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Factors Associated with Self Care Among Stroke Survivors at Kenyatta National Hospital

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Abstract: Background: Stroke is a condition that reduces blood flow to the central nervous system—specifically, the brain and may be associated with long-term neurologic adverse effects that result in accelerated functional decline and disability. Self-care is one of the greatest challenges to stroke survivors, they lose the ability to do certain activities of daily living and depend partially or entirely on others. The purpose of this study was to understand the factors associated with self-care among stroke survivors at Kenyatta National Hospital. Method: The study adopted a cross-sectional analytical design, where convenience and purposeful sampling were employed during questionnaire administration. The study involved interviewing 90 volunteer patients. Both Qualitative and Quantitative data were collected and analyzed using SPSS version 21. Logistic regression and correlation analysis were used to determine the influence and relationship of socio-demographic, clinical impairment, and psychosocial factors on self-care performance. Results: A sample consisted of 90 respondents. Demographic analyses revealed that the majority of stroke patients were female gender (n=54; 60%), aged between 56-65 years, (26%), married (n=55; 62.5%), on education (n=68; 75.6% had at least attained secondary school. Socio-demographic and clinical impairment factors had positive significant influence on self care performance at Pearson correlation {(df=1 N=90)=<0.05}, analysis of the psychosocial variables revealed that most stroke survivors would need support hence having insignificant negative effect on self care performance, Pearson correlation {(df=1 N=90)=0.05. Conclusion: Socio-demographic and clinical impairment predict the level of self-care performance while psychosocial factors did not influence performance of self care.

Keywords: Self Care, Socio Demographic, Stroke, Impairments, Psychosocial

1. Introduction

A stroke is caused by the interruption of the blood supply to the brain, usually because a blood vessel bursts or is blocked by a clot [16]. American Heart Association (3), describes stroke as a disease that affects arteries leading to and within the brain. Stroke is a disease that affects the arteries leading to and within the brain.

The most common symptom of a stroke is sudden weakness or numbness of the face, arm or leg, most often on one side of the body. Other symptoms include confusion, difficulty speaking or understanding speech; difficulty seeing with one or both eyes; difficulty walking, dizziness, loss of balance or coordination; severe headache with no known cause; fainting or unconsciousness. The effects of a stroke depend on which part of the brain is injured and how severely it is affected. A very severe stroke can cause sudden death [16].

Selfcare activities are activities that individuals, families, and communities undertake intending to enhance health, prevent diseases, and restoring health [16]. These are the skills that support personal independence. They include bathing, grooming, dressing, self- feeding, and toileting.

Stroke poses the biggest challenge to mankind as it affects not only the survivors but even the people around them. Self-care is one of the greatest challenges to stroke survivors, as after suffering stroke they lose the ability to do certain activities of daily living and therefore depend in a way or entirely to others for assistance, and sometimes they don't even get the assistance, or at the right time. These challenges

lead to despair and frustration by the victims who may develop severe depression and loss of interest in life. Apart from self-care, there are other challenges that stroke survivors face such as the cost of treatment and rehabilitation, social interactions and responsibilities, loss of jobs among others. Maintaining independence in self-care is therefore an important factor for the quality of life.

Approximately 50 million stroke survivors worldwide have physical, cognitive, and emotional problems, about 25%–74% of whom are dependent on Activities of Daily Living (ADL) [16]. The WHO, further indicates that, Stroke is a growing societal challenge and a third leading cause of disability globally. In 2006, the World Health Organization estimated that there were approximately 5.8 million people worldwide dying from stroke each year of which 60% occurred from Africa.

Africa is particularly worst hit by stroke owing to its rapid population growth, unchecked industrialization, and increasing consumption of western diets, [1]. According to a systematic review by Adeloye *et al*., [1], of 19 studies in 10 African countries, it was estimated that 483 which is equivalent of 81/100000 new stroke cases among people aged 15 years and above were estimated in Africa in 2009, and prevalence of 317.3/100,000 cases which was an equivalence of 0.3% prevalence rate. In the same study, it was further estimated that low and middle-income countries account for over 78% Disability Adjusted Life Years (DALY'S) from a stroke which is about seven times the DALY'S lost in High-Income Countries (HIC).

Acute stroke treatment and care in the poorest countries of sub-Saharan Africa is severely under-resourced, [5]. A study done at the Mulago Hospital, which is the national referral hospital of Uganda with a population of 32 million, highlights the massive gaps, such as lack of diagnostic equipment, limited treatment, and preventive methods, catering for the neurology inpatient unit which admits 20–30 stroke patients [6].

According to the WHO data published in 2017, Stroke Deaths in Kenya reached 11,976 or 4.25% of total deaths. And Kenya ranks number 117 in the world. [17].

A study done at KNH and MTRH where a total of 719 patients were recruited (KNH: n=406 [56.5%]; MTRH: n=313 [43.5%]), showed that the male-to-female ratio was 1: 1.4, and the peak age for stroke was between 50 and 69 years. Mortality at day 10 and day 28 was 18.4 and 26.7%, respectively. The inpatient mortality rate was 21.6%. The mean survival time was significantly different between inpatients (13.9 months; 95% CI: 13.0-14.7) and outpatients (18.6 months; 95% CI: 17.2-19.9) ($p<0.001$). A 1-year increase in age increased the hazard by 1.8%. Inpatients had a 3.9-fold increase in hazard compared to outpatients. [8].

The study was therefore done to establish the factors that are associated with self-care among the stroke survivors attending treatment at Kenyatta National Hospital, Nairobi, Kenya.

