Assessment of Biopsychosocial Needs for Patients With Chronic Cerebrovascular Stroke

[1]Eman Talaat El-shamaa*, [2]Mohamed Hassan El-Banouby and [3]Neven Mustafa

[1]Assistant professor of Medical Surgical Nursing, Faculty of Nursing, Ain Shams University, Egypt.
[2]Professor of Neuro-psychiatry & geriatrics faculty of Medicine, Ain Shams University, Egypt
[3]BSc Nursing , Ain Shams University, Egypt

ABSTRACT: Cerebrovascular stroke is one of the most common diseases. It is ranks as the third leading cause of death, behind heart disease and cancer with 4.5 million survivors of stroke, two thirds of whom are permanently disabled**.**

Objective: The present study aimed to assess the physical and psychosocial needs for patients with chronic cerebrovascular stroke.

Methods: Data were collected from two settings, the neurology clinic and physiotherapy clinic in Ain Shams University Hospital. The study was conducted on all the available patients who visited the outpatient clinics within a period of six months and meet the selective criteria such as 1-Both sex, 2- Diagnosed with cerebovascular stroke excluded comatose patients according to glasco coma scale.,

3- The patient in the chronic phase of stroke. Data were collected through :(1) An interviewing questionnaire sheet for assessing the socio-demographic characterstics and the activities of daily living scales for assessing physical needs. (2) Geriatrics depression scale and Taylor scale of anxiety for assessing psychological needs.

(3) Social dysfunction rating scale for assessing social needs**.**

Results This study concluded that, there is lack of physical condition which affect on psychological and social conditions. The study recommended the establishment of specialized stroke rehabilitation units that deal with all types of rehabilitation (physical, psychological, occupational and speech therapy). Follow up care should be available for patients with disability due to cerebrovascular stroke through phone call, home health visits and clinic visits to pin-point problems and solve them. Counseling for patients and their families to improve the physical and psychosocial condition.

Key Words: Stroke**,** Cerebrovascular, Needs, Physical, Psychological.

INTRODUCTION

Cerebrovascular accidents, the third leading cause of death in the United States, occur as brain ischemia or brain hemorrhage. In brain ischemia there is an inadequate supply of blood to areas of the brain due to blockage of blood vessels or general circulatory failure. Brain hemorrhage, either subarachnoid hemorrhage or intracerebral hemorrhage, is less common than brain ischemia. Risk factors for cerebrovascular accidents include hypertension, hyperlipidemia, diabetes mellitus, history of transient ischemic attacks, and family history of cardiovascular disease [1].

Every year, millions of people survive a stroke and suffer brain damage with varying degrees of continuing mental and physical disability [2]. Although 14% of stroke survivors achieve a full recovery in physical function, between 25% and 50% require at least some assistance with activities of daily

*Corresponding author: Dr. Eman Talaat El-shamaa, Assistant professor of Medical Surgical Nursing Faculty of Nursing, Ain Shams University, Egypt

living, and half experience severe long-term effects such as partial paralysis. Consequently, activity intolerance is common among stroke survivors especially in the elderly [3].

According to[4], in a multicenter study, prevalence of stroke has been found to be 4.6/1000 in urban areas, 5.6/1000 in rural areas and 4.6/1000 in suburban areas with a mean 4.5/1000. Ischemia constituted 78% of all strokes. Middle cerebral artery (MCA) was the main vessel involved (73.7%) followed by vertebro-basilar system (15.8%).

Need is a state of want, or a condition arising from a deficiency status [5]. Needs assessment is the systemic appraisal of the type, depth, and nature of health needs/problems as perceived by clients, health providers, or both in a given community [6]. Needs assessment used to determine the programs requiring attention and the way to best meet these needs [7].

The Biopsychosocial model uses systems approach in attempting to integrate biological, psychological, and social aspects of the patient's condition. This approach inherently validates the potential importance of biogenetic, psychological, social and environmental factors in the diagnosis and treatment of the patient [8].

The advanced practice nurse (APN) plays an important role in patient care for those with chronic illness. Health care visits may be frequent and require the services of APN skilled assessment of the changing condition and response to therapy, support during diagnostic evaluation, education about medications and complex treatment plans also co-ordination of home care therapies and referral services and communication between all members of the health care team including patient and family. The involvement of the nurse in the initial and ongoing educational process is beneficial for the physician, patient and family. The nurse can present a formal educational plan and schedule appointment to review the various aspects of self-management and reinforce their importance [9].

Stroke is a major health problem, not only due to its fatality, but also due to large number of survivors with disability and dependency, which is considered an enormous economic burden especially with aging population. The patient with disability after stroke is faced with physical, psychological and social needs, which must be assessed.

