

**Assessment of Biopsychosocial Needs for Patients
with Chronic Cerebrovascular Stroke**

Thesis

Submitted for Partial Fulfillment of Master Degree in
Nursing Science (Medical-Surgical Nursing)

By

Neven Fathey Ibrahim

B.Sc. Nursing

**Faculty of Nursing
Ain Shams University
2007**

**Assessment of Biopsychosocial Needs for Patients
with Chronic Cerebrovascular Stroke**

Thesis

Submitted for Partial Fulfillment of Master Degree in
Nursing Science (Medical-Surgical Nursing)

Under supervision of

Prof. Dr. Mohamed Hassan El-Banouby

*Professor of Neuro-Psychiatry and Geriatrics
Faculty of Medicine- Ain Shams University*

Assist. Prof. Dr. Eman Talaat Mohamed

*Assistant Professor of Medical Surgical Nursing
Faculty of Nursing- Ain Shams University*

Faculty of Nursing
Ain Shams University
2007

تقييم الاحتياجات الجسمانية والنفسية والاجتماعية لمرضي
السكتة الدماغية المزمنة

رسالة مقدمة

توطئة للحصول على درجة الماجستير في علوم التمريض
(تمريض باطنى جراحى)

من

نيفين فتحي إبراهيم
بكالوريوس تمريض

كلية التمريض
جامعة عين شمس
٢٠٠٧

تقييم الاحتياجات الجسمانية والنفسية والاجتماعية لمرضي
السكتة الدماغية المزمنة

رسالة مقدمة

توطئة للحصول على درجة الماجستير في علوم التمريض
(تمريض باطنى جراحي)

تحت إشراف

أ.د/ محمد حسن البانوبي

أستاذ الأمراض العصبية والنفسية وطب المسنين
كلية الطب – جامعة عين شمس

أ.م.د./ إيمان طلعت محمد

استاذ مساعد بقسم تمريض باطني جراحي
كلية التمريض – جامعة عين شمس

كلية التمريض
جامعة عين شمس
٢٠٠٧

Acknowledgement

First and foremost, I feel always indebted to Allah, the most kind and the most merciful.

*I'm deeply grateful to **Prof. Dr. Mohamed Hassan El-Banouby**, Professor of Neuro-Psychiatry and Geriatric, Faculty of Medicine, Ain Shams University, for his meticulous supervision, tireless efforts, fruitful guidance, valuable support and instructions throughout this work, all are deeply and heartily appreciated.*

*I would like to express my deep appreciation to **Dr. Eman Talaat Mohamed**, Assistant Professor of Medical Surgical Nursing, Faculty of Nursing, Ain Shams University, for her faith in my ability, her scientific help, meticulous supervision and constructive criticism to accomplish this work.*

I would like to express my deep thanks to all those who contributed by giving their time, effort, and encouragement to the fulfillment of this work.

Dedication

*To my dear father and Mother for
their great effort and assistance.*

To my family and friends.

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. The present study aimed to assess the physical and psychosocial needs for patients with chronic cerebrovascular stroke. 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 out patient clinics within a period of six months and meet the selective criteria such as 1-Both sex, 2- Diagnosed with cerebrovascular stroke excluded comatosed 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 characteristics and the activities of daily living scales for assessing physical needs. (2) Geriatrics depression scale and Taylar scale of anxiety for assessing psychological needs. (3) social dysfunction rating scale for assessing social needs. Results of 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 conditions.

Key words: stroke, physical needs, psychosocial needs, disability.

APPENDIX I

استمارة استبيان لتقييم الاحتياجات الجسمية والنفسية والاجتماعية لمرضى السكتة الدماغية المزمنة

(١) البيانات الشخصية للمريض

١- رقم مسلسل : (.....)

٢- الاسم:

٣- السن: تاريخ الميلاد:

سنة	شهر	يوم

٤- النوع:

أنثى	ذكر
٢	١

٥- العنوان:

٦- رقم التليفون:

٧- الوظيفة السابقة:

٨- التعليم :

أمي	يقرأ ويكتب	ابتدائي	إعدادي	ثانوي	جامعي
١	٢	٣	٤	٥	٦

٩- الحالة الاجتماعية :

أعزب	متزوج	مطلق	أرمل
١	٢	٣	٤

(٢) أنشطة الحياة اليومية

(أ) أنشطة الحياة اليومية البسيطة

الاجابة			البنود
			١ - الإستحمام
☐ ٠	☐ ١	☐ ٢	هل تستطيع الاستحمام؟
بمساعدة كاملة	يحتاج مساعدة	بدون مساعدة	٢ - اللبس
☐ ٠	☐ ١	☐ ٢	هل تستطيع ارتداء ملابسك
بمساعدة كاملة	يحتاج مساعدة	بدون مساعدة	٣ - إستخدام الحمام :
☐ ٠	☐ ١	☐ ٢	هل تستطيع استخدام الحمام؟
بمساعدة كاملة	يحتاج مساعدة	بدون مساعدة	لقضاء حاجتك (التبول والتبرز)؟
☐ ٠	☐ ١	☐ ٢	٤ - الانتقال :
بمساعدة كاملة	يحتاج مساعدة	بدون مساعدة	هل تستطيع الانتقال من
☐ ٠	☐ ١	☐ ٢	والى الفراش أو المقعد ؟
بمساعدة كاملة	يحتاج مساعدة	بدون مساعدة	٥ - التحكم في الإخراج :
☐ ٠	☐ ١	☐ ٢	هل تستطيع التحكم في
بمساعدة كاملة	يحتاج مساعدة	بدون مساعدة	البول والبراز
☐ ٠	☐ ١	☐ ٢	٦ - التغذية :
بمساعدة كاملة	يحتاج مساعدة	بدون مساعدة	هل تستطيع تناول الطعام
☐ ٠	☐ ١	☐ ٢	والشراب ؟
١٢ /			الدرجة:

Appendix III

استمارة استبيان لتقييم الاحتياجات الجسمانية والنفسية والاجتماعية لمرضى السكتة الدماغية المزمنة

(ب) أنشطة الحياة اليومية المركبة

البند	الإجابة
١ - القدرة على استخدام التليفون	٠ ١ ٢ بمساعدة كاملة يحتاج مساعدة بدون مساعدة
٢ - التسوق	٠ ١ ٢ بمساعدة كاملة يحتاج مساعدة بدون مساعدة
هل تستطيع استعمال التليفون؟ هل تستطيع الخروج للتسوق وشراء إحتياجاتك ؟ ٣ - إعداد الطعام :	٠ ١ ٢ بمساعدة كاملة يحتاج مساعدة بدون مساعدة
هل تستطيع تحضير وجبات طعامك بنفسك ؟ ٤ - النظافة المنزلية:	٠ ١ ٢ بمساعدة كاملة يحتاج مساعدة بدون مساعدة
هل تستطيع القيام بشئون المنزل ٥ - الغسيل :	٠ ١ ٢ بمساعدة كاملة يحتاج مساعدة بدون مساعدة
هل تستطيع غسل ملابسك؟ ٦ - وسيلة الانتقال :	٠ ١ ٢ بمساعدة كاملة يحتاج مساعدة بدون مساعدة
هل تستطيع الخروج إلى الأماكن العامة ؟ ٧ - المسؤولية اتجاه الأدوية:	٠ ١ ٢ بمساعدة كاملة يحتاج مساعدة بدون مساعدة
هل تستطيع تناول الأدوية الخاصة بك ؟ ٨ - القدرة على التعامل المالي :	٠ ١ ٢ بمساعدة كاملة يحتاج مساعدة بدون مساعدة
تستطيع التعامل مع الأوراق المالية؟	٠ ١ ٢ بمساعدة كاملة يحتاج مساعدة بدون مساعدة
الدرجة:	١٦/