2. Research Methods

2.1. Study Population

The study population targeted was composed of stroke patients attending treatment at Kenyatta National Hospital, in the outpatient clinics of Neurology, Physiotherapy, and Occupational Therapy, from which a sample of respondents was drawn. Neurology clinic offers curative medical follow up while physiotherapy and Occupational therapy offer rehabilitation services.

2.2. Study Design

The study was conducted through an analytical, cross-sectional study design. This design was selected because the independent variables are linked to performance in self-care, and therefore the study was showing the relationships between self-care and demographic characteristics, self-efficacy, impairments, and social support which are independent variables and self-care as the dependent variable.

2.3. Sample Size Determination

The sample size was determined by Fischer et al., 1990, as shown below.

Fisher's method

$$n_o = \frac{Z^2 pq}{e^2}$$

No. Desired sample size if the target population is equal to or greater than 10,000

z The normal standard deviation according to Fischer *et al* 1998

p The proportion in the target population estimated to have characteristic being measured

q Proportion of the population not being measured 1-p

e level of precision 95% (0.05)

=1.96 × 1.96 ×0.5 ×0.5

0.05×0.05=384 respondents

Fisher's alternative for the population less than 10,000. Fisher's alternative for the population less than 10,000.

$$Nf = \frac{1+n}{N}$$

Where;

NF=desired sample size for the population less than 10,000,

N=estimate of population size=384

n=desired sample size=100

$$\frac{384}{1+384}$$

100=79.3+10%=88 respondents approximately90 respondents

2.4. Inclusion and Exclusion Criteria

2.4.1. Inclusion Criteria

i. Patients suffering from a stroke.
ii. Attending treatment at Kenyatta National Hospital.
iii. Aged above 18 years.
iv. Able to communicate and cognitively stable.
v. Willing to consent to participated in this study.

2.4.2. Exclusion Criteria

i. The patients who were unable to communicate.
ii. Very ill or cognitively impaired.
iii. Not attained age of 18.
iv. Not attended the clinic.

2.5. Data Collection Methods

The data was collected using the following methods;

i. Individualized structured Questionnaire interview: A data collection instrument consisting of a series of questions and other prompts to gather information from respondents. This was used to collect information by individual interviews.
ii. Key informant interview: and a key informant is any other person who possesses the information being sought, and in this circumstance the clinicians, nurses and therapists were interviewed to give an overview about the stroke patients.
iii. Direct observation is a systematic data collection methodology which uses senses to examine people in natural settings or naturally occurring situations. Was used to respond to questions that need observation of the impairments and analysis of various activities.

2.6. Data Analysis

Data obtained was analyzed given the objectives of the study using descriptive and inferential statistics. The descriptive analysis involved processing data using percentages, frequencies, and mean. Mean score, standard deviation, range, mean score percentage for self-care abilities. Inferential statistics t test, regression coefficients, and correlation coefficient were used to determine the relationship between self-efficacy, social support, and impairments with levels of self-care abilities of stroke survivors. Data was then presented in tables and figures. The collected information was analyzed using SPSS software 21. The value of significance 95% was used.

3. Results

3.1. Social Demographic Characteristics Influencing Self-Care among Stroke Survivors

3.1.1. Descriptive Analyses

Female gender (n=54; 60%) while the male gender accounted for (n=36, 40%), the majority were aged between 56-65 years while the 26-35 and 46-55 registered the least percentage of the responses (n=9; 11.8% each). The study also established that majority of the respondents were married (n=55; 62.5%), with single and separated/divorced accounting for 25% and 12.5% respectively. On education, the majority of the respondents (n=68; 75.6% had at least secondary school education with only 6.7% reporting to not have been through any formal education system and finally professionals (n=25; 28%) while students held the least percentage (n-11; 12.2%).