Aim of the Study

This study is aiming to:

1- Assess the physical needs for patients with chronic cerebrovascular stroke.

2- Assess the psychosocial needs for patients with chronic cerebrovascular stroke.

Research questions:

1- What are the physical needs for patients with chronic cerebrovascular stroke?
2- What are the psychosocial needs for patients with chronic cerebrovascular stroke?

SUBJECTS AND METHODS

I- Technical Design

The technical design includes the setting, subjects and tools used in the study.

A- Setting:

The present study was conducted in the outpatient clinics (Neurology & Physiotherapy Clinics) at Ain Shams University Hospital. This setting chooses because the patients with chronic cerebrovascular stroke followed rehabilitation course in the physiotherapy clinic.

B- Subjects

Convenience sample who visited the outpatient clinics within a period of six months and met the selective criteria were included in the study sample.

In this period, the researcher met sixty patients (39 males and 21 females).

Criteria for selection:

- Both sexes.
- Diagnosed with cereborvascular stroke.
- Patients in the chronic phase of stroke, whose irreversible illness caused permanent physical impairment and requires long-term health care [10].

C- Tools of data collection

Data were collected using the following tools:
An interviewing questionnaire sheet, divided into two parts:
1-The socio-demographic characteristics of the study sample.
2-Activities of Daily Living Scales.

3- Geriatric Depression Scale and Taylor Anxiety Scale.
4-Social Dysfunction Rating Scale.

I-   *An interviewing questionnaire sheet:* An Arabic questionnaire, suitable to the study sample, was filled by the researcher.
This questionnaire sheet is divided into two parts:
1-Socio-demographic characteristics of the study samples such as name, age, sex, address, marital status, occupation, and level of education.
2- Activities of daily living scales:
Using the two activities of daily living scales; Katz Scale of basic activity of daily living "ADLs" and Lawton scale of Instrumental Activities of Daily Living Scale "IADLs". Which modified from the comprehensive geriatric assessment sheet used by the geriatric department at Ain Shams University Hospital and also depending on the previous master thesis in medical surgical department, Faculty of Nursing, Ain Shams University [11].
It was developed by [12]. Katz Scale of basic activities of daily living "ADLs", this is a commonly used measure of functional status to assess six basic functions of independent living (bathing, dressing, toileting, transfers, continence, and feeding).

Scoring system:

In ADLs each function is rated on a three point scale.
- 0 = Completely dependent.
- 1 = Partially dependent.
- 2 = Independent.
The total score for ADLs ranges from 0 to 12. The patient's scores were collected and ranged as follows:
- 0-5   = Completely dependent.
- 6-9   = Partially dependent.
- 10-12= Independent.
It was developed by [13]. Lawton scale of instrumental activities of daily living "IADLs" includes the more complex activities that are essential to community living situation.

Scoring system:

In IADLs each function is rated on a three-point scale
- 0 = completely dependent.
- 1 = partially dependent.
- 2 = Independent.
The total score for IADLs ranges from 0 to 16. The patient's scores were collected and ranged as follows:

- 0-7   = completely dependent.
- 8-12 = partially dependent.
- 13-16 = Independent.

II- Geriatric Depression Scale and Taylor Anxiety Scale :

Geriatric Depression Scale (short form):

The Geriatric Depression Scale (GDS) was conducted to assess the mood state of patients. It was designed originally by [14] and translated and validated on Egyptian population by [15]. And depending on the previous master of Faculty of Nursing at Ain Shams University [11].

Scoring system:

The Geriatric Depression Scale included 15 items, in all items Yes =1 & No=0 except for five positive items in which Yes = 0 & No=1. The patient's scores were collected and ranged as follows:
- > 5   = Normal.
- 5-7   = Mild depressed.
- 8-10   = Moderate depressed.
- 11-15 = Severe depressed.

 (1) Taylor Anxiety Scale:
Taylor Anxiety Scale was designed by Janet Taylor to measure a generalized tendency to experience anxiety in the face of stress. It borrowed items from the Minnesota Multiphase Personality Inventory (1989), which is an empirically based test of adult psychopathology designed to assess the major symptoms and signs of social and personal maladjustment commonly indicative of disabling psychological dysfunction.

Scoring system:

Taylor Anxiety Scale consists of 50 statements that have an answer of "Yes" or "No", the answer of yes is scored 1.
When items were summed, raw scores for each scale showed that:
Score below 16 referred to non to minimal anxiety level.
Score from 16 to 25 referred to mild anxiety level.
Score from 26 to 35 referred to moderate anxiety level.
Score above 35 referred to severe anxiety level.
It was carried out as an interview questionnaire.

