



ISSN NO. 2320-5407

Journal homepage: <http://www.journalijar.com>

INTERNATIONAL JOURNAL
OF ADVANCED RESEARCH

RESEARCH ARTICLE

Quality of Life and Psychosocial Problems of persons after Stroke

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Manuscript Info

Manuscript History:

Received: 18 March 2015
Final Accepted: 29 April 2015
Published Online: May 2015

Key words:

Stroke, Quality Of Life, Perceived Social Support, Depression and Functional Status

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Abstract

Stroke is one of the leading causes of death and disability in India. The estimated adjusted prevalence rate of stroke range, 84-262/100,000 in rural and 334-424/ 100,000 in urban areas. The incidence rate is 119-145/100,000 based on the recent population based studies (Pandian and Sudhan, 2013). A number of recent studies have focused on Quality of Life after stroke. It has been observed that underlying depression effects QOL and the functional abilities of patients. This paper explores to look the psychosocial problems like social support, depression and disability in patients with stroke has associations with QOL. The main objectives of the study is (1) To find the Quality of Life of persons after stroke (2) To explore the Social Support of persons after stroke (3) To assess the Functional abilities of persons after stroke (4) To investigate the Depression in persons after stroke (5) To find relationship between the Quality of Life, Social support, Functional abilities and Depression in persons after stroke. The investigator clearly finds in the paper the mean age of the respondents is 54.36. It was found that the total mean score of stroke specific quality of life is 131.96 and Standard Deviation is 25.35. The result shows that respondents are having more family support, followed by society and friends. Majority of 53.3% respondents were having mild depression, followed by 36.7% respondents were normal and 10.0% were having moderate level of depression. In Social Support majority of the respondents were having more family support. In Functional abilities majority of the respondents were having independent functional abilities. In Depression majority of the respondents were having mild level of depression. In the study it was found that Quality of Life is having positive correlation with perceived social support, functional abilities and with depression negative correlation was found.

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INTRODUCTION

According to the World Health Organization, (2013), stroke, an acquired brain injury, is a cerebrovascular disease "caused by the interruption of the blood supply to the brain, usually because a blood vessel bursts or is blocked by a clot. This cuts off the supply of oxygen and nutrients, causing damage to the brain tissue". The collective term "stroke" largely refers to the three specific diagnoses ischemic stroke, intra-cerebral haemorrhage and subarachnoid haemorrhage (Bennett et al., 2012). In general, approximately 85% of stroke victims suffer an ischemic stroke, whereas 15% are diagnosed with an intra-cerebral haemorrhage or subarachnoid haemorrhage (Bennett et al., 2012). Ischemic stroke is the most frequent diagnosis among the young group of stroke sufferers (Cotter, Belham, & Martin, 2010).

The symptoms following a stroke vary depending on stroke severity and localisation. The most common symptoms are one-sided weakness of the arm, leg, and/or face, confusion, speech-related problems, and/or loss of balance and coordination (Bennett et al., 2012; World Health Organization, 2013). The consequences of a stroke may be classified as mild, moderate or severe (Bennett et al., 2012).

Stroke is a leading cause of death and frequently reduces the level of quality of life (QOL) of the survivors. A number of psychosocial challenges have been identified following a stroke. Anxiety, depression, fatigue and struggles with social participation are frequently observed among the young stroke population (Daniel et al., 2009; Lerdal et al., 2009; Naess et al., 2005; Teasell et al., 2000; Varona, 2011). Furthermore, a significant number of stroke survivors fail to return to work (Daniel et al., 2009; Hofgren et al., 2010; Wilz & Soellner, 2009). Many factors have been shown to influence the QOL of these patients, which include motor impairment, physical disability or dependency in activity of daily living (ADL), the presence of depression, cognitive impairment, speech disturbances and the location of the lesion. Stroke causes sufficient decrease in quality of life even among those who have no post stroke disability. In other populations multiple risk factors including age, gender, dependency in activities of daily living ADL/ disability, social support, depression, institutionalization and diabetes have been associated with poorer Health related quality of life (HRQOL) in stroke survivors.

OBJECTIVES OF THE STUDY

- To find the Quality of Life of persons after stroke
- To explore the Social Support of persons after stroke
- To assess the Functional abilities of persons after stroke
- To investigate the Depression in persons after stroke
- To find relationship between the Quality of Life, Social support, Functional abilities and Depression in persons after stroke.

