

# Self-Care Activities for Patients' with Stroke

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**Abstract- Objective:** this study aimed to assess of self-care activities among stroke patients' and to find out the relationship between self-care activities and their demographic and clinical data such as age, gender, level of education and socioeconomic status.

**Methodology:** Descriptive correlation design (Quantitative) was adopted in the current study to achieve the early stated objectives. The study was carried out from November, 1st, 2015 to June, 26th, 2016 in Al Najaf city. A (Purposive Sample) of (100) adult patient with stroke who attending the outpatients in the consultation unit either for consultations, treatment, or both. Data collection was done by applying of the developed questionnaire consist of three parts, **part I** consists of Socio-demographic characteristics contain (7) items, **part II** consists of Medical History contain (2) items, and **part III** consists of Self-Care Activities for Patient with stroke contain (6) domains, Data collected by direct interview method with stroke patients'. Reliability of the questionnaire was determined through pilot study and validity determined through a panel of experts consists of (20) experts. Data was analyzed by using descriptive data analysis includes (Frequencies, Percentages, and Mean of scores), Cutoff point (0.66), and statistical figures (Bar charts, Pie Charts and Histogram) and Pearson's Correlation Coefficients (Reliability), and Inferential Data Analysis include Chi-Square to test independency distribution of observed frequencies.

**Results:** The result of the study present that the self-care activities are interdependent and there is a significant association between the patients' self-care activities with their age, gender, marital status before stroke, and occupational status after stroke, while there is high significant relationship between the patients' self-care activities occupational status before stroke. While there is a non-significant difference between self-care activities and their clinical data in all items except there is only a significant difference in duration of smoking.

**Conclusion:** The study concludes that most patients with stroke need assistance in their daily self-care activities.

**Recommendation:** The study recommends implementing a routine of self-care to manage stroke patients and to direct the patients by the nurses to be independent when they perform their self-care activities, a health education programs should be designed and implemented for nurses to increase and improve their abilities in managing stroke patients.

**Index Terms-** assessment, self-care, patient, stroke

## I. INTRODUCTION

Stroke can be considered a catastrophic event affecting all aspects of an individual's life. The effect of the disease on individual is unexpected and usually destructive, need a

large changes in ways of living for those who stay a life after stroke<sup>(1)</sup>. Stroke usually happens among old age people, and between all the neurologic diseases of adult life stroke ranks first in frequency and importance<sup>(2,3)</sup>.

The rate of people who need aid in everyday life has extremely enlarged and for the next ten years the number will be increased due to factors that are related to the population. The outcome of this has long effect on people e.g. difficult communication and decrease movement and life task<sup>(4)</sup>.

The inability level is different between patients depending on classification of stroke complain, the brain side affected, and the damaged area extent<sup>(5)</sup> Although remarkable improvement has been done in the treatment of stroke and nearly all after stroke management will persist to depend on recovery implications<sup>(6)</sup>.

Rehabilitation for stroke patients emphasized on self-care activities and can discharge from hospital to home with no efforts for preparation to work rehabilitation or society involvement<sup>(7)</sup>. Self-care is wide-ranging; it indicates person accountabilities for healthy lifestyle activities needed for their improvement and activities such as dealing with health circumstances<sup>(8)</sup>.

The conception of self-care is correlated with independence, self-rule and personal tasks for healthy performance, as well as for the improvement of actions needed to observe and control health cases<sup>(7)</sup>.

In Iraq, stroke is increasing as a health problem. The number of patients who are admitted to Iraqi hospitals in 2013 was 23442 and this number increased in 2014 to 28876 patients. In Al-Najaf City, the numbers of patients who were admitted to the Al-Najaf hospitals in 2013 was 1263 and this number increased in 2014 to 1264 patients<sup>(8,9)</sup>.

## Objectives of the study:

This study aimed to assess of self-care activities among stroke patients' and to find out the relationship between self-care activities and their demographic and clinical data such as age, gender, level of education and socioeconomic status.

## II. METHODOLOGY

### Design of the Study:

Descriptive correlation design (Quantitative) was adopted in the current study to achieve the early stated objectives. The study was carried out from November, 1<sup>st</sup>, 2015 to June, 26<sup>th</sup>, 2016 in Al Najaf city. A (Purposive Sample) of (100) adult patient with stroke who attending the outpatients in the consultation unit either for consultations, treatment, or both.

