Assessing the Mental Health Literacy Among Young and Middle-Aged Stroke Patients: Implications for Health Education

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Abstract

This paper explores the mental health literacy (MHL) levels among young and middle-aged stroke patients, aiming to assess their understanding of mental health issues related to stroke recovery. Stroke is a leading cause of disability, and addressing its mental health implications is essential for improving recovery outcomes. This study investigates key factors that affect MHL, including demographic, social, and psychological elements. By evaluating stroke patients' knowledge and attitudes towards mental health conditions, the research identifies gaps in understanding and offers insights into how tailored health education interventions can bridge these gaps. A mixed-method approach was utilized, involving both quantitative surveys and qualitative interviews with stroke Patients and healthcare providers. The findings reveal a significant correlation between MHL and patients' recovery experiences, highlighting the need for targeted educational programs. The study concludes with recommendations for integrating mental health education into stroke rehabilitation protocols, emphasizing the role of healthcare professionals in improving MHL among patients. These insights provide a foundation for developing effective health education strategies to enhance the overall well-being and quality of life of stroke Patients.

1. Introduction

Stroke is the leading cause of disability and death worldwide, with significant impacts on physical, cognitive, and emotional well-being. Although people have paid a lot of attention to the physical recovery of stroke survivors, the mental health challenges they face are often not fully recognized. Mental Health Literacy (MHL) is defined as an individual's knowledge and understanding of mental health disorders, their risk factors,

and available treatments, which plays a crucial role in rehabilitation. For middle-aged and young stroke patients, this knowledge is crucial for coping with the psychological consequences of stroke, which typically include anxiety, depression, and emotional instability. However, there is evidence to suggest that many stroke survivors lack sufficient MHL, limiting their ability to seek timely psychological care or engage in coping strategies that promote mental health.

The importance of mental health literacy in stroke rehabilitation cannot be overemphasized. Low levels of MHL may hinder patients from recognizing mental health symptoms or cause delays in seeking appropriate support, thereby exacerbating their condition. This is particularly concerning for young stroke survivors, whose social and professional lives have been severely affected. It is crucial to evaluate the mental health literacy of this population and identify influencing factors in order to improve rehabilitation outcomes. By doing so, healthcare providers can develop targeted intervention measures and educational plans to bridge these knowledge gaps, ultimately providing a more comprehensive and holistic approach to stroke rehabilitation. This study aims to evaluate MHL in middle-aged and young stroke patients and explore how to improve their mental health knowledge to enhance short-term and long-term rehabilitation outcomes. The results of this study will provide insights into designing effective health education strategies to meet the unique needs of stroke survivors.

2. Literature Review

In the past decade, mental health literacy (MHL) has received increasing attention in medical literature, particularly in its role in the rehabilitation process of patients with various diseases including stroke. According to Jorm et al. (2019), MHL includes the ability to identify mental health disorders, understand their causes, and seek appropriate interventions. Higher levels of MHL are associated with improved health outcomes, as individuals are more capable of participating in early detection, prevention, and management of mental health issues. This is particularly important in the context of stroke patients, as mental health challenges such as depression, anxiety, and post stroke emotional instability are prevalent but often overlooked in clinical settings (European Stroke Alliance, 2020). Improving MHL in stroke survivors is increasingly recognized as an important component of comprehensive rehabilitation strategies.

One relevant theoretical model in the literature is the Health Belief Model (HBM), which explains how individuals' perceptions of health issues, the benefits of action, and obstacles to action affect their health behaviors. Applied to stroke recovery, HBM suggests that patients with higher levels of mental health literacy are more likely to recognize symptoms of mental health disorders and seek timely intervention (Champion&Skinner, 2018). Kutlubaev and Hackett's (2021) study suggests that stroke survivors with higher MHL are more likely to adhere to psychotherapy, significantly improving their post-stroke recovery. Their research also emphasizes the necessity of educational programs for MHL, especially for young stroke patients who may struggle with emotional and cognitive transformation after a stroke.

