

DEPRESSIVE DISORDER AMONG SPOUSES OF STROKE PATIENTS

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ABSTRACT

OBJECTIVE

To determine frequency of depressive disorder among spouses of stroke patients at follow-up in tertiary care public hospital.

STUDY DESIGN

Descriptive cross-sectional study.

PLACE AND DURATION OF THE STUDY

Out-patient department of Medicine and Neurology Departments, JPMC Karachi, Pakistan, for the period of six months i.e. 1st April 2016 to 30th Sep 2016.

SUBJECTS AND METHODS

Total of 145 spouses of diagnosed stroke patients were included in the study. Criteria to include were spouses of the patients who were brought for follow-up at concerned OPD, at least after two weeks of diagnosis of stroke both ischemic and hemorrhagic, having ages between 18 to 60 years, both male and female spouses, Diagnosis of depressive disorder was based on applying patient health questionnaire-09, (PHQ-9).

RESULTS

A total of 145 spouses of diagnosed cases of stroke were recruited in the study with 65 (44.8%) males and 80 (55.2%) females. According to PHQ-9, Out of 145 spouses, 73 (50.3%) had minimal or no depressive disorder while 26 (17.9%) had major depressive disorder or very severe depression, 46 (31.6%) had other depressive disorder as per PHQ-9 that includes mild, moderate and moderately severe depressive disorder, so totally 72 (49.7%) had depressive disorder.

CONCLUSION

In developing country like Pakistan where emotional health of an individual is often neglected, even during stressful situations like persistent disability of spouse which can be a turmoil in anyone's life, therefore the issues related to emotional wellbeing are poorly addressed and this study reveals high prevalence of depression among spouses of stroke patients.

KEY WORDS

Mood disorder, Husband, Wife, Stroke.

INTRODUCTION

Stroke is a main source of long haul handicap and most of stroke survivors depend on family guardians to help with exercises of day to day living. Internationally, roughly 16.9 million individuals experience the ill effects of stroke every year and 5.9 million are fatal¹. Among the individuals who endure, practically 60% of patients remain disabled².

The subsequent hindrances after a stroke can influence both stroke survivors and guardians, and detailed raised degrees of depression and anxiety. Past studies have indicated prevalence of depression among stroke survivors were at paces of 33%–44%³; a few investigations have discovered that the stroke survivors and family care givers commonly affected each other's burdensome symptoms⁴. Stroke survivors' distress, negatively affects the caregivers' emotional state, while caregivers' depressive symptoms influence post-stroke depression⁵. Although stroke research has found that depression of survivors and caregivers is interdependent⁶, little consideration has been given to the factual examinations that control this reliance inside stroke dyads.

Quality of Life (QOL) is a significant result measure in patients with stroke. Stroke restoration results don't just expect to reestablish or advance ideal physical capacity, yet in addition ideal QOL, as it covers patient's viewpoints on physical, mental, and social health⁶.

Care giving for a stroke survivor is highly stressful, which often has negative impact on a caregiver's physical and mental state and his or her well-being, Stroke caregivers generally report more somatic symptoms, depressive mood symptoms, sleep disorders and remaining socially isolated, and moreover they generally have poorer quality of life in comparison to the general population.

It has been observed that higher educational levels, planning and active coping are positively associated with good health-related quality of life, where the number of chronic conditions, and hours of care per day and functional dependence of the survivor are negatively related to the quality of life, the active coping strategies have predicted better health-related quality of life, the overall findings have suggested that the intervention programs should be introduced to enhance coping skills and improve social support in caregivers of stroke survivors⁷.

Talking about informal care giving specially in developing countries like Pakistan is mostly provided by the spouses, who can be a male or a female, where they have to suffer physical and emotional pain, as to see one's life partner who was healthy enough in past and seeing declining health make them feel persistently low and irritable. Studies on spousal distress concluded that male and female spouses whose partners become



somatically ill had significantly poorer mental health than partners who were healthy, considering the somatic conditions, physical disability had the most significant contribution on spousal Global Mental Health for both sexes, some of the loss of spousal mental health seems to be mediated by the ill person's psychological distress⁸. The impact of a stroke is not limited to the patient who suffers it but also to the family and specially the patient's spouse being specifically vulnerable⁸. A study found that the spouses of the stroke patients were found to have a greater degree of psychiatric morbidity and a large proportion of them found care giving as a stressful experience. Psychiatric morbidity and strain in the spouses were not directly proportional to the extent of the patient's disability; spouses whose partner's speech was affected by the stroke were more likely to experience severe strain than those who were unaffected in this way⁹.

In our region the research over this significant area is scarce so this study is designed to assess the prevalence of depression among spouses of stroke patients so that strategies may be made to reduce the burden of care givers of such patients.