APPENDIX II

(أ) مقياس الإكتئاب المصغر في المسنين

البنود	الاجابة
١- أنت راضي عن حياتك؟	لا نعم ١ ٠
٢- أنت أهملت كثير من نشاطاتك واهتماماتك؟	لا نعم ٠ ١
٣- أنت حاسس إن حياتك فاضية ؟	لا نعم ٠ ١
٤- في الغالب بتحس إنك متضايق وزهقان ؟	لا نعم ٠ ١
٥- في الغالب معنوياتك بتكون عالية ؟	لا نعم ١ ٠
٦- أنت خايف من حاجة وحشه هتحصلك ؟	لا نعم ٠ ١
٧- في الغالب بتحس إنك مبسوط ؟	لا نعم ١ ٠
٨- في الغالب بتحس إنك قليل الحيلة ؟	لا نعم ٠ ١
٩- بتحب تقعد في البيت عن انك تخرج تعمل حاجة جديدة؟	لا نعم ٠ ١
١٠- أنت حاسس إن عندك مشاكل في الذاكرة اكثر من الاخرين؟	لا نعم ٠ ١
١١- أنت بتعتقد إن دي حاجة حلوه انك لسه عايش؟	لا نعم ١ ٠
١٢- أنت شايف إنك عايش الحياة بطريقة مش مناسبة ليك؟	لا نعم ٠ ١
١٣- أنت حاسس إنك مليان حيوية ونشاط ؟	لا نعم ١ ٠
١٤- انت حاسس إن حالتك دي ميئوس منها ؟	لا نعم ٠ ١
١٥- أنت حاسس إن أغلب الناس اللي حولك أحسن منك؟	لا نعم ٠ ١

Appendix III

استمارة استبيان لتقييم الاحتياجات الجسمية والنفسية والاجتماعية لمرضى السكتة الدماغية المزمنة

الدرجة:	١٥/
---------	-----

Appendix III

استمارة استبيان لتقييم الاحتياجات الجسمية والنفسية والاجتماعية لمرضى السكتة الدماغية المزمنة

(ب) اختبار تيلور للقلق

البنود	الإجابة
١- نومي مضطرب ومتقطع .	نعم لا
٢- مرت بي أوقات لم استطع خلالها النوم بسبب القلق .	نعم لا
٣- مخاوفي قليلة جداً بالمقارنة بأصدقائي .	نعم لا
٤- اعتقد انني اكثر عصبية من معظم الناس .	نعم لا
٥- تنتابني أحلام مزعجة أو كوابيس كل عدة ليالي .	نعم لا
٦- لدى متاعب كثيرة في معدتي .	نعم لا
٧- غالباً ما ألاحظ أن يداي ترتجفان عندما أحاول القيام بعمل ما .	نعم لا
٨- أعاني من نوبات اسهال .	نعم لا
٩- يثير قلقي أمور العمل والمال .	نعم لا
١٠- تصيبني نوبات من الغثيان (غمات النفس).	نعم لا
١١- كثيراً ما أخشى أن يحمّر وجهي خجلاً.	نعم لا
١٢- اشعر بالجوع في كل الأوقات تقريباً.	نعم لا
١٣- أثق بنفسي تماماً .	نعم لا
١٤- أتعب بسرعة	نعم لا
١٥- يجعلني الانتظار عصيباً .	نعم لا
١٦- اشعر بالاثارة لدرجة أن النوم يتعذر علي .	نعم لا
١٧- عادة ما أكون هادئاً ولا اضطرب بسهولة .	نعم لا
١٨- تمر بي فترات من عدم الاستقرار لدرجة أنني لا استطيع الجلوس طويلاً في مقعدي	نعم لا
١٩- لا اشعر بالسعادة معظم الوقت .	نعم لا
٢٠- من السهل أن اركز ذهني في عمل ما .	نعم لا
٢١- أشعر بالقلق على شيء ما أو شخص ما طول الوقت تقريباً	نعم لا
٢٢- لا أتهيب مواجهة الازمات والشدائد	نعم لا
٢٣- أود أن اصبح سعيداً كما يبدو الآخرين	نعم لا
٢٤- كثيراً ما أجد نفسي قلقاً على شيء ما	نعم لا
٢٥- اشعر احياناً بشكل مؤكد انه لا فائدة لي	نعم لا
٢٦- اشعر أحياناً أنني أتمزق	نعم لا
٢٧- أعرق بسهولة حتى في الأيام الباردة	نعم لا
٢٨- الحياة صعبة بالنسبة لي في أغلب الأوقات .	نعم لا
٢٩- لا يقلقني ما يحتمل أن اقبله من سوء حظ	نعم لا
٣٠- أنني حساس بنفسي لدرجة غير عادية	نعم لا

Appendix III

استمارة استبيان لتقييم الاحتياجات الجسمية والنفسية والاجتماعية لمرضى السكتة الدماغية المزمنة

لا	نعم	٣١- لاحظت أن قلبي يخفق بشدة وأحياناً تنهج أنفاسي
لا	نعم	٣٢- لا أبكي بسهولة
لا	نعم	٣٣- خشيت أشياء أو اشخاص أعرف انهم لا يستطيعون ايدائي
لا	نعم	٣٤- لدى قابلية للتأثر بالاحداث تأثراً شديداً
لا	نعم	٣٥- كثيراً ما أصاب بالصداع
لا	نعم	٣٦- لأبد ان اعترف بأنني شعرت بالقلق الشديد على أشياء لا قيمة لها
لا	نعم	٣٧- لا أستطيع ان أركز تفكيري في شئ واحد
لا	نعم	٣٨- لا ارتبك بسهولة .
لا	نعم	٣٩- اعتقد أحياناً أنني لا اصلح لشئ بالمرّة
لا	نعم	٤٠- أنا شخص متوتر جداً
لا	نعم	٤١- ارتبك أحياناً لدرجة تجعل العرق يتساقط مني بصورة تضايقتني
لا	نعم	٤٢- يحمر وجهي خجلاً بدرجة أكبر مما يحدث للآخرين
لا	نعم	٤٣- أنا أكثر حساسية من غالبية الناس
لا	نعم	٤٤- مرت بي أوقات شعرت خلالها بتراكم الصعاب بحيث لا استطيع التغلب عليها
لا	نعم	٤٥- أكون متوتر للغاية أثناء القيام بعملتي
لا	نعم	٤٦- يداي وقدماي باردتان في العادة
لا	نعم	٤٧- كثيراً ما احلم بأشياء افضل الاحتفاظ بها لنفستي
لا	نعم	٤٨- لا ينقصني الثقة بالنفس
لا	نعم	٤٩- كثيراً ما أصاب بالإمساك
لا	نعم	٥٠- لا يحمر وجهي أبداً من الخجل

Appendix III

استمارة استبيان لتقييم الاحتياجات الجسمية والنفسية والاجتماعية لمرضى السكتة الدماغية المزمنة

APPENDIX III

مقياس معدل الخلل الوظيفي الاجتماعي

تصنيف المكانة الاجتماعية	غير موجود	ضعيف جداً	ضعيف	متوسط	قوى	قوى جداً
الثقة بالنفس:						
١-أشعر بعدم الكفاءة ولا أرقى لمستوى المثالية						
ليس لدى أي حافز داخلي للمستقبل						
٣- أفقر إلى الرضا بمعنى الحياة أو فلسفتها .						
٤- أنشغل بصحتي الجسمية						
المنظومة الداخلية للإنسان						
٥-الانسحاب العاطفي (علاقتي قليلة مع الآخرين)						
٦-العدوانية (أشعر بالعدوانية اتجاه الآخرين)						
٧- اتحكم في البيئة المحيطة بي ولو على حساب الآخرين.						
٨-اعتمد على الآخرين لتحقيق مصلحتي .						
٩-القلق (أشعر بعدم الراحة وعدم الاستقرار)						
١٠-أشعر بعدم الثقة وأشك في الآخرين						
منظومة الأداء :						
١١-ينقصني علاقات مرضية داخل محيط الأسرة .						
١٢-ينقصني وجود الأصدقاء والعلاقات الاجتماعية .						
١٣- أشعر بالحاجة إلى العلاقات الاجتماعية .						
١٤-ينقصني العمل المنتج الذي يعطى الاحساس بأنى مقيد ويزيد الثقة .						
١٥-ينقصني الشعور بالرضا عن العمل .						
١٦-لا أقوم بأي أنشطة للتسلية فى وقت الفراغ .						
١٧-احتاج الى ممارسة الأنشطة التى ترضينى وتجدد نشاطى						
١٨- لا أشارك فى أنشطة المجتمع .						
١٩-أشعر بعدم الأمان المادى						
٢٠-أجد صعوبة فى التكيف مع حالتى الآن						

التاريخ:

المعدل:

اسم المريض :

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 (*Potter & Perry, 2001*).

