

Review

Psychological Management of Stroke: A Review

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ABSTRACT

Due to its increasing rate of incidence, stroke is being increasingly recognized as the major cause of death and disability in survivors across the world. Stroke survivors and their caregivers often experience numerous functional daily life activities challenges and limitations after discharging from hospital. Stroke is a family disease and considerable empirical evidence regarding post-stroke management consistently highlights the crucial role of psychosocial interventions in facilitating overall recovery process. Especially, the holistic approach in the post stroke management and rehabilitation of these patients has led to a considerable reduction in the burden of stroke care worldwide. The present review will add the new horizon in existing understanding and guide the future research attempts for the development of new psychosocial paradigms for promoting the optimal rehabilitation of stroke survivors and their carers.

KEYWORDS: Stroke, Psychosocial interventions, Recovery, Rehabilitation

INTRODUCTION

A stroke occurs when a blood clot or a ruptured artery or blood vessel cuts off blood flow to a portion of the brain,^{1,2}. It can lead to different problems based on the area of the brain that has been impacted. However, common problems after stroke include impairment in the areas of cognition, speech and language, movement, emotional and behavioural problems among stroke patients^{3,4,5,6}.

The management of stroke comprises of holistic approach. When working with survivors of stroke, often times, the

focus is more on physical symptoms while ignoring other aspects of care including emotional and psychological care. Hence, there needs to be increased recognition of other aspects of care including psychological management. Furthermore, policies and directives from government agencies will also help to bring awareness and target these areas of care. There is also a need to work in a multidisciplinary team, including but not limited to doctors, physiotherapists, speech language pathologists, clinical psychologists, neurologists, social workers, survivors and carers of stroke, to offer the best possible support after a stroke^{7,8}.

Several studies have highlighted reduced depressive symptoms after psychosocial interventions in stroke survivors and their carers^{9,10}. However, there is a little evidence suggesting the role of such interventions in improving QOL and coping strategies for stroke survivors and carers. Furthermore, there is a considerable limitation of empirical evidence of such interventions in improving self-efficacy, caregiver strain and overall caregiver satisfaction⁹. In addition, communication skills in stroke caregivers is also found to play a crucial role in decreasing depressive symptoms¹¹.

After a stroke, many people find it difficult to engage in activities of daily living^{12,13}. In addition to slowing their life and increasing dependency, the situation is also known to reduce their self-esteem, feel an intense sense of loss and grief, hopelessness, helplessness, and frustration¹⁴. Finally, relationship with the caregiver and financial status of the stroke survivor is also known to have an impact on how they feel about the situation.

EMOTIONAL AND BEHAVIOURAL PROBLEMS

Common emotional problems after a stroke includes anger, irritation, frustration, helplessness, catastrophic reaction, loss of motivation, apathy, anxiety and depression⁶. Depression is associated with poor motivation to engage in rehabilitation activities, slower regaining of functioning, longer hospitalizations, etc¹⁵. Other behavioural and emotional problems such as acting out, shouting, screaming, denial of physical symptoms is also common in survivors of stroke¹⁶.

A longitudinal study revealed encouraging findings indicating that psychological interventions have a longer lasting impact when compared to non-specific support in stroke patients¹⁷. Furthermore the results suggest that a psychological interventions can help stroke patients to manage effectively the mood related disorders. Similarly another longitudinal study at about 5 years follow ups after a stroke, one-fifth of caregivers experienced symptoms of anxiety and one-quarter had symptoms of depression¹⁸. In addition, stroke survivors' cognitive decline was found to be linked to both depressive and anxious symptoms in family caregivers¹⁸.

IDENTIFYING EMOTIONAL ISSUES

Identifying emotional problems following a stroke can be difficult due to overlapping symptoms from the stroke and mental disorders, as well as impairment in cognitive, communication, and physical abilities. There are some evaluation strategies that can be implemented with recognised cut offs for individuals suffering from stroke which may include PHQ-9, GHQ- 28, SCID, etc¹⁹. However, it is important to not rely solely on these but also use our clinical acumen.

Certain risk factors like denial of physical symptoms, prior stressors increase the vulnerability to stress and possibility of psychological distress. Affective symptoms (such as deep sadness, anger, or anxiety), behavioural symptoms (like rapid anger outbursts or crying, rejection of disability, or withdrawal), and cognitive symptoms are the most common (e.g., reduced attention span, impaired memory, or aphasia).

Multiple studies have been done both at 6 month and 12 month time range which highlighted stroke survivors and their family caregivers had better mental health outcomes. In a recent study at 6 months of time range, personalised psychosocial intervention was done which resulted in a significant improvement in caregiver satisfaction²⁰. Furthermore, in some studies, a dyadic psycho-educational intervention was found to be efficient in improving stroke survivors' functional independence and the burden on family members for a brief period of time while also improving survivors' long-term quality of life²¹. However, its effectiveness was found to be uncertain because other psychological and social health consequences for stroke survivors and their family carers have yet to significantly improve following treatment. A study done by Kalra and colleagues which included a randomised, controlled clinical study of 300 stroke primary caregiver in which 3 to 5 inpatient sessions, including one home visit session, were provided as part of the intervention group and included tailored psycho-educational topics as well as skill-building strategies²². the study improved a number of survivor and caregiver outcomes. Similarly another study resulted in cost savings in addition to the improved caregiver outcomes²³.