An assessment tool is adopted and developed by the researcher to assess of self-care activities for patients' with stroke. The final study instrument consists of three parts:

- **Part I: Socio-demographic characteristics:** consists of (7) items, which included age, gender, level of education, monthly income, residency, marital status and occupational status.

- **Part II: Medical History:** The second part of the questionnaire is composed of (2) items, which include:

**A- Present history:** include causes of the stroke, type of stroke, side of weakness, duration of stroke, and complication of stroke

**B- Past history:** include associated diseases, smoking, and Alcohol consumption.

**Part III: Self-Care Activities for Patient with Stroke:** This part of the questionnaire is comprised of (6) domains, including (grooming, feeding, Toileting, bathing, dressing, And physical ambulation) domains. Each domain includes three levels (independent, interdependent, and dependent). All the studied domains, developed with the aid of many scientific studies and guidelines<sup>(10)</sup>.

The data collection was done by applying of the developed questionnaire with aid of structured interview technique with the subjects as they were individually interviewed. The study subjects are interviewed in a similar way. The interview technique spends about 20-25 minutes for each subject.

**Statistical Analysis**

The data were analyzed by using statistical methods to evaluate the study result:

- **Descriptive Data Analysis:** This approach includes the following measurements: A- Frequencies and Percentages. B- Mean, Mean of scores (MS) and the assessment by cutoff point (66.66%) due to the three points of likert scales with three levels of assessment for self-care activities as dependent (1-1.66), interdependent (1.67-2.33), and independent (2.34-3), C- Pearson's Correlation Coefficients to determine the reliability of questionnaire (Internal consistency) through using Split Half. And

- **Inferential data analysis:** include Chi-Square test ( $X^2$ ) to test the association between the studies variables according to its type.

**Ethical consideration:**

This is one of the most basic principles before gathering the data, to keep the patient's values and self-respect. The researchers achieved this agreement from the ethical committee at the Faculty of Nursing / University of Kufa. The researchers promised to keep the patient's information confidential, and use these data for this study only then he explained the purpose of this study to each participant without affecting the routine visiting and care. In addition to above the researcher told each participant that this is an involuntary work, and they can leave any time even the interview process is not completed.

III. RESULTS

**Table (1): The Study Sample Distribution According to their demographic data**

Demographic Data	Rating And Intervals	Frequency	Percent
Age / years	<= 55	19	19
	56- 63	26	26
	64- 71	26	26
	72- 79	16	16
	80 and above	13	13
Gender	Male	64	64
	Female	36	36
Levels of education	Illiterate	51	51
	Able to read and write	23	23
	Primary school graduated	8	8
	Intermediateschool graduated	4	4
	Secondary school graduated	5	5
Monthly income	College or institute graduated	9	9
	Sufficient	11	11
	Sufficient to what limit	46	46
Residency	Insufficient	43	43
	Rural	22	22
Marital status before stroke	Urban	78	78
	Single	1	1
Marital status after stroke	Married	84	84
	Widowed	15	15
Occupational status before stroke	No changes	100	100
	Governmental employee	10	10
	Free worker	18	18
	Retired	28	28
	Disable	20	20

<b>Occupational status after stroke</b>	<b>Housewife</b>	<b>19</b>	<b>19</b>
	<b>Jobless</b>	<b>5</b>	<b>5</b>
	<b>No changes</b>	<b>62</b>	<b>62</b>
	<b>Change the job</b>	<b>9</b>	<b>9</b>
	<b>Loss the job</b>	<b>29</b>	<b>29</b>
<b>Total</b>		<b>100%</b>	<b>100%</b>

**N (100); Non-significant at p-value > 0.05; S, significant at p-value < 0.05; HS, highly significant at p-value < 0.01**

Table (1) shows that the following age groups (56-63) and (64-71) considered as the highest percentage (26%) for each one among the study sample, Regarding gender of the study sample, the study indicate that (64%) are males, also this table present that the majority of the sample (51%) are illiterates. The results indicate that (46%) of study sample had sufficient monthly income to some extent, (78%) are living in urban residential area,

the majority of the study sample (84%) was married before they getting stroke, while after stroke, the results show that the entire study sample (100%) have no change in their marital status. Concerning occupational status, about (28%) of the study sample were retired before stroke, and after stroke (62%) of the study have no change in occupational status, and (29%) loss jobs.