III- Social Dysfunction Rating Scale:

The social dysfunction rating scale measures the dysfunction aspect of adjustment. Effective coping problem solving and adaptive behavior are integral part to healthy social functioning [16].

Scoring system:

Each item is ranged from 0-5, classified as following:
- 0 Very severe.
- 1 Severe.
- 2 Moderate.
- 3 Mild.
- 4 Very mild
- 5 No.

The total score (100) is divided as following;
0 - < 20 : Very high level of social dysfunction.
20 - < 40: High level of social dysfunction.
40 - < 60: Moderate level of social dysfunction.
60 - < 80: Mild level of social dysfunction.
80 - < 100: No social dysfunction [17].

II- Operational Design:

The operational design included pilot study, field work, and limitation of the study.

Pilot study

A pilot study was applied on 6 patients with chronic cerebrovascular stroke (those patients were excluded from the study sample) for testing clarity, arrangement, and content applicability and reliability of items and time consuming. Based on the finding of the pilot study, no changes were needed on the tools.

Field work

Data collection of this study was carried out through six months, in the period from the beginning of January, 2008 till the end of June, 2008.
The researcher visited the selected settings three days per week as Saturdays and Mondays in the Neurology Clinic and Thursdays in the Physiotherapy Clinic.
The purpose of the study was explained for the subjects included in the study.
In every visit, the researcher met from 1-2 patients, the data were collected after insuring that they fit the criteria for selection either before or after the physician visit. The interviewing questionnaire needed from 20 to 30 minutes to be completed, and filled it through asking the patients about its items.

Limitations:

Some patients refused to share in the research and others refused to complete the assessment so they were excluded from the study sample.

III- Administrative Design

To carry out the study. The necessary approval was obtained from the Hospital Director of Ain Shams University Hospital. An oral consent was taken from patients in order to participate in research process.

IV- Statistical Design

Analysis of data was done by an IBM computer using (SPSS) Statistical Program for Social Science as follows:
- Description of quantitative variables as mean, SD and range
- Description of qualitative variables as number and percentage
- Chi- square test was used to compare qualitative variables
- Correlation co-efficient test was used to rank different variables against each others either positively or inversely .
$P > 0.05$ Non significant
$P < 0.05$ Significant
$P < 0.01$ Highly significant

RESULTS

Part I: Socio-demographic Characteristics of Patients with Chronic Cerebrovascular Stroke
Table (1): This table shows, socio-demographic characteristics of the male and female subjects, it reveals that, the mean age of the males was 49.5 ± 12, while that of the females was 52.9 ± 17.
Regarding to occupation, results reveal that, (59%) were manual workers in the male group, while (57.8%) were housewives.
Concerning educational level, results reveal that, (36%) were illiterate in males, while in females there were (57.1%). The same table reveals also that, the majority of patients in both sexes (males & females) were married (94.9%, 85.7% respectively).

Table (1): Socio-demographic characteristics of chronic cerebrovascular stroke among study group as regards age, occupation, educational level and marital status

Socio-demographic Data	Males N=39	%	Females N=21	%	Total N=60	%
Age (yrs)						
<40	0	0	2	9.5	2	3.3
40-49	12	30.8	6	28.6	18	30
50-59	13	33.3	7	33.3	20	33.3
60-69	11	28.2	4	19	15	25
≥70	3	7.7	2	9.5	5	8.3
Mean age ± SD	49.5±12		52.9±17		50.5±13.5	
Occupation						
Manual worker	23	59	8	38.1	31	51.7
Clerk worker	16	41	1	4.8	17	16.7
Housewife	-	-	12	57.8	12	20
Education level						
Illiterate	14	36	12	57.1	26	43.3
Read and write	6	15.4	3	14.3	9	15
Primary school	2	5.1	1	4.8	3	5
Prep school	4	10.2	2	9.5	6	10
Secondary school	4	10.2	1	4.8	5	8.3
University	9	23.1	2	9.5	11	18.3
Marital status						
Single	0	0	0	0	0	0
Married	37	94.9	18	85.7	55	91.7
Divorced	1	2.6	0	0	1	1.7
Widowed	1	2.6	3	14.3	4	6.7

Part II: Physical Needs of Patients with Chronic Cerebrovascular Stroke

Table (2): Relation between socio-demographic characteristics of chronic cerebrovascular stroke and ADLs