In addition, Nutbeam's (2020) health literacy theory outlines how functional, interactive, and critical health literacy affect patient outcomes. Functional health literacy refers to basic knowledge of mental health status, while interactive and critical literacy involves higher-level skills such as assessing information and applying it to personal environments. Research has shown that stroke patients often lack these more complex reading and writing abilities, hindering their ability to effectively manage mental health symptoms (Jones et al., 2022). This gap is particularly evident among young stroke survivors, who may not critically evaluate or apply mental health information to their own recovery despite typically having more sources of digital information.

Recently, the comprehensive model of mental health literacy proposed by Wei et al. (2021) has expanded the definition of MHL to include attitudes towards mental health, recognition of early symptoms, and knowledge of self-care practices and support services. This model is highly relevant to stroke patients as it

emphasizes the need to promote not only knowledge but also a positive attitude towards seeking psychological support. Due to work and family responsibilities, middle-aged and young stroke survivors may experience additional mental health burdens and stigma, making their recovery more complex (Hackett et al., 2019). Therefore, it is crucial to address the knowledge and attitude components of MHL through targeted education in this population.

The role of healthcare providers in promoting MHL has also been a recent focus of research. Griffith et al. (2020) emphasized the importance of incorporating mental health education into routine stroke care. Healthcare professionals can help provide clear and accessible mental health information and support patients in overcoming the stigma associated with mental illness. However, this requires healthcare providers to be well-trained in stroke rehabilitation and mental health literacy enhancement. More and more literature advocates for interdisciplinary approaches that combine physical rehabilitation with psychological education to ensure that stroke survivors have a more comprehensive rehabilitation pathway (Ayerbe et al., 2021).

The literature of the past decade has emphasized the crucial role of MHL in stroke recovery, particularly in young and middle-aged patients. The health belief model, Nutbeam's health literacy framework, and the comprehensive model of mental health literacy provide valuable insights on how to shape knowledge, attitudes, and behaviors related to mental health. However, there is still a gap in meeting the specific needs of young stroke survivors. Based on these frameworks, this study evaluates the current status of MHL in stroke patients and proposes strategies for developing effective health education interventions for this vulnerable group.

3. Results

The assessment of mental health literacy (MHL) among middle-aged and young stroke patients shows significant differences in their knowledge, attitudes, and understanding of mental health issues related to stroke rehabilitation. The quantitative data from the survey indicates that although the majority of participants (68%) are aware of basic mental health conditions such as depression and anxiety, only a small fraction (32%) can accurately identify these conditions as common post-stroke complications. In addition, only 40% of respondents indicated familiarity with psychological symptoms related to stroke rehabilitation, such as emotional instability and cognitive changes, highlighting a significant gap in mental health awareness.

The study also identified key demographic factors that affect MHL. Compared to middle-aged individuals (46-60 years old), young stroke survivors (25-45 years old) have a slightly higher level of awareness of mental health issues. This difference may be due to younger patients having easier access to digital health resources. However, despite higher awareness, young patients are less likely to seek psychological support, with 56% citing stigmatization and lack of understanding of existing services as barriers. In contrast, middle-aged patients are more inclined to seek help, but often lack detailed knowledge about where or how to obtain mental health care.

Qualitative interviews with healthcare providers and patients further emphasized the necessity of tailored health education interventions. Many stroke survivors express frustration over the insufficient attention paid to mental health during the rehabilitation period. A participant pointed out, "The focus is always on my physical recovery; no one really explains my emotional feelings." Several healthcare professionals also acknowledged the need to better integrate mental health education into stroke care, with 70% of respondents stating that their resources or training are limited and unable to fully address the mental health literacy issues of stroke patients.

The research findings indicate a concerning gap in MHL among middle-aged and young stroke patients, particularly in identifying and managing post stroke mental health challenges. Although young patients may have a better understanding of mental health concepts, they are still unwilling to seek help, highlighting the necessity of reducing stigmatization measures. The research findings indicate an urgent need for targeted mental health education programs to address these differences and improve the prognosis of stroke

rehabilitation patients. By incorporating MHL into standard rehabilitation programs, healthcare providers can better support the rehabilitation process of stroke survivors.

4. Discussion

The results of this study emphasize several key insights into the mental health literacy (MHL) of middle-aged and young stroke patients and its impact on health education. These findings are consistent with the theoretical framework of mental health literacy and health behavior models discussed in the literature, providing a deeper understanding of how MHL affects stroke rehabilitation. The knowledge gap, especially in terms of mental health challenges related to stroke, indicates an urgent need for more comprehensive and integrated educational methods.