**Table (2): Statistical distribution of the study sample according to their present medical data**

<b>Medical Data</b>	<b>Rating Intervals</b>	<b>And</b>	<b>Frequency</b>	<b>Percent</b>
<b>Causes of stroke</b>	<b>Traumatic</b>		<b>8</b>	<b>8</b>
	<b>Pathologic</b>		<b>92</b>	<b>92</b>
<b>Type of stroke</b>	<b>Ischemic</b>		<b>72</b>	<b>72</b>
	<b>Hemorrhagic</b>		<b>28</b>	<b>28</b>
<b>Side weakness</b>	<b>Right side</b>		<b>49</b>	<b>49</b>
	<b>Left side</b>		<b>51</b>	<b>51</b>
<b>Duration of stroke / years</b>	<b>1-3</b>		<b>85</b>	<b>85</b>
	<b>4-6</b>		<b>5</b>	<b>5</b>
	<b>7-9</b>		<b>4</b>	<b>4</b>
	<b>10 and more</b>		<b>6</b>	<b>6</b>

This table shows, that the majority of the study sample have stroke related to pathologic causes (92%). In addition to the type of stroke about (72%) of the sample have ischemic stroke. Regarding to the side of weakness in the body, the results reveals

that the majority of the study subjects (51%) were with Left side weakness. In regards to duration of disease, the table shows that majority of the sample (85%) their disease duration were from (1-3).

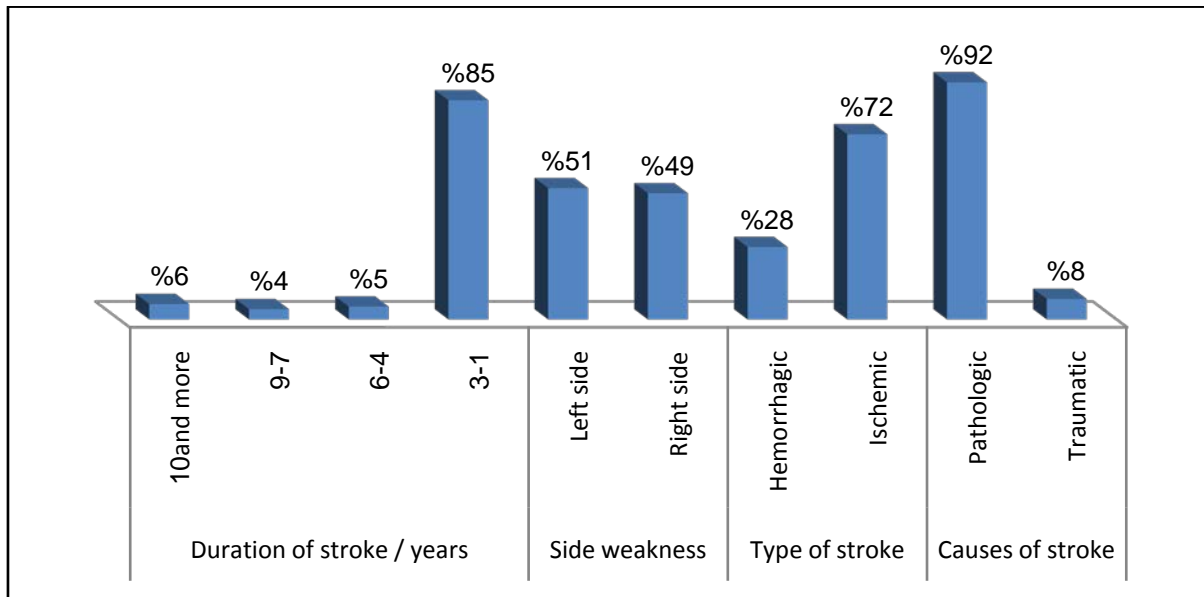


Figure (4.1) the Study Sample Distribution in Regards to the Present Medical Data

Table (3): the Study Sample Distribution According to the Complications of Stroke

Complications of stroke	Rating And Intervals	Frequency	Percent
Pneumonia	Yes	31	31
	No	69	69
Epilepsy	Yes	8	8
	No	92	92
Deep vein thrombosis	Yes	5	5
	No	95	95
Shoulder Pain	Yes	50	50
	No	50	50
Decubitus Ulcer	Yes	12	12
	No	88	88
Urinary tract infection	Yes	40	40
	No	60	60
Constipation	Yes	53	53
	No	47	47
Joint Contracture	Yes	12	12
	No	88	88
Hemiplegia	Yes	83	83
	No	17	17
Speech disturbance	Yes	92	92
	No	8	8
Visual disturbance	Yes	66	66
	No	34	34
Other complications	No other diseases	92	92
	Headache	2	2
	Peptic ulcer	4	4
	Memory loss	2	2

