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Health Related Quality of Life among Stroke Patients in Bangladesh

Binay Bhushan Mozumder[1], Sreekanto Kumar[2], Mahbub Alam[3], Dr. Fardina Rahman Omi[4], Halima Akter[5]

[1]Senior Staff Nurse, Dhaka Medical College Hospital (DMCH), Dhaka.

[2]Senior Staff Nurse, National Institute of Cancer Research and Hospital (NICRH), Dhaka.

[3]Senior Staff Nurse, Dhaka Medical College Hospital (DMCH).

[4]Associate Professor, Universal Nursing College (UNC), Mohakhali, Dhaka.

[5]Lecturer, Department of Graduate Nursing, Bangobondhu Sheikh Mujib Medical University (BSMMU), Dhaka.

ABSTRACT

Background: Stroke is a leading cause of disability and mortality worldwide, with significant impacts on patients' physical, psychological, and social well-being. In Bangladesh, the burden of stroke is increasing due to aging populations, lifestyle changes, and limited access to quality healthcare.

Objective: This study aims to determine factors that may impact quality of life following a stroke and to evaluate overall and domain-specific QoL in post-stroke patients using the SS-QoL scale.

Methods: The study was a cross-sectional study which was conducted over one year duration. Based on inclusion and exclusion criteria 125 samples were recruited from Neurology and Neurosurgery department of Dhaka Medical College Hospital. A face-to-face interview carried out. Overall domain specific score was expressed in mean and percentages.

Result: Health related quality of life scale was physical & energy of the participants mean 1.08, (SD ±. 31), family & social mean 1.36, (SD ±.73), Mood & personality mean 1.45 (SD ±. 87). The study concluded that health related quality of life scale influence better outcomes of the stroke participants.

Conclusion: Study revealed that health related quality of life among stroke patients had minimum HRQoL domain scores.

KEYWORDS: Health Related Quality of Life, Stroke, Patient, Domain.

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INTRODUCTION

Stroke is a leading cause of mortality and long-term disability worldwide, exerting a profound impact on individuals and healthcare systems alike (Feigin et al., 2021). Characterized by the sudden onset of neurological dysfunction due to ischemic or hemorrhagic events in the brain, stroke significantly impairs various aspects of physical, emotional, and social functioning (Kim et al., 2020). For stroke survivors, the effects extend beyond clinical symptoms, encompassing challenges in maintaining an adequate quality of life (QoL). Health-related quality of life (HRQoL) is a multidimensional concept that reflects an individual's perception of their physical, mental, and social well-being, particularly in the context of chronic diseases (Cella et al., 2012).Stroke is one of the leading causes of death and disability worldwide, affecting millions of people every year and posing a significant burden on healthcare systems (GBD 2019 Stroke Collaborators, 2021). In stroke patients, HRQoL is influenced by a wide range of factors, including physical disabilities, psychological distress, cognitive impairments, social support, and access to rehabilitation services (Santos et al., 2020).

Bangladesh, a low- and middle-income country, faces an escalating burden of non-communicable diseases, including stroke, largely driven by rapid urbanization, lifestyle changes, and limited access to preventive healthcare (Islam et al., 2021). Stroke prevalence in Bangladesh is alarmingly high, with recent data suggesting a growing trend among younger populations (Sarker et al., 2020). Despite the increasing burden, limited attention has been paid to assessing HRQoL among stroke survivors, leaving a critical gap in

understanding the broader impact of this condition on individuals and their families.

This study aims to evaluate the HRQoL of stroke patients in Bangladesh, focusing on the factors influencing their physical and psychological well-being. By addressing this gap, the findings are expected to contribute to the development of targeted interventions and policies that improve the quality of life and overall rehabilitation outcomes for stroke survivors in the country.

MATERIALS AND METHODS

Study design: A cross-sectional study was conducted to assess the quality of life (QOL) among stroke patients in Bangladesh.

Study place and population: The target population in this study was stroke patients at Dhaka Medical College Hospital, Dhaka.

Study period: The study was conducted from December, 2023 to June, 2024 (Six months).

Sampling technique: The convenient sampling method was used to collect data from the population.

Sample Size: Sample size was 125.

Research Instrument:

- A semi-structured questionnaire (Interviewer administered)
- Stroke specific Quality of life Scale
- Medical Records.

Data collection Procedure: Data was collected by researcher herself by face to face interview. **Data Analysis:** Data was analyzed by SPSS version 30.

ETHICAL IMPLICATIONS

Ethical permission was carried out from the local ethical committee and before initiation of the interview the respondents were informed about their full right to participate or refuse to participate in the study. The researcher also assured that all the information obtained would be used for the purpose of the study only. A complete assurance was given to them that all information provided by them would be kept confidential and their names or anything which could identify them would not be exposed any part of the study.