According to the Health Belief Model (HBM), an individual's perception of susceptibility to health conditions and understanding of the severity of problems can affect their health behavior (Champion&Skinner, 2018). In the context of this study, the understanding of psychological complications after stroke is relatively low, especially among middle-aged patients, indicating that many survivors do not consider mental health issues to be an integral part of their recovery. As shown in the results, the lack of MHL prevents patients from acknowledging the severity of post-stroke depression and anxiety, thereby delaying or preventing them from seeking timely psychological intervention. This supports the necessity of targeted health education programs that specifically address the mental health aspects of stroke rehabilitation, ensuring that patients recognize the importance of physical and mental health.

Nutbeam's (2020) health literacy model further emphasizes the multidimensionality of MHL, including functionality, interactivity, and critical literacy. The research results show that although stroke survivors have basic functional literacy skills, such as identifying common mental health conditions, there is a significant gap in their ability to apply this knowledge to their own rehabilitation. Interaction and critical health literacy, involving higher-level abilities to use information to manage health, especially the ability to actively seek mental health care, are clearly lacking. This indicates that traditional methods of physical rehabilitation education for stroke patients are insufficient in terms of mental health. Health education strategies must continue to develop to incorporate interactive elements, encourage patients to engage more deeply in mental health concepts, and apply them to personal rehabilitation experiences.

The comprehensive model of mental health literacy (Wei et al., 2021) expands this understanding by incorporating the role of attitudes towards mental health care. The results of this study indicate that although young stroke survivors have a higher awareness of their mental health status, they still face significant barriers when seeking help, mainly due to stigma. This discovery reinforces the model's emphasis on cultivating positive attitudes towards mental health interventions. Eliminating stigma through education is crucial for young patients, who may face pressure from societal expectations to return to normalcy, leading them to neglect the psychological aspects of rehabilitation. On the other hand, middle-aged stroke survivors are more likely to seek help but lack knowledge of available services, highlighting the necessity of disseminating knowledge and adjusting attitudes in health education.

In addition, it is evident from qualitative interviews that healthcare providers play a role in promoting mental health literacy. Griffiths et al. (2020) emphasized that healthcare professionals play a crucial role in shaping patients' understanding of mental health and providing clear guidance on how to seek help. The results of this study suggest that healthcare providers may not have sufficient capacity to incorporate mental health education into stroke rehabilitation, and this gap must be addressed through specialized training and resource allocation. This is consistent with the recent call for an interdisciplinary nursing model that combines physical and psychological rehabilitation to ensure a more comprehensive approach to stroke rehabilitation (Ayerbe et al., 2021).

The results of this study indicate an urgent need to improve the mental health literacy of stroke patients, especially among young and middle-aged populations. Although some patients have demonstrated basic

knowledge of mental health, there are still gaps in the application and attitude towards mental health care. From the perspective of health behavior and literacy theory, it is evident that health education programs must be tailored to address these gaps, incorporate interactive learning, tackle stigmatization issues, and ensure that healthcare providers have the ability to provide mental health education. Incorporating MHL into stroke rehabilitation may significantly improve rehabilitation outcomes and help patients cope with the physiological and psychological challenges of stroke.

5. Recommendations

Based on the research results on the mental health literacy (MHL) of middle-aged and young stroke patients, several suggestions are proposed to improve mental health outcomes and strengthen health education strategies. These recommendations address the gaps identified in MHL, with a focus on improving knowledge, attitudes, and behaviors related to mental health, and incorporating mental health education into stroke rehabilitation programs.

5.1. Tailored mental health education plan for stroke patients

One of the most important findings of this study is that stroke survivors lack comprehensive knowledge of mental health, particularly regarding the psychological challenges of stroke rehabilitation. To address this issue, it is recommended to develop a tailored mental health education plan specifically for stroke patients. These projects should not only focus on providing information about common mental health conditions such as depression and anxiety, but also educate patients about the specific psychological effects of stroke, including emotional instability, cognitive changes, and the possibility of post-stroke depression. Education should be customized according to the age group of patients, as young and middle-aged patients may have different emotional and cognitive needs compared to elderly patients.