This table shows, that the majority of the study samples (69%) are without Pneumonia, (92%) don't complain from epilepsy and (95%) of the study results have no deep vein thrombosis. In addition, the majority of the study sample shows that half (50%) of the study sample has shoulder Pain. In

regarding to the subjects the majority (88%) of the study sample have no complain from decubitus ulcer. Relative to the urinary tract infection, the majority of the study subjects (60%) have negative response. In regarding to the constipation, more than half (53%) of the study sample have constipation .the results

show that the majority of the study sample (88%) has no joint contracture. Most of the study subjects (83%) have hemiplegia. In speech disturbance, it shows that the higher percentage (92%) were having speech disturbance, In addition, the study results reveal that (66%) of study sample with visual disturbance.

**Table (4): statistical distribution of the study sample according to their past medical history**

Past Medical history	Rating And Intervals	Frequency	Percent
Diabetes mellitus	Yes	52	52
	No	48	48
Ischemic heart diseases	Yes	54	54
	No	46	46
Hypertension	Yes	84	84
	No	16	16
Heart failure	Yes	15	15
	No	85	85
Renal diseases	Yes	14	14
	No	86	86
Other diseases	No	96	96
	Cholelithiasis	1	1
	hypothyroidism	2	2
	peptic ulcer & arthritis	1	1
Smoking	Yes	44	44
	No	56	56
Duration of smoking	<= 3	57	57
	4 - 13	4	4
	14 - 23	10	10
	24 - 33	15	15
	34 and above	14	14
Number of cigarettes / day	Nonsmoker	56	56
	10 and less	2	2
	11-20	7	7
	21-30	9	9
	31-40	10	10
Alcohol Consumption	Yes	1	1
	No	99	99
Duration of alcohol / years	Not alcoholic	99	99
	30	1	1
Frequency of taking alcohol / day	Not alcoholic	99	99
	Once a day	1	1

Table (4.4) shows that in regards to past history, the majority of the study sample (52%) have Diabetes mellitus, and (54%) have history of Ischemic heart diseases. Moreover, (84%) of the study sample complained from hypertension, while (85%) of them have no heart failure, and (86%) have no renal diseases. In addition, the study results reveal that more than half of the study samples (56%) don't smoke. Finally, alcohol consumption shows major group of the study sample (99%) don't use alcohol.

**Table (5): Statistical distribution of the study sample responses to the self-care activities**

self-care activities	Rating	Frequency	Percent	M.S.	Assessment
1. Grooming	dependents	6	6	2.31	Interdependent
	Interdependent	57	57		
	independent	37	37		
2. Feeding	dependents	2	2	2.45	Independents
	Interdependent	51	51		
	independent	47	47		
3. Toileting	dependents	15	15	2.13	Interdependent
	Interdependent	57	57		

	<b>independent</b>	<b>28</b>	<b>28</b>		
<b>4. Bathing</b>	<b>dependents</b>	<b>18</b>	<b>18</b>	<b>2.02</b>	<b>Interdependent</b>
	<b>Interdependent</b>	<b>62</b>	<b>62</b>		
	<b>independent</b>	<b>20</b>	<b>20</b>		
<b>5. Dressing</b>	<b>dependents</b>	<b>12</b>	<b>12</b>	<b>2.1</b>	<b>Interdependent</b>
	<b>Interdependent</b>	<b>66</b>	<b>66</b>		
	<b>independent</b>	<b>22</b>	<b>22</b>		
<b>6.Physical ambulation</b>	<b>dependents</b>	<b>27</b>	<b>27</b>	<b>1.84</b>	<b>Interdependent</b>
	<b>Interdependent</b>	<b>62</b>	<b>62</b>		
	<b>independent</b>	<b>11</b>	<b>11</b>		

N(100), independent (mean of score 2.34 and more), interdependent (mean of score 1.67-2.33), dependent (mean of score (1-1.66), cut off point (0.66)

Table 5 shows that the sample responses to the following self-care activities (grooming, toileting, bathing, dressing, and physical ambulation) were interdependent, while the sample self-care activities were independent in feeding domain.

