Health-Related Quality of Life in Patients with Stroke

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Abstract

Background: Stroke is a neurological disorder due to a sudden decline in blood flow to a localized area of the brain. It is the second most common cause of death and the third most common cause of disability worldwide. Quality of life (QOL) is increasingly being used as an outcome measure designed to assess the health-related quality for patients with stroke. **Aim of the study:** This study aimed to assess health-related quality of life in patients with stroke. **Research design:** A descriptive design was used to conduct this study. **Setting:** The study was conducted at the Medical Neurological Departments & Outpatient Clinics of El-Fayoum General Hospital. **Sample:** A convenience sample composed of 100 post stroke patients. **Data collection tools: Part I**: Socio-demographic and medical data questionnaire. **Part II:** Stroke-specific quality of life scale (SS-QOL). **Results**: The mean score of overall HRQOL (118.97) was poor for the study patients. There was a significant relation between quality of life (QOL) and research variables regarding age, level of education, stroke duration, compliance with medication, and family history of stroke. **Conclusion:** Based on the results of present study, it can be concluded that all quality-of-life post stroke patients were poor. There is a statistically significant relation with QOL with age, stroke duration, compliance with medication, and family history of stroke. **Recommendations:** The study recommended to design health education program to promote stroke patient HRQOL.

Keywords: Stroke, Health-Related Quality of Life (HRQOL), SS-QOL.

Introduction:

A stroke is a disorder where a sudden reduction in the supply of blood to a specific part of the brain causes neurological impairments. A stroke is a type of cerebrovascular disease or the outcome of altered blood flow in the brain that causes a temporary or permanent loss of function in one or more brain regions. It happens when there is a disruption in the blood supply to the brain. This might occur from blood clotting obstructing an artery in the brain or from a blood vessel bursting in the brain. It usually affects one side of the body and is abrupt, sudden, and can cause weakness and loss of feeling right away **(Hinkle & Cheever, 2021)**.

(Timby & Smith, 2020) mentioned that the non-modifiable like age, gender, race, history of previous stroke, and inheritance that are unavoidable and modifiable risk factors that can be altered by medical intervention, such as managing high blood pressure, adhering to a healthy lifestyle, or giving up smoking.

Health-related quality of life (HRQOL) is known as a person's sense of their own place in life within a cultural context and the values they adhere to in terms of expectations, interests, and accomplishments **(Tonon, 2022).** HRQOL is increasingly being used as an outcome measure in clinical trials and observational studies designed to assess the quality of care for patients with stroke **(Alkadry, Wilson, & Nicholas, 2021).**

Stroke can impact on multiple dimensions of health-related quality of life (HRQOL) in stroke patients such as physical health such as muscle weakness, paralysis, fatigue, pain, limited mobility, psychological well-being e.g., depression, anxiety, emotional lability, cognitive deficits, social functioning as reduced participation in family, work, or community life due to disabilities, independence in daily activities such as difficulty with self-care e.g., bathing, dressing, feeding, communication such as aphasia or dysarthria affecting ability to speak or understand others, role functioning where there is a loss of job or inability to fulfill previous responsibilities **(Clare, 2020).**

Significance of the study:

Stroke is the second leading cause of both disability and death worldwide, with the highest burden of the disease shared by low- and middle-income countries **(Saini, Guada, & Yavagal, 2021).**

As per the American Stroke Association 2022, 33 million strokes occurred globally in 2019, accounting for 11.13% of all global fatalities **(Rajati, Rajati, Rasulehvandi, & Kazeminia, 2023).**

In Egypt, the overall crude prevalence rate of stroke is high (963/100,000 inhabitants), and the incidence of stroke annually is approximately 150,000 -210,000. About 25% of Egyptians have high blood pressure, which puts them at the highest risk of dying from heart failure, renal failure, cerebrovascular illnesses, and other conditions **(Morsy, Elfeky, & Ahmed, 2021).** The prevalence of

stroke in Fayoum governorate was 16 of 1000 **(Shaheen, Wahed, & Hasaneen, 2019).**

Aim of the study:

The aim of the study was to assess health-related quality of life in patients with stroke.

Research questions:

1. What is quality of life among the studied patients with stroke?
2. What are the factors that affect the health-related quality of life among the studied stroke patients?

Subjects and Method:

Research design:

A descriptive research design utilized in this study.