Every year, millions of people survive a stroke and suffer brain damage with varying degrees of continuing mental and physical disability (*WHO, cited in Mohamed, 2003*). 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 living, and half experience severe long-term effects such as partial paralysis. Consequently, activity intolerance is common among stroke survivors especially in the elderly (*Gordon, et al., 2004*).

Stroke continues to have a devastating impact on public health (*Easton, 1998*). It is often considered a disease of the older adults because approximately 60% to 75% of all strokes occur in persons over 65 years of age. Therefore, it is considered as one of the leading causes of death and severe disability in most countries (*Walsh 1997, WHO, cited in Mohamed, 2003*).

Introduction & Aim of the Study

According to *Abdul Ghani (2003)* 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 (*Nevid et al., 1998*). 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 (*Hitchcock et al., 2003*). Needs assessment used to determine the programs requiring attention and the way to best meet theses needs (*Stanhope & Lancaster, 2002*).

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 (*Stoudemire, 1998*).

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,

Introduction & Aim of the Study

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 (*Nettina, 2001*).

Significance of the study:

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?

PART I: AN OVERVIEW OF CEREBROVASCULAR STROKE

Cerebrovascular stroke

Introduction

The brain is the body's center of thinking, feeling and physical function. A continuous blood supply is essential to maintain function in the brain. A cerebrovascular accident is an interruption of blood flow to part of the brain. Without normal blood flow, the affected area is deprived of oxygen, and cell death begins to occur in as little as 4 minutes. The effects of oxygen deprivation vary depending on the area of the brain involved and the length of time the brain is deprived of oxygen (*Linton et al., 2000*).

Stroke is the sudden appearance of neurological symptoms when severe interruption of blood flow to the brain cell necrosis. Stroke is a serious and common illness that occurs approximately every minute in the United States. This rate of occurrence produces about 500.000 new stroke victims in the United States every year (*Kolb and Whishaw, 2001*).

Anatomy and Physiology of the Brain

The brain represents approximately 2% of the total body weight; it weighs approximately 1400g in an average young adult. In the elderly, the average brain weighs approximately 1200g. The brain is divided into three major areas: **the cerebrum, the brain stem, and cerebellum**. The **cerebrum** is composed of two hemispheres, the thalamus, the hypothalamus, and the basal ganglia. Additionally, connections for the olfactory (cranial nerve I) and optic (cranial nerve II) nerves are found in the cerebrum. The brain stem includes the midbrain, pons, medulla, and connections for cranial nerves III and IV through XII. The cerebellum is located under the cerebrum and behind the brain stem (*Smeltzer and Bare, 2000*).

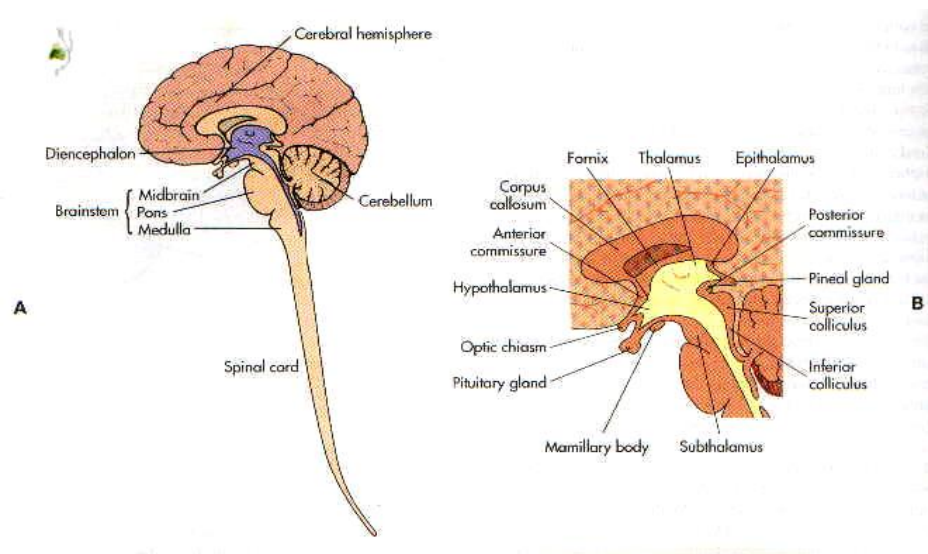


Fig. (1): A Major divisions of the central nervous system (CNS). B, Diencephalon thalamus and hypothalamus. Adopted from (*Phipps et al., 2003*).

A- Cerebrum

The cerebrum consists of two hemispheres that are incompletely separated by the great longitudinal fissure. This sulcus separates the cerebrum into the right and left hemispheres. The two hemispheres are joined at the lower portion of the fissure by the corpus callosum. The surface of the hemispheres has a wrinkled appearance that is the result of many folded layers or convolutions called gyri, which provide a tremendous increase in the surface area of the brain. The external or outer portion of the cerebrum (the cerebral cortex) is made up of gray matter approximately 2 to 5 mm in depth; it contains billions of neurons/cell bodies, giving it a gray appearance. White matter makes up the inner most layer and is composed of nerve fibers and neuroglia (support tissue) that form tracts or pathways connecting various parts of the brain with one another (transverse and association pathways) and the cortex to lower portions of the brain and spinal cord (projection fibers). The cerebral hemispheres are divided into pairs of frontal, parietal, temporal, and occipital lobes (*Lewis et al., 1996 & Smeltzer and Bare, 2000*).

a- Thalami

The thalami are a pair of egg-shaped masses of grey matter at the base of each hemisphere. Each mass is referred to a thalamus and forms part of the lateral walls of the third

ventricle. The thalami form the main relay centre for sensory impulses and cerebellar and basal ganglia projections to the cerebral cortex (*Clochesy et al., 1996 and Walsh, 1997*).

b. Hypothalamus

This is an important grey mass that lies beneath the thalamus. It forms the floor and part of the wall of the third ventricle. It contains nuclei of the autonomic nervous system for the control of most of the body's involuntary functions as well as many aspects of emotional behaviour. There are neuronal links between the hypothalamus and the posterior pituitary gland. The hypothalamus is also concerned with gastrointestinal and feeding regulation. Hunger centres and a satiety centre have been identified in this grey mass. In addition, it activates feeding reflexes such as licking the lips and swallowing. It is also known to affect responses such as pleasure and fear (*Seely et al., 2002 and Walsh, 2002*).

c- Basal ganglia

The basal ganglia are gray nuclei located deep within the white matter of each cerebral hemisphere. They consist of the paired anatomic structures of the lenticular nucleus, caudate nucleus, amygdaloid body, and claustrum. The lenticular and caudate nuclei together are called the corpus striatum. Functions include motor control of fine body movements, particularly in the hands and lower extremities (*Walsh, 1997*).

Review of Literature

The internal capsule, located in the thalamic-hypothalamic area, is a massive bundle of white matter. It consists of afferent and efferent fiber tracts that transmit impulses from the cerebrum to the brainstem and spinal cord (*Thompson et al., 1997*).

B- Brainstem

The brainstem is located deep in the center of the hemispheres and is not visible when the intact brain is viewed. It includes a series of sections that make connections with the spinal cord at the level of the medulla, and it contains all nerve fibers passing from the hemispheres and the spinal cord. Twelve cranial nerves connect to the undersurface of the brain, mostly on the brainstem (*Saladin and Porth, 1998*).