Socio-demographic Data	Independent N	%	Partially Dependant N	%	Completely Dependant N	%	P-value
Age (yrs)							
<40	1	50	1	50	0	0	>0.05
40-49	12	66.7	5	27.8	1	5.6	
50-59	12	60	8	40	0	0	
60-69	9	60	5	33.3	1	6.7	
≥70	1	20	4	80	0	0	
Occupation							
Manual worker	14	45.2	1	48.4	2	6.5	<0.05*
Clerk worker	13	76.5	5	23.5	0	0	
Housewife	8	66.7	4	33.3	0	0	
Education level							
Illiterate	14	53.8	1	38.5	2	7.7	>0.05
Read and write	3	33.3	0	66.7	0	0	
Primary school	1	33.3	6	66.7	0	0	
Prep school	3	50	2	50	0	0	
Secondary school	4	80	3	20	0	0	
University	10	90	1	9.1	0	0	
Marital status							
Single	0	0	0	0	2	3.6	>0.05
Married	32	58.2	2	38.2	0	0	
Divorced	1	100	1	0	0	0	
Widowed	2	50	0	50	0	0	

Table (2): This table shows that slightly more than three quarters (76.5%) of clerk workers and more than two thirds (66.7%) of housewife are independent, representing the highest percentages with significant association between occupation and ADLs. On the other hand, no statistically significant relations were detected between other sociodemographic data and ADLs by chi square test (p > 0.05).

Table (3): Regarding to instrumental activities of daily living scale, (53.8%) of males were partially dependent, while (46.2%) were completely dependent. However, among females, (52.4%) of them were partially dependent and (47.6%) were completely dependent.
Statistically, there was no significant difference between males and females ($X^2 = 0.11$ at P-value > 0.05).

Table (3): Instrumental activities of daily living in relation to gender of chronic cerebrovascular stroke cases.

Gender	Instrumental Activities of Daily Living scale (IADLs)					
	Independent No.	%	Partially Dependant No.	%	Completely Dependant No.	%
Males N=39	0	0	21	53.8	18	46.2
Females N= 21	0	0	11	52.4	10	47.6
Total	0	0	32	53.3	28	46.7
Significance	$X^2 = 0.11$			P>0.05		

Part III: Psychological Needs of Patients with Chronic Cerebrovascular Stroke.

Table (4): This table shows that no statistically significant relations could be detected between different sociodemographic data and GDS by chi square test (p > 0.05).
Table (5): This table shows that no statistically significant relations could be detected between different socio-demographic data and Taylor Anxiety Scale by chi square test (p > 0.05).
Table (6): This table shows highly statistically significant positive correlation between GDS versus Taylor Anxiety Scale and ADL versus IADL by correlation co-efficient test (r) (p < 0.01). On the other hand, there was a statistically significant inverse correlation between ADL and Taylor Anxiety Scale by the same test. Otherwise no statistically significant correlations could be detected between different scales by correlation coefficient test.

Table (4): Relation between socio-demographic characteristics of chronic cerebrovascular stroke and GDS

Socio-demographic data	Normal		Mild		Moderate		Severe		P value
	No	%	No	%	No	%	No	%	
Age (yrs)									
<40	1	50	0	0	1	50	0	0	>0.05
40-49	8	44.4	1	5.6	6	33.3	3	16.7	
50-59	10	50	3	15	2	10	5	25	
60-69	2	13.3	3	20	3	20	7	46.7	
≥70	1	20	2	40	1	20	1	20	
Occupation									
Manual worker	15	48.4	2	6.5	7	22.6	7	22.6	>0.05
Clerk worker	3	17.6	5	29.4	3	17.6	6	35.3	
Housewife	4	33.3	2	16.7	3	25	3	25	
Education level									
Illiterate	12	46.2	3	11.5	6	23.1	5	19.2	>0.05
Read and write	4	44.4	1	11.1	1	11.1	3	33.3	
Primary school	1	33.3	1	33.3	1	33.3	0	0	
Prep school	3	50	0	0	3	50	0	0	
Secondary school	1	20	1	20	0	0	3	60	
University	1	9.1	3	27.3	2	18.2	5	45.5	
Marital status									
Single	0	0	0	0	0	0	16	29.1	>0.05
Married	20	36.4	7	12.7	12	21.8	0	0	
Divorced	1	100	0	0	0	0	0	0	
Widowed	1	25	2	50	1	25	0	0	

Table (5): Relation between Socio-demographic characteristics of chronic cerebrovascular stroke and Taylor Anxiety Scale