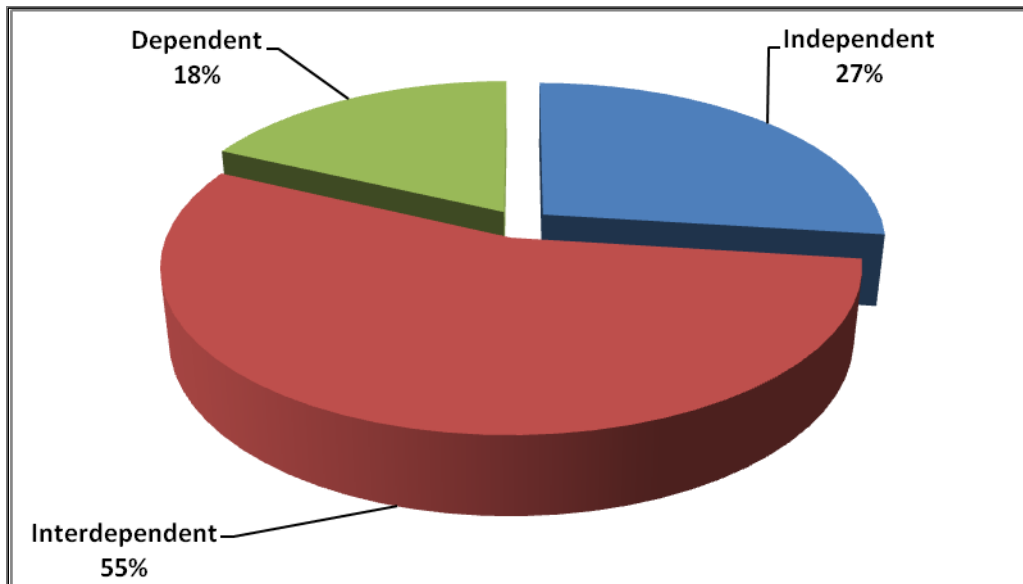


Figure (4.2) Overall assessment of the self-care activities of stroke patients

Table (6): Relationship between patients' self-care activities and their demographic data

Demographic Data	Sig.	D.F	P-Value
Age / years	$\chi^2=17.976$	8	0.021 S
Gender	$\chi^2=9.155$	2	0.01 S
Levels of education	$\chi^2=12.471$	10	0.255 NS
Monthly income	$\chi^2=7.679$	4	0.104 NS
Residency	$\chi^2=1.666$	2	0.435 NS
Marital status before stroke	$\chi^2=12.572$	4	0.014 S
Occupational status before stroke	$\chi^2=34.089$	10	0.001 HS
Occupational status after stroke	$\chi^2=13.660$	6	0.034 S

$\chi^2$ = chi square; S= significant; Ns= non-significant; D.F= degree of freedom; HS = high significant

The result of this table shows that there is a significant association between the patients' self-care activities with their age, gender, marital status before stroke, and occupational status

after stroke, while there is high significant relationship between the patients' self-care activities occupational status before stroke at p-value less than 0.05.

**Table (7): Relationship between the patients' self-care activities and the problems and complications related to stroke**

Complications	Sig. value	D.F	P-Value
Pneumonia	$\chi^2=1.902$	2	0.386 NS
Epilepsy	$\chi^2=1.003$	2	0.606 NS
Deep venous thrombosis	$\chi^2=1.000$	26	27 NS
Painful shoulder	$\chi^2=1.833$	2	0.4 NS
Pressure sore	$\chi^2=0.890$	2	0.641 NS
Urinary infection	$\chi^2=11.160$	2	0.004 HS
Constipation	$\chi^2=9.507$	2	0.009 HS
Joint Contracture	$\chi^2=7.953$	2	0.019 S
Hemiplegia	$\chi^2=14.894$	2	0.001 HS
Speech disturbance	$\chi^2=3.308$	2	0.191 NS
Visual deficit	$\chi^2=8.591$	2	0.014 S
Other	$\chi^2=5.060$	6	0.536 NS

$\chi^2$ = chi square; S= significant; Ns= non-significant; D.F= degree of freedom; HS = high significant

Table 7 shows that there were a high-significant relationship between the patients' self-care activities and complications (urinary infection, constipation, and hemiplegia), while there were significant relationship between the patients' self-care activities and complications (visual deficit and joint contracture) at p-value less than 0.01.