The brainstem is made up of several structures that include the midbrain, pons, and medulla oblongata. Of special importance is the core of tissue that extends throughout the entire brainstem called the reticular activating system. This interconnected network of cells contains important integrating centers for respiration, cardiovascular function, afferent and motor systems and state of consciousness. Increased stimulation leads to wakefulness, and decreased stimulation results in sleepiness (*Phipps et al., 2003*).

C- Cerebellum

The cerebellum is located below the posterior part of the cerebrum and is separated from it by a fold of dura mater. It consists of two hemispheres separated by a narrow strip called the "vermis". The cortex of the cerebellum consists of gray matter which has many folds to increase its surface area. The interior comprises white matter presented in a branching configuration termed "tree of life". There are three connections, called the cerebellar peduncles', which link the cerebellum to the rest of the brain and spinal cord. These allow the cerebellum to receive sensory information and thereby to maintain equilibrium and modify voluntary movement, making it smooth and coordinated (*Alexander et al., 2000*).

Definitions

Stroke or cerebrovascular accident is the onset and persistence of neurologic dysfunction lasting longer than 24 hours and resulting from disruption of blood supply to the brain and indicates infarction rather than ischemia. Strokes are classified as ischemic or hemorrhagic. Stroke is the third leading cause of death in the United States (*Nettina, 2001*).

Review of Literature

A sudden or gradual interruption of blood supply to a vital center in the brain is a cerebrovascular accident, which may cause complete or partial paralysis or death. In the United States, thousands of people die every year following CVA (*Rosdahl, 1999*).

The World Health Organization defines stroke as "rapidly developed clinical signs of focal (or global) disturbance of cerebral function, lasting more than 24 hours or leading to death, with no apparent cause other than of vascular origin" (*Barker, 1994*).

Classification of Cerebrovascular Stroke

Cerebrovascular accidents are commonly called strokes. There are two types of CVAs, ischemic and hemorrhagic. They are further classified as transient ischemic attack, reversible ischemic neurologic deficit, completed stroke, and stroke in evolution. All types of CVAs share common signs and symptoms. There are differences, however, among the types of CVAs in relation to duration and progression of symptoms (*Linton et al., 2000*).

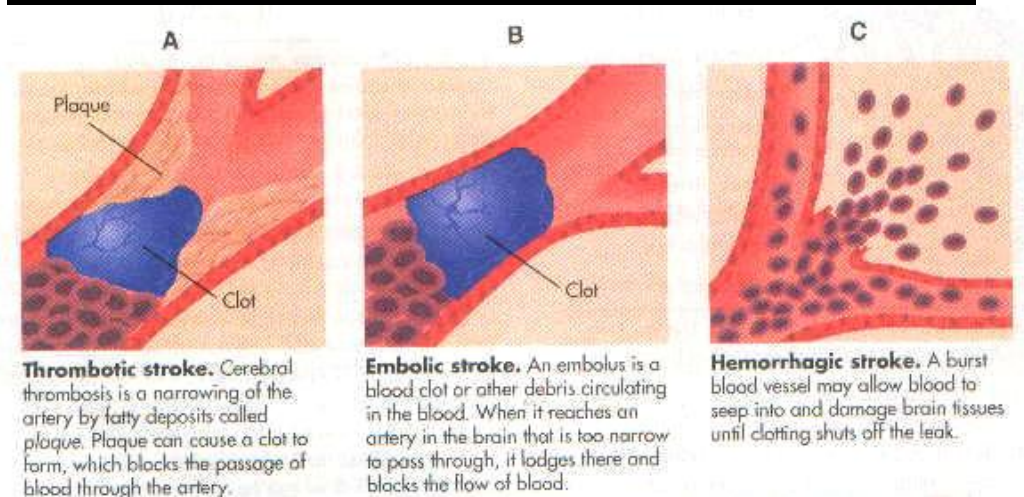


Fig. (2): Classification of cerebrovascular stroke.

Adopted from *(Lewis et al., 2004)*.

A- Ischemic stroke

Ischemic strokes result from inadequate blood flow to the brain from partial or complete occlusion of an artery and account for approximately 85% of all strokes. Ischemic strokes are further divided into thrombotic and embolic *(Lewis et al., 2004)*.

The extent of the stroke depends on rapidity of onset, the size of the lesion, and the presence of collateral circulation. Most patients with ischemic stroke do not have a decreased level of consciousness in the first 24 hours, unless it is due to a brainstem stroke or other conditions such as seizures, increased intracranial pressure, or hemorrhage. Ischemic stroke symptoms may progress in the first 72 hours as infarction and cerebral oedema increase *(Thompson et al., 2002)*.

a- Thrombotic stroke:

Thrombosis occurs in relation to injury to a blood vessel wall and formation of a blood clot. The lumen of the blood vessel becomes narrowed, and if it becomes occluded, infarction occurs. Thrombosis develops readily where atherosclerotic plaques have already narrowed blood vessels. Thrombotic stroke, which is the result of thrombosis or narrowing of the blood vessel, is the most common cause of stroke, accounting for 61% of strokes. Two thirds of thrombotic strokes are associated with hypertension or diabetes mellitus, both of which accelerate atherosclerosis. Thrombotic strokes in 30% to 50% of individuals have been preceded by a transient ischaemic attack (*Lindsay and Bone, 1997*).

A lacunar stroke

It is a stroke from occlusion of a small penetrating artery with development of a cavity in the place of the infarcted brain tissue. This most commonly occurs in the basal ganglia, thalamus, internal capsule, or pons (*Gilroy, 2000*).

b- Embolic stroke

Embolic stroke occurs when an embolus lodges in and occludes a cerebral artery, resulting in infarction and edema of the area supplied by the involved vessel. Embolism is the second most common cause of stroke, accounting for about 24% of stroke (*Barnett et al., 1998*). The majority of emboli originate in the endocardial (inside) layer of the heart, with plaque breaking off from the endocardium and entering the

Review of Literature

circulation. The embolus travels upward to the cerebral circulation and lodges where a vessel narrows or bifurcates. Heart conditions associated with emboli include atrial fibrillation, myocardial infarction, infective endocarditis, rheumatic heart disease, valvular prostheses, and atrial septal defects, less common causes of emboli include air and fat from long bone (femur) fractures (*Hudak et al., 1998*).

B- Hemorrhagic stroke

Hemorrhagic stroke accounts for approximately 15% of all strokes and results from bleeding into the brain tissue itself (intracerebral or intraparenchymal hemorrhage) or into the subarachnoid space or ventricles (subarachnoid hemorrhage or intraventricular hemorrhage) (*Kidd and Wagner, 2001*).

a- Intracerebral hemorrhage

Intracerebral hemorrhage is bleeding within the brain caused by a rupture of a vessel. Hypertension is the most important cause of intracerebral hemorrhage. Other causes include cerebral amyloid angiopathy, vascular malformation, coagulation disorders, anticoagulant and thrombolytic drugs, trauma, brain tumors, and ruptured aneurysms (*Lewis et al., 1996*). Hemorrhage commonly occurs during periods of activity. There is most often a sudden onset of symptoms, with progression over minutes to hours because of ongoing bleeding. Symptoms include neurologic deficits, headache, nausea, vomiting, decreased level of consciousness (in about 50% of patients), and hypertension. The extent of the symptoms varies

Review of Literature

depending on the amount and duration of the bleeding. A blood clot within the closed skull can result in a mass that causes pressure on brain tissue, displaces brain tissue, and decreases cerebral blood flow, leading to ischemia and infarction (*Haslett et al., 1999*).

