense of coherence.

5.4. Positive Psychological Intervention

A number of studies have confirmed that positive psychological intervention can improve the sense of coherence of PD patients from multiple dimensions. Shao Jingxiang et al. pointed out in their study [23] that this intervention can effectively improve patients' depressive mood and cognitive dysfunction, and the improvement of cognitive function can help patients better cope with the disease, enhance the sense of life control, and thus promote the development of sense of coherence. Another study on positive intervention based on the PERMA model also showed [24] that positive psychological intervention can significantly alleviate patients' negative psychology such as depression and anxiety, and improve the quality of life and psychological resilience. When patients view life with a more positive attitude, their perception of the meaning of life will be enhanced, which

also helps to improve the sense of coherence. In addition, cognitive behavioral therapy has been proven to help patients identify and change negative thinking patterns, make them form a more reasonable cognition of diseases and life stressors, and enhance the sense of life comprehensibility. Studies have shown [25] that mindfulness intervention can reduce patients' depression and anxiety, improve the quality of life, and further provide support for the improvement of sense of coherence by helping patients better perceive and understand their own emotional experiences.

6. CONCLUSION

To sum up, PD is a chronic neurodegenerative disease that cannot be completely cured at present. Middle and advanced patients gradually lose their independent living ability due to motor function decline (such as falls, swallowing disorders, etc.), and generally have mental health problems such as depression and anxiety, which have a profound negative impact on their quality of life, even exceeding that of motor symptoms. As a core protective trait of positive psychology, SOC can improve the quality of life of patients by strengthening it. However, the SOC level of PD patients is significantly lower than that of healthy people, and it is significantly negatively correlated with the progression of the disease. At the same time, intervention for patients based on positive psychology is an effective way to improve the SOC of PD patients. Therefore, medical staff should put forward targeted suggestions and intervention measures for PD patients, such as formulating personalized intervention plans; incorporating positive psychological intervention technologies such as cognitive behavioral therapy and mindfulness training into daily nursing; constructing a collaborative support model of medical staff + family + patients; conducting long-term follow-up and monitoring of patients' SOC, and dynamically evaluating its changes, so as to improve their SOC level and help patients maintain a high quality of life.

REFERENCES

- [1] Dorsey ER, Constantinescu R, Thompson JP, et al. Projected number of people with parkinson disease in the most populous nations, 2005 through 2030 – Reply [J]. *Neurology*, 2007, 69(2): 224-224.
- [2] Liu S Y. Prevalence status of Parkinson's disease [J]. Unpublished thesis, n.d.
- [3] Guo H L. Research on the current status and influencing factors of social participation in patients with Parkinson's disease [J]. Unpublished thesis, n.d.
- [4] SCHNELL T, SUHR F, WEIERSTALL-PUST R. Post-traumatic stress disorder in volunteer firefighters: influence of specific risk and protective factors [J]. *European Journal of Psychotraumatology*, 2020, 11(1):1-10.
- [5] Jian A H. Level of sense of coherence and its influencing factors in elderly patients with Parkinson's disease [J]. Unpublished thesis, n.d.
- [6] Zhang S Y. Application of positive psychology in nursing care of stroke patients [J]. Unpublished thesis, n.d.
- [7] SU W, LIU H, JIANG Y, et al. Correlation between depression and quality of life in patients with Parkinson's disease [J]. *Clinical Neurology and Neurosurgery*, 2021, 202:106552.
- [8] Chinese Society of Neurology. Diagnostic Criteria and Treatment Guidelines for Depression, Anxiety and Psychotic Disorders in Parkinson's Disease [J]. Unpublished guideline, n.d.
- [9] Caap-Ahlgren M, Dehlin O. Sense of coherence is a sensitive measure for changes in subjects with Parkinson's disease during 1 year [J]. Unpublished study, n.d.
- [10] PUSSWALD G, FLECK M, LEHRNER J, et al. The “Sense of Coherence” and the coping capacity of patients with Parkinson disease [J]. *International Psychogeriatrics*, 2012, 24(12): 1972-1979.
- [11] Gison A, Rizza F. The sense-of-coherence predicts health-related quality of life and emotional distress but not disability in Parkinson's disease [J]. Unpublished study, n.d.
- [12] Antonovsky A. The structure and properties of sense of coherence [J]. Unpublished paper, n.d.
- [13] MITTELMARK M B. Stressor Appraisal on a Pathway to Health: The Role of the Sense of Coherence [M]//*The Handbook of Salutogenesis*. Springer, 2022: 69-78.

- [14] ROHNER S L, BERNAYS F, MAERCKER A, et al. Early-life adversity and later-life mental health: a conditional process analysis of sense of coherence and resilience-related resources [J]. *Frontiers in Child and Adolescent Psychiatry*, 2023, 2:1-12.
- [15] WIESMANN U, HANNICH H-J. A salutogenic inquiry into positive aging – a longitudinal analysis [J]. *Aging & Mental Health*, 2018, 23(11): 1562-1568.
- [16] TRAP R, REJKJÆR L, HANSEN E H. Empirical relations between sense of coherence and self-efficacy, National Danish Survey [J]. *Health Promotion International*, 2016, 31(3): 635-643.
- [17] Wu X. Clinical study on self-efficacy in rehabilitation nursing of Parkinson's disease patients [J]. Unpublished thesis, n.d.
- [18] MARS G M J, KEMPEN G I J M, MESTERS I, et al. Characteristics of social participation as defined by older adults with a chronic physical illness [J]. *Disability and Rehabilitation*, 2009, 30(17): 1298-1308.
- [19] SCHÖNFELDOVÁ J, COHEN C, OTMAZGIN O, et al. Perceived social support in the daily life of people with Parkinson's disease: a distinct role and potential classifier [J]. *Scientific Reports*, 2025, 15(1):1-12.
- [20] HUANG Z, XIAO D, LAO Y, et al. The Significance of Psychological Support in Managing Depression in Parkinson's Disease: Combining Venlafaxine with Pramipexole and Psychological Care [J]. *Actas Españolas de Psiquiatría*, 2025, 53(1): 19-25.
- [21] HURT C S, BURN D J, HINDLE J, et al. Thinking positively about chronic illness: An exploration of optimism, illness perceptions and well-being in patients with Parkinson's disease [J]. *British Journal of Health Psychology*, 2013, 19(2): 363-379.
- [22] STUTTS L A, SPEIGHT K L, YOO S, et al. Positive Psychological Predictors of Psychological Health in Individuals with Parkinson's Disease [J]. *Journal of Clinical Psychology in Medical Settings*, 2019, 27(1): 182-189.
- [23] Shao J X. Effect of positive psychological intervention on PD patients with depression and cognitive dysfunction [J]. Unpublished thesis, n.d.
- [24] YAO Y, WANG C-J, YIN S-Y, et al. Effects of positive psychology intervention based on the PERMA model on psychological status and quality of life in patients with Parkinson's disease [J]. *Heliyon*, 2024, 10(20):e22568.
- [25] YI M, ZHANG W, ZHAO B, et al. The Effects of Mindfulness-Based Interventions in People with Parkinson's Disease: A Systematic Review and Meta-Analysis [J]. *Clinical Gerontologist*, 2024, 48(4): 570-588.