SUBJECTS AND METHODS

Participants

A descriptive cross sectional study conducted at Outpatient Department of Medicine and Neurology at Jinnah Postgraduate Medical Centre Karachi, a tertiary care public sector hospital from 1st April, 2016 to 30th September, 2016. The sample size of this study was 145 calculated through standard method. Sampling collection technique was non probability consecutive. Spouses of patients of stroke whether ischemic or hemorrhagic of at least two weeks duration were included in study irrespective of gender. Those spouses who were having any chronic co morbid illness, suffering from other Neurological disorder like Epilepsy, Parkinson's disease or Multiple sclerosis and those who were already on antidepressants were excluded from study.

Instruments

Depressive disorder was assessed through Patient Health Questionnaire PHQ-9. The PHQ-9 is a 9 items depression screening and rating scale, it has comparable sensitivity and specificity, and mainly consists of the actual nine criteria on which the diagnosis of DSM-IV depressive disorders was based.

When using this instrument it mainly establish diagnosis of depressive disorder as major depressive disorder, other depressive disorder or no depressive disorder and further severity of the disorder is also measured in terms of minimal depression, mild, moderate, moderately severe and very severe depressive disorder. So the PHQ-9 is a dual-purpose instrument, by using these nine items, researcher can establish provisional diagnosis of depressive disorder as well as grade depressive symptom severity.

Procedure

Ethical approval was sought before start of study from institute review board. Informed consent was obtained from the spouses after informing them in simple and understandable language about the purpose of study. They were made assure of confidentiality and were allowed to withdraw at any point in study without mentioning the reason. Predefined performa was applied by the researcher on the spouses of stroke patients. The collected data was analyzed by using computer package SPSS (Statistical Packages of Social Sciences) version 22.0. Frequency and percentage was calculated for depressive disorder. Stratification with respect to age, gender and duration of illness was also done. Post Stratification Chi-square test was applied. P-value ≤ 0.05 was considered significant.

RESULTS

A total of 145 spouses of diagnosed cases of stroke were inducted in the study with 65 (44.8%) males and 80 (55.2%) females. According to PHQ-9, Out of 145 spouses, 73 (50.3%) had minimal or no depression while 26 (17.9%) had major depressive disorder or very severe depression and 46 (31.6%) had other depressive disorder including mild, moderate and moderately severe depression, so totally 72 (49.7%) had depressive disorder as shown in **table 1**.

Presence of Depressive disorder was analyzed in spouses of patient with Stroke in relation to duration of stroke in those patients, categorized as duration of 14 days to 1 month, 1 month to 6 months, 6 months to 1 year and more than 1 year. Very severe or Major Depressive disorder found to be highly prevalent in spouses of patient having stroke of duration 14 days to one month i.e. 25.8% in comparison to 1 month to 6 months, 6 months to one year and more than one year duration having frequency of Very severe depression 20.4%, 11.9% and 13% respectively as shown in **table 2**. Similarly, as per PHQ-9, other depressive disorder including mild, moderate and moderately severe were more prevalent in duration of 6 months to 1 year i.e. 38.1%.

The age was categorized in two groups, as less than 40 years and 40 years and above, majority of the patients i.e. 57.93% was included in the group 40 years and above, but the very severe depressive disorder was more prevalent in the group who were less than 40 years i.e. 24.59% and mild, moderate and moderately severe depressive disorder was more prevalent in the group less than 40 years i.e. 33.33%. The intensity of the depressive disorder was also assessed, in males 1.53% had no depression, 15.38% had minimal depression, 43.07% had mild depression, 30.77% had moderate depression and 9.2% had moderately severe depression. For females 7.5 had no depression while 18.75% had minimal depression, 48.75% mild depression, 16.25% had moderate depression, 3.75% had moderately severe depression and 5% had severe depression as shown in **table 3**. The duration of illness of stroke patients and age groups of the spouses were also stratified against the intensity of depressive disorder.

Table 1
Frequency of Depressive Disorder among Spouses of stroke patients

Depressive Disorder	Frequency	Percent %
Minimal or no Depressive Disorder	73	50.3
Very severe or Major Depressive Disorder	26	17.9
Other Depressive Disorder including mild, moderate and moderately severe depression.	46	31.6
Total	145	100

Table 2

Association of Depressive Disorder with Gender & Age of Spouse and Duration of illness of Stroke Patients.

		Depressive Disorder			Total	P value
		Minimal or no Depressive Disorder	Very severe or Major Depressive Disorder	Other Depressive Disorder including mild, moderate and moderately severe		
Gender of Spouse	Male	34(52.3%)	12(18.5%)	19(29.2%)	65(44.8%)	0.045
	Female	39(48.9%)	14(17.5%)	27(33.8%)	80(55.2%)	
Duration Of illness/ Stroke	14 days - 1 month	13(41.9%)	8(25.8%)	10(32.2%)	31(21.4%)	0.670
	1 month - 6 months	26(53.1%)	10(20.4%)	13(26.0%)	49(33.8%)	
	6 months - 1 year	21(50.0%)	5(11.9%)	16(38.1%)	42(28.9%)	
	> 1 year	13(56.5%)	3(13.0%)	7(30.4%)	23(15.8%)	
Age of Spouse	Less than 40 years	28 (45.9%)	15(24.59%)	18(29.5%)	61(42.07%)	0.204
	40 years and above	45 (53.57%)	11 (13.09%)	28 (33.33%)	84 (57.93%)	

Table 3

Association of Intensity of Depressive Disorder with Gender & Age of Spouse and Duration of illness of Stroke patients.