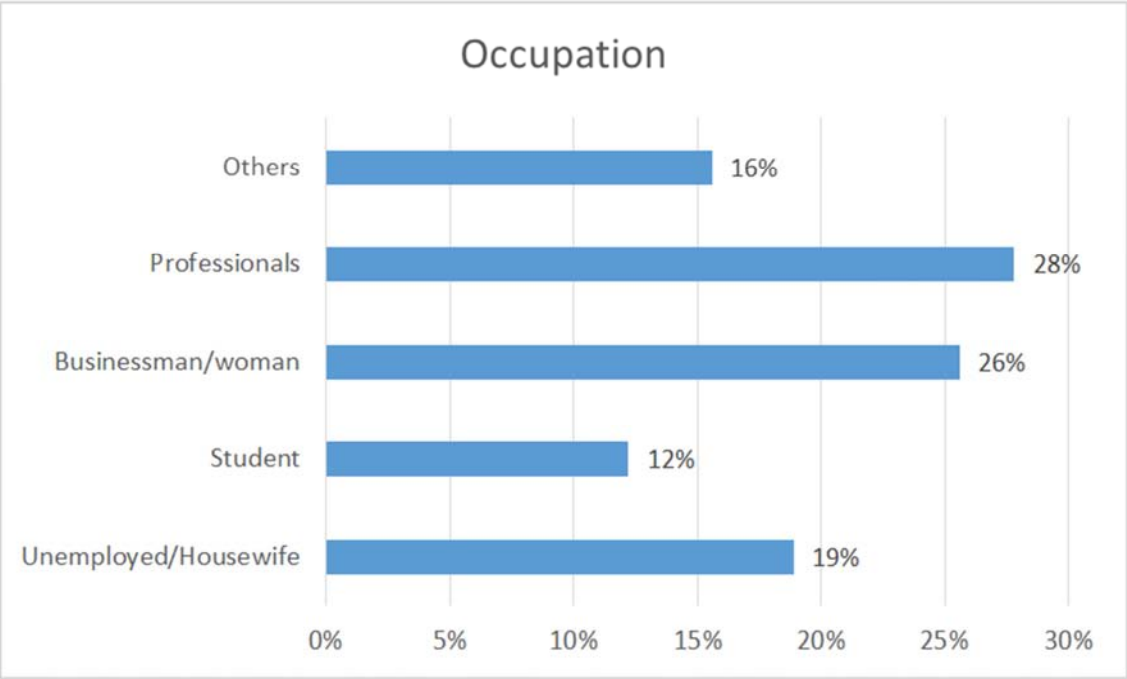

Figure 1. *Respondent Occupation.*

Table 1. *Social Demographic Characteristics Influencing Self-Care.*

Coefficients[a]						
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**Beta**		
1	(Constant)	6.984	1.928		3.622	.001
	Marital status	-.242	.492	-.056	-.492	.624
	Age	-.051	.018	-.340	-2.896	.005
	Gender	-.319	.553	-.058	-.577	.565
	Religion	.134	.279	.049	.481	.632
	Highest level of education	1.072	.298	.377	3.594	.001
	What your work is involved in	-.306	.228	-.136	-1.340	.184
	How long suffered from stroke	-.137	.201	-.068	-.684	.496

a. Dependent Variable: Self Care_Performance

The study finally established that majority of the respondents had suffered from stroke less than one year (n=40; 45%). Those who had suffered from stroke for more than one year accounted for 29%.

3.1.2. Regression Analysis

Pearson correlation was used for regression analysis and established that most socio demographic variables did not have a significant correlation with self-care among stroke survivors, only age and level of education showed a significant correlation to self care performance (p=0.005 and 0,001 respectively).

As in tables 2 and 3 the study also established that length of time a patient had suffered from stroke was not significantly correlated with self care performance.

Table 2. *Effect of time suffered from stroke on self-care performance.*

Correlations			
		Self Care Performance	**How long suffered from stroke**
Self Care Performance	Pearson Correlation	1	.027
	Sig. (2-tailed)		.803
	N	90	89

Table 3. *Regression analysis on demographic factors' influence on individual selfcare performance.*

		Age Group	**Gender**	**Marital status**	**Highest level of education**	**What your work is involved in**	**How long suffered from stroke**
Feeding	Pearson Correlation	-.169	-.028	-.202	.268*	-.106	-.147
	Sig. (2-tailed)	.146	.798	.059	.011	.320	.170
	N	76	89	88	90	90	89
Bathing	Pearson Correlation	-.308**	-.073	-.255*	.357**	-.020	.047
	Sig. (2-tailed)	.007	.498	.017	.001	.852	.667
	N	75	89	87	89	89	88
Grooming	Pearson Correlation	-.314**	-.070	-.235*	.326**	.003	.168
	Sig. (2-tailed)	.006	.517	.027	.002	.976	.117
	N	76	89	88	90	90	89
Dressing	Pearson Correlation	-.321**	-.044	-.234*	.352**	-.022	.005
	Sig. (2-tailed)	.005	.680	.028	.001	.838	.960
	N	76	89	88	90	90	89
Bowels	Pearson Correlation	-.189	-.003	-.210*	.440**	-.032	.059
	Sig. (2-tailed)	.103	.975	.050	.000	.763	.584
	N	76	89	88	90	90	89
Bladdero	Pearson Correlation	-.155	-.007	-.210	.464**	-.006	.036
	Sig. (2-tailed)	.184	.950	.051	.000	.956	.739
	N	75	88	87	89	89	88
Toilet Use	Pearson Correlation	-.175	.028	-.215*	.375**	-.097	.083
	Sig. (2-tailed)	.130	.797	.044	.000	.366	.441
	N	76	89	88	90	90	89
Transfer (Bed to chair and back)	Pearson Correlation	-.254*	.036	-.253*	.451**	.037	.056
	Sig. (2-tailed)	.027	.740	.017	.000	.729	.605
	N	76	89	88	90	90	89
Mobility (On level surface)	Pearson Correlation	-.296**	.052	-.230*	.433**	.009	-.057
	Sig. (2-tailed)	.010	.629	.031	.000	.936	.598
	N	76	89	88	90	90	89
Stairs	Pearson Correlation	-.419**	-.081	-.332**	.257*	-.177	.027
	Sig. (2-tailed)	.000	.449	.002	.015	.095	.803
	N	76	89	88	90	90	89

3.2. Clinical Impairments and Self-Care Performance Among Stroke Survivors

3.2.1. Motor Functions

(i) Descriptive Analyses

Patients who reported total proximal upper extremity motor impairment accounted for 3.4% (n=3). Those with moderate proximal upper extremity impairment accounted for 16.5% (n=15), whereas those with mild proximal upper extremity impairment accounted for 59.6% (n=53). From this study, it was observed that no stroke survivor had a normal proximal upper extremity motor function. For the proximal lower extremity motor functions, stroke survivors with total motor impairment accounted for 1.1% (n=1). Those with moderate lower extremity motor impairment accounted for 16.7% (n=15). Those with mild lower extremity impairment accounted for 60% (n=54) and those with a normal proximal lower extremity accounted for 2.2% (n=20).

Furthering the motor function, the study established that stroke survivors with total upper extremity distal impairment accounted for 13.5% (n=12), those with moderate upper extremity distal impairment accounted for 37.1% (n=33), those with mild upper extremity distal impairment accounted for 44.9% (n=40) It must be noted that just like the upper proximal, the upper distal extremity too did not have a normal functioning from the sampled stroke survivors. The motor functions for the lower distal established that stroke survivors with total Impairment accounted for 6.7% (n=6). Those with moderate impairment accounted for 29.2% (n=26) while those with mild impairment accounted for 63.4% (n=50). The researcher noted none of the stroke survivors had a normal lower proximal extremity.