STATEMENT OF THE PROBLEM

Psychosocial wellbeing may be threatened following a stroke (Donnellan et al., 2006; Knapp et al., 2000). Depressive symptoms, anxiety, general psychological distress and social isolation are prevalent the first months and years (Knapp et al., 2000; Barker-Collo, 2007; Ferro et al., 2009; Hackett et al., 2008). Psychosocial difficulties may significantly impact long-term functioning and quality of life (Ferro et al., 2009; Teoh et al., 2009), reduce the effects of rehabilitation services and lead to higher mortality rates (Ferro et al., 2009; Hackett et al., 2008). The causes and risk factors of psychosocial problems are ambiguous and as special attention are to be paid to the associated disabilities towards initiation of their rehabilitation.

A number of recent studies have focused on QOL after stroke. It has been observed that underlying depression affects QOL and the functional abilities of patients. Psychosocial problems like social support, depression and disability in patients with stroke has associations with QOL. Many of the neurological conditions are de-generative and irreversible and care provision is the only priority. In these cases psychosocial issues play a major role in care and rehabilitation. Research on QOL and related psychosocial problems in neurological conditions especially in the North-East of India could help organize services in these areas by the helping professionals. Psychiatric Social Worker can play a major role in providing support and psychosocial care to the stroke survivor and their caregiver.

The important limitation of the study is the sample size, which was relatively small. The generalization of the information gathered could have increased if there were a greater number of participants. No gender comparison was made in present research. Another issue was the rehabilitation follow-up programs; all the respondents were taking rehabilitation programme in the physiotherapy section which has a strong, positive impact on health related Quality of Life (HRQoL). No follow up study done to see the difference in quality of life and depression after the rehabilitation follow-up programs. The last weakness may be the lack of family assessment which can be the most important determinants of quality of life for persons after stroke.

MATERIALS AND METHODS

RESEARCH DESIGN

In this study the researcher aims to assess and describe quality of life and psychosocial problems among persons after stroke; hence present study followed the descriptive research design.

SETTING

The research setting was at the Centre of Rehabilitation Sciences, LGB Regional Institute of Mental Health, Tezpur, Assam.

SAMPLE

Those who are suffering from stroke attending Centre of Rehabilitation Sciences, LGB Regional Institute of Mental Health (LGBRIMH), Tezpur, Assam.

SAMPLE SIZE

Thirty participants were taken for the Research study.

SAMPLING TECHNIQUE

The researcher uses purposive sampling as the technique of sampling. In purposive sampling, we sample with a *purpose* in mind. In this study the researcher assessed and measured quality of life, depression, social support, and functional abilities in persons after stroke.

TOOLS FOR DATA COLLECTION

In the study the researcher used the following tools for data collection:

1. **Clinical and socio-demographic data sheet:** Relevant socio-demographic and clinical details were collected using this Performa.
2. **Stroke Specific QOL (SSQOL) (Williams et al., 1999):** The Stroke Specific Quality Of Life scale (SS-QOL) is a patient-centered outcome measure intended to provide an assessment of health-related quality of life specific to patients with stroke.
3. **The Barthel Index (Mahoney, 1965):** The Barthel Index consists of 10 items that measure a person's daily functioning specifically the activities of daily living and mobility.
4. **Hamilton Depression Rating Scale (HAM- D) (Hamilton, 1960):** The Hamilton Depression Rating Scale (HAM-D) has proven useful for many years as a way of determining a patient's level of depression before, during, and after treatment.
5. **The multidimensional scale of perceived social support:** The Multidimensional Scale of Perceived Social Support was developed by Zimet et al. (1988) and aims to measure perceived social support.
6. **Mini Mental Status Examination (Folstein et al., 1975):** The MMSE which includes eleven questions, requires only 5-10 minutes to administer and therefore practical to use serially and routinely.

RESULTS AND DISCUSSION

- **Objective 1:** To find the Quality of Life of persons after stroke

Table 1: Mean and SD score in Stroke Specific Quality of Life

Sl. No.	SS-QOL	Mean	SD
1.	Total Score QOL	131.96	25.35
2.	Energy	8.56	1.27
3.	Family Roles	7.16	1.41
4.	Language	10.86	4.76
5.	Mobility	13.50	3.91
6.	Mood	16.46	4.36

7.	Personality	6.40	1.95
8.	Self-care	14.46	4.09
9.	Social Roles	12.40	2.95
10.	Thinking	10.70	1.76
11.	Upper extremely function	12.00	4.09
12.	Vision	10.90	2.07
13.	Work/productivity	8.80	2.73

The above table represents distribution of the samples according to the Stroke Specific Quality of Life. It shows that total mean score of stroke specific quality of life is 131.96 and SD is 25.35. We can say that person with stroke were having moderate level of quality of life. From the above finding it can be said the quality of life was high in the domain of mood, followed by self care, mobility, social roles, upper extremely function, vision, language, thinking, work productivity, energy, family roles and personality.