According to *Broderick, (1999)* the prognosis of patients with intracerebral hemorrhage is poor, with over 50% of patients dying soon after the hemorrhage occurs and only about 20% being functionally independent at 6 months.

b- Subarachnoid hemorrhage

Subarachnoid hemorrhage occurs when there is intracranial bleeding into the cerebrospinal fluid filled space between the arachnoid and pia mater membranes on the surface of the brain. Subarachnoid hemorrhage is commonly caused by rupture of a cerebral aneurysm (congenital or acquired weakness and ballooning of vessels). Aneurysms may be saccular or berry aneurysms ranging from a few millimeters to 20 to 30mm in size or fusiform atherosclerotic aneurysms. The majority of aneurysms are in the circle of Willis. Other causes of subarachnoid hemorrhage include arteriovenous malformations (AVMs), trauma, and illicit drug (cocaine) abuse (*Clochesy et al., 1996*). The annual incidence of subarachnoid hemorrhage caused by ruptured aneurysm is 6 to 16 per 100,000. The incidence increases with age and is higher in women than men (*Greener and Langhorne, 2002*).

Incidence and prevalence

There are more than 3 million stroke survivors in the United States. Approximately 730,000 strokes occur each year, and more than 150,000 deaths. Strokes tend to occur more often in the southern United States (stroke belt), which is probably related to the geographic distribution of the older population, an increased use of tobacco, increased obesity, and a diet higher in fats (*Ignatavicius and Workman, 2002*).

About 72% of all strokes occur in persons over 65 years of age. The remaining 28% affect younger persons. Strokes are slightly more common in men than in women (*Phipps et al., 2003*). African Americans are affected by stroke more often than other groups, possibly as a result of the high frequency of hypertension and diabetes in this group (*Ignatavicius and Workman, 2002*).

According to *The Ministry of Health and Population Statistics (2004)* the incidence of cerebrovascular stroke in Egypt was 500 persons in 2001, while it was 498 persons in 2002, to 266 persons in 2003. This is 10% random sample. However *Abdul Ghani (1994)* revealed that the annual incidence of stroke in Egypt is about 2.1 per one thousand per year.

Pathophysiology of cerebrovascular stroke

The region of the brain served by the occluded or ruptured vessel is deprived of its normal perfusion. This perfusion deficit may develop immediately (e.g., in the case of emboli or hemorrhage) or over a few days (e.g., in the case of thrombotic strokes). Thrombotic stroke, the most common type is often preceded by focal neurologic deficits that simulate the manifestations of stroke but that last less than 24 hours. These transient ischemic attacks (TIAs) may result from spasm at sites of plaque or from miniemboli composed of plaque fragments or blood clots. TIAs signal impending stroke by atherosclerotic and thrombotic occlusion (*Hansen, 1998 & Price and Wilson, 2003*).

If ischemic stroke occurs, glucose and oxygen to brain cells are reduced. The reduced glucose quickly depletes the stores of adenosine triphosphate (ATP), resulting in anaerobic cellular metabolism and the accumulation of toxic by products such as lactic acid. Although some brain cells die from anoxia, the lack of oxygen destroys additional brain cells by a secondary mechanism. Oxygen depletion triggers the release of glutamate, an excitatory neurotransmitter that activates neuronal receptors known as N-methyl-D-aspartate (NMDA) receptors. The receptors allow large amounts of calcium followed by glutamate to enter the cells. Once glutamate is inside the brain cells, it literally overexcites them, causing

Review of Literature

disordered enzyme activities that release toxic free radicals, which destroy the cells. This secondary assault extends the zone of cerebral infarction (death of brain tissue) (*Timby and Smith, 2007*).

Hemorrhagic stroke depends on the cause and type of cerebrovascular disorder. Symptoms are produced when an aneurysm or arteriovenous malformation (AVM) enlarges and presses on nearby cranial nerves or brain tissue or, more dramatically, when an aneurysm or AVM ruptures, causing subarachnoid hemorrhage (hemorrhage into the cranial subarachnoid space). Normal brain metabolism is disrupted by the brain being exposed to blood; by an increase in intracranial pressure (ICP) resulting from the sudden entry of blood into the subarachnoid space, which compresses and injures brain tissue, or by secondary ischemia of the brain resulting from the reduced perfusion pressure and vasospasm that frequently accompany subarachnoid hemorrhage but in the intracerebral hemorrhage, or bleeding into the brain substance because degenerative changes from these diseases cause rupture of the vessel (*Smelzter and Bare, 2004*).

Factors precipitating of stroke

The risk factors most closely associated with stroke can be divided into two categories: non-modifiable and potentially modifiable. Risk of stroke increases for persons with more than risk factor (*Ezekowitz et al., 2003*).

Review of Literature

The non-modifiable risk factors include gender, age, race, and hereditary. The overall incidence of stroke greatly increases with advancing age (*Wagner et al., 2006*). But the risk factors that are potentially modifiable include hypertension, cardiac disease, diabetes mellitus, blood lipid abnormalities, and certain lifestyle habits. The most important risk factor associated with stroke is hypertension (*Lewis et al., 2004*). There is, however, little agreement about the effects of the other potentially alterable risk factors on stroke proneness. Most of the lifestyle risk factors associated with coronary artery disease are not as clearly linked to stroke. These risk factors include obesity, cigarette smoking, alcohol use, a diet high in saturated fats and cholesterol, salt intake and stress (*Polaski and Tatro, 1996*).

Clinical manifestations

A stroke may produce different signs and symptoms, depending on the type, location, and extent of brain injury. Symptoms of a hemorrhagic stroke generally occur suddenly and may include severe headache, stiff neck, and loss of consciousness. Vomiting and seizures may also occur (*Linton et al., 2000*).

Symptoms of an embolic stroke also often appear without warning. The specific symptoms depend on the area of the brain affected by the lack of blood supply. One or more of the following signs and symptoms may be noted: one-sided (unilateral) weakness, numbness, visual problems, confusion

Review of Literature

and memory lapses, headache, dysphagia (difficulty swallowing), and language problems. Language problems may be in the form of difficulty understanding speaking, or both. Reading and writing may also be affected (***Monahan and Neighbors, 1998***).

The signs and symptoms of a thrombotic stroke may be the same as those of an embolic stroke. Because the obstruction forms in the same area in which it causes the occlusion, however the symptoms tend to develop more gradually (***Linton and Maebius, 2003***).

Regardless of the type of stroke, symptoms can be devastating. Some symptoms may improve with time and therapy, but others may be permanent. Long-term effects that require special attention are aphasia, dysarthria, dysphagia, dyspraxia, hemiplegia, homonymous hemianopsia, personality change, emotional lability, impaired cognition, and bladder dysfunction. Some signs and symptoms are dependent on whether the right or the left side of the brain is affected (***Lewis et al., 2004***).

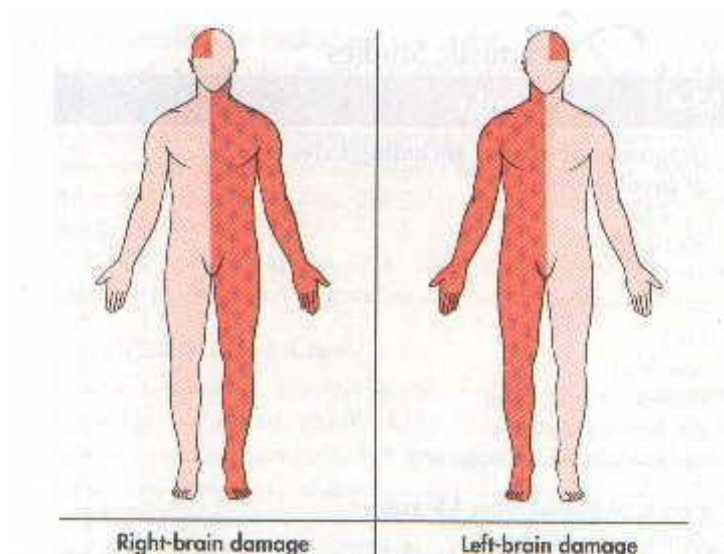


Fig. (3) : Manifestations of right brain damage and left brain damage.