Marginalization and associated social stigma also seem to contribute to social isolation which may result in embarrassment and avoidance across a variety of social situations²⁴. Furthermore, some studies have found a link between denial and lessened fear, which has been linked to a delay in seeking medical attention and a poor outcome. As a result, in order to encourage patients to seek help, it is critical to help them overcome their challenges of illness.

One study's results supported the use of an instructional intervention to enhance results such as physical health, cognition, and quality of life in stroke patients, as well as caregiver burden of care. In addition, educational interventions based on ongoing communication with stroke survivors and their families were found to significantly improve depression, whereas educational interventions based on family-mediated exercises were found to significantly improve physical functioning in stroke survivors²⁵.

The most common challenges and impacts of stroke reported by family members are: Uncertainty about future health status, fear of having another stroke, negative emotions, and role changes after stroke. The qualitative study provides useful information about the difficulties faced by dyads, intervention topics to prioritise, and strategies to maximise feasibility, acceptability, and impact²⁶.

PSYCHOSOCIAL MANAGEMENT

Depression and Anxiety

Symptoms of anxiety and depression have been shown to respond to pharmacological and non-pharmacological interventions. However, in some studies problem of using medication for depressive symptoms in stroke patients have demonstrated the increased risk of developing negative consequences^{27,28,29} indicating that medication should only be given in the case of severe depression. Although the efficacy of CBT in stroke patients has not been extensively studied, there is strong evidence that it is beneficial in the treatment of depressive episodes in the general population as well as in people who suffer from other physical ailments³⁰.

Depression can be commonly seen in stroke patients^{31,32}. The first line of treatment for PSD should be pharmacological therapy with antidepressants and psychotherapy. The SSRI's like escitalopram and paroxetine are the most effective antidepressants, while the most effective psychotherapeutic intervention is cognitive behavioural therapy³³. Despite the fact that this meta-analysis discovered that CBT has a positive effect on depressive symptoms in Post-Stroke Depression, because of the limitations of the included studies, the indication for CBT remains inconclusive. To validate the benefits of Cognitive Behaviour Therapy in Post-Stroke Depression, future studies of high-quality methodology are warranted³⁴.

Acupuncture and slow stroke back massage have been shown in some studies to reduce anxiety after a stroke³⁵. However, most of psychological interventions still awaits empirical effectiveness in stroke conditions. Cognitive behaviour therapy has been discovered to be highly effective for anxiety disorders in older and working-age people,³⁴ but it needs to be tested further in stroke survivors. Furthermore, the role of other psychological interventions such as relaxation training, supportive and psychodynamic approaches need to be evaluated further in future researches^{36,6,37}.

Trauma-focused cognitive therapy is also beneficial in treating post-traumatic traumatic stress in the general public, but its effectiveness in those with post-stroke psychiatric conditions has yet to be determined. As some studies have demonstrated that having stroke itself is considered to be a traumatic event having an adverse downstream effects on physical health in patients and their caregivers³⁸.

Analyzing the effects of psychosocial interventions by type revealed that social support improved physical function significantly and behavioural therapy significantly reduced depression, but their effect sizes were also small. Recently a study confirmed that psychosocial interventions with stroke patients have a significant effect on physical function and depression, giving the future directions into the implementation of most effective interventions for improving physical function and reducing depression in stroke patients³⁹.

Functional Limitations

Stroke leads to functional consequences in various areas of a person's life, like social, occupational, personal, and family. Therefore, management efforts must also be focused on addressing these problems. Primary physicians can also aid the coping process by helping stroke survivors understand the illness and its repercussions, and the areas associated that are under their control. This can be achieved using a variety of means such as psycho education; supplying resources that can help them better understand the illness, and the process of rehabilitation, teaching them problem solving skills, etc.

Physicians/ therapists can also help their patients gain a sense of control and see the illness in a more manageable light. Furthermore, helping the patient develop a supportive social support system may also aid in alleviating symptoms of depression and facilitating coping behaviours⁴⁰.

Addressing psychological need and having a good support system should be accepted as essentials of the culture of services in stroke⁴¹.

Motivational interviewing and problem solving therapy have a preventive effect. Psychological interventions like distress management, group therapy and music therapy also help, however; the evidence is limited⁴². Providing informational sources to patients and their caregivers, and regular follow ups are also effective ways that help to alleviate patients' mood.

Grief counselling can also be used for stroke patients in order to help them deal with the psychological impacts of stroke⁴³.