Total visual impairment accounted for 1.1% (n=1), the moderate visual impairment accounted for 7.8% (n=7), the mild visual impairment accounted for 10.0% (n=9) whereas normal visual cortical function accounted for 81.1% (n=73). Of all the impairments recorded by stroke patients, visual impairment was the least.

The speech cortical functions analyses established that Total speech Impairment accounted for 12.2% (n=11), the moderate speech impairment accounted for 20.0% (n=18), the mild speech impairment accounted for 27.8% (n=25) and the normal speech cortical function accounted for 40% (n=36). Of the cortical functions, speech was the biggest challenge for stroke survivors.

Analyses on Unaffected side Grip strength established the following statistics: Moderate impairment (n=2; 2.2%, Mild Impairment (n=10; 11.1%) and Normal (n=78; 86.7%). The unaffected side grip quadriceps analyses established: Total Impairment to be (n=1; 1.1%), Mild Impairment was (n=11; 12.5%), while the Normal unaffected side grip quadriceps accounted for (n=76; 86.4%).

(ii) Correlation Analysis

Table 4. *Regression Analysis on individual clinical impairments on on individual self-performance variables.*

		Motor Functions Proximal	Motor Functions Distal	Motor Functions Proximal Lower	Motor Functions Distal Lower	Muscle Touch	Muscle tone	Muscle Touch Lower	Muscle tone Lower	Sensory Function Touch	Sensory Function Position
Feeding	Pearson Correlation	.555**	.515**	.371**	.527**	.499**	.423**	.521**	.531**	.466**	.572**
	Sig. (2-tailed)	0	0	0	0	0	0	0	0	0	0
	N	89	89	90	89	90	88	89	87	90	89
Bathing	Pearson Correlation	.514**	.556**	.379**	.567**	.487**	.588**	.467**	.596**	.546**	.555**
	Sig. (2-tailed)	0	0	0	0	0	0	0	0	0	0
	N	88	88	89	88	89	88	88	87	89	88
Grooming	Pearson Correlation	.459**	.468**	.337**	.513**	.460**	.508**	.408**	.569**	.525**	.560**
	Sig. (2-tailed)	0	0	0.001	0	0	0	0	0	0	0
	N	89	89	90	89	90	88	89	87	90	89
Dressing	Pearson Correlation	.560**	.539**	.343**	.606**	.513**	.538**	.466**	.608**	.529**	.666**
	Sig. (2-tailed)	0	0	0.001	0	0	0	0	0	0	0
	N	89	89	90	89	90	88	89	87	90	89
Bowels	Pearson Correlation	.534**	.543**	.335**	.559**	.581**	.501**	.516**	.574**	.608**	.593**
	Sig. (2-tailed)	0	0	0.001	0	0	0	0	0	0	0
	N	89	89	90	89	90	88	89	87	90	89
Bladder	Pearson Correlation	.547**	.561**	.396**	.578**	.584**	.468**	.527**	.542**	.605**	.607**
	Sig. (2-tailed)	0	0	0	0	0	0	0	0	0	0
	N	88	88	89	88	89	87	88	86	89	88
Toilet Use	Pearson Correlation	.593**	.573**	.415**	.623**	.570**	.602**	.520**	.573**	.622**	.670**

		Motor Functions Proximal	Motor Functions Distal	Motor Functions Proximal Lower	Motor Functions Distal Lower	Muscle Touch	Muscle tone	Muscle Touch Lower	Muscle tone Lower	Sensory Function Touch	Sensory Function Position
	Sig. (2-tailed)	0	0	0	0	0	0	0	0	0	0
	N	89	89	90	89	90	88	89	87	90	89
Transfere (Bed to chair and back)	Pearson Correlation	.593**	.604**	.422**	.656**	.566**	.581**	.520**	.603**	.578**	.644**
	Sig. (2-tailed)	0	0	0	0	0	0	0	0	0	0
	N	89	89	90	89	90	88	89	87	90	89
Mobility (On level surface)	Pearson Correlation	.588**	.552**	.415**	.654**	.469**	.532**	.389**	.562**	.510**	.627**
	Sig. (2-tailed)	0	0	0	0	0	0	0	0	0	0
	N	89	89	90	89	90	88	89	87	90	89
Stairs	Pearson Correlation	.491**	.488**	0.155	.513**	.383**	.472**	.366**	.487**	.501**	.512**
	Sig. (2-tailed)	0	0	0.144	0	0	0	0	0	0	0