#### IV. DISCUSSION

According to the study results indicate that the age groups (56-63) and (64-71) considered as the highest and equal percentage for each age group of the study sample (26%), this result is in agreement with Subha, et al., (2015) their result indicated that the patients within age 56 years old are the dominant age for the study sample<sup>(11)</sup>. This reveals that stroke is more common among old age people, which can be the beginning of many physiological changes which include blood vessels that supply the brain this may be reduced due to narrowing or blockage of these vessels.

Regarding gender, the study indicates that (64%) were males, Zhang, et al., (2011) indicated in their study that the

majority of the study subjects were males<sup>(12)</sup>. Also Kamel, et al., (2010) in their study show that the study population which were (50) stroke patient, (62%) males and (38%) females, and Jun, et al., (2015) find out that over half of the study sample are males<sup>(1)</sup>. Additionally, this study indicates that over half of the sample (51%) is illiterates, several previous studies were in agreement with the present study result Hassan & Mohammed (2010); and Al-Yasiri & Naser (2015) they found that the majority of their studies subjects were illiterates<sup>(13,14)</sup>.

Regarding socio-economic status, the study results indicate that (46%) of study sample had sufficient monthly income to some extent, and (78%) of them are living in urban area, The study finding comes with Jun, et al., (2015) their study shows that 72% from the subjects in the study staying in city area<sup>(13)</sup>, also Hassan & Mohammed (2010) shows in their results that (62%) of the study sample were living at a big cities rather than the rural area. Stroke patient who live in urban area have more chances to receive care within short time in hospitals usually established in the city, this chance become less for patient in rural area which need long distance to transfer from home to health services that mainly provided for them in the city<sup>(14)</sup>.



Regarding to the majority of the study sample (84%) were married before they get stroke, while after stroke, the results show that the entire study sample (100%) have no change in their marital status, this finding is consistent with the Iraqis culture as the families continues in good relation with each other in catastrophic event and after injury, the spouse continue with their partner as both male and female have legal commitment about their marriage.

Concerning occupational status, about (62%) of the study has no change in occupational status, while (29%) loss their jobs. Around (28%) of the study sample were retired before stroke, and after stroke Artal, et al., (2009) in their study shows that (47.8%) of study sample were retired and (16.7%) still working after getting stroke. The changes in functional ability of patient after stroke may have little improvement with long rehabilitation period that may take months or years which make it difficult for most of the patients to return back to work<sup>(16)</sup>.

About clinical data, the result of the study shows that around (92%) of the sample with stroke from pathologic causes. While in the type of stroke the results shows that the majority of the study subjects (72%) diagnosed with Ischemic type of stroke, any studies results emphasized that ischemic stroke take the highest percent than hemorrhagic stroke, from these studies; Hassoun, et al., (2016) in their study(34 patients out of 50) had the ischemic type (68%),Thirty two percent of the patients (16 patients out of 50) had the hemorrhagic type of stroke (32%)<sup>(17)</sup>, also Kamel, et al., (2010) emphasized that Cerebral ischemic stroke was detected in 36 (72%) patients, and cerebral hemorrhage in 14 (36%) patients<sup>(1)</sup>.

About the side of stroke, this study shows that (51%) of the study subjects have left side stroke. Hedna, et al., (2013)concluded that(54%) of their sample have left-hemispheric strokes while the right hemispheric strokes are (46%)<sup>(18)</sup>,in addition, regarding duration of disease the highest duration was from (1-3) years with percentage of (85%).This result is supported by Hassan & Mohammed, (2010)who emphasized that stroke duration in the study subject with that devastating diseases mainly distributed with in this range of years (<5) and they accounted for (70.6%) of the study sample<sup>(14)</sup>.

Regarding to the majority of the study sample (69%) of the patients with stroke has no Pneumonia. These finding agrees with study of Jaffer, et al., (2012) in their study of Stroke Related Pneumonia Incidence and Possible Risk Factors 11 (13.4%) patients developed stroke associated pneumonia from 82 stroke patients admitted to medical wards<sup>(19)</sup>.

In addition to the stroke, the higher percentage (92%) of study results had no epilepsy, this result is supported by Burneo, et al., (2010) they include (5027) patients as a sample in the study; they found that seizures happened in (2.7%) of them<sup>(20)</sup>. Also this result is supported by the, Navarro, et al., (2008) in his study 14 (1.3%) had epileptic seizure. Stroke is the most common cause of seizures that occurs as spasms in older people, and considered as a sign of injury in the brain especially in the first few weeks after stroke due to sudden unorganized electrical activity in the brain cells<sup>(21)</sup>.