		Intensity of Depressive Disorder						Total	P value
		No	Minimal	Mild	Moderate	Moderately severe	Severe		
Gender of Spouse	Male	1 (1.53%)	10 (15.38%)	28 (43.07%)	20 (30.77%)	6 (9.23%)	0	65(44.8%)	0.195
	Female	6 (7.5%)	15 (18.75%)	39 (48.75%)	13(16.25%)	3 (3.75%)	4 (5%)	80 (55.2%)	
Duration Of illness/ Stroke	14 days - 1 month	0	3 (9.67%)	13 (41.9%)	13 (41.9%)	1 (3.22%)	1 (3.22%)	31 (21.4%)	0.518
	1 month - 6 months	0	10 (20.41%)	24 (48.98%)	10 (20.41%)	4 (8.16%)	1 (2.04%)	49 (33.8%)	
	6 months - 1 year	0	10 (23.81%)	19 (45.23%)	3 (7.14%)	1 (2.38%)	9 (21.42%)	42 (28.9%)	
	> 1 year	1 (4.34%)	2 (8.69%)	11 (47.8%)	7 (30.43%)	1 (4.34%)	1 (4.34%)	23 (15.8%)	
Age of Spouse	Less than 40 years	0	12(19.67%)	25(40.98%)	19(31.15%)	3(4.92%)	2(3.28%)	61(42.1%)	0.731
	40 years and above	1(1.19%)	13 (15.4%)	42 (50%)	20 (23.8%)	6 (7.14%)	2 (2.38%)	84 (57.9%)	



DISCUSSION

Current study has found out that 49.7% of stroke survivors' spouses suffer from depressive. This is quite comparable with recent study conducted at Nigeria which showed that 46.1%¹⁰ of primary care givers of stroke patients were suffering from depressive disorder. A study conducted in Finland on depression among caregivers of stroke survivors revealed that 30-33% cases were found depressed¹¹, while our study showed 49.7% of the spouses had diagnosis of depressive disorder, this huge disparity could be due to various psycho-social precipitants in gender demography in developing countries like ours where there is less understanding of emotional issues, collateral social issues like financial burden, large family size, joint family systems etc.

In contrast to our study where the frequency of depressive disorder was low specifically 47.7% in male spouses and higher 51.3% in female spouses of stroke patients had depressive disorder. Same status of higher rates of women depressive disorder were noticed in our study where 51.3% female spouses had depressive disorder, the higher rates of depression in women could be due to sensitive sociocultural roles with related adverse life events, poor social support and psychological attributes related to vulnerability to life events and poor coping skills are likely to be involved.

In our study when we compared duration of stroke i.e. 14 days to one month and the frequency of spousal depressive disorder we found spouses, who had major depressive disorder was 25.8% compared with the study done in Finland where they compared the incidence and severity of depression at 3 and 12 months respectively, where they found 41% depressed caregivers at three months¹². In comparing the pooled global prevalence of depressive symptoms among caregivers of stroke survivors with our results it is estimated to be 40.2%¹³ in 2016. Also, 33.57% to 42.16% of all caregivers were depressed as reported in an Iranian population¹⁴. In a survey in a Chinese population, 71% of stroke caregivers reported to have experienced depressive symptoms¹⁵.

Continuing duration of stroke i.e. 6 months to one year we found 38.1% depressed spouses had other depressive disorder and in contrast, a similar study by Gillen Robert and colleagues on depressive disorder in care givers of patients with head injury found 43% of the care givers met the diagnostic criteria of depressive disorder 6 months later after head injury¹⁶. The findings of our study coincides with the study in Ghana by Abeasi and Osafo¹⁷ where 84.0% caregivers reported mood disturbance while in our study it is 49.7%, in previous study 12.0% borderline depression while in current 31.6% had other depression in the form of mild, moderate or moderately severe. Post stroke duration of stroke survivor had a significant association with depression of caregivers of stroke survivors.






In this study, caregivers of stroke survivors in the early phase of recovery had a higher preponderance of depression as majority 49% had moderately severe depression among first 6 months of their spouses' stroke. Furthermore, at the early phase of caregiving for stroke survivors, caregivers are not prepared for the role of caregiving and hence not well adjusted for the role of caregiving, which often has psychological implications for the caregiver¹⁸.

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