# Research Progress on Social Avoidance and Distress in Stroke Patients

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*Abstract:* This study reviewed the research on social avoidance and distress in stroke patients for future research. This study reviewed and summarized the research on social avoidance and distress in stroke patients. This paper analyzed the research status, evaluation tools, influencing factors, and intervention methods of social avoidance and distress in stroke patients, and suggested directions for future research. Social avoidance and distress are common among stroke patients, and there is currently a lack of tools to assess social avoidance and distress. Gender, age, clinical biological indicators, stroke sequelae, psychological factors, social support, and social discrimination are influencing factors for social avoidance and distress in stroke patients. Social avoidance and distress can be alleviated by self-management, health empowerment intervention, and implementing mindfulness-based stress reduction therapy. Social avoidance and distress seriously affect the quality of life of stroke patients and are detrimental to their social lives. Hence, it is necessary to develop assessment tools to evaluate social avoidance and distress for stroke patients. Additionally, it is important to continuously improve social support systems and health education to motivate and reintegrate stroke patients into society.

## **1. Introduction**

A stroke is characterized as damage to brain tissues that is caused by the sudden rupture of a blood vessel in the brain or the blockage of a blood vessel that prevents blood flow to the brain. It has reported high morbidity, disability, mortality, and recurrence <sup>[1]</sup>. At social activities, stroke patients often lack a sense of social integration, which gradually reduces their willingness and ability to socialize. This eventually leads to social avoidance and distress, which is a chronic behavioral and emotional state commonly reported in stroke patients <sup>[2]</sup>. If left untreated, the behavior can deteriorate into a social disorder, causing patients to self-isolate with reduced social adaptability and an increased sense of helplessness. Therefore, attention should be directed to the physical and mental health of stroke patients to improve their quality of life and promote their reintegration into society. This review summarized the relevant research on social avoidance and distress in stroke patients, provided an overview of the research status, assessment tools, influencing

factors, and intervention measures on social avoidance and distress in stroke patients, and suggested directions for future research.

#### 2. Related concepts of social avoidance and distress

The concept of "social avoidance and distress" was first proposed by Watson and Friend to collectively describe social avoidance behavior and social distress emotion <sup>[3]</sup>. "Social avoidance and distress" refers to significant and persistent avoidant tendencies and perceived negative emotional experiences of distress when individuals socialize <sup>[4]</sup>.

#### 3. Research status of social avoidance and distress in stroke patients

In recent years, the social problems of stroke patients have attracted widespread attention. Shan reported that stroke patients with hemiplegia have limited daily activities and need to rely on others to complete them <sup>[5]</sup>. The patients have a heavy psychological burden, which leads to a certain resistance to social activities. A qualitative study by Guo revealed that stroke patients often feel lonely and helpless, which reduced their desire and behavior to socialize <sup>[6]</sup>. Song demonstrated that young and middle-aged stroke patients would encounter various social pressures such as career selection, marriage, childbirth, and social interaction <sup>[7]</sup>. At the same time, due to the existing functional impairment and risk of stroke recurrence, stroke patients are at a disadvantage in job opportunities and professional ability, further aggravating the disconnection from society. Likewise, Cha revealed that stroke patients have varying degrees of stigma, such that they are unwilling to appear in public places and display social avoidance tendencies during social interactions <sup>[8]</sup>. Therefore, stroke patients with social avoidance and distress have a poorer quality of life and are not conducive to a return to society.

## 4. Related assessment tools for social avoidance and distress

There is currently a lack of effective tools to specifically assess social avoidance and distress in stroke patients. Most assessments of social avoidance and distress in stroke patients usually use the following scales:

The Social Avoidance and Distress Scale (SADS) was compiled by Watson to assess the social avoidance and distress of individuals during social interaction <sup>[9]</sup>. The scale is composed of two parts: the dimension of social avoidance (14 items) and the dimension of social distress (14 items). The total score on the scale ranges from 0 to 28, with higher scores indicating more severe social avoidance and distress.

