



## ASSOCIATION OF DEPRESSION AND PERCEIVED SOCIAL SUPPORT IN POST STROKE PATIENTS OF LAHORE, PAKISTAN

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### ABSTRACT

**Background:** The survivors of stroke usually have poor health and poor life quality which is also associated with depression, anxiety, physical limitation, and disability. Quality of life of stroke survivors and their recovery is greatly affected by perceived social support.

**Objective:** The main purpose of this study is to determine the association between depression and perceived social support among post stroke patients of Lahore.

**Method and materials:** This is an Analytical cross sectional study conducted in Lahore, Pakistan in 2017. 152 subjects were enrolled. DSM IV scale was used to evaluate depression. Multi-Dimensional Scale of Perceived Social Support (MSPSS) was used to find out the level of social support. The data was collected from the OPDs (out-patient department) of different government and private hospitals along with physical therapy clinics of Lahore. Chi-square test was applied to find association between depression and perceived social support among post stroke patients of Lahore.

**Result:** Out of 152 total patients 90 patients were diagnosed as depressed while 62 were non-depressed. 90 patients were diagnosed as depressed while 62 were non-depressed. Out of 90 depressed patients, 53 patients were with high social support, 87 with moderate social support and 12 were those who got low social support. And all the patients who were non-depressed were those who got moderate and high social support. Chi-square test of independence showed significant association between depression and perceived social support in post stroke patients ( $p$ -value  $< 0.05$ ).

**Conclusion:** Lack of social support results in depression in post stroke patients. Patients who got high levels of social support showed less depression. Social support is an important factor in the prognosis of post stroke patients to prevent depression and improve their quality of life. Strain is observed within the family unit, and depressive symptoms are associated with poor social

support. Patients who are socially isolated are at the high risk for depression.

**Keywords:** Cross-sectional study, Depression, Pakistan, Perception, Social support, Stroke

### INTRODUCTION

Stroke is the main reason of disability and mortality all over the world. Pakistan is one of the countries that are most susceptible for stroke development. It is suspected that by 2020, Pakistan will be the 4<sup>th</sup> most populous country for the development of the risk factors for stroke. (1) Post stroke depression is very common and it occurs in all stages of stroke recovery. Almost 33% patients of stroke undergoes post stroke depression. (2) It is estimated that health, income and age are the predictors for the post stroke depression following 7-9 months of post stroke rehabilitation. (3)

It has been found out that disability is mainly caused by stroke than any other medical condition. (4) Post stroke patients consume most health services. It mostly occurs in the elderly population but can also occur in young population. (5) The survivors of stroke usually have poor health and poor life quality which is also associated with depression, anxiety, physical limitation and disability. (6)

Depression is the most common entity that occurs after stroke. It is mainly because of the effects of disability, cognitive impairment and even mortality. (7) The depression and the communication barriers has a negative result on the quality of life in the post stroke population, thus depression after stroke is the chief predictor which affect the quality of life after stroke in patients. (8) The occurrence of the most depression after stroke was found to be 25% in acute stage and it is almost the same at three months after stroke, after 2 years the depression rate decreases up to 19% yet again it increases to 29% at 3 years. There are many predictors of the depression and they include anterior brain lesions, dysphasia, living alone and dependence of the daily activities. (9) There are many risk factors of post stroke

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depression and they majorly include history of previous depression, living alone, social distress and even the intellectual disfunctioning, it is also said that female gender is also one of the risk factor of the post stroke depression.(10)

Quality of life of stroke survivors and their recovery is greatly affected by perceived social support. A notable difference is seen in the recovery of patients after stroke that had high social support. It is a very important prognostic element in the recovery of functional status in post stroke patients.(11) The studies have shown that self-efficacy plays an important role in improving quality of life and promotes functional independence, and only social support can build self-confidence and motivate patients for self-care.(12)