Socio-demographic Data	Mild		Moderate		Severe		P value
	No	%	No	%	No	%	Value
Age (yrs)							
<40	1	50	1	50	0	0	> 0.05
40-49	7	38.9	10	55.6	1	5.6	
50-59	8	40	11	55	1	5	
60-69	9	60	6	40	0	0	
≥70	4	80	1	20	0	0	
Occupation							
Manual worker	14	45.2	15	48.4	2	6.5	> 0.05
Clerk worker	10	58.8	7	41.2	0	0	
Housewife	5	41.7	7	58.3	0	0	
Education level							
Illiterate	10	38.5	15	57.7	1	3.8	> 0.05
Read and write	5	55.6	3	33.3	1	11.1	
Primary school	2	66.7	1	33.3	0	0	
Prep school	3	50	3	50	0	0	
Secondary school	3	60	2	40	0	0	
University	6	54.5	5	45.5	0	0	
Marital status							
Single	0	0	0	0	2	3.6	> 0.05
Married	24	43.6	29	52.7	0	0	
Divorced	1	100	0	0	0	0	
Widowed	4	100	0	0	0	0	

Table (6): Correlation between different scores versus each other among chronic cerebrovascular stroke cases

Variables	ADL	IADL	Taylor
GDS	-0.12	-0.22	0.63**
ADL	-	0.52**	-0.25*
IADL	-	-	-0.05

Values in the table (r) and p values represent either:
* Significant p < 0.05
** Highly significant p < 0.01
 No stars not significant p > 0.05

Part IV: Social Needs of Patients with Chronic Cerebrovascular Stroke

Table (7): Using Social Dysfunction Rating Scale, (12.8%) of males were mild, (56.4%) showed a moderate, one (28.2%) showed high, and (2.6%) showed very high social dysfunction, while in females, (19%) were mild social dysfunction, (42.9%) showed moderate, (28.6%) showed high, and (9.5%) showed very high social dysfunction.

Statistically there was a statistically insignificant difference between males and females (X2 = 2.6 at p >0.05).

Table (7): Social Dysfunction Rating Scale in relation to gender of chronic cerebrovascular stroke cases

Social Dysfunction Rating Scale	Gender			
	Male (39)		Female (21)	
	No.	%	No.	%
No social dysfunction	0	0	0	0
Mild social dysfunction	5	12.8	4	19
Moderate social dysfunction	22	56.4	9	42.9
High level social dysfunction	11	28.2	6	28.6
Very high social dysfunction	1	2.6	2	9.5
Significance	X^2 = 2.6		P > 0.05	

Table (8): This table shows a highly statistically significant positive correlation between Social Dysfunction Rating Scale, ADL, (r = 0.36; p < 0.01**) and highly statistically significant inverse correlation between Social Dysfunction Rating Scale and GDS (r=-0.59; p<0.0**1) and between Social Dysfunction Rating Scale and Taylor Anxiety Scale by using correlation co- efficient test (r=-0.56; p< 0.01**).

Table (8) Correlation between Social Dysfunction Rating Scale versus ADL, IADL , GDS and Taylor Anxiety scale

Variables	r	P
ADL	0.36	<0.01**
IADL	0.20	>0.05
GDS	-0.59	<0.01**
Taylor Anxiety scale	-0.56	<0.01**

DISCUSSION

Cerebrovascular stroke is one of the most common diseases. In the United States, annual stroke incidence has increased from 500.000 new cases to more than 750.000. This stroke ranks as the third leading cause of death, behind heart disease and cancer. With 4.5 million survivors of stroke, two thirds of whom are

permanently disabled. In term of medical care of economic losses, the annual direct and indirect costs for stroke care total are about 40$ billion [18].
In Egypt, at Ain Shams Specialized Hospital, stroke patients who were admitted in 1999 at the Emergency and Neuro-surgery units represented 30% of all the patients who were admitted to these units [19].

I- Socio-demographic Characteristics of the Study Group:

Regarding to age, stroke was found to be more common among those between 50 and 70 years of age, being the least common before 30 and after 70 years of age as reported by [20]. In this respect [21], found that at age 55 years, stroke incidence rates double with every decade of life. In another study done by [22], on acute and chronic stroke patients in Cairo University Hospitals, the researcher found that patients with stroke were more than 45 years old accounting for 70% of the total study subjects. On the same line, with [17] this thesis stated that more than two fifths of the stroke subjects in the study group and half of the control subjects were among the age group of fifty to sixty years old.
In this study, the mean age of the males was 49.5 +12, while that of the females was 52.9 +17. In accordance with this study findings [23], mentioned that female patients in their study were older than male patients, with a mean age of 71 years for women and 69 years for men.
The present study revealed that, the mean age among the whole sample of patients was 50.5 +13.5. which is consistent with [24],as the mean age among her studied patients was 55 years, with a range from 27 to 73.
This study result revealed that the range of age of cerebrovascular stroke was between 40 to 70 years and that the mean age of the males was less than that of females.
Regarding to sex, approximately two thirds of the subjects were males while one third of them were females. On the same line,
With [20] who found that stroke in Egypt was more common in males (59.5%) than in females (40.5%). In a study carried out by [23] males constitute about 52% of CVS patients. On the other hand [25], mentioned that, the overall incidence and prevalence of stroke were almost equal for men and women but women die more often from stroke than men. [26], stated that each year, about 40.000 more women than men have stroke. Recently [24], stated that approximately three quarters