The Liebowitz Social Anxiety Scale (LSAS) was compiled by Liebowitz in 1987 <sup>[10]</sup>, and it is used to assess the anxiety, fear, and avoidant behaviors of patients. LSAS has a total of 24 items to assess the individual's subjective experience of fear and anxiety and objective avoidance behavior. The items of the scale adopt a four-level Likert score, and the scores range from 0 to 3. Higher scores indicate more severe social avoidance by the individual.

The General Alienation Scale (GAS) was compiled by Crowther in 1977<sup>[11]</sup>, and it is mainly used to measure the individual's sense of isolation and participation in social activities. The 15 items of the scale adopt the Likert four-level scoring method, and the scores range from 15 to 60, where higher scores indicate higher levels of social avoidance.

## 5. Influencing factors of social avoidance and distress in stroke patients

#### **5.1 Demographic factors**

Studies have found that age and gender affect the degree of social avoidance and distress in stroke patients. Gardiner demonstrated that social avoidance and distress were worse in elderly stroke patients aged  $\geq 60$  years old <sup>[12]</sup>. However, McCarthy mentioned that young stroke patients are psychologically more prone to social avoidance and distress <sup>[13]</sup>. On the other hand, a study by Zhou reported that male stroke patients are more likely to experience social avoidance and distress <sup>[14]</sup>. This was contrary to the study by Holmes <sup>[15]</sup>, where female stroke patients were reported to be more prone to social avoidance and distress. The differences in findings could be due to the evaluation tools used, sample sizes, and patients of different social backgrounds. Therefore, further research is required to better understand the influence of demographic factors on social avoidance and distress in stroke patients.

#### **5.2 Clinical Biological Indicators**

Studies have confirmed that stroke patients with long-term social avoidance have abnormal values of HbA1c <sup>[16].</sup> Shiovitz-Ezra reported that when HbA1c, BMI, and metabolic burden increased, the risk of loneliness and social avoidance in stroke patients was 39% to 71% <sup>[17]</sup>. Likewise, Wang reinstated that HbA1c, CRP, IL-6, and BMI levels could predict the mental condition and occurrence of social avoidance of stroke patients <sup>[18]</sup>. A study by Stuller proved that a dysfunctional HTPA axis is the biological consequence of the interaction between stroke and social avoidance <sup>[19]</sup>.

#### 5.3 Sequelae of stroke

Sequelae of stroke can limit the social participation of patients. According to a study by Gu, stroke patients actively chose to reduce the number of public interactions due to physical dysfunction, and the lack of long-term social activities leads to their disconnection from society <sup>[20]</sup>. Studies have found that stroke patients are prone to fatigue, which would prevent them from performing tasks and returning to work <sup>[21]</sup>. In addition, a qualitative study by Broussy implied that the pain experienced by stroke patients would interfere with their communication with others <sup>[22]</sup>. Hence, stroke sequelae are important factors contributing to social avoidance and distress in stroke patients.

#### **5.4 Psychological factors**

Most stroke patients have negative emotions. Larsen demonstrated the decreasing social adaptability of stroke patients with negative emotions, which reduced their interest in participating in social activities <sup>[23]</sup>. Stroke patients have long-term self-denial emotions, whereby they continuously magnify their defects and are overly sensitive to external speech. This eventually leads to social dysfunction <sup>[24]</sup>. In addition, stroke patients are prone to anxiety and irritability due to the decline in self-care, and this could negatively affect the social relations of patients, resulting in social embarrassment or isolation <sup>[25]</sup>.

#### **5.5 Social factors**

Social discrimination can lead to social avoidance and distress in stroke patients. Some social

groups stigmatize stroke patients with disgust and deliberate alienation, thereby causing social withdrawal <sup>[26]</sup>. On the contrary, good social support can help stroke patients with hemiplegia regain confidence and promote their smooth integration into society <sup>[27]</sup>. Therefore, eliminating social discrimination and improving social support are of great significance for reducing social avoidance and distress in stroke patients and promoting their return to society.