Setting:

This study was conducted at the Medical Neurological Departments & Outpatient's Clinics of El-Fayoum General Hospital.

Sample:

The sample consisted of 100 post stroke patients aged between 21- 60, both genders, agree to participate in this study, have ability to understand questions and respond verbally.

Tools of data collection:

Data were collected by using the two following tools:

Tool 1: Stroke' sociodemographic and medical data questionnaire: this tool was designed by the researcher to collect patient data in relation to the following:

A. Sociodemographic data such as age, gender, level of education, occupation, marital status, and area of residence.

B. Medical data such as patient diagnosis, surgical history, causes of hospitalization, associated disease, and family history.

Tool 2: Stroke-Specific Quality of Life Scale (SS-QOL):

This tool was developed by **(Williams, Weinberger, Harris, Clark, & Biller, 1999)** to measure health-related quality of life (HRQOL) and was adopted by the researcher and translated to Arabic language. It is a five-point Likert scale, and consists of twelve domains, merged in two subtotal scores. The first six domains (e.g., self-care, mobility, upper extremity function, language, vision, and work or productivity) in a physical subtotal score and the last six domains (e.g., thinking, family roles, social roles, personality, mood, and energy) in a psychosocial subtotal score, ranged from total help - Couldn't do it at all - Strongly agree (1) to no help needed - No trouble at all - Strongly disagree (5).

Validity and Reliability:

Content validity done by a jury of five experts in the field of Medical-Surgical Nursing to review the tools for clarity, relevance, comprehensiveness, accuracy, understandable, applicability and minor modifications were done.

Reliability: Cronbach's Alpha was used to measure the internal consistency of the tools used in this study.

Pilot study:

A pilot study was conducted on 10% of studied post stroke patients to test the applicability, clarity and the efficiency of the study tool. As well as to estimate the time needed to answer

it. The modifications were done for the used tool then the final form was developed. Patients of the pilot study were excluded from the studied group.

Field work:

- Permission was obtained from the director of El-Fayoum General Hospital for conduct of the study in Medical Neurological Departments and Outpatient's Clinics.
- Informed consents were obtained for data collection after the nature and purpose of the study were explained to patients.
- Sampling and data collection were started and completed from January 2024 until January 2025 in the selected settings.
- Testing validity and reliability of the tools was done.
- The researcher personally conducted the interviews. On average, each interview lasted 10-15 minutes.
- The researcher collected data using sociodemographic, medical data for each patient, and also Specific Quality of Life Scale (SS-QOL) for post stroke patients.

Ethical consideration:

Ethical approval was obtained from Fayoum University Supreme Committee for Scientific Research Ethics was assured that confidentiality and privacy were considered. Each patient has the right to withdraw from the study at any time. Ethics, valves, culture and beliefs were respected.

Statistical design:

Statistical presentation and analysis of the present study was conducted, using the mean, standard deviation, unpaired student t-test was used to compare between two groups in quantitative data, and ANOVA test was used for comparison among different times in the same group in quantitative data by (*IBM SPSS Statistics for Windows, Version 20.0. Armonk, NY: IBM Corp.)*.

- $P > 0.05$ non-significant
- $P \leq 0.05$ significant
- $P < 0.001$ High significant

Results:

Table (1): Illustrated that, nearly three-quarters (72%) of the patients were aged from 50 to 60 years, (21%) were aged from 40 to less than 50 years, while (3%) were less than 30 years. About two-thirds (69%) were male, and a similar proportion were married. Regarding occupation, (34%) were workers, 31% were employed, (20%) were housewives, while (15%) were without work. For the level of education, (24%) were able to read and write, (20%) were illiterate and another (20%) had secondary school certificates. The majority (70%) were resided in rural areas.

Table (2): revealed that, the majority (90%) of patients had an ischemic stroke, (10%) were hemorrhagic strokes. Also, more than half (54%) had their first stroke incidence within the past month, while 30% had it between one and six months ago. Medication compliance was high, with 86% adhering to their prescribed treatment. Regarding associated

diseases, 38% had heart diseases, 34% had hypertension, while 28% had diabetes mellitus. Concerning surgical history, the majority (95%) had no surgical history, (5%) had surgical history. A strong family history of stroke was evident, as 90% of patients reported having relatives with a similar condition.