Adopt from (*Lewis et al., 2004*)

1- Aphasia

If the stroke has affected the left hemisphere of the brain (right hemiplegia), damage to the speech center may occur, resulting in aphasia. Aphasia is described as receptive or expressive, with receptive aphasia, the patient has difficulty understanding the written or spoken word, whereas with expressive aphasia, the patient has difficulty speaking and writing. Sometimes, the patient is able to sing simple songs, count, or recite the alphabet and make statements such as "Good morning" or "How are you"? but is unable to communicate effectively. This phenomenon is called automatic or primitive speech. Several guidelines are useful when taking

with the patient with aphasia. When the patient is stable, a referral to a speech therapist is made (*Gall and Judith, 1996*).

2- Dysarthria

Dysarthria is defined as the inability to speak clearly. It is caused by neurologic damage that prevents normal control of muscles used in speech. Dysarthric patients are difficult to understand, but they understand what is said and have no difficulty putting together their thoughts. They only have problems using the muscles of speech to form words (*Linton et al., 2000*).

3- Dysphagia

Patients with dysarthria are also likely to have dysphagia (swallowing difficulty), which requires lengthy periods of rehabilitation. This is a very serious problem because of the risk of aspiration and because it can interfere with adequate nutrition. Dysphagia can be especially discouraging for the patient when attempts to eat resulting in choking, frustration, and fear. Gastrostomy tubes may be inserted for long-term feeding purposes. Rehabilitation may include therapy to treat dysphagia. Speech therapists are trained to help patients with dysphagia (*Travers, 1999*).

4- Dyspraxia

Dyspraxia is the partial inability to initiate coordinated voluntary motor acts. Any part of the body with motor function may be affected. For instance, the patient may not be able to stand or walk or transfer to a chair without assistance even though the patient is not paralyzed. Dyspraxic patients may be able to spontaneously perform a motor act, yet be unable to initiate such an act willfully. This contradictory behavior can lead to uninformed family, friends, or caretakers to assume the person is being "difficult". The difficulty initiating motor actions seen in dyspraxia is quite different from the inability to perform motor acts due to hemiplegia. The person who has apraxia can move the affected parts but cannot perform specific purposeful actions such as walking or dressing (*Lindsay and Bone, 1997*).

5- Hemiplegia

Hemiplegia is defined as paralysis of one side of the body. The affected side is opposite from the side of the brain in which the stroke occurred because nerve fibers in the brain cross over as they pass into the spinal cord. Initially, hemiplegia is characterized by flaccidity (decreased muscle tone) of the affected area. Eventually, flaccidity is replaced by spasticity (increased muscle tone). Recovery from hemiplegia is a gradual process, and the extent of improvement varies widely (*Barker, 1994 & Hudak et al., 1998*).

6- Sensory loss

Sensory losses from stroke may take the form of slight impairment of touch or may be more severe, with loss of proprioception (ability to perceive position and motion of body parts) as well as difficulty in interpreting visual, tactile and auditory stimuli (*Smeltzer and Bare, 2000*).

7- Unilateral neglect

Patients may experience what is called unilateral neglect, in which they do not recognize one side of their body as belonging to them. Unilateral neglect is most common with right hemisphere damage and results in failure to attend to the left side of the body. The condition often resolves after about 3 months (*Linton and Maebius, 2003*).

8- Homonymous hemianopia

Homonymous hemianopia is a perceptual problem that involves loss of one side of the field of vision. Homonymous hemianopia translates to a half-blinded field of vision that occurs on the same side in both eyes. At mealtime, the patient may leave half the plate untouched, the half on the affected side, or the patient may shave his face completely on one side and leave the whiskers untouched on his affected side (*Smeltzer and Bare, 2004*).

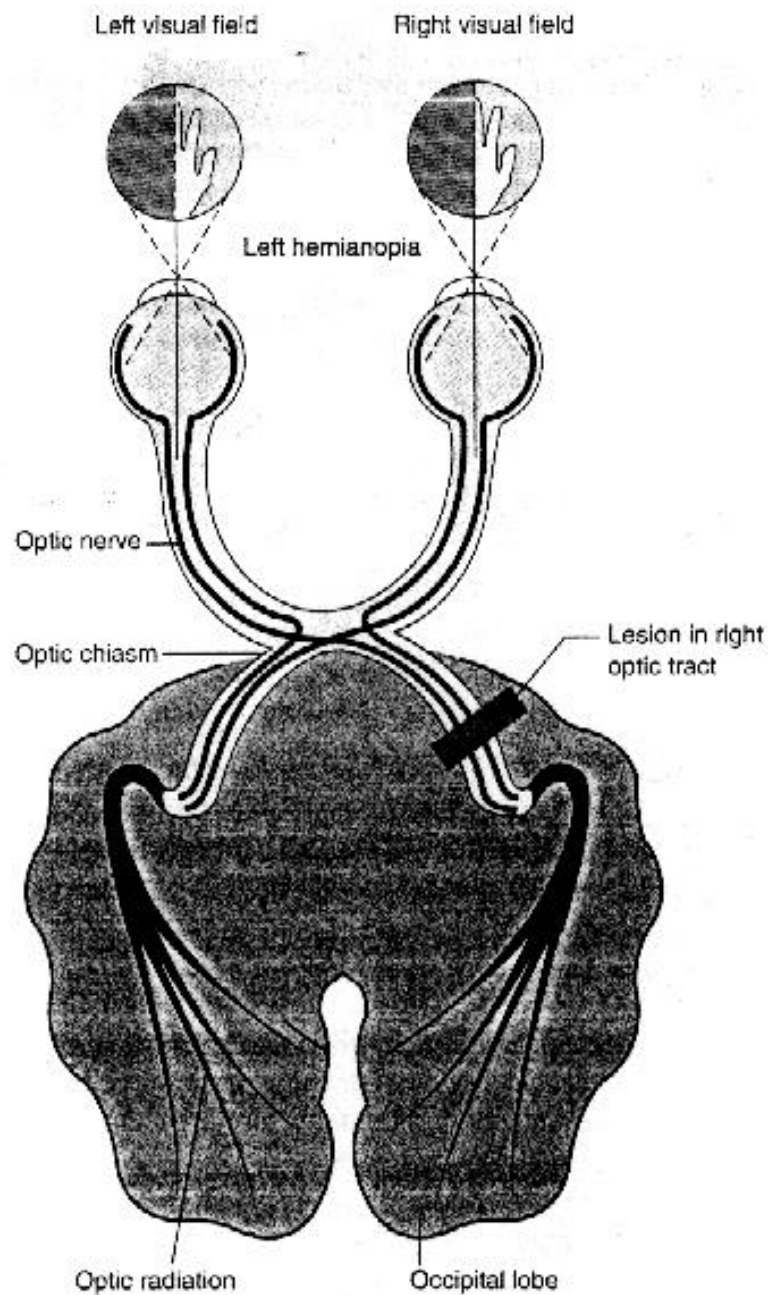


Fig. (4) ences
an inability to see the left or right half of an image. Adopted
from (*Timby and Smith, 2003*)

9- Elimination disturbances

Review of Literature

In the acute phase of stroke, and sometimes into the rehabilitation phase, the patient may experience a neurogenic bladder. A neurogenic bladder is further classified depending on the type of symptoms identified. A flaccid bladder (one without muscle tone) cannot empty completely. In some cases, the coordination to be able to store urine in the bladder or wait once the urge to void felt is lost (dyssynergia), which also leads to incontinence (*Linton and Maebius, 2003*). Bowel incontinence is rarely a physiologic consequence of stroke. However, confusion, disorientation, and immobility may contribute to incontinent episodes and to chronic constipation (*Linton et al., 2000*).

10- Cognitive impairment:

There may be changes in the patient's intellectual function. This may affect memory, judgment, and problem solving abilities (*Hegner et al., 2005*).