Regarding complications to the stroke sample, the results shows that the majority of the study subjects (95%) with no deep vein thrombosis (DVT). This result come along with Zhang, et

al., (2011) and Navarro, et al., (2008), both shows that majority of their sample have no DVT<sup>(12,21)</sup>.

Concerning shoulder Pain complications, the majority of the study sample have shoulder pain. This result is supported by Bates, et al., (2005) they emphasize in their study that majority of their stroke sample experience almost one episode of shoulder pain during their first year of disease<sup>(22)</sup>. Also this result may come along with another study which reveals that high correlation between shoulder pain and older age after stroke (Hassan, 2006). The reason of shoulder pain could be spasticity which can lead to reduced activity and can delay rehabilitation and affect the patient general condition<sup>(23)</sup>.

Regarding to decubitus ulcer, the majority of the study sample had no decubitus ulcer. These finding agrees with previous study which claimed in their study that (2.6%) from the study subjects has decubitus ulcer (Navarro, et al., 2008). Decubitus ulcer can happen due to pressure on certain area of the body of stroke patients because of their immobility for long time, with the reduction of observation and action like massage of pressure area, skin will be damaged and it can involve deep tissue which adds more difficulties to their condition<sup>(21)</sup>.

In regards to urinary tract complications, the highest percent of the study sample (40%) had no urinary tract infection (UTI). This result agree with previous study Westendorp, et al., (2011) find that (10%) from 87 subject in their study has UTI and Johnsen, et al., (2012) emphasized that UTI is one of the common complication in patients admitted with acute stroke<sup>(24,25)</sup>.

In regarding to the constipation, (53%) of the study sample have constipation, Navarro et al., (2008) in their study that the 75% from the study subjects has constipation<sup>(33)</sup>. Also Yi et al., (2011) in their study bowel function can be affected with constipation as stroke patient have poor activities of daily living<sup>(26)</sup>.

In addition, the study subjects respond to hemiplegia which is the paralysis of one side of the body, the higher percentage (83%) for having hemiplegia. This result is supported with the study of Okawara&Usuda, (2015) which indicated 66% of stroke patients with hemiplegia and they were unable to adapt to changing visual or surface conditions<sup>(27)</sup>. The speech disturbance shows that (92%) of study sample had speech disturbances, this result is supported with the Stroke Association Report, (2012) which shows that the majority of the study subjects have communication problems post a stroke. It is expected that around third of patient with stroke will have difficulties of communication (aphasia or dysphasia) post stroke<sup>(28)</sup>.

Concerning the study results reveal that more than half of the study sample (66%) had visual disturbance. This result agrees with Hinkle & Cheever, (2014) they mentioned that visual disturbance's may happen because of stroke and may be momentary or permanent and the side of vision which is affected matches to the body side that is paralyzed<sup>(29)</sup>.

Regarding diabetes mellitus among stroke patients, the results present that (52%) of study subjects have diabetes. This result is in agreement with Wu, et al., (2010) in their study they concluded that DM were more frequent in the older group than in the younger group of patients with stroke. While in Ischemic heart diseases, the majority of the study sample (54%) of the present study had ischemic heart diseases<sup>(30)</sup>, Raju, et al., (2010)



their results came in opposite to the results of another study done by who find that from stroke patient sample which include (162) only (24.7%) have Ischemic heart disease<sup>(31)</sup>.

In addition, the majority of the sample (84%) has hypertension. This result is agrees with many previous studies who find that most common co morbidity was hypertension (Hassan & Mohammed, 2010; Duff, et al., 2014; Sahathevan, et al., 2015)<sup>(14,32,33)</sup>.

In regard to Heart failure, the majority of the study sample (85%) has no Heart failure that happens because chronic heart failure is a common disease and a major risk factor for ischemic stroke<sup>(34)</sup>.

For renal diseases, the majority of the study sample (86%) has no renal diseases. This result is supported by Kamel, et al., (2010) their study shows that (90%) of their sample has no renal diseases<sup>(1)</sup>.

The results of the study reveal that (56%) of the study sample are no smoker. This result is in agreement by Sanakayala, et al., (2015) which emphasize in their study that people with smoking history were (23.7%). Regarding alcohol consumption the present study shows that the major group of the study sample(99%) is not alcoholic and only 1% is alcoholic. This result is supported by Sanakayala, et al., (2015) they emphasize in their study that the sample who used to drink alcohol is (3.5%)<sup>(35)</sup>.