- **Objective 2 :** To explore the Social Support of persons after stroke

Table 2: Mean and SD score in Multidimensional scale of perceived social support

Sl. No.	Multidimensional scale of perceived social support	Mean	SD
1.	Total score in Multidimensional scale of perceived social support	59.73	10.15
2.	Family	22.76	3.23
3.	Friend	17.70	4.11
4.	Society	19.60	4.84

The presence and effectiveness of large social support networks have a positive influence on the physical recovery and quality of life of the stroke survivor. According to Meijer et al. (2004), social support is a complex, multidimensional concept that is critical to a stroke patient's successful return home. As such it should be considered according to specific social domains; home front (composition of persons in the home and financial means), social situation (availability of care and quality of social network) and residence (adaptability to the needs of the individual). The above table represents distribution of the samples according to their perceived social support. It shows that total mean score of perceived social support is 59.73 and the standard deviation is 10.15. Domain wise mean for family is 22.76 and the SD is 3.23, for Friend mean is 17.70 and the SD is 4.11 and for the society the mean score is 19.60 and the SD is 4.84. The results shows that respondents were having more family support, followed by society and friends.

- **Objective 3:** To assess the Functional abilities of persons after stroke

Table 3: Mean and SD score in Barthel Index

Sl. No.	Barthel Index	Mean	SD
1.	Barthel Index	78.33	25.35

The above table shows the mean score in Barthel Index is 78.33 and the SD is 25.35 which mean that majority of the respondents are having independent functional abilities. Joseph and Rhoda, (2013) examined activity limitations and factors influencing functional outcome of patients with stroke following rehabilitation at a specialized facility in the Western Cape. The Barthel Index was used to collect data relating to functional abilities. It was found that the mean Barthel Index scores on at discharge were 81.59 which are nearby to our finding. As all the respondents in our research were undergoing in Centre for Rehabilitation services for Physiotherapy.

- **Objective 4:** To investigate the Depression in persons after stroke

Table 4: Distribution of the respondents according to their depression level

Sl. No.	Depression	N=30	Percentage
1.	Normal	11	36.7%
2.	Mild Depression	16	53.3%
3.	Moderate Depression	3	10.0%
Total		30	100.0%

The above table shows that majority of 53.3% respondents were having mild depression, followed by 36.7% respondents were normal and 10.0% were having moderate level of depression. Similar studies confirmed that Post Stroke Depression is generally observed in nearly one third of cases (Vataja et al., 2004; Verdelho et al., 2004; Paolucci et al., 2006; Linden et al., 2007; Townen et al., 2007). Data available from 51 studies that have been run between 1977 and 2002 confirmed that depressive symptoms were assessed in 33% (29–36%) among all stroke survivors at any time during follow-up. (Hackett, Yapa, Parag and Anderson 2005). Although the risk of all depressive disorders was reported ranging from 25% to 79% among people suffering from a stroke Gordon and Hibbard (1997) found that, post stroke major depression prevalence ranged from 3% to 40% (Spencer, Tompkins and Schulz, 1997).

Objective 5: To find relationship between the Quality of Life, Social support, Functional abilities and Depression in persons after stroke.

Table 5: Correlation between Quality of Life (QOL) with Social support, functional abilities and Depression

Sl. No.	Correlation	MSPSS	B.I	Depression
1.	Total Score QOL	.120	.815**	-.657**
2.	Energy	.019	.406*	-.141
3.	Family Roles	.198	.639**	-.179
4.	Language	.093	.560**	-.505**
5.	Mobility	.113	.706**	-.469**
6.	Mood	.180	.364*	-.549**
7.	Personality	.077	.502**	-.103
8.	Self-care	-.009	.722**	-.729**

9.	Social Roles	.362*	.519*	-.404*
10.	Thinking	.019	.323	-.534**
11.	Upper extremely function	.045	.753**	-.465**
12.	Vision	.203	.303	-.481**
13.	Work/productivity	.191	.754**	-.514**