RESULTS

Table 1: Distribution of the respondents Socio- demographic characteristics (125)

Items	Categories	Frequency (f)	Percentage (%)
Age	**Mean=61.48 SD=±10.25**		
Marital Status	Married	113	90.4
	Unmarried	12	9.6
Monthly Family Income	**Mean=31728**	**SD±10766.11**	
Family Types	Nuclear	115	92
	Joint	10	8
Occupation	Service	78	62.4
	Business	29	23.2
	Farmer	17	13.6
Number of Children	**Mean=2.29**	**SD±1.02**	
Living Place	Dhaka	104	83.2
	Barishal	15	12
	Gopalgange	1	.8
	Sylhet	2	1.6
	Comilla	1	.8
	Rangpur	1	.8
	Rajsahi	1	.8

The table showed that demographic characteristics of the respondents. Result showed that the mean age of the patients was 61.48 and standard deviation was ± 10.25 years. It was found that majority of the respondents (90.4 %) was married and (9.6%) were nuclear. Large numbers of respondent (62.4 %) were working as a services holder. Most of the respondent leaving place in Dhaka (83.2 %) and second living place Barishal nearable (12 %).

Table-2: Response regarding health related quality of life domain score of stoke patients (n=125)

Traits	Strongly disagree(5)	Moderately Disagree(4)	Neither agree or disagree(3)	Moderately Agree(2)	Strongly agree(1)
	f (%)	*f* (%)	*f* (%)	*f* (%)	*f* (%)
Physical & Energy					
I felt tired most of the time.			1(.8)	9(7.2)	115(92)
I had to stop and rest during the day.			1(.8)	15(12.0)	109(87.2)
I was too tired to do want to do.	1(.8)		1(.8)	21(16.8)	102(81.6)
I have trouble writing or typing	2(1.6)	1(.8)	2(1.6)	27(21.6)	93(74.4)
I have trouble putting on socks & buttons	3(2.4)	1(.8)	1(.8)	27(21.6)	93(74.4)
I have trouble buttoning buttons	1(.8)			36(28.8)	88(70.4)
I have trouble zipping a zipper	2(1.6)			36(28.8)	87(69.6)
I have trouble opening a jar			2(1.6)	33(26.4)	90(72)
I have trouble walking	1(.8)		2(1.6)	38(30.4)	84(67.2)
I lose my balance when bending over to or reaching for something	2(1.6)		3(2.4)	24(19.2)	96(76.8)
I have trouble climbing stairs	2(1.6)		2(1.6)	34(27.2)	87(69.6)
I have trouble getting out of a chair	1(.8)	2(1.6)	1(.8)	28(22.4)	93(74.4)
I have trouble speaking For example, get stuck, stutter, stammer, or slur your words	1(.8)		1(.8)	23(18.4)	100(80)
I have trouble speaking clearly enough to use the telephone	1(.8)		2(1.6)	21(16.8)	101(80.8)
other people have trouble in understanding what I said	1(.8)		3(2.4)	31(24.8)	90(72)
I have trouble ending the word you wanted to say	1(.8)	1(.8)	2(1.6)	35(28)	86(68.8)
I have trouble seeing the television well enough to enjoy a show	2(1.6)	2(1.6)	5(4)	47(37.6)	69(55.2)
I have trouble reaching things because of poor eyesight	3(2.4)	6(4.8)	8(6.4)	37(29.6)	71(56.8)
I have trouble seeing things off to one side	1(.8)	4(3.2)	12(9.6)	35(28)	73(58.4)
I need help preparing food	3(2.4)		12(9.6)	27(21.6)	83(66.4)
I need help eating, For example, cutting food or preparing food	1(.8)	1(.8)	2(1.6)	27(21.6)	94(75.2)
I need help getting dressed For example, putting on socks or shoes, buttoning buttons, or zipping	2(1.6)		3(2.4)	29(23.2)	90(72)
I need help taking a bath or a shower	2(1.6)		2(2)	21(21)	91(72.2)
I need help to use the toilet	2(1.6)		3(2.4)	22(17.6)	98(78.4)
Family & Social					
I didn't join in activities just for fun with my family.	2(1.6)	2(1.6)	1(.8)	29(23.2)	91(72.8)
I felt I was a burden to my family.	2(1.6)	2(1.6)	1(.8)	45(36)	75(60)
My physical condition interfered with my personal life	1(.8)		5(4)	31(24.8)	88(70.4)
didn't go out as often as I would like.	8(6.4)	4(3.2)	9(7.2)	40(32)	64(51.2)
I did my hobbies and recreation for shorter periods of time than I would like.	4(3.2)	7(5.6)	4(3.2)	35(28)	75(60)
I didn't see as many of my friends as I would like.	12(9.6)	6(4.8)	7(5.6)	40(32)	60(4.8)
My physical condition interfered with my social life.	4(3.2)	2(1.6)	6(4.8)	31(24.8)	82(65.6)
Mood and personality					
I was discouraged about my future.	3(2.4)	3(2.4)	5(4.0)	26(20.8)	88(70.4)