Table 4. *Continued.*

		Sensory Function Touch Lower	Sensory Function Position Lower	Range of motion	Range of motion Lower	Pain	Trunk Vertically	Trunk Abdominal MMT	Cortical Functions Visual	Cortical Functions Speech	Unaffected side Grip strength	Unaffected side Grip Quadriceps
Feeding	Pearson Correlation	.552**	.268*	.492**	.543**	.518**	.605**	.588**	.415**	.551**	0.142	0.207
	Sig. (2-tailed)	0	0.011	0	0	0	0	0	0	0	0.181	0.053
	N	89	88	89	86	90	90	90	90	90	90	88
Bathing	Pearson Correlation	.566**	.242*	.501**	.478**	.629**	.625**	.630**	.365**	.445**	.236*	.217*
	Sig. (2-tailed)	0	0.024	0	0	0	0	0	0	0	0.026	0.043
	N	88	87	88	85	89	89	89	89	89	89	87
Grooming	Pearson Correlation	.486**	.218*	.418**	.406**	.577**	.592**	.598**	.352**	.341**	.228*	.259*
	Sig. (2-tailed)	0	0.041	0	0	0	0	0	0.001	0.001	0.031	0.015
	N	89	88	89	86	90	90	90	90	90	90	88
Dressing	Pearson Correlation	.515**	0.152	.449**	.426**	.642**	.682**	.686**	.421**	.450**	0.167	.221*
	Sig. (2-tailed)	0	0.157	0	0	0	0	0	0	0	0.115	0.038
	N	89	88	89	86	90	90	90	90	90	90	88
Bowels	Pearson Correlation	.587**	0.105	.626**	.608**	.604**	.778**	.779**	.470**	.450**	.211*	.295**
	Sig. (2-tailed)	0	0.332	0	0	0	0	0	0	0	0.046	0.005
	N	89	88	89	86	90	90	90	90	90	90	88
Bladder	Pearson Correlation	.588**	0.117	.644**	.657**	.590**	.748**	.740**	.456**	.454**	0.194	.280**
	Sig. (2-tailed)	0	0.281	0	0	0	0	0	0	0	0.069	0.008
	N	88	87	89	86	89	89	89	89	89	89	88
Toilet Use	Pearson Correlation	.580**	0.151	.584**	.561**	.650**	.735**	.726**	.382**	.353**	0.155	.253*
	Sig. (2-tailed)	0	0.159	0	0	0	0	0	0	0.001	0.144	0.017
	N	89	88	89	86	90	90	90	90	90	90	88
Transfere (Bed to chair and back)	Pearson Correlation	.590**	.213*	.566**	.564**	.663**	.754**	.755**	.493**	.499**	0.159	.252*
	Sig. (2-tailed)	0	0.046	0	0	0	0	0	0	0	0.135	0.018
	N	89	88	89	86	90	90	90	90	90	90	88
Mobility (On level surface)	Pearson Correlation	.546**	0.198	.589**	.542**	.651**	.736**	.736**	.461**	.532**	0.175	.292**
	Sig. (2-tailed)	0	0.065	0	0	0	0	0	0	0	0.099	0.006
	N	89	88	89	86	90	90	90	90	90	90	88
Stairs	Pearson Correlation	.458**	0.024	.459**	.449**	.523**	.537**	.542**	0.106	.327**	0.075	0.176
	Sig. (2-tailed)	0	0.827	0	0	0	0	0	0.32	0.002	0.482	0.101

Table 5. *Regression Analysis of clinical impairment and their effects on Self-care performance.*

Correlations			
		Self Care Performance	Clinical Impairment
Self Care Performance	Pearson Correlation	1	.825**
	Sig. (2-tailed)		.000
	N	90	90
Clinical Impairment	Pearson Correlation	.825**	1
	Sig. (2-tailed)	.000	
	N	90	90

**. Correlation is significant at the 0.01 level (2-tailed).

3.3. Psychosocial Support and Performance of Self-Care Among Stroke Survivors

The figure reveals that the need for someone to help prepare meals topped the psychosocial support followed by toilet use and support if a respondent is confined in bed. Stroke survivors who responded with none or little of the times accounted for a dismal number in all the variables.

