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Quality of life of cerebrovascular stroke patients

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***Abstract*---**Background: Stroke is a neurological deficit resulted from a sudden decline in blood flow to a localized area of the brain. Worldwide someone every two seconds complain from a symptomatic stroke. According to American Stroke Association 2014, worldwide prevalence was 33 million strokes in 2010 which represent 11.13% of total deaths worldwide. Aim of the study: the study aims to assess the quality of life of cerebrovascular stroke patients. Subject& Methods: a descriptive research design was followed, the study was held in in Al-Hussein Hospital, (80 adult patients). Result: the main result of study revealed that, there was a highly significant relation between socio-demographic characteristics and the patients QOL especially age, employment status, and the monthly income, the overall QOL (P<0.05). Conclusions: There were a significants relation between socio-demographic characteristics and the patients QOL especially age, employment status, and monthly income, the overall QOL (P<0.05). Recommendation: the study recommended that, design health education program to raise stroke patient QOL, design program to improve care giver attitude toward stroke patient, collaborative efforts among the governmental agencies to improve the educational level of the citizens, further studies to examine QOL on larger group of patients to generalize the results.

***Keywords*---**cerebrovascular stroke, quality of life, nursing practice.

Introduction

Quality of life (QOL) is currently being utilized as an end measurement in clinical studies and observational research aiming to assess the quality of care for stroke patients. QOL, like life expectancy, is an essential facet of health outcome and a factor of result. Even in individuals with minor stroke outcomes, the life quality was reduced. [(1)].high cholesterol levels can clog arteries and cause a stroke. Moreover, stroke could be increased by 500% because of atrial fibrillation (Afib.)

as it can cause blood to pool in the heart and may form a clot and cause a stroke [2]. Excess alcohol intake should be avoided. Mild to moderate alcohol consumption (1-two standard glasses per day) is linked to a lower risk of stroke [3]. Reducing obesity by improving dietary behaviors, increasing physical activity levels and keep sedentary behaviors can reduce the occurrence of stroke [4]. Physical Activities as Regular exercise (30 – 60 minutes per week of brisk walking, running, bicycling, or any other aerobic workouts) is often suggested. [5].

Therefore, there is a felt need to assess QOL of patients with cerebrovascular stroke. So, the study aimed at assessing QOL. As a part of QOL assessment, the study also aimed to observe the impact of stroke on the self-care, mobility, upper extremity function, language, vision, work/productivity, thinking, family roles, social roles, personality, mood, and energy of stroke patients.

Method

The study's goal is to evaluate the quality of life of people who have had a cerebrovascular stroke.

Research design
Descriptive research designing

Research question: What is the quality of life of cerebrovascular stroke patients?

Setting

The study was conducted at in in Al-Hussein Hospital. The study site is chosen because the majority of stroke patients who are diagnosed are referred to this clinic for follow up.

Subjects

A convenience sample of 80 adult patients who attend the previous mentioned setting and meeting the following criteria: age group (21-60) years old, able to communicate verbally, willing to participate, and first visit to the outpatient clinic after the stroke

Table (1): Distribution of the study subjects according to their socio - demographic characteristics.

Demographic data		No	%
Age in years	21-	2	2.5%
	30-	3	3.8%
	40-	17	21.3%
	50-60	58	72.5%
Gender	Male	55	68.8%
	Female	25	31.3%
Marital status	Single	6	7.5%
	Married	56	70.0%
	Widowed	12	15.0%

	Divorced	6	7.5%
Employment status	Employed	25	31.3%
	Unemployed	55	68.8%
	Manual work	4	5.0%
	Clerk work	15	18.8%
Occupation	Technical work	33	41.3%
	House wife	16	20.0%
	Without work	12	15.0%
	Uneducated	16	20.0%
	Reading and writing	19	23.8%
	Elementary school	5	6.3%
Educational level	Junior school	10	12.5%
	Intermediate schooling	16	20.0%
	college education	14	17.5%
Area of residence	Rural	24	30.0%
	Urban	56	70.0%
	Enough	33	41.3%
Monthly income	Less than enough	39	48.8%
	Not enough	8	10.0%

Table (1): Shows socio-demographic characteristics of patients after stroke. As regards to age 72.5% of the studied patients' age ranged from 50 to 60 years old, 21.3% were aged from 40 to less than 50 years, while 2.5% were aged from 21 to less than 30 years. Regarding gender 68.8% of patients were males and unemployed. As for the marital status 70% of them were married. As regard for the occupation 41.3% were had technical work. For the educational level 20% were illiterate and had secondary school. As for residence area 70% of patients were live in urban areas.