About one third of the survivors of stroke face post stroke depression. Anyhow perceived social support can help them in minimizing the duration and onset of depression. Social support can reduce and prevent psychiatric distress.(13)

The severity of depression has a strong relation with the poor social support.(14)

S Northcott et al, 2015 conducted a research on the systematic review of the impact of stroke on social support. The major objective was to recognize the perception of the social support in the stroke survivors. It was a quantitative study and it was found that lessened perceived social support leads to disability, depression and aphasia. (15)

Willeke J. et al, 2013 conducted research to observe the association between stroke and the impact of social support and the improvement of life. The main objective of the research was to associate social support with quality of the life of post stroke survivors. The study was systematic review. It was concluded that social support should be an integral part for the stroke recovery, Attention shall be given towards the social support.(16)

Lewin A. et al, 2013 conducted the research with the main objective to study self-efficacy, depression in stroke and perceived social support influence on the self-reported depressive symptoms. It was concluded that self-efficiency and perceived social support in the rehabilitation of hospitalized patients reduces the chances of post stroke depression among the stroke patients.(17)

This was the first study to describe the association between post stroke depression and perceived social support in Pakistan. There is a gap in this area of research as our society has different norms and culture. The knowledge of effect of social support and depression in

Pakistan would provide a baseline data to design better recovery plans for the post stroke patients in which our significant focus would be on providing social support to those patients. The main purpose of this study is to determine the association between depression and perceived social support among post stroke patients of Lahore.

## **MATERIALS AND METHODS**

It was Analytical cross-sectional study. Data was collected from different government and private hospitals along with physical therapy clinics of Lahore. Population for my research was post stroke patients. The study was completed in three months after the acceptance of synopsis. Convenient sampling

Using 6.4% prevalence of stroke(1) population size of stroke in Lahore was estimated to be 559424. And after calculation from "Raosoft" sample size was 196.

The inclusion criteria of my study included the following: Ischemic stroke patients., Patient with single episode of stroke, Patient in outpatient department, Minimum one month and maximum one year after stroke and Patients with disability level of 2 to 4 on modified ranking scale Medically unstable patient with other systemic disease, Patient diagnosed with depression prior to the onset of stroke, Patient diagnosed with any other psychotic disorder and Patient not willing to participate in this study.

The data was collected after the approval by Board of Ethical Committee. All the data was collected from the patients who came under the inclusion criteria. The data was collected after taking the informed consent from the patient. No unethical or illegal means were used in collecting data. Information was collected by self-administered questionnaires.

Diagnostic and Statistical Manual of Mental Disorders, IV was used to screen depression among stroke patients. It consists of nine depressive symptoms. For a patient to be diagnosed as depressed he must possess at least five out of the nine symptoms and the five symptoms must include one of either depressive mood or lack of interest or pleasure.

MSPSS was used to find out the level of social support. It has 12 questions, each to be answered by a 7-point Likert scale. The data was filled in for the patients who had difficulty in interpreting the language or difficulty in writing

## **RESULTS**

Table-1: Descriptive statistics for gender of the participants



		Frequency	Percentage
		Yes	No
Depressed Mood		118 (77.6%)	34 (22.4%)
Loss of Interest in Activities Previously Enjoyed		103 (67.8%)	49 (32.2%)
Significant Weight Changes	Weight Loss >5%	72 (47.4%)	80 (52.6%)
	Weight Gain >5%	50 (32.9%)	102 (67.1%)
Sleep Disturbance	Late Onset Sleep	86 (56.6%)	66 (43.4%)
	Feeling Un-Fresh in The Morning	91 (59.9%)	61 (40.1%)
Psychomotor	Agitation	100 (65.8%)	52 (34.2%)
	Retardation	33 (21.7%)	119 (78.3%)
Loss Of Energy		132 (86.8%)	20 (13.1%)
Feelings Of Worthlessness		96 (63.2%)	56 (36.8%)
Diminished Ability to Concentrate		75 (50.7%)	77 (49.3%)
Recurrent Thoughts of Death or Suicidal Ideation		49 (32.2%)	103 (67.8%)
	Frequency (n=152)	Percentage	
Male	85	55.9	
Female	67	44.1	

Male participants in this study were 85 (55.9%) and females were 67 (44.1%).