11- Intellectual and emotional effects

Many patients experience emotional changes after a stroke, to the point of personality change from prestroke behavior. Emotional lability is a frequent problem after a stroke. The patient may be laughing and seemingly happy and suddenly burst into tears for no apparent reason. Angry outbursts, childlike behavior, and inappropriate sexual behavior may occur. Emotional changes such as these are thought to be

Review of Literature

caused by neurochemical imbalances in the brain or by loss of the brain's ability to inhibit inappropriate behavior. It has also been found that cognitive processes are slowed after a stroke even without readily apparent deficits in thinking and responses (*Phipps et al., 2003*).

Diagnostic studies

When symptoms of a stroke occur, diagnostic studies are done to confirm that it is a stroke and not another brain lesion, such as a subdural hematoma, and identify the likely cause of the stroke. Tests also guide decisions about therapy to prevent a secondary stroke (*Lewis et al., 2004*).

A computed tomography (CT) scan is the primary diagnostic test used after a stroke. CT can indicate the size and location of the lesion and differentiate between ischemic and hemorrhagic stroke. CT angiography (CTA) provides visualization of vasculature and can be performed at the same times as the CT scan. CTA allows detection of intracranial or extracranial occlusive disease. Serial CT scans may be used to assess the effectiveness of treatment and to evaluate recovery (*Lewis et al., 1996 and Hudak et al., 1998*).

Magnetic resonance imaging (MRI) is used to determine the extent of brain injury. MRI has greater specificity compared with CT. Diffusion-weighted MRI is more sensitive. MRI that better delineates ischemic brain injury early after a stroke when

Review of Literature

CT and standard MRI may appear normal. Use of MRI may be restricted in patients with claustrophobia or with devices such as pacemakers that would be affected by the magnetic field. Magnetic resonance angiography (MRA) is a noninvasive method of assessing vascular occlusive disease in the head or neck, similar to CTA (*Tierney et al., 2003*).

Other tests used to diagnose stroke and assess the extent of tissue damage include positron emission tomography (PET), magnetic resonance spectroscopy (MRS), xenon CT, single photon emission computed tomography (SPECT), and cerebral angiography. PET shows the metabolic activity of the brain and provides a depiction of the extent of tissue damage after a stroke. Less active or diseased tissue appears darker than healthy active cells. MRS detects biochemical changes that may be present before physical changes are apparent. Its value in the clinical evaluation of stroke remains to be determined (*Thompson et al., 2002*).

Angiography is the gold standard for imaging the carotid arteries. Angiography can identify cervical and cerebrovascular occlusion, atherosclerotic plaques, and malformation of vessels. Intra-arterial digital subtraction angiography (DSA) reduces the dose of contrast material, uses smaller catheters, and shortens the length of the procedure compared with conventional angiography. DSA involves the injection of a contrast agent to visualize blood vessels in the neck and the large vessels of the circle of Willis. It is considered safer than cerebral angiography

Review of Literature

because less vascular manipulation is required. Risks of angiography include dislodging an embolus, vasospasm, inducing further hemorrhage, and allergic reaction to contrast media (*Phipps et al., 2003 and Swearingen, 2003*).

Transcranial Doppler (TCD) ultrasonography is a noninvasive study that measures the velocity of blood flow in the major cerebral arteries. TCD has been shown to be effective in detecting microemboli and vasospasm. Other neurodiagnostic tests such as skull X-rays, brain scan, and electroencephalogram (EEG) are currently used much less in the diagnosis of stroke. A skull X-ray result is usually normal after a stroke, but there may be a pineal gland shift with a massive infarction (*Clochesy, 2004*).

A lumbar puncture may be done to look for evidence of red blood cells in the cerebrospinal fluid if a subarachnoid hemorrhage is suspected but the CT does not show hemorrhage. A lumbar puncture is avoided if there are signs of increased intra-cranial pressure (ICP) because of the danger of herniation of the brain downward leading to pressure on cardiac and respiratory centers in the brain stem and potentially death. An EEG may show low-voltage, slow-wave activity suggestive of ischemic infarction. If the stroke is due to a hemorrhage, the EEG may show high-voltage slow waves (*Thompson et al., 2002*). If the suspected cause of the stroke includes emboli from the heart, diagnostic cardiac tests should be done such as an electrocardiogram (ECG), a Holter monitor test, cardiac

Review of Literature

enzymes evaluation, and an echocardiogram (*Lewis et al., 2004*).

Routine blood studies, including a complete blood count and platelet count (to evaluate for polycythemia, thrombocytosis, bacterial endocarditis, and severe anemia). Blood should be taken to evaluate glucose, prothrombin time, partial thromboplastin time; and a lipid profile. In the elderly, determination of the erythrocyte sedimentation rate should be preformed urgently to exclude giant cell arteritis; in the young, the presence of antiphospholipid antibodies helps to identify immune-related disease processes predisposing to stroke. Other blood tests (e.g., protein C, protein S, measurements of viscosity or platelet function, and tests for collagen vascular diseases) may be indicated in younger patients who lack obvious causes for their strokes. Tests of renal function and serum electrolyte measurements help to establish systemic illnesses as well as the milieu in which subsequent diagnostic tests (e.g. contrast injection) and treatments might be offered (*Bennett and Plum, 1996 and Swearingen, 2003*).

Prevention

Primary prevention of stroke is the best approach. Stroke risk screenings are an ideal opportunity to lower stroke risk by identifying high-risk individuals or groups and educating the patients and the community about recognition and prevention of stroke (*Lindsey, 2000 and Manzella & Galante, 2000*).

Review of Literature

Modifiable risk factors for stroke include hypertension, cardiovascular disease, high cholesterol, obesity, smoking and diabetes. For people at high risk, interventions that alter modifiable factors, such as treating hypertension and hyperglycemia, stopping smoking, limiting alcohol consumption and weight control, will reduce stroke risk. Many health promotion efforts involve encouraging a healthy lifestyle, including eating a low-fat, low-cholesterol diet and increasing exercise. Recent evidence suggests that eating fish two or more times per week reduces the risk thrombotic stroke for women (*Smeltzer and Bare, 2004*).

Several methods of preventing recurrent or secondary stroke have been identified for patients with transient ischemic attacks TIAs or mild ischemic stroke. Patients with moderate to severe carotid stenosis are treated with carotid endarterectomy (*Haslett et al, 2002*). In patients with atrial fibrillation, which increases the risk of emboli, administration of warfarin (Coumadin), an anticoagulant that inhibits clot formation, may prevent both thrombotic and embolic strokes (*Krenzer, 1999*).

Complications

The list of possible complications of stroke is almost endless. Stroke may result in death or profound neurologic injury. With less severe strokes, the initial acute period may be complicated by respiratory problems related to aspiration and

Review of Literature

atelectasis (*Smeltzer and Bare, 2000*). Other disuse-related complications include skin breakdown, deep vein thrombosis, muscle atrophy, and joint contractures. Urinary tract infections often result from the use of Foley catheters, and both constipation and impaction may result from immobility (*Davenport and Dennis, 2000*).

Stroke patients are at high risk for environmental injury from a variety of physical and cognitive impairments, and the consequences of communication impairments can isolate the patient from full and active participation in the world. Furthermore, for each complication the patient experiences, there is the very real possibility that additional problems will develop for the family and support network (*Phipps et al., 2003*).

Stroke, also known as a cerebrovascular accident or brain attack, is a sudden impairment of cerebral circulation in one or more blood vessels. A stroke interrupts or diminishes oxygen supply and commonly causes serious damage or necrosis in the brain tissues (*Clochesy, 2004*).

Rebleeding is a major complication that may occur at any time with an unclipped aneurysm. Rebleeding commonly occurs within the first few days after hemorrhage, but may occur any time over the first few months if the aneurysm is unclipped (*Black and Jacobs, 1997*).

Prognosis

The prognosis for survival after cerebral infarction is better than after cerebral or subarachnoid hemorrhage (*Tierney et al., 2003*). About 20% of all patients with strokes due to cerebral infarction die within the first month, and the long-term death rate is about 5-10% per annum. However, the mortality of hemorrhage remains high. Approximately 40% of patients die as a direct result of a first hemorrhage, 10% of these before reaching hospital. Of those that are admitted alive, mortality is about 25% at the end of the first week, 50% at 2 months and 70% at 5 years. If the aneurysm cannot be safely clipped, the overall risk of subsequent recurrent haemorrhage is about 35% in the first year and 3% per year thereafter (*Souhami and Moxham, 2002*).