Table (3): The findings revealed that, all sub-domains demonstrated high internal consistency, with Cronbach's alpha values ranging from 0.836 to 0.897. The highest mean score was observed in the overall quality of life domain (118.97 ± 35.07), followed by the total physical (64.10 ± 21.09) and total psychosocial domains (54.87 ± 14.65). Among individual sub-domains, mobility (15.23 ± 5.14) and mood (12.43 ± 4.36) had relatively higher mean scores.

Table (4): Revealed that, age and educational level showed statistically significant relation with all domains ($p < 0.05$), with the highest QOL scores observed among patients aged 40–<50 and those with a university education. In contrast, gender, marital status, employment status, and residence showed no statistically significant differences across the QOL domains ($p > 0.05$).

Table (5): Revealed that, total QOL was highly significantly related to stroke duration ($p < 0.001$), medication compliance ($p < 0.001$), and family history of stroke ($p = 0.011$). Early-stage stroke survivors and those adhering to medication reported higher total QOL, reinforcing the value of early and sustained medical intervention. Interestingly, although associated diseases such as hypertension and diabetes had high mean scores, statistical significance was not achieved ($p > 0.05$). Patient diagnosis (stroke type) had no impact on total QOL.

Table (1): Distribution of socio-demographic data among studied stroke patients (N=100)

Research variable	N	%
Age		
<30	**3**	**3**
30 < 40	**4**	**4**
40 < 50	**21**	**21**
50 ≤ 60	**72**	**72**
Mean ± SD	**51.9 ±15.3**	
Gender		
Male	**69**	**69**
Female	**31**	**31**

Marital status		
Single	**8**	**8**
Married	**69**	**69**
Widowed	**15**	**15**
Divorced	**8**	**8**
Occupation		
Employed	**31**	**31**
Worker	**34**	**34**
House wife	**20**	**20**
Without work	**15**	**15**
Level of education		
Illiterate	**20**	**20**
Read and write	**24**	**24**
Primary school	**6**	**6**
Preparatory school	**13**	**13**
Secondary school	**20**	**20**
University education	**17**	**17**
Area of residence		
Rural	**70**	**70**
Urban	**30**	**30**

Table (2): Distribution of medical data among studied patients (N=100)

Research variable	N	%
Patient diagnosis		
Ischemic stroke	**90**	**90**
Hemorrhagic stroke	**10**	**10**
Duration from first incidence of stroke		
< One month	**54**	**54**
One month ≥ six months	**30**	**30**
≥ six months	**16**	**16**
Compliance with medication		
Yes	**86**	**86**
No	**14**	**14**
Associated diseases		
Heart disease (e.g., MI, AF, HF)	**38**	**38**
Hypertension	**34**	**34**
Diabetes mellitus	**28**	**28**
Surgical history		
Yes	**5**	**5**
No	**95**	**95**
Family history of stroke		
Yes	**90**	**90**
No	**10**	**10**

Table (3): Distribution of QOL domains among the studied patients (N=100)

SS-QOL sub-domains	Reliability coefficient	Range (Min-Max)	Mean ± SD	Median
Self-Care	**0.862**	**5-25**	**11.91±5.11**	**11**
Mobility	**0.863**	**7-28**	**15.23±5.14**	**15**
Upper extremity function	**0.864**	**5-24**	**10.47±4.52**	**9**
Language	**0.865**	**5-25**	**12.16±4.56**	**11.5**
Vision	**0.872**	**4-13**	**7.11±2.20**	**7**
Work / Productivity	**0.870**	**5-16**	**7.22±2.60**	**6**
Total physical	**0.836**	**35-117**	**64.10±21.09**	**56**
Thinking	**0.871**	**4-14**	**7.19±2.58**	**7**
Family roles	**0.870**	**4-15**	**7.91±2.70**	**7**
Social roles	**0.869**	**8-23**	**12.33±3.58**	**12**
Personality	**0.873**	**5-13**	**7.85±2.06**	**8**
Mood	**0.864**	**7-23**	**12.43±4.36**	**11**
Energy	**0.871**	**4-14**	**7.16±2.47**	**7**
Total psychosocial	**0.841**	**39-93**	**54.87±14.65**	**48**
Overall QOL	**0.897**	**75-208**	**118.97±35.07**	**103**

Table (4): Relation between total Quality-of-Life domains and sociodemographic factors among the studied patients (N=100)