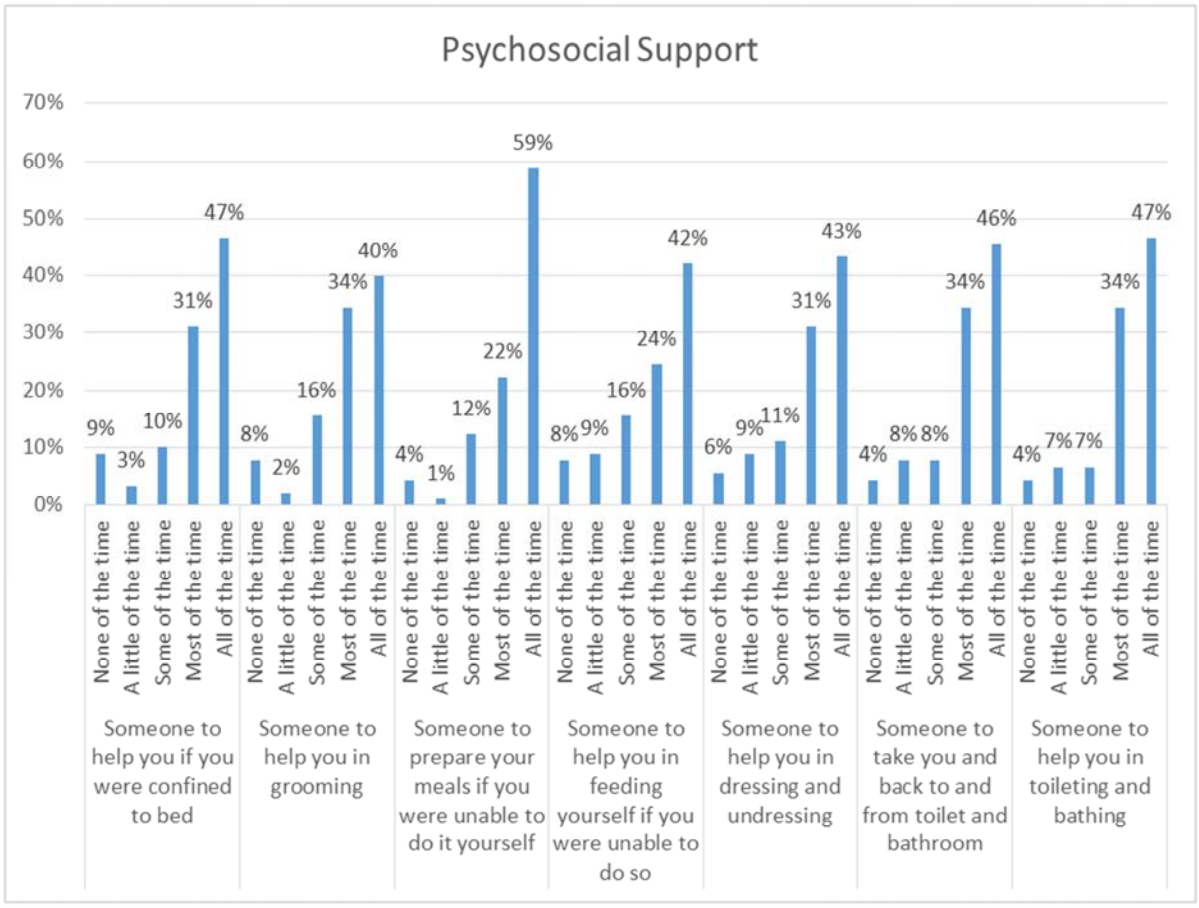

Figure 2. *Descriptive analysis on Psychosocial support responses.*

From the individual analyses in the table hereunder, it can be confirmed that all individual variables had a moderate negative linear correlation ranging from -0.2 to 0.5.

Table 6. *Regression Analysis on individual social variables on individual self-performance variables.*

		Someone to help you if you were confined to bed	**Someone to help you in grooming**	**Someone to prepare your meals if you were unable to do it yourself**
Feeding	Pearson Correlation	-.452**	-.477**	-.399**
	Sig. (2-tailed)	.000	.000	.000
	N	90	90	89
Bathing	Pearson Correlation	-.265*	-.446**	-.364**
	Sig. (2-tailed)	.012	.000	.000
	N	89	89	88

		Someone to help you if you were confined to bed	Someone to help you in grooming	Someone to prepare your meals if you were unable to do it yourself
Grooming	Pearson Correlation	-.245*	-.416**	-.297**
	Sig. (2-tailed)	.020	.000	.005
	N	90	90	89
Dressing	Pearson Correlation	-.457**	-.460**	-.435**
	Sig. (2-tailed)	.000	.000	.000
	N	90	90	89
Bowels	Pearson Correlation	-.368**	-.486**	-.341**
	Sig. (2-tailed)	.000	.000	.001
	N	90	90	89
Bladdero	Pearson Correlation	-.387**	-.506**	-.342**
	Sig. (2-tailed)	.000	.000	.001
	N	89	89	88
Toilet Use	Pearson Correlation	-.464**	-.491**	-.413**
	Sig. (2-tailed)	.000	.000	.000
	N	90	90	89
Transfere (Bed to chair and back)	Pearson Correlation	-.409**	-.467**	-.327**
	Sig. (2-tailed)	.000	.000	.002
	N	90	90	89
Mobility (On level surface)	Pearson Correlation	-.416**	-.436**	-.368**
	Sig. (2-tailed)	.000	.000	.000
	N	90	90	89
Stirs	Pearson Correlation	-.570**	-.659**	-.637**
	Sig. (2-tailed)	.000	.000	.000
	N	90	90	89

Table 6. *Continued.*

		Someone to help you in feeding yourself if you were unable to do so	Someone to help you in dressing and undressing	Someone to take you and back to and from toilet and bathroom	Someone to help you in toileting and bathing
Feeding	Pearson Correlation	-.422**	-.431**	-.478**	-.465**
	Sig. (2-tailed)	.000	.000	.000	.000
	N	89	90	90	89
Bathing	Pearson Correlation	-.429**	-.294**	-.332**	-.327**
	Sig. (2-tailed)	.000	.005	.001	.002
	N	88	89	89	88
Grooming	Pearson Correlation	-.399**	-.290**	-.328**	-.303**
	Sig. (2-tailed)	.000	.006	.002	.004
	N	89	90	90	89
Dressing	Pearson Correlation	-.436**	-.440**	-.497**	-.458**
	Sig. (2-tailed)	.000	.000	.000	.000
	N	89	90	90	89
Bowels	Pearson Correlation	-.457**	-.418**	-.459**	-.438**
	Sig. (2-tailed)	.000	.000	.000	.000
	N	89	90	90	89
Bladdero	Pearson Correlation	-.454**	-.438**	-.439**	-.430**
	Sig. (2-tailed)	.000	.000	.000	.000
	N	88	89	89	88
Toilet Use	Pearson Correlation	-.471**	-.457**	-.536**	-.502**
	Sig. (2-tailed)	.000	.000	.000	.000
	N	89	90	90	89
Transfere (Bed to chair and back)	Pearson Correlation	-.433**	-.433**	-.473**	-.433**
	Sig. (2-tailed)	.000	.000	.000	.000
	N	89	90	90	89
Mobility (On level surface)	Pearson Correlation	-.396**	-.357**	-.399**	-.381**
	Sig. (2-tailed)	.000	.001	.000	.000
	N	89	90	90	89
Stirs	Pearson Correlation	-.639**	-.486**	-.557**	-.530**
	Sig. (2-tailed)	.000	.000	.000	.000
	N	89	90	90	89

3.4. Level of Self-Care Among Stroke Survivors

All activities recorded a positive correlation of r ranging from r=0.530 for taking the stairs to a strong r=0.823 for personal grooming. The correlation variables also returned a p≤.005 (p=0.000) for all variables measured indicating a strong correlation in the level of self-care.