Table (2): Distribution of the study subjects according to their clinical data

Clinical data		No	%
	<40 years	7	8.8%
Age of stroke first onset	40-	13	16.3%
	50-60	60	75.0%
Durations from first	Days	43	53.8%
incidence of stroke	Weeks	24	30.0%
	Months	13	16.3%
Range (days)		1-365	
Mean ± SD		25.1 ±71.2	
Median		5.0	
Compliance with	Yes	69	86.3%
medication	No	11	13.8%
	Yes	72	90.0%
Family history of stroke			
	No	8	10.0%

Table (2): demonstrates the distribution of stroke patients' clinical data. As for the age for the first onset 75.0% were aged above 50 years, 16.3% aged above 40years to less than 50 years, while 8.8% of patient aged less than 40 years (52.9 ± 8.6). Regarding the duration of the first incidence of stroke it was noted that 53.8% of patients had passed days of the attack, 30.0% had passed weeks, while 16.3% had the stroke since months (25.1±71.2). Regarding the compliance with medication 86.3% were compliant to the medication while, 11% were not compliant. For the family history of the stroke 90% had family history.

Table (3): Distribution of overall QOL domains levels by the study subjects

QOL	No	%
Physical QOL		
▪ Poor	20	25.0%
▪ Fair	31	38.8%
▪ Good	29	36.3%
Psychological QOL		
▪ Poor	28	35.0%
▪ Fair	45	56.3%
▪ Good	7	8.8%
Overall QOL		
▪ Poor	22	27.5%
▪ Fair	43	53.8%
▪ Good	15	18.8%

Table (3): demonstrates the QOL domains. For the physical QOL domain 38.8% of the study subjects had fair physical activity, while 25% of them had poor physical activity. As for psychological QOL domain 56.3% had fair psychological state while, only 8.8% had good psychological state. The overall status of the patients was fair by 53.8% and good by 18.8%.

Table (4): Relation between the study subjects overall QOL levels and their socio-demographic characteristics

Demographic data		Overall QOL						*MCP*
		Poor		Fair		Good		
		No	%	No	%	No	%	
Age in years	21-	0	0.0%	1	50.0%	1	50.0%	0.046*
	30-	0	0.0%	2	66.7%	1	33.3%	
	40-	0	0.0%	12	70.6%	5	29.4%	
5	22	37.9%	28	48.3%	8	13.8%		
Gender	Male	15	27.3%	28	50.9%	12	21.8%	0.562
	Female	7	28.0%	15	60.0%	3	12.0%	
Marital status	Single	1	16.7%	4	66.7%	1	16.7%	0.188
	Married	14	25.0%	28	50.0%	14	25.0%	
	Widowed	6	50.0%	6	50.0%	0	0.0%	

	Divorced	1	16.7%	5	83.3%	0	0.0%	
Employment status	Employed	2	8.0%	16	64.0%	7	28.0%	0.025*
	Unemployed	20	36.4%	27	49.1%	8	14.5%	
	Manual work	0	0.0%	2	50.0%	2	50.0%	
	Clerk work	1	6.7%	7	46.7%	7	46.7%	
Occupation	Technical work	13	39.4%	15	45.5%	5	15.2%	0.014*
	House wife	5	31.3%	11	68.8%	0	0.0%	
	Without work	3	25.0%	8	66.7%	1	8.3%	
	Uneducated	9	56.3%	7	43.8%	0	0.0%	
	Reading and writing	6	31.6%	8	42.1%	5	26.3%	
	Elementary school	1	20.0%	4	80.0%	0	0.0%	
Educational level	Junior school	2	20.0%	7	70.0%	1	10.0%	0.074
	Intermediate schooling	2	12.5%	10	62.5%	4	25.0%	
	college education	2	14.3%	7	50.0%	5	35.7%	
Area residence	Rural	7	29.2%	10	41.7%	7	29.2%	0.229
	Urban	15	26.8%	33	58.9%	8	14.3%	
Monthly income	Enough	4	12.1%	20	60.6%	9	27.3%	0.022*
	Less	16	41.0%	20	51.3%	3	7.7%	
	enough	2	25.0%	3	37.5%	3	37.5%	

MCP: Mont Carlo exact probability * P < 0.05 (significant)

Table (4): demonstrate the relation between the overall QOL and socio-demographic characteristics. Regarding the age, there was significant difference between the overall QOL from good to fair and poor where (P=0.046*). Regarding the employment status there was significant difference between the overall QOL from good to fair and poor where (P=0.025*). As regard for the occupation there was significant difference between the overall QOL from good to fair and poor where (P=0.014*). As for the monthly income there was significant difference between the overall QOL from good to fair and poor where (P=0.022*). While, the same table showed that there was no statistical difference between the overall QOL and, gender, marital status, educational level, and area of residence.