Research variables	Total QOL domains			
	Mean	SD	t/f	P-value
Age				
<30	**133.33**	**19.14**	**4.119**	**0.009***
30 <40	**109**	**30.24**		
40 <50	**140.71**	**41.96**		
50 ≤ 60	**112.58**	**31.21**		
Gender				
Male	**120.65**	**37.44**	**0.714**	**0.477**
Female	**115.23**	**29.33**		
Marital status				
Single	**118**	**25.65**	**0.404**	**0.751**
Married	**121.39**	**36.93**		
Widowed	**112.2**	**35.14**		
Divorced	**111.75**	**28.2**		
Occupation				
Employed	**130.58**	**43.13**	**1.842**	**0.145**
Worker	**111.24**	**29.08**		
House wife	**114.45**	**30.89**		
Without work	**118.53**	**30.79**		

Level of education				
Illiterate	**98.45**	**6.97**	**12.381**	**<0.001***
Read and write	**103.38**	**9.61**		
Primary school	**93.33**	**10.42**		
Preparatory	**120**	**47.52**		
Secondary	**131.3**	**34.62**		
University	**158.88**	**35.29**		
Area of residence				
Rural	**119.43**	**36.81**	**0.199**	**0.843**
Urban	**117.9**	**31.18**		

t=T-test, f=ANOVA *** Significance at P<0.05**

Table (5): Relation between total Quality-of-Life domains and clinical factors among the studied patients (N=100)

Research variables	Total QOL domains			
	Mean	**SD**	**t/f**	**P-value**
Patient diagnosis				
Ischemic stroke	**118.98**	**35.12**	**0.007**	**0.995**
Hemorrhagic stroke	**118.9**	**36.44**		
Duration from first incidence of stroke				
< One month	**133.72**	**39.06**	**13.106**	**<0.001***
One month < six months	**103.67**	**21.48**		
< six months	**97.88**	**10.31**		
Compliance with medication				
Yes	**123.47**	**35.71**	**3.336**	**<0.001***
No	**91.36**	**8.54**		
Associated diseases				
Heart disease	**108.24**	**22.21**	**2.986**	**0.055**
Hypertension	**125.56**	**42.24**		
Diabetes mellitus	**125.54**	**37.29**		
Family history of stroke				
Yes	**121.91**	**35.59**	**2.588**	**0.011***
No	**92.5**	**11.5**		

t=T-test, f=ANOVA *** Significance at P<0.05**

Discussion

Discussion of the present study was categorized into the following parts:

Part (I): Sociodemographic data among studied stroke patients:

The findings of the present study revealed that the majority of patient were aged between 50 and 60 years. This finding is consistent with **(Sobeih, Abd- Ella, Mohammed, & Mohammed, 2021),** who found that about more than half of the study sample ages ranged between 50 years and more. Additionally, this finding is aligning with study by **(Helmy, Essa, & El Batch, 2022)**, who reported that the common age group was between 45-65 years and this was significantly high compared with the other age groups.

Regarding gender, more than two third of the sample were males. This is in line with study by **(Reeves et al. 2022)** who reported that more than two third of the subjects were male which may be due to stresses of everyday life as females were weaker and more sensitive than male. Also, there is agreement **(Dewey et al., 2019**), who reported that there was higher stroke incidence in men, especially in younger and middle-aged groups. These findings had disagreement with (**Sobeih et al., 2021)**, who reported that more than half of the study samples were females.

Regarding marital status, the majority of patients were married. The findings supported by **(Ali, 2020)**, who found that marital status can influence recovery outcomes, as married individuals often benefit from stronger social support networks, which are known to positively impact rehabilitation and emotional well-being.

As regards the occupation, the present study demonstrated that more than third of studied patients were worker, and also more than third were employed in other sectors. The finding is in accordance with **(Addo et al., 2022)**, who found that occupational status is often a proxy for socioeconomic status, which has been associated with stroke risk and post-stroke outcomes. Individuals in manual labor or without employment may face more barriers in accessing timely and comprehensive stroke care.

Concerning, level of education of the studied patients, the current study showed that less than half were illiterate & read and write, and one fifth were secondary school. This finding is with disagreement **(Dayapoglu & Tan, 2020)** who reported that the incidence of stroke was significantly higher among low educated patients in comparison with highly educated patients. In addition to **(Grimaud, Bejot, Heritage, Koifman, & Giroud, 2021)**, who discovered that the association between lower educational attainment and stroke incidence is well-documented, with limited education often linked to poorer health literacy, inadequate disease prevention practices, and lower treatment adherence. Approximately the same findings were found by **(Leite, Nunes, & Correa, 2021),** who found illiteracy among more than one-third of patients with stroke.