The critical variables that affect recovery are the patient's condition before the stroke, the length of time between the occurrence of stroke and the diagnosis, the support for the patient in the acute phase (usually the first 48 hours), the severity of the patient's symptoms, and access to rehabilitative therapy. A stroke patient who is comatose for more than 36 hours has a poor chance of recovery. Most recovery from stroke takes place in the first 3 months. After that time, improvement is usually slight (*Monahan and Neighbors, 1998*).

The long-term recovery of the stroke patient may well depend on the care received immediately after the stroke. Therefore, the nurse's role in attending stroke patients is a vital one (*Linton and Maebius, 2003*).

Treatment

After a complete stroke, management is aimed at minimizing the volume of brain that is irreversibly infarcted, preventing complications, reducing the patient's disability and handicap through rehabilitation, and preventing recurrent episodes. Patients with subarachnoid haemorrhage should be referred urgently to a neurosurgical center, since these patients require investigation for, and surgical treatment of, the berry aneurysm which may be the cause (*Haslett et al., 1999*).

Medical treatment

Approaches in stroke are very wide because of the huge variety of presentations. They will depend on: the site of the occlusion or aneurysmal rupture, the degree and extent of the ischemia or hemorrhage, the effectiveness of medical and nursing intervention and the patient's response (*Alexander et al., 2000*).

Oxygen therapy

Oxygenation is a priority immediately after a stroke, especially if the patient is unconscious. Oxygen therapy may be ordered. For patients who are comatose, a tracheostomy is sometimes necessary to maintain an airway. Intubation and mechanical ventilation may be necessary to combat inadequate ventilatory effort. Respiratory exercises, including incentive spirometry, may be ordered for the alert patient (*Linton et al., 2000*).

Drug therapy

Antiplatelet drugs are usually the chosen treatment to prevent further stroke in patients who have had a TIA related to atherosclerosis. Aspirin is the most frequently used antiplatelet agent, commonly at a dose of 50 to 325 mg per day (*Lewis et al., 2004*). When some patients are unable to tolerate the long-term use of aspirin, and its use increases the risk of peptic ulcer disease, several alternative antiplatelet drugs, including ticlopidine (ticlid), clopidogrel (plavix), and dipyridamole (persantine), have been shown to be effective for secondary stroke prevention, but these agents are more costly than aspirin, and patients must be monitored for drug-specific side effects (*Phipps et al., 2003*).

Review of Literature

According to *Haslett et al. (2002)* intravenously delivered thrombolysis with urokinase, streptokinase or recombinant tissue plasminogen activator (rt-pA) increases the risk of haemorrhagic conversion of the cerebral infarct with potentially fatal results. However, this risk may be offset by an improvement in overall outcome if thrombolysis is given within six hours of onset of an ischaemic stroke, in the absence of hypertension, when the CT does not show extensive low density.

Intravenous anticoagulation may be used during acute-stage management of a progressing ischemic or embolic stroke. Authorities do not agree about the appropriateness of anticoagulant use in acute stroke management because of the significant risk of bleeding that may follow ischemic damage to brain tissue and because of the lack of conclusive evidence that acute anticoagulation therapy improves patient outcomes (*Phipps et al., 2003*).

Cerebral emboli occurring during the course of acute bacterial endocarditis or subacute endocarditis are usually considered to be a contraindication to anticoagulants: this is because of the high risk of haemorrhage from mycotic aneurysms, which are formed from the spread of infection from the embolus into the vessel wall (*Souhami and Moxham, 2002*).

Review of Literature

The calcium channel blocker nimodipine (Nimotop) is given to patients with subarachnoid hemorrhage to decrease the effects of vasospasm and minimize cerebral damage (**Lewis et al, 2004**). Antiepileptic drugs (AEDs), such as phenytoin (Dilantin), gabapentin (Neurontin), or topiramate (Topamax), are given to treat seizures if they occur (**Ignatavicius and Workman, 2002**).

A raised blood sugar after a stroke increases infarct size and adversely affects functional outcome. This is probably because hyperglycaemia exacerbates the anaerobic production of lactic acid in the ischaemic penumbra. Hence, blood sugar should be normalized within insulin (**Haslett et al., 1999**).

There is some evidence that reducing cerebral oedema with dexamethasone may enable some patients to survive. However, life-threatening cerebral oedema is associated with large infarcts, so that the quality of survival in the few patients who may be saved in this way is poor (**Souhami and Moxham, 2002**). Cerebrospinal fluid drainage may be used in some patients to reduce intracranial pressure (ICP). Diuretic drugs, such as mannitol (Osmitol) and furosemide (Lasix), may be used to decrease cerebral edema (**Lewis et al., 2004**).

Elevated blood pressure is common immediately after a stroke and may be a protective response to maintain cerebral

Review of Literature

perfusion. Immediately following ischemic stroke, use of drugs to lower blood pressure is recommended only if blood pressure is markedly increased (mean arterial pressure > 130 mmHg or systolic pressure > 220 mmHg). Oral antihypertensive drugs are generally preferred (*Hudak et al., 1998*).

Hypervolemia and hyperdilution can be achieved by the administration of saline and perhaps albumin. This treatment arguably supports a sustained blood pressure and promotes vasodilation of the cerebral vessels, theoretically maximizing perfusion to the brain. Hypervolemic-hyperdilution therapy has been successfully used to treat vasospasm after subarachnoid hemorrhage, but its efficacy in acute ischemic stroke is unproven (*Phipps et al., 2003*).

Fluid and nutrition therapy

An order for intravenous fluids will probably be given for the stroke patient in the acute phase. This route provides fluids, electrolytes, and some calories and provides access for the intravenous administration of drugs. The dietary ordered is based on the patient's nutritional requirements and ability to eat. Food may be regular, soft, or pureed, depending on how well the patient can chew and swallow. Vitamins and electrolytes supplementation may also be ordered (*Haslett et al., 2002*).

Total parenteral nutrition may be ordered for the malnourished patient. Sometimes a nasogastric tube is inserted

Review of Literature

for feeding purposes. If long-term feeding are indicated, a gastrostomy tube may be placed (*Moore and Trifiletti, 1994*).

Urine elimination

Sometimes an indwelling catheter is ordered to manage urinary incontinence. Intermittent catheterization is a method of controlling incontinence caused by a flaccid bladder that is less likely to lead to infection. Intermittent catheterization is done every 4 to 6 hours as ordered. The frequency of catheterization is based on the amount of urine obtained each time (*Kelly, 1995*).

Surgical treatment

Carotid endarterectomy is the primary surgical intervention used in stroke management. It is a targeted stroke prevention primarily for patients with symptomatic carotid stenosis. Endarterectomy carefully removes the plaque after the artery has been clamped both above and below the obstruction. Circulation to the brain on the affected side is maintained through the vertebrobasilar arterial system with supplemental flow through a temporary bypass shunt (*Phipps et al., 2003*). During the first 24 hours after surgery, fluctuating blood pressure can occur. The most common fluctuation is hypotension with bradycardia, which might require treatment with a vasopressor agent. Hypertension has also been associated with cerebral hemorrhage. Embolization of plaque and

Review of Literature

microthrombi resulting from the surgical manipulation increase the risk of additional strokes and are the primary postoperative concerns. Other complications from this surgery are neck hematoma and myocardial infarction (*Hartshorn and Sole 1997*).

Transluminal angioplasty is the insertion of a balloon to open a stenosed artery and improve blood flow. Stenting involves intravascular placement of a stent in an attempt to maintain patency of the artery. These procedures are still being evaluated as options to a carotid endarterectomy (*Lewis et al., 2004*).

Extracranial-intracranial bypass involves anastomosing (surgical connecting) a