Discussion

People and governments concerned for delivering health care are becoming increasingly conscious of the impact of stroke on population health and the expense to the public. [6]. According to the present study, the vast majority of those investigated were above the age of 55. The findings of this study are consistent with those of Tsai et al. (2018), who studied stroke admissions at a tertiary hospital in Nigeria and found that stroke incidence increases with age and the likelihood of having a stroke about halves for each year of life just after aged of 55[7]. This result is especially concerning given that more than half of the

patients were men. In this context, Joanna, Bates, Gibson, (2019) and Morsy (2013) discovered that males had a greater incidence of CVS than women, and after adjusting for all risk factors [8,9]. Wahab et al. (2011), on the other hand, found that women were more likely than males to suffer from CVS. [10]. Around half of the subjects of the current study group were married and more than half had no recurrence, this may be due to the social and psychological support the patient may had from his/her partener. In this regard Fang, (2020) [11].

As regarding to residencess, majority of the studed group were from urban areas and mor than aquarter of the sample were from rural area, although, being from rural areas. And interfers with treatmentand compliance from medical regimen. In addition, urban people may be more educated and have better health awareness to seek health services and follow up. This finding was in contradiction with Tavangar, et al, (2012) who They discovered a contradictory discovery in which they discovered that urban populations have a higher risk of stroke, hypertension, ischemic heart disease, and diabetes than rural residents [12]. On the other hand, Altmaier, (2019) reported the same findings in his study on stroke patients [13].

Half of the subject of the study had a low income, where their income did not cover their daily needs as well as their treatment needs this may be due to their type of occupation which provided them with low daily income in addition to the continuous increasing in daily life demand as most of them worked as manual work, clerk work, technical work, house wife or were unemployed. Moreover, health maintenance especially with chronically ill patient needs proper medical follow up which require large expenses. In this context, Fang (2020) discovered that lower income and wealth are both related with a higher prevalence of CVS [14] .Toivanen (2011) supports this by revealing that the risk of stroke death is significant in the poor people also with unemployment among both men and women [15] .Regarding compliance with medication the present study revealed that, a large number of patients are compliant with medication as they maintain medication time, dose and frequency this may be due to fear from complications resulting from stroke and their desire to return to their usual life. But they complain from medication prices as it is too expensive and they are afraid about them in abilities to continue with medication compliance.

As for family history the current study revealed that the majority of the studied subjects had family history of stroke this may be due to that stroke is combined with chronic illness as hypertension which is also combined with the family history. In addition, the family member lives in the same living circumstances which may lead to stroke as stressors, unhealthy life style, smoking, or medical seeking behavior. This finding was in agreement with Bor (2014) who found that individuals with two or more first-degree relatives who have had stroke have an increased risk of stroke, as he investigated the yield of long-term serial screening for stroke in these individuals [16]. Also, this discovery was consistent with Morte and Guadagn (2012), who investigated the heredity of ischemic stroke and stroke-related risk variables and obtained similar results. [17].

As for quality of life of stroke patients the current study revealed that approximately a quarter of the subjects had both poor physical and psychological

QOL. As physical domain was poor in work productivity as they could not do daily work around the house as usual and could not complete a job they started and do any work they used to do. As for vision as they cannot see well as before as, having trouble see of the television well enough to enjoy a show, having trouble reaching things because of poor eyesight and having trouble seeing things off to one side. Also, self- care was affected as became unable to perform their daily care as dressing, feed, or toilting on their own that may due to physical impairement resulteing from stroke as upper exterimities daily function, and mobility is affected and in addition to they are unable to express what they need. furthermore, psychological domain was found to be poor in family role as Participative with family activity, feeling that they are a burden on their family and physical condition Interfering with personalitylife. As for, energy, beeing tired most of the time, tried to do resting for long time during the day. As for thinking disturbance, inability to concentrated, un able remember thing to do. As for personality change, being impatient, irritable, most of time with other. This may be resulted from not knowing the importance of follow up especially in patients with recurrent stroke.

In the present study the subjects showed a highly significant relation between QOL levels and their socio-demographic characteristics as age, employment status, occupation, and monthly income. This may be because of these variables have both immediate and long-term impact on physical and psychological status outcomes. In this essence, Zemed (2021), confirmed that the people who survived the stroke had significantly poor quality of life this in patient with low level of education [(18)].

Conclusion

The majority of studied patients were over 50 years old, male, married, unemployed, had technical work, just read and write, lived in urban area, and had a monthly income of less than enough. The majority of patients had a stroke onset at the age above 50 years (51.9±15.3), majority of them compliance with medication (86.3%), and majority of them had a family history of stroke (90%). There was a significant relation between socio-demographic characteristics and the patients QOL especially age, employment status, and monthly income, the overall QOL ($P<0.05$).

Recommendations

- Design health education programs to raise stroke patient QOL.
- Design programs to improve care giver attitude toward stroke patient.
- Collaborative efforts among the governmental agencies to improve the educational level of the citizens.
- Further studies to examine QOL on larger group of patients to generalize the results.
- Creating a hotline for harmful scenarios that may emerge

unexpectedly for stroke victims.

- Creating stroke counseling teams to give information and assist in issue solving.
- The establishment of dedicated sections in hospitals and outpatient clinics devoted to educating patients how to change their lifestyle.
- Submission of instructional materials on stroke treatment and recurrence prevention.

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