Table-2: Descriptive statistics for age of the participants

	Mean ± SD
Age	61.0 ± 12.7

Average age in years of the participants was 61.0 (SD=12.7).

Table-4: Descriptive statistics for work status

	Frequency (n=152)	Percentage
Working	58	38.2
Non-working	94	61.8

Total participants were 152 out of which 58 were working and 94 were non-working.

Table-5: Descriptive statistics for relation to caregiver

	Frequency (n=152)	Percentage
In laws	5	3.3
Parents	3	2.0
Spouse	67	44.1
Children	64	42.1
Friends/relatives	13	8.6

Relation to care giver in most participants were spouse (n=67) and children (n=64), then friends/relatives (n=13), in laws (n=5) and parents (n=3).

Highest frequencies were seen for presence of depressed mood (n=118, 77.6%) loss of interest in activities (n=103, 67.8%), loss of energy (n=132, 86.8%), Agitation (n=100, 65.8%) and feelings of worthlessness (n=96, 63.2%).

### DISCUSSION

This cross sectional study was done on stroke population. It was completed in three months. A total of 152 patients were studied in this research. Out of which 85 were male and 67 were female. MSPSS was used to see the level of social support among these patients and depression was diagnosed based on DSM-IV criteria. 90 patients were diagnosed as depressed while 62 were non-depressed. Out of 90 depressed patients, 53 patients were with high social support, 87 with moderate social support and 12 were those who got low social support. And all the patients who were non-depressed were those who got moderate and high social support. These results show the significant association between depression and perceived social support i.e. All the patients who were diagnosed non-depressed were with moderate and high social support. If we talk about depressed patients, about 82% of the patients were with low and moderate social support with shows a significant association. While other 18% patients with depression got high social support which leaves the room for further studies to find other associated factors for depression as Robinson-Smith G et

al found that self-support was strongly associated with the post stroke depression so clinicians should encourage the patients for self-care to improve their quality of life and prevent depression.(18)

According to a study depression was the most common entity that occurs after stroke. It is mainly because of the effects of disability, cognitive impairment and even mortality.(7) The depression and the communication barriers has a negative result on the quality of life in the post stroke population, thus depression after stroke is the chief predictor which affect the quality of life after stroke in patients.(8)

In this study depression was seen in more than half of the population (59.2%) which is related to the study done by Farner et al who found prevalence rate of depression was 56% in stroke patients. (19)

This study shows the P-value of 0.00 which shows there is a significant association between the depression and perceived social support in post stroke patients. Depression strain was observed within the family unit, and depressive symptoms are associated with poor social support. Patients who are socially isolated are at the high risk for poor outcome. The study shows that there is increased risk of depression in post stroke patients with low social support as compared to those with high social support.

Literature showed that higher quality of life in developed countries after stroke is associated with good socio economic status and better social support while lower quality of life has been associated with stress and depression.(20) Literature also narrates that depression slows down the process of rehabilitation and was found to negatively affect quality of life.(21)

This study is important as it shows the significance of social support in preventing the post stroke depression. It is found in a study that depression after stroke leads to poor prognosis and lowers functional independence in the stroke patients. (22) Social support plays an important role in reducing depression in stroke patients and making their recovery more effective and efficient.

#### **CONCLUSION**

Lack of social support results in depression in post stroke patients. Patients who got high levels of social support showed less depression. Social support is an important factor in the prognosis of post stroke patients to prevent depression and improve their quality of life. Strain is observed within the family unit, and depressive symptoms are associated with poor social support. Patients who are socially isolated are at the high risk for depression. Clinicians and family should encourage

patient's confidence and provide social support in order to improve their quality of life.

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