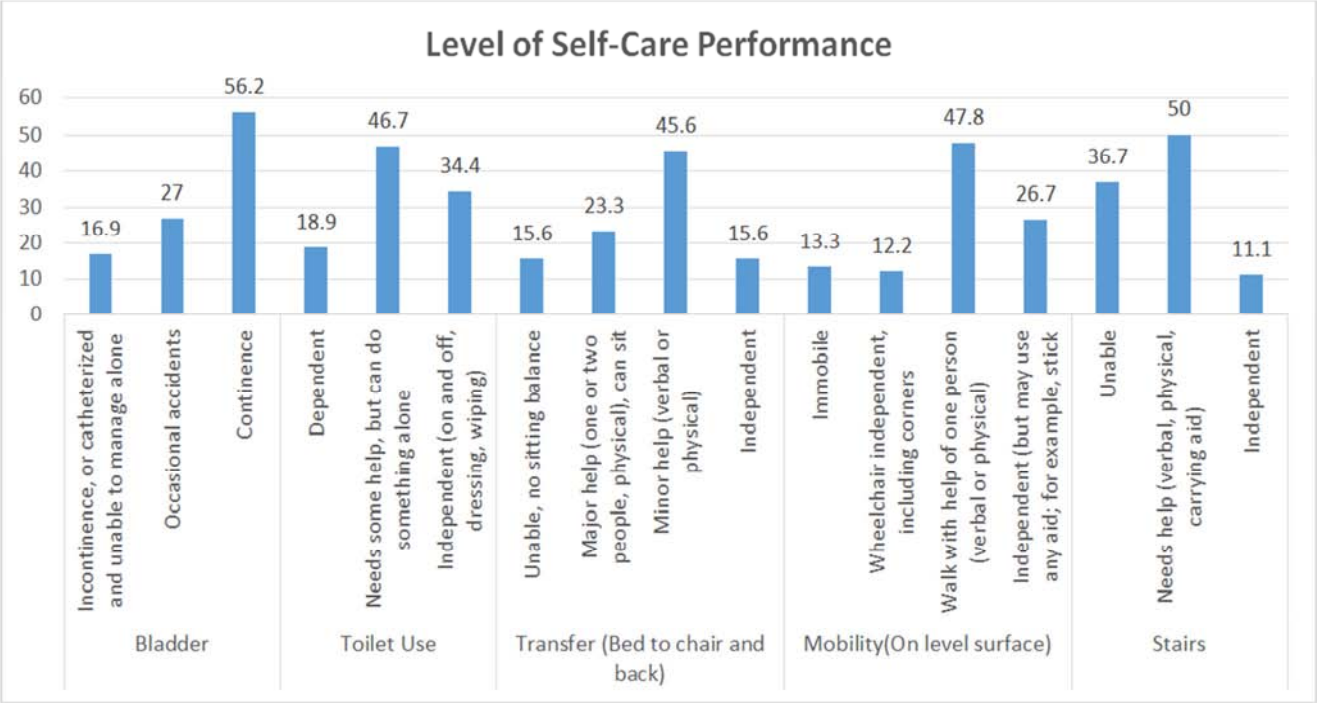

Figure 3. *Level of Self-Care Performance.*

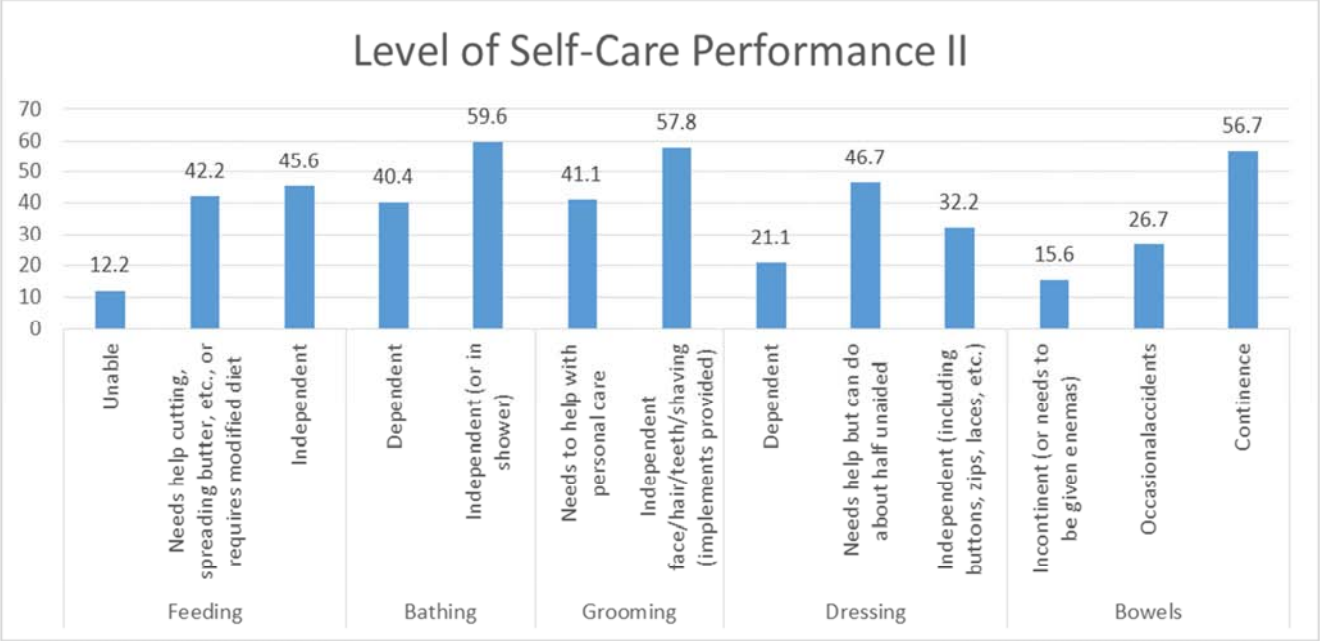

Figure 4. *Level of Self-Care Performance II.*

4. Discussion

4.1. Socio-Demographic Characteristics that Influence Self-Care among Stroke Survivors

According to worldwide population-based studies, age is a major risk factor to stroke [17]. These studies suggest that age is largely important risk factor for the development of stroke. This study however, established that age was not related significantly to stroke (p=0.160). This could be explained in part by data from longitudinal studies which established that the most powerful determinants of stroke are lifestyle related factors. Factors such as elevated blood pressure, smoking, daily physical activities, diet and weight are mentioned extensively in these studies.