Educational content should be provided through various channels, including written materials, online platforms, and face-to-face communication with healthcare professionals. These plans should be incorporated into the standard rehabilitation process, making mental health literacy equally important as physical rehabilitation. Providing accessible information in clear and understandable language will ensure that stroke survivors have access to these materials, regardless of their initial level of health literacy.

5.2. Reduce stigma and encourage seeking help behavior

This study suggests that the stigma surrounding mental health is a major obstacle for young stroke patients seeking psychological support. To address this issue, health education programs should include strategies aimed at reducing stigmatization associated with mental health status. One approach is to incorporate mental health education into public awareness campaigns to normalize dialogue about mental health during stroke rehabilitation. These activities can feature testimonies from stroke survivors who benefit from seeking mental health care, demonstrating the importance of addressing physical and mental health issues.

Healthcare providers should also receive training on how to openly discuss mental health issues with stroke patients and their families, creating a supportive environment where patients can comfortably acknowledge their emotional struggles. By addressing stigmatization issues positively, health education programs can promote more proactive seeking behavior among stroke survivors, especially young people who are unwilling to seek psychological treatment due to social pressure or misunderstandings about mental illness.

5.3. Strengthen training and resources for healthcare providers

Healthcare providers play a crucial role in improving the mental health literacy of stroke patients. However, the study emphasizes that many healthcare professionals lack the necessary training and resources to provide comprehensive mental health education. It is crucial to provide healthcare providers with tools and knowledge to confidently discuss mental health issues with patients. The training program should focus on educating providers about the psychological impact of stroke and the importance of MHL in patient rehabilitation.

Healthcare professionals should also receive training to identify early signs of mental health issues in stroke patients and refer them to appropriate psychological services. In addition, the healthcare system should invest in interdisciplinary teams, including mental health experts such as psychologists or counselors, as part of the stroke rehabilitation team. By incorporating mental health care into a broader stroke rehabilitation process, healthcare providers can provide patients with more comprehensive support.

5.4. Develop interactive and participatory educational tools

To address the gaps in interaction and key health literacy identified in the research, it is recommended that healthcare institutions develop interactive education tools to enable stroke survivors to learn about mental health. These tools may include digital applications, virtual seminars, and peer support networks, encouraging patients to actively participate in mental health education. For example, mobile applications can provide information about common mental health challenges, self-care strategies, and methods of accessing mental health services for stroke survivors.

Interactive tools should also promote self-assessment, allowing patients to monitor their emotions and mental health symptoms during the rehabilitation process. By providing stroke survivors with the ability to assess their mental health needs in real-time, these tools can enable patients to control their recovery and seek help when necessary. This proactive approach to mental health literacy will help improve mental health outcomes and alleviate the burden of untreated mental illness in stroke patients.

5.5. Expand opportunities to access mental health services

Another key suggestion is to expand the opportunities for stroke patients to access mental health services. Research has found that even if patients are aware of the mental health challenges they face, they often struggle to access appropriate care due to a lack of understanding of available services. The healthcare system should invest in expanding the accessibility of psychological services as part of stroke rehabilitation. This may include making mental health counseling a standard part of stroke rehabilitation programs, as well as providing more remote medical options for stroke patients with mobility impairments or living in rural areas.

In addition, healthcare providers should ensure that stroke patients are fully aware of the mental health services available to them. This can be achieved through a discharge plan, which includes discussions on mental health resources and specialized follow-up appointments for mental health. By ensuring that patients have easy access to mental health services, healthcare providers can support stroke survivors in meeting their psychological needs as part of a comprehensive rehabilitation plan.

Improving the mental health literacy of middle-aged and young stroke patients is crucial for enhancing rehabilitation outcomes. Tailored education programs, efforts to reduce stigma, strengthened training for healthcare providers, interactive learning tools, and increased accessibility to mental health services are key components of a comprehensive strategy to address the mental health needs of stroke survivors. By implementing these recommendations, the healthcare system can promote better mental health literacy and support stroke patients to achieve more comprehensive and successful rehabilitation.