of the study group and two thirds of the control group were females.
As regards occupation, in the present study, slightly less than three fifths of males were manual workers, and a near percentage of females were housewives. In her thesis [23], findings revealed that, two thirds of the subjects in the study group and half of the subjects in the control group were housewives. This finding could be attributed to that the majority of the study and control groups were females.
Concerning educational level, in this study, the result revealed that more than one third of males were illiterate. while among females, more than half were illiterate Considering the total sample, more than two fifths of subjects of both males and females were illiterate, which explains ignorance with precipitating factors of stroke.
According to [24], three fifths of the subjects in her study group and slightly less in the control group were only able to read and write. On the same line, with [27], concluded that, the educational level was strongly inversely associated with fatal stroke, there was now an even more distinct gradient of decreasing risk with increasing level of education.
Regarding to marital status in this study, the result revealed that, most of males were married and more than four fifths of females were married. On the same line with [30] and [25] revealed that the majority of their subjects were married.

II- Assessment of Physical Needs of the Study Group

The present study revealed that, regarding to ADL, slightly less than three fifths of males were independent, while less than three fifths of females were independent with no statistically significant difference between both males and females.
In a similar study, [31], reported that, the bulk of recovery of physical ability in self care appeared to occur over the first six months, however among the very stroke disabled, almost half of the study group showed improvements between six months and one year. These results were supported by [28], who found that through analysis of results, six months post discharging from rehabilitation centers, the main elements of self dependency activities were self care activities related to feeding, personal hygiene, bathing, toileting dressing, mobility, elimination and ambulation.

On the other hand [30] in a recent study revealed that, mobility decline is an essential concern in chronic stroke patients, especially because it might lead to dependence in activities of daily living, which affects social reintegration. This result is in agreement with [24], who recently revealed that, all patients of the study and control groups preprogram intervention, were totally dependent in bathing, walking, grooming, and ascending and descending stairs. Almost three quarters of them were totally dependent in dressing and toileting while around three fifths of subjects were totally dependent in feeding self and transfer. These findings were also in agreement with [21], who stated that 47% of patients surviving a stroke will be physically dependent on others. The previous results were also supported by [32] who emphasized that 40% of his study group and 45% of his control group viewed their disabilities in daily living activities as a major problem encountered in living at home.

III- Assessment of Psychological Needs of the Study Group:

The present study finding revealed that regarding to relation between socio-demographic data and GDS there were no statistically significant relationships between age, occupation, educational level and marital status with geriatric depression scale.

The current study results revealed that approximately half of males had mild anxiety, more than two fifths of them had moderate anxiety and the minority had severe anxiety. As for females, more than two fifths had mild anxiety, more than half had moderate anxiety and only the minority of them had severe anxiety. There was no statistically significant difference between both males and females.

In a similar study [32], revealed that one third of the men and half of the women with post-stroke anxiety disorders showed evidence of either depression or an anxiety disorder at the time of the stroke. They added that through 12 months follow up of the 49 patients with agoraphobia by a non-hierarchic approach, 51% had recovered, and equal proportions of the remainder had died or still had agoraphobia.

This finding was explained by [33], stating that many people who survive a stroke feel fear, anxiety, frustration, anger, sadness, and a sense of grief for their physical and mental losses. They clarified that these feelings are a natural response to the psychological trauma of stroke.

IV- Assessment of Social Needs of the Study Group:

Social functioning is an integral part of assessing recovery after stroke [30]. The present study revealed that, in males more than one tenth had mild social dysfunction, less than three fifths had moderate social dysfunction, less than one third had high level social dysfunction and the minority of them had very high social dysfunction. However in females, slightly less than one fifth had mild social dysfunction, more than two fifths had moderate social dysfunction, more than one quarter had high level social dysfunction and slightly less than one tenth had very high social dysfunction, with no statistically significant difference between both males and females.

This result is in agreement with [24],who mentioned in her thesis that more than half of study and control groups, in the pre-program phase, had moderate level of social dysfunction and that one fifth of the study group had high level of social dysfunction. These results were also supported by [33], who reported that, most of the stroke survivors identified profound ways in which their lives had been affected. Feeling of helplessness and frustration were frequently expressed in relation to enforced changes in social role. The majority of respondents described deterioration in their social lives following stroke not just as a consequence of physical obstacles, but also because of negative responses to perceptions of physical disability.