According to (Table 5) in the results, emphasized on self-care activities, the overall assessments for patients' self-care activities were interdependent. It shows that the sample responses to the following self-care activities (grooming, toileting, bathing, dressing, and physical ambulation) were interdependent which mean they need some assistance in performing these activities, while the sample self-care activities were independent in feeding domain which means they don't need any assistance.

The reason for these results may be related to the idea of stroke is a life catastrophic issue that affects the entire human dimensions physically and psychosocially. So when the physical mobility affected by stroke due to the impairment in the neural supply to the muscles, then our conclusion is that patients may have more limitation in the physical mobility and this can affect the self-care activities. These results agree with Guidetti, (2008) she concluded in her study that the stroke are a life-community change, also stroke refers to a big challenge when the person need to perform their self-care activities because these activities become difficult to perform it after stroke due to the physical impairment<sup>(36)</sup>.

In addition, Theofanidis, et al.,(2015) they stated that during the first year nearly a third of stroke patients will die most of them of during the first week of starting the disease, the second third will be permanently restricted in activity and dependent on the help of others, while the last third will become independent function when return home<sup>(37)</sup>. Also Tuyen, (2015) in their results indicated that most of subjects required moderate and high assistance for daily activities<sup>(38)</sup>.

According to (Table 6,7) in the results, show that there is a positive relationship between the patients' self-care activities and their age, gender, marital status before stroke, and occupational status after stroke, while there is high significant relationship between the patients' self-care activities and occupational status

before stroke. The earlier results is in agreement with Gall, et al., (2012); Moorley, (2012) their findings shows that there is a positive association between self-care activities and gender<sup>(39,40)</sup>.

In addition, Bakken, et al., (2012) found that there is positive association between the activities of patients with stroke and their age groups, while there is a poor association between patient's activities and their levels of education and other demographic data<sup>(41)</sup>. Also Zaky, et al., (2015) they found that there is positive association between the daily living activities and the patients' marital status<sup>(42)</sup>.

Also Heikinheimo & Chimbayo, (2015) their findings indicate that there is a positive association between the daily activities and the patients age and gender<sup>(43)</sup>. And Jun, et al., (2015); Wolf, et al., (2009) they determine the occupational therapy practices after stroke; they find that there is a significant impact of the patients self-care activities on their occupational status after stroke<sup>(7,13)</sup>.

Also there is a non-significant difference between self-care activities and their clinical data in all items except there is only a significant difference in duration of smoking at p value 0.018. Also McCarthy, et al., (2013) mentioned that there is a positive association between the stroke patients' self-care activities and the persistent of smoking<sup>(44)</sup>.

In addition, the study results regarding clinical data, these results come because the stroke patients after one year they become adapted with different clinical data and some of these data are captured with their treatment and adherence to therapeutic recommendations, so the effect of these clinical data on self-care activities will minimize after one year of stroke, furthermore, the types of stroke often cause the same clinical data so there is in general no significant effect on patients self-care activities .

In addition, this study shows that there are a strong relationship between the patients' self-care activities and complications (urinary infection, constipation, and hemiplegia), while there were significant relationship between the patients' self-care activities and complications (visual deficit and joint contracture). These results agree with Ingeman, et al., (2011); Kumar, et al., (2010) their study indicate that there is a significant impact of the clinical data specifically urinary tract infection, constipation, and hemiplegia on the patients self-care activities<sup>(45,46)</sup>.

In addition, Civelek, et al., (2016) studied the (medical complications following stroke), they found that there is a significant association between the self-care activities after stroke with joint contractures and visual problems<sup>(47)</sup>.

## V. CONCLUSIONS

All the study patients are completely independent in feeding themselves in their daily self-care activities. But most patients with stroke need moderate assistance in performing grooming, toileting, bathing, dressing, and ambulation in their daily self-care activities.

## VI. RECOMMENDATIONS

- 1- An implement a routine of self-care to manage stroke patients and to direct the patients by the nurses to be independent when they perform their self-care activities .
- 2- A health education programs should be designed and implemented for nurses to increase and improve their abilities in managing stroke patients.
- 3- A written nursing policies and procedures should be provided in the center that deals with the management of patients' problems that face the patient during assisting them to perform self-care activities in order to be followed by nurses in same manner to determine a scientific methods and steps of care when dealing with stroke patient.
- 4- Periodic continuous educational courses should be provided to update nurse's knowledge and practice about self-care activities for patients with stroke

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