Table 5 shows that the total score of Quality of Life (QOL) is having positive correlation with Multidimensional Scale of perceived social support ($p=.120$), significant positive correlation with Barthel Index ($P=.815$, $p \leq 0.01$) and negative correlation with depression ($P= -.657$, $p \leq 0.01$). Social support to stroke survivors has been recognized as an important determinant of their health-related quality of life (HRQoL). They show a positive relation between perceived social support and stroke survivors' HRQoL. Relations between perceived social support and HRQoL seems to be more often significant and were stronger than relationships between specific social support types or sources and HRQoL (Kruihof et al., 2013).

Huang et al. (2010) also examined the associations among social support, post stroke depression and quality of life among patients with first-time ischemic stroke and to further test the impact of the dimensions of social support on post stroke depression and quality of life. Nearly half of the patients with stroke felt depressed. Social support fully mediated the prediction of quality of life by age and partially mediated the prediction of quality of life by functional ability. Social support partially mediated the prediction of post stroke depression by functional ability.

Domain wise energy is having positive correlation with multidimensional scale of perceived social support (MSPSS) ($p=.019$), significant positive correlation with Barthel Index ($P= .406$, $p \leq 0.05$) and negative correlation with depression (-141).

Family roles is having positive correlation with Multidimensional Scale of Perceived Social Support (MSPSS) ($p= .198$), significant positive correlation with Barthel Index ($P= .639$, $p \leq 0.01$) and the negative correlation with depression (-179).

Language has positive correlation with multidimensional scale of perceived social support (MSPSS) ($p= .093$), significant correlation with Barthel Index ($P= .560$, $p \leq 0.01$) and significant negative correlation with depression ($P= -.505$, $p \leq 0.01$).

Mobility has positive correlation with multidimensional scale of perceived social support (MSPSS) ($p= .113$), significant correlation with Barthel Index ($P= .706$, $p \leq 0.01$) and significant negative correlation with depression ($P= -.469$, $p \leq 0.01$).

Mood has positive correlation with multidimensional scale of perceived social support (MSPSS) ($p=.180$), significant positive correlation with Barthel Index ($P= .364$, $p \leq 0.05$) and significant negative correlation with depression ($P= -.549$, $p \leq 0.01$).

Personality has positive correlation with multidimensional scale of perceived social support (MSPSS) ($p= .077$), significant correlation with Barthel Index ($P= .502$, $p \leq 0.01$) and negative correlation with depression ($p= -.103$).

Self-care has negative correlation with multidimensional scale of perceived social support (MSPSS) ($p= -.009$), significant positive correlation with Barthel Index ($P= .722$, $p \leq 0.01$) and negative correlation with depression ($P= -.729$, $p \leq 0.01$).

Social roles has significant positive correlation with multidimensional scale of perceived social support (MSPSS) ($P= .362$, $p \leq 0.05$), significant correlation with Barthel Index ($P= .519$, $p \leq 0.01$) and significant negative correlation with depression ($P= -.404$, $P \leq 0.05$).

Thinking has positive correlation with multidimensional scale of perceived social support (MSPSS) ($p= .019$), positive correlation with Barthel Index ($p= .323$) and significant negative correlation with depression ($P= -.534$, $p \leq 0.01$).

Upper extremely function has positive correlation with multidimensional scale of perceived social support (MSPSS) ($p= .045$), significant positive correlation with Barthel Index ($P= .753$, $p \leq 0.01$).

Vision has positive correlation with multidimensional scale of perceived social support (MSPSS) ($p= .203$), positive correlation with Barthel Index ($p= .303$) and significant negative correlation with ($P= -.481$, $p \leq 0.01$).

Work/productivity has positive correlation with multidimensional scale of perceived social support (MSPSS) ($p= .191$), positive correlation with Barthel Index ($P= .754$, $p \leq 0.01$) and significant negative correlation with depression ($P= -514$, $p \leq 0.01$).

CONCLUSION

This study explored the Quality of Life and Psychosocial Problems after stroke. In Stroke Specific Quality of Life it was found that that person with stroke were having moderate level of quality of life .In Social Support majority of the respondents were having more family support. In Functional abilities majority of the respondents were having independent functional abilities. In Depression majority of the respondents were having mild level of depression. In the present study it was found that Quality of Life is having positive correlation with perceived social support, functional abilities and with depression negative correlation was found.

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