On the same line with, [3]' found that because of difficulty with mobility, perceived social stigma related to physical or cognitive deficits or depression, many stroke patients become socially isolated. Social isolation is also strongly correlated with post stroke depression.

The present study finding revealed, a highly statistically significant positive correlation between social dysfunction rating scale and ADL, a highly statistically significant inverse correlation between social dysfunction rating scale and both GDS and Taylor Anxiety Scale, and an insignificant positive correlation between social dysfunction rating scale and IADL. The social dysfunction of patients post stroke, in this study may be due to the physical disability that led to social isolation and lack of confidence with others.

Conclusion

The present study concluded that: Patients with cerebrovascular stroke, representing approximately

three fifths of males as well as of females, were independent in basic activities of daily living.

Regarding to instrumental activities of daily living, in this study, both males and females accounting for approximately half of the study group were partially dependent, while slightly less than half of them were completely dependent.

Considering psychological needs, more than four fifths of males and females are depressed. The majority of males and all females suffered from anxiety.

Investigating the social needs, all patients of the study group have social dysfunction. Patients were in need for social interaction, solving problems with work due to illness, financial support, emotional support from others, maintaining social role, coping effectively with illness, reassurance and encouragement, and improvement of body image.

Recommendations

Based on the findings of this study the following recommendations can be suggested:

In services:

1- Continuous in service educational programs should be held for all the health team working in rehabilitation units regarding nursing care for patients with disability such as hemiplegia or paraplegia to revise, acquire and develop knowledge, performance and attitude needed to deal with such a group of patients.

2- Cooperation of multidisciplinary health team members as well as levels of involvement of both patients and family members in home care is essential to maintain continuity of patient care.

3- A network, such as the internet stroke center for Egyptian stroke patients, as a communication tool and support group should be developed.

In researches:

4- Further research is needed to study the rehabilitation programs that would help the hemiplegic patients after cerebrovascular stroke to adapt with their physical disabilities, social dysfunction and psychological breakdown.

5- Further research is required to study the effect of implementing the developed self care guide on such a group of patients.

REFERENCES

1. Potter, A.P. and Perry, G.A., Fundamentals of Nursing, (2001):5th ed., Mosby Company, Toronto, p.p. 262, 291.

2. Mohamed, M.H., Effect of A Rehabilitation Nursing Program on The Functional Outcome of Acute Ischemic Stroke Adult Patients, Thesis for The degree of Doctorate, Medical-Surgical Nursing, Faculty of Nursing, Cairo University, (2003): p.p. 1-2.

3. Gordon, F.A., Gulanick ,M., Costa, F., et al., Physical Activity and Exercise Recommendations for stroke Survivors, American Heart Association, (2004): 109 (1), P.P. 2031-2032.

4. Abdul Ghani, O., Epidemiology of Stroke in Egypt, The Egyptian Journal of Stroke, (2003): 16(3), p. 54.

5. Nevid, S., Rathus, A., and Rubenstein, R., Health The New Millennium, (1998):1st ed., Warth Publishers, New Your, p. 414.

6. Hitchcock, E.J., Schubert, E.P., and Thomas, A.S., Community Health Nursing Caring in Action, (2003): 2nd ed, Thomson Delmar Learning, U.S.A, P. 312.

7. Stanhope, M. and Lancaster, J., Foundations of Community Health Nursing: Community Oriented Practice, (2002): 1st ed., Mosby Company, U.S.A, P. 167.

8. Stoudemire, A., Clinical Psychiatry, (1998): 3rd ed., Lippincott-Raven Publishers, New York, P. 75.

9. Nettina, M.S., Manual of Nursing Practice, (2001): 7th ed., Lippincott Company, New York, P. 19, 458-461.

10. Taylor, C., Lillis, C., and Le Mone, P., Fundamentals of Nursing: The Art and Science of Nursing Care, (2001): 4th ed., Lippincott Williams and Wilkins Company, New York, p.p. 25-26, 464.

11. Mohamed, N., Nursing System: Theory and Designs, (2004):1st ed., Nursing Administration Department, Faculty of Nursing, Monsoura University, A.R.E, p. 36.

12. Katz, S., Ford, A.B., Moskowitz, A.W., et al., Studies of Illness in The Aged. The Index of ADL: A standardized Measure of Biological and Psychosocial Function, Journal of the American Medical Association, (1963):185(1), p.p. 914-919.