## 6. Interventions related to social avoidance and distress in stroke patients

## 6.1 Mindfulness-based stress reduction (MBSR)

The purpose of MBSR is to relieve the psychological distress of stroke patients through mindfulness meditation. Zeng reported that the use of MBSR effectively alleviated social isolation and avoidance in stroke patients <sup>[28]</sup>. Cui used MBSR in stroke recovery patients for eight weeks. The group reported a significant reduction in negative emotions and increased social interactions <sup>[29]</sup>. Hence, MBSR can facilitate the successful integration of stroke patients into society and increase their motivation to participate in interpersonal interactions.

## 6.2 Improving participation after stroke self-management program (IPASS)

IPASS mainly manages and improves stroke manifestations and behaviors of stroke patients. Furthermore, IPASS has helped patients regain their social life and return to their families, work, and community <sup>[30]</sup>. Wolf and Lo applied IPASS to stroke rehabilitation patients and reported significant improvements in the self-efficacy and enthusiasm of stroke patients to return to their families and communities <sup>[31, 32]</sup>. Therefore, IPASS can alleviate the social problems faced by stroke patients.

#### 6.3 The health empowerment intervention for stroke-self management (HEISS)

HEISS is a form of health education that stimulates decision-making in patients during recovery. Sun proved that HEISS improved the enthusiasm of stroke patients in rehabilitation and encouraged them to actively participate in daily activities and improve social participation <sup>[33]</sup>. In a separate study by Deyhou, two weeks of intervention relieved the anxiety and depression of stroke patients and significantly improved the self-confidence of patients in social interactions <sup>[34]</sup>.

## 7. Implications for Future Research

#### 7.1 Developing social avoidance and distress assessment tools for stroke patients

Social avoidance and distress comprise subjective feelings (social anxiety and loneliness) and objective behaviors (social avoidance). However, most of the current assessment tools only focus on the assessment of subjective feelings. At the same time, there is currently no assessment tool for social avoidance and distress in stroke patients, and there might be some bias in the assessment results. Therefore, better assessment tools should be developed for social avoidance and distress in stroke patients. In future research, the combination of quantitative and qualitative data should be used to better evaluate social avoidance and distress in stroke patients. The social avoidance and distress in stroke patients. The social avoidance and distress is stroke patients.

## 7.2 Improving social support systems

High-quality social support and family support play an important role in eliminating negative emotions in stroke patients, especially during recovery. Most stroke patients have bad experiences with social rejection. However, spiritual encouragement from family and friends can help reduce social fear, loneliness, and uncertainty in patients. Therefore, future research should continue to improve the social support system for stroke patients to better integrate into society.

## 7.3 Strengthening health education to relieve negative emotions in stroke patients

Health education plays an important role in relieving negative emotions and promoting social interactions. Through health education, patients can fully understand the harm of adverse psychological emotions. At the same time, patients are encouraged to confide their psychological feelings to family members or friends around them to alleviate their negative psychological emotions and promote their return to society. In future clinical work, clinical staff should strengthen health education for stroke patients and rationally use mind maps and short videos during health education. Moreover, clinical staff should encourage patients to vent their emotions, psychologically guide these patients, help rebuild self-awareness, and reduce negative emotions in stroke patients.

## 8. Conclusion

Stroke patients generally have social avoidance and distress, which is not conducive to their return to society. Through the current study, age, gender, clinically relevant biological indicators, stroke sequelae, social discrimination, and social support can affect social avoidance and distress in stroke patients. In the intervention of social avoidance and distress in stroke patients, relevant factors should be evaluated in multiple aspects to identify the avoidance behavior and understand the distress of stroke patients for personalized treatments. Through self-management, health empowerment interventions, and mindfulness-based stress-reduction therapy, the mental state of patients can be improved for better social interactions, adaptability, and quality of life. Besides that, there is currently a lack of tools to assess social avoidance and distress in stroke patients. Threefore, an evaluation tool dedicated to social avoidance and distress in stroke patients. At the same time, the social support system and health education should be further improved to boost the social enthusiasm of stroke patients and promote their reintegration into society.

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