I felt withdrawn from other people.	1(.8)	2(1.6)	4(3.2)	38(30.4)	80(64)
I had little confidence in myself.	2(1.6)	2(1.6)	7(5.6)	43(34.4)	71(56.8)
I was not interested in food.	1(.8)	1(.8)	6(4.8)	41(32.8)	76(60.8)
I was irritable.	1(.8)	3(2.4)	5(4)	33(26.4)	83(66.4)
My personality has changed.	1(.8)		4(3.2)	31(24.8)	89(71.2)
It was hard for me to concentrate.	1(.8)		4(3.2)	29(23.2)	91(72.8)
I had trouble remembering things.	4(3.2)	1(.8)	6(4.8)	45(36)	69(55.2)
I had to write things down to remember them.			3(2.4)	41(32.8)	81(64.8)
Mean=55.17 SD ±10.79					

In the table showed that distribution of frequency, percentage, mean and standard deviation of Health Related Quality of life among stroke Patients. Health Related Quality of life mean was (55.17), SD (±10.79). It was found that Family & Social mean were (9.84), SD (±3.45) of the respondents. Mood and personality mean were (11.82), SD (±2.93) of the respondents.

DISCUSSION

The data analyzed provides insights into the socio-demographic characteristics of the participants. The mean age of the participants was 61.48 years (SD = ±10.25), indicating that the study focused on an older population group. This is consistent with research suggesting that older individuals are more likely to be involved in studies focusing on specific demographic or health-related aspects (Hoffman et al., 2020). Regarding marital status, the majority of participants were married (90.4%), with only 9.6% being unmarried. This aligns with the cultural norms in Bangladesh, where marriage is highly emphasized, particularly among older adults (Islam & Karim, 2021).

The mean monthly family income was reported as 31,728 BDT (SD = ±10,766.11), reflecting a middle-income group. The income variability might be due to the participants' engagement in different occupations. Most participants were in service (62.4%), followed by business (23.2%) and farming (13.6%). This distribution aligns with the trend in Bangladesh, where a large proportion of the population is engaged in the service sector, reflecting urbanization and economic diversification (Bangladesh Bureau of Statistics [BBS], 2021).

Family structure was predominantly nuclear (92%), while only 8% lived in joint families. This result suggests a shift from traditional joint families to nuclear family systems, especially in urban areas like Dhaka, likely influenced by modern socioeconomic changes (Rahman, 2020).

The findings of this study provide valuable insights into the Health-Related Quality of Life (HRQoL) among stroke patients, focusing on key dimensions such as overall HRQoL, family and social well-being, and mood and personality. The mean HRQoL score was 55.17 (SD = ±10.79), indicating a moderate quality of life among the respondents. Stroke has a significant impact on physical, emotional, and social well-being, which is reflected in the lower HRQoL scores observed. These findings align with previous studies that highlight the adverse effects of stroke on various aspects of life, including mobility, emotional health, and social participation (Wolfe et al., 2020).

Family and social well-being were measured with a mean score of 9.84 (SD = ±3.45). This lower score indicates challenges faced by stroke patients in maintaining strong family and social connections. Stroke survivors often encounter difficulties in social reintegration due to physical disabilities, communication barriers, and reduced independence (Kuluski et al., 2014). These results emphasize the need for family-centered and community-based support systems to enhance social engagement and overall well-being.

Mood and personality, another critical aspect of HRQoL, had a mean score of 11.82 (SD = ±2.93). Stroke often results in psychological and emotional changes, such as depression, anxiety, and alterations in personality traits, which negatively affect quality of life (Hackett & Pickles, 2014). The findings suggest the need for routine mental health assessments and interventions, such as counseling or therapy, to address these issues and improve emotional well-being.

Overall, these findings highlight the multidimensional impact of stroke on patients' lives, emphasizing the importance of comprehensive rehabilitation programs that address not only physical recovery but also social and emotional well-being. Future research should explore the factors influencing HRQoL among stroke patients, including the role of socioeconomic status, caregiving support, and access to rehabilitation services.

CONCLUSION

This study highlights the multidimensional impact of stroke on the health-related quality of life (HRQoL) among patients in Bangladesh. The findings reveal moderate overall HRQoL, with notable challenges in family and social well-being, as well as mood and personality. These results emphasize the need for comprehensive stroke rehabilitation programs that address physical, emotional, and social dimensions of recovery. Family-centered support systems, mental health interventions, and improved access to rehabilitation services are crucial for enhancing the quality of life for stroke survivors. Future research should focus on identifying specific barriers to recovery and tailoring interventions to the unique cultural and socioeconomic context of Bangladesh.

RECOMMENDATIONS

- Develop and implement multidisciplinary rehabilitation programs that include physical therapy, occupational therapy, and speech therapy to address the physical and functional limitations of stroke survivors.
- Provide access to counseling and psychological interventions to improve emotional well-being.
- Strengthen family-centered support systems by educating caregivers on the physical and emotional needs of stroke patients.
- Establish community support groups and peer networks to help stroke survivors and their families share experiences, reduce social isolation, and foster reintegration into society.
- Advocate for national policies to improve access to affordable rehabilitation services, especially in rural areas.

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CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

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