13. Lawton, M.P. and Brody, E.M., Assessment of older people: Self-Maintaining and Instrumental Activities of Daily Living, Gerontologist, (1969): 9(1), p.p. 179-186.

14. Yesarage, J.A. and Brink, T.L., Development and Validation of A Geriatric Depression Screening Scale: A preliminary Report, Journal of Psychiatric Research, (1983): 17(1), p.p. 37-49.

15. Metwally, A.S., Prevalence of Depression Among Egyptian Geriatric Community, Thesis for the degree of Master, Geriatric Medicine, Faculty of Medicine, Ain Shams University, (1998):Cairo, Egypt, p.p. 56-66.

16. Matteson, M.A., McConnell, E.S., and Linton, A.D., Gerontological Nursing Concepts and Practice, (1997): 2nd ed., W.B. Saunders Company, U.S.A, p.p. 98-99.

17. Ahmed, A.F., Rehabilitation of Hemiplegic patients After Cerebro-Vascular Stroke, Thesis for the degree of Doctorate, Medical Surgical Nursing, Faculty of Nursing, Ain Shams University, (2006): p.p. 75, 133-134, 137-138, 141.

18. Dressman, L., and Hunter, J., Stroke Awareness and Knowledge Retention in Children: The Brain Child Project, stroke, (2002): 33(1), p. 623.

19. Saad, F.N., Developing Nursing Care Standards for Stroke Patients, Thesis for the degree of Doctorate, Nursing Service Administration, Faculty of Nursing, Ain Shams University, (2003): p. 4.

20. Abd EL-Ghani, O. and El-Tamawy, M., Incidence of Stroke in Egypt: (2001):Electronic Publication, URL. http://www.yahoo/health.com.

21. Martinson, I.M., Widmer, A.G., and Portill, C.J., Home Health Care Nursing, (2002):2nd ed., W.B., Saunders Company, Philadelphia, p.p. 347, 353.

22. Kannoon, M.Z., Autonomic Nervous System Function Assessment in Acute and Chronic Stroke Patient, Thesis for the degree of Master, Neuro-psychiatry, Faculty of Medicine, Cairo University, (2002): p. 77.

23. Lai, M.S., Duncan, W.P., Dew, P., and Keighley, J., Sex Differences in Stroke Recovery, (2005): Available from: URL. http://www.cdc.gov/pcd/issues/2005.

24. Mohamed, M.H., Effect of A rehabilitation Nursing Program on The Function Outcome of Acute Ischemic Stroke Adult Patients, Thesis for the degree of Doctorate, Medical Surgical Nursing, Faculty of Nursing, Cairo University, (2003): p.p. 84, 88.

25. Ross, R., Yuan, J., Henderson, B., Park, J., Geo, Y.U., and Yu, M., Prospective Evaluation of Dietary and Other Predictor of Fatal Stroke in Shanghi, (1997): China, Circulation, 96(4), p. 50.

26. Hamed, A.N., Self-Care Rehabilitation Model for Cerebro-Functional Disabilities, Thesis for the degree of Doctorate, Community Health Nursing, Faculty of Nursing, Ain Shams University, (2003): p.p. 165-167.

27. Abd El-Ghany, F.A., Knowledge, Attitude and Practice of Family Caregivers Regarding Care of Patients with Stroke at Home, Thesis for the degree of Master, Community Health Nursing, Faculty of Nursing, Cairo University, (2000): p.110

28. Van de Port, I.G., Kwakkel, G., Van Wijk, I., and Lindeman, E., Susceptibility to Deterioration of Mobility Long-Term After Stroke: A prospective Cohort Study, Stroke, (2006): 37(1), p. 67.

29. Kauko, P., Stroke Rehabilitation in The Elderly; A Controlled Study of The Effectiveness and Costs of A multidimensional Intervention, Thesis for the degree of Doctorate, Faculty of Medicine, University of Kuopio, China, (2000):p. 45.

30. Burvill, P.W., Johnson, G.A., Jamrozik, K.D et al., Anxiety Disorders After Stroke: Results from the Perth Community Stroke Study, The British Journal of Psychiatry, (1995): 166 (1), p. 28.

31. El-Shafiey, A.O., Saad, S. and Lang, P., Follow up of Ischemic Stroke Patients: A study for two years, Faculty of Medicine, Al-Azhar University, (2000): P. 16.

32. Lai, P., Sue, M., Perera, S., Duncan, P.W. and Bode, R., Physical and Social Functioning after Stroke: Comparison of The Stroke Impact Scale and Short Form- (2003): 36, Stroke, 34(5),p.488.

33. Dowswell, G. Investigating Recovery from Stroke: A qualitative study, Journal of Clinical Nursing, (2000):9(4), p. 507.