Regarding, area of residence, the present study showed that less than three quarters were living in rural areas. This finding is an agreement with **(Fawi, Corea, Abbas, Thabit, & Comi, 2020),** who found that majority of stroke involved residents in rural areas due to insufficient health service in rural communities. In addition to **(Wang, Rudd, & Wolfe, 2021)**, who founded that rural populations often have higher stroke burdens due to limited access to healthcare services, delayed hospital arrival, and fewer rehabilitation options. In contrast, **(Aziz, Rizian, Tawfik, & Mekky, 2023)**, who founded that the majority of the studied group were from urban areas. Additionally, this finding was disagreement with **(Tavangar, Shamsaee, Chitsaz, Akbari, & Saadatnia, M. 2022)**, where they found that urban population had a higher probability of stroke, hypertension, ischemic heart disease and diabetes than rural population.

Part (II): Medical data among studied patients:

The findings of the present study indicated that the vast majority of patients had ischemic stroke, while minority were diagnosed with hemorrhagic stroke. This finding with agreement with **Aziz et al., (2023)**, who found that majority (90%) of his samples had ischemic stroke, while 10% had hemorrhagic stroke**.** Additionally, **(Feigin, Norrving, & Mensah, 2024),** who reported that ischemic strokes account for approximately 85–90% of all strokes.

Over half of the patients experienced stroke less than one month, while one third were between one month and six months post-stroke, and minority had strokes six months or more prior. These findings with agree with **Aziz et al., (2023),** who found that (53.8%) of the sample suffered from stroke with a duration less than one month.

Regarding medication compliance, the majority was reported among patients. These findings align with **(Burnier & Egan, 2019),** who found that majority of the study were compliant with the medication.

In relation to associated diseases, the current study reported that more than one third were heart disease, followed by more than one third hypertension and less than third diabetes mellitus. These findings are in line with **(Wolf, Abbott, & Kannel, 2022),** who found that atrial fibrillation, heart failure, and myocardial infarction significantly increase the risk of both ischemic and embolic strokes. Similarly, **Katsanos et al., (2022),** who reported that hypertension is widely recognized as the most significant modifiable risk factor for stroke globally, and diabetes contributes to increased stroke risk through mechanisms such as atherosclerosis and endothelial dysfunction.

Regarding family history of stroke, 90% of patients reported a positive family history of stroke, which may indicate a genetic predisposition or shared lifestyle and environmental risk factors within families. This finding is consistent with **Aziz et al., (2023),** who found that 90 % of the patient with positive family history of stroke.

Part (III): Distribution of QOL domains among the studied patients:

The current study revealed that, the total physical domain mean was 64.10, indicating moderate impairment. This corroborates with **(Dorman, Dennis, & Sandercock, 2021),** who identified physical disability as a leading factor affecting QOL in stroke survivors.

Regarding, the total psychosocial domain mean score 54.87, which reflects moderate psychosocial impact. (**Jaracz and Kozubski, 2023),** who found similar results, emphasizing the need for psychosocial intervention as part of stroke rehabilitation.

The overall QOL mean score of the present study was 118.97, indicating a poor level of perceived quality of life among the patient. This result is consistent with **(Hilari, Byng, Lamping, & Smith, 2023)**, who found that stroke survivors often report poor QOL scores due to residual physical, cognitive, and emotional impairments.

Part (IV): Relation between total Quality-of-Life domains and sociodemographic factors among the studied patients:

There was a statistically significant relation, particularly regarding age and level of education, whereas other factors like gender, marital status, occupation, and area of residence did not show significant differences.

Age was significantly associated with overall QOL ($p = 0.009$). The highest mean QOL scores were reported in patients aged 40–<50 and those under 30. These findings align with those of **Dewey et al. (2019),** who reported that younger stroke survivors tend to have higher QOL scores than older adults due to better functional capacity and recovery potential. Similarly, **(Rombough, Howse, Bagg, & Bartfay, 2022),** highlighted the negative impact of aging on stroke outcomes and psychosocial adjustment. However, contrarily, **(Naess, Waje-Andreassen, Thomassen, Nyland, & Myhr, 2022),** found no significant age-related differences in QOL, attributing this to individual variations in coping mechanisms and support systems.