This study noted that stroke occurrence is common among the employed professionals accounting to (n=25; 28%) than it is among students (n-11; 12.2%). This could be perceived from the age perspective as it is assumed that professionals have attained a higher age than students. It could also be

attributed to the psychosocial behavior of individuals. Evidence derived from a number of studies has demonstrated that marital strain, job stress and depression are associated with stroke [7, 18]. FurtherStudies have demonstrated that marriage bears a survival advantage [4].

A meta-analysis by the American Academy of Neurology [2] has postulated that having a high stress job may be linked to a higher risk of stroke. This has been attributed to the fact that high stress jobs lead to unhealthy behaviors, such as poor eating habits, smoking and a lack of exercise. Whereas these studies identified how work relates to the predisposition to stroke, they did not measure how the nature of work influenced the patient's self-care performance. Concerning occupational status, 19% of the respondents are unemployed, 12% were student, 26% were business people, 28% were professionals and 16% had other occupational status. According to this study, results shows that there lacks a significant association between the patients' self-care activities and their occupational status (p=0.184).

4.2. Clinical Impairments and Performance of Self-Care Among Stroke Survivors

The study analyzed the association between impairment variables on the one hand and PADL scores on the other. Results: Motor function correlated most strongly with self care (Barthel score coefficient б=.0825) and a significant positive correlation at 0.0001 alpha level. This means that an increase in clinical impairments translates to an increase in challenges in the performance of self-care among stroke survivors, these findings echo the findings by Sveen [14] study, that showed that the Barthel score was strongly related to motor function six months after stroke with correlation coefficients (r) of 0.73 and 0.75 for arm and leg respectively. We observe that leg motor function had a weaker correlation to PADL in this study. This may be due to differences in the motor scales applied, and to the fact that the term leg motor function actually reflects different aspects. Further in this study it was found that arm motor function had stronger correlates with all variables than leg function, which may indicate that arm function is clinically more dominant. Or the results may be due to a lower sensitivity of the leg motor function scale compared with the arm subscale, because the former comprises fewer items. Further studies showed no direct evidence between performance of activities and alertness or attention span [10].

4.3. Psychosocial Support and Performance of Self-Care Among Stroke Survivors

The Pearsons correlation revealed that the variables had a negative correlation in that an increase in social support yields a decrease in self-care performance. Empirical studies have demonstrated that individuals who enjoy help from friends, neighbors or family are deemed to enjoy better quality of life than those who do not. Social is defined as the experience of being cared for, loved, valued, and esteemed by others. Stroke survivors often experience diminished functional abilities and experience stigma and poor body image, all of which may lead to social isolation. An array of research has established that social support helps patients cope with their conditions and adhere to various aspects of treatment [12]. A number of previous studies have elicited gender as being a significant determinant in psychosocial support [19, 12]. In Zhang et al [19] study, women seemed to enjoy more social support than men, while in Onabajo et al [12] study, these is contradicted. Men were the greatest beneficiaries of psychosocial support. This study sought to understand the strength of relationship between gender and psychosocial support, however it did not establish any significant association between gender and psychosocial support P≥ 0.005 (p=0.602). However in another study, hardiness was seen as a major predictor of self care performance [6], in addition self efficacy was shown in a study by Nott et al., [11] as a significant mediator to improvement in performance of activities,

4.4. Level of Self-Care Among Stroke Survivors

In this study, it was established that all self-care activities recorded a positive correlation ranging from r=0.530 for taking the stairs to a strong r=0.823 for personal grooming. The correlation variables also returned a p ≤.005 (p=0.0001) for all variables measured indicating a strong positive correlation in the level of self-care. These study findings were echoed by a study by Kim et al,[9], in which study, self-care ability was measured using the functional independence measure (FIM), and their variables of interest included; Self-care, Sphincter control, Mobility, Locomotion, Communication, and Social cognition, and the results established a significant correlation among the FIM items and the quality of life (p<0.01). Also in agreement is a study by Szymon et al. [13], that found out, that 57.3% of stroke survivors had problems with mobility, 63.2% had pain and discomfort and overally 32.2% had difficulties in self care.

5. Conclusion and Recommendation

From this study it was concluded that, among the stroke survivors, advancement in Age and level of education were associated with difficulty in performance of self care activities, higher number of young people are suffering from stroke, clinical impairments had a significant effect on performance of self care, increased psychosocial support did not improve the performance of self care and finally there were varying levels of severity in performance of self care, from severely dependent to mildly dependent.

It is recommended that; Rehabilitation and other intervention strategies should be more focused on stroke survivors with advanced age by minimization of clinical impairments, secondly due to the emerging high numbers of young people being affected, there is need for preventive measures or interventions focusing on this category and finally more research to be focused in areas of; what specific level of education has a negative effect on self care performance and what level of psychosocial support leads to

negative performance.

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