Cognitive Rehabilitation

Cognitive rehabilitation has proved to be efficacious in reducing cognitive impairments after stroke and in improving functional outcomes. Based on the area of impairment, detailed profiling can be done and the required rehabilitation training provided⁴⁴. Cognitive rehabilitation requires in depth evaluations of different brain functioning. Cognitive screening measures help to detect post-stroke dementia and also understand the pattern of cognitive impairments following a stroke. Mini Mental Status Examination (MMSE) and Montreal Cognitive Assessment (MoCA) are widely utilised to screen for areas of cognitive impairment. Middlesex Elderly Assessment of Mental State — MEAMS is also shown to be sensitive to detect cognitive impairment after stroke.

Cognitive rehabilitation is an important step in the stroke rehabilitation process that employs fundamentals of restorative neurology and neuropsychology. The cognitive rehabilitation process includes assessing cognitive functions, identifying specific areas of impairment, and providing treatment, goal settings on the basis of which appropriate rehabilitation strategies are planned. At present, there is numerous sources of evidence to support the efficacy of cognitive rehabilitation for stroke neglect and aphasia. Specific intervention may also help

with apraxia, inattention, and executive dysfunction. Reparative strategies are the first treatment option for patients who have memory problems. Aside from specific cognitive deficits, emotional and physical disturbances, as well as social support, all have an impact on functional recovery. Comprehensive and integrated cognitive rehabilitation programmes are required to improve stroke patients' day-to-day functioning⁴⁵.

According to the research, adding a strengths-based psycho education programme to the current rehabilitation protocol for stroke survivors may help survivors' families manage a smooth transition to care⁴⁶. Another study found that: (1) CRT reduced cognitive impairment as measured by MOCA and MMSE scores; (2) CRT lessened anxiety as measured by HADS anxiety and SAS scores; and (3) CRT had a role in remission of depression as measured by HADS depression and SDS scores in patients after stroke. Results: Comprehensive rehabilitation training (CRT) helped stroke patients recover from cognitive impairment and reduce the incidence of post stroke anxiety, depression, and dementia. It significantly prevented the impairment of cognitive function, anxiety, and improved activities of daily living in stroke patients^{47,46}.

Self Management

Patients' self-management of stroke and other chronic conditions can be viewed as an iterative procedure encompassing multidimensional strategies for meeting self-identified needs in order to deal with problems in their daily activities. Self-management does not have a universal definition, however it is generally identified as a person's capacity to deal with the symptoms, therapeutic interventions, physical and mental effects, and lifestyle changes that are associated with living with a chronic disease. Rather than an end point or result in and of itself, self-management is chiefly a multi-dimensional process that affects and leads to outcomes. Systematic reviews of studies on the effects of self-management interventions found that self-management intervention strategies may enhance life quality and thus self-efficacy in post-stroke patients^{48,49}. Self-management interventions may improve self-management, self-efficacy, life quality everyday routines, and other psychological functions in stroke patients over the age of 65⁵⁰. Although psychological support and emotional support appear to be more effective, self-management techniques may enhance the efficiency and emotional well-being of nurse-led stroke aftercare⁵¹.

In self-management strategies, exercises have also been recommended by the American Stroke Association guidelines as a part of optimal stroke rehabilitation⁵². Furthermore, it encourages stroke survivors to actively reflect on followed by taking initiative and responsibility for their daily activities⁵³. This method can be supported by incorporating social networks and social contexts. Another comprehensive study

recommends a comparable strategy in a qualitative meta-synthesis which appears to be worthwhile to investigate the psychosocial self-management support which is found to be especially beneficial for elderly people suffering from stroke⁵⁴.

Peer support is important self-management interventions which may help stroke survivors improve their physical and psychological outcomes^{55,56}. The evidence regarding the effects of peer support on community engagement and life quality is mixed, emphasising the need for additional high-quality research to back up these findings⁵⁷.

Considerable literature identifies numerous mechanisms of action through which peers can help with stroke management. First, in a study examining the standards of a group self-management treatment, stroke survivors revealed that they believed peers could assist problem solving and experience sharing because they had experienced the same stroke. Second, peers can provide emotional support by validating thoughts that two-tenths of stroke survivors currently believe are insufficient. Finally, qualitative results from the Chronic Illness Self-Management Programme indicate that peers provide a social comparison platform^{58,59}.

CONCLUSION

Psychosocial interventions have shown effectiveness in improving overall health related outcomes and promoting positive sense of well being. The current review has attempted to examine the utility of these interventions. Existing evidence suggest the role of self management and adaptation to new learning approaches in improving health related outcomes and self-efficacy. In addition, neuropsychological interventions, adapting to new coping strategies and activities of daily living are being given the utmost importance in the emerging researches. However, despite having considerable empirical support and utility of various psychosocial interventions in post stroke management, several shortcomings have been identified in our present review. Firstly with respect to emotional disturbances, there has still been limited evidence regarding the efficacies of various interventions in ameliorating depressive and anxiety symptoms. Secondly, lack of empirical support has also been noticed in improving life quality, self-efficacy & adaptable coping strategies for stroke survivors and their caregivers. Thirdly, due to the increasing incidence or number of stroke patients there is a strong need for trained and skilled specialists which is still lacking. Lastly, empirical support on the effects of psychosocial methods is also found to be limited. Hence, more researches on various psychosocial interventions are strongly warranted to further examine the format and optimal number of sessions.

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