The current study showed that there was no significant relation between QOL and gender. This finding is consistent with studies by **(Hsu, Tsao, Sung, & Hsieh, 2024),** which reported that gender relations in post-stroke QOL are often minor or absent when adjusting for stroke severity and comorbid conditions. However, these findings in contrast with study by **(Jaracz, Kozubski, & Grabowska-Fudala, 2022),** who noted that females may report lower QOL, possibly due to a higher prevalence of depression post-stroke.

The current study showed no significant relationship between marital status and QOL domains ($p > 0.05$). This contradicts the findings of (**Ali, 2020)**, who reported that married stroke survivors generally experience better social support and higher QOL. However, our result may reflect a culturally shared burden of care among family members in both marital and non-marital contexts, particularly in collectivist societies.

Regarding, occupation was not significantly associated with total QOL domains ($p > 0.05$). This is in line with **(Lai, Studenski, Duncan, & Perera, 2022)**, who found that employment status alone is not a consistent predictor of QOL unless it is tied to functional independence and psychological satisfaction. Nevertheless, the observed trend supports the idea that engaging in work may provide a sense of purpose and structure, which can enhance recovery motivation.

Level of education was significantly associated with all QOL domains. Patients with university education had the highest QOL scores, whereas those who were illiterate or had only primary education reported the lowest scores. This finding is strongly supported by **(Carod-Artal, Egido, González, & Varela de Seijas, 2020),** who emphasized that higher educational attainment is associated with better stroke outcomes and QOL due to better health literacy, access to care, and coping skills. Likewise, **(Clarke & Black, 2022)**, who found education level to be a robust predictor of psychological adjustment after stroke. These findings indicate the need for tailored educational and support programs for patients with low literacy to enhance their recovery outcomes.

The current study, stated that no significant relationship was observed between QOL domain and residence areas (rural & urban). This contrasts with the findings of **(Clarke & Black, 2022)**, who suggested urban residents typically have better access to health services, influencing recovery and QOL. Also, **(Gelin, Gall, Sturm, Macdonell, 2020),** who showed that poor QOL was significantly associated with rural residence.

Part (V): Relation between total Quality-of-Life domains and clinical factors among the studied patients:

The current study showed that, there was no statistically significant relation in QOL scores between patients with ischemic and hemorrhagic strokes. This finding aligns with the work of **Carod-Artal et al. (2020)**, who found that stroke type alone is not a strong predictor of QOL outcomes, as both types can result in varying degrees of disability depending on location and severity. Conversely, **Dewey et al. (2019)** found that hemorrhagic strokes tend to have worse outcomes in the acute phase, which might not persist in long-term QOL assessments.

A significant association was found between overall QOL and the time elapsed since the first stroke incident ($p < 0.001$). Patients assessed within one month of stroke onset reported the highest QOL scores, with a marked decline among those whose stroke occurred more than six months ago. This trend may reflect early optimism, reduced disability accumulation, and active rehabilitation efforts during the initial post-stroke period. These results are in line with findings by **Lai et al. (2022)**, who documented that QOL tends to decline over time without consistent rehabilitative interventions.

Compliance with prescribed medication was significantly associated with overall QOL. Patients who adhered to their treatment plans

had substantially better QOL scores compared to non-compliant individuals. This finding is supported by **(Jaracz et al. 2022)**, who concluded that medication adherence improves not only physical recovery but also psychological well-being due to better disease control and fewer complications.

Concerning associated diseases, there was no statistically significant relation between total QOL and associated diseases. These findings are disagreed with **(Clarke & Black, 2022),** who found that there was association between total QOL and patients with hypertension or diabetes.

Regarding family history of stroke, there was statistically significant relation with total QOL and family history. These findings echo those of **Hsu et al. (2024)**, who noted that patients with familial experience of stroke may be better prepared for coping with the illness.

Conclusion:

Based on the results of the present study, it can be concluded that the overall quality-of-life post stroke patients were poor. There was statistically significant relation with QOL with research variables such as age, level of education, stroke duration, compliance with medication, and family history of stroke.

Recommendations:

- Implementation of rehabilitation programs on QOL for post stroke patients.
- Provide booklet and educational handouts for patients about the management and care of stroke patients.
- Application of the study on large samples from different regions to generalize the findings.

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