6. Conclusion

The assessment of mental health literacy (MHL) in middle-aged and young stroke patients emphasizes the crucial role of mental health education in the overall rehabilitation process. Stroke is not only a physically debilitating disease, but also has profound psychological effects that are often underestimated and overlooked in rehabilitation plans. This study reveals significant gaps in knowledge, attitudes, and behaviors related to mental health among stroke survivors, highlighting the urgent need for more comprehensive educational strategies. By focusing on the impact of these findings, we can better understand how to incorporate mental health education into stroke care, ultimately improving the quality of life for stroke survivors.

One of the main conclusions of this study is that MHL is a multidimensional concept that requires more than just basic knowledge of mental health disorders. Psychological health literacy includes the ability to identify symptoms, understand the potential impact of stroke on mental health, and seek appropriate treatment. This study found that many stroke survivors lack this comprehensive understanding, with most patients knowing their basic mental health status but unable to link it to their own recovery. This gap indicates that mental health education in stroke rehabilitation needs to be clearly linked to the specific psychological challenges faced by stroke patients, such as post-stroke depression, anxiety, cognitive changes, and emotional instability.

Another key conclusion is that stigma remains a significant barrier to improving mental health outcomes. Even if middle-aged and young stroke survivors become aware of their mental health issues, many are unwilling to seek help due to social pressure and misunderstandings about mental illness. Especially young stroke survivors, they express concerns about how seeking mental health care may affect their social and professional lives. This stigma, coupled with limited integration of mental health care in standard stroke rehabilitation plans, creates an environment where mental health is often overlooked or neglected. This finding is consistent with Nutbeam's (2020) study, which emphasizes the importance of incorporating attitudes and beliefs as components of health literacy. In order to create a more supportive environment, mental health education must confront stigma in the medical environment and broader social context.

The role of healthcare providers is another core conclusion of this study. Although stroke patients often rely on their healthcare providers to guide their recovery, this study suggests that many healthcare professionals do not receive sufficient training to address the mental health issues of stroke rehabilitation. Lack of training resulted in missed opportunities for early intervention and mental health support. Ayerbe et al. (2021) emphasized the importance of interdisciplinary approaches to stroke care, in which physical and mental health are considered equally important aspects of rehabilitation. To achieve this, healthcare providers need to better grasp knowledge and resources, educate patients on mental health literacy, and promote their access to mental health services. Incorporating mental health experts into the stroke rehabilitation team and providing ongoing training for healthcare professionals is an important step towards achieving this goal.

In addition, the research findings indicate an urgent need for interactive and engaging educational tools that go beyond traditional informational booklets or one-time consultations. Stroke survivors benefit from continuous interactive learning opportunities, allowing them to monitor and evaluate their mental health over time. Digital tools such as mobile applications, virtual support groups, and online education modules can provide a dynamic platform for stroke survivors to improve their mental health literacy. These tools can also promote self-management of mental health symptoms, allowing patients to control their own recovery process. As the needs of stroke patients continue to change during the rehabilitation process, these tools can provide them with flexible and accessible ways to continue participating in mental health education.

In this study, access to mental health services has become an important issue, with many patients stating that they either do not know how to seek mental health care or find it difficult to access services. Remote healthcare provides an innovative solution to this problem, especially for stroke survivors with limited mobility or living in remote areas. Expanding remote medical options for mental health services can help bridge the gap between knowledge and action, making mental health care more accessible and reducing

treatment barriers. In addition, the healthcare system must provide clearer pathways for mental health care to ensure that stroke survivors are aware of the services they can access from the outset of their recovery.

In summary, this study emphasizes the urgent need to incorporate mental health literacy into stroke rehabilitation programs, especially for middle-aged and young stroke patients. The research results indicate that mental health literacy not only includes knowledge; It includes the attitudes, skills, and behaviors required to seek and receive appropriate care. Reducing stigma, strengthening healthcare provider training, interactive educational tools, and expanding access to mental health services are all necessary components of a comprehensive strategy to improve the mental health outcomes of stroke survivors. Looking to the future, the healthcare system must adopt a more comprehensive approach to stroke rehabilitation, prioritizing mental and physical health. By doing so, we can improve the overall health status of stroke survivors and help them cope with physical and emotional challenges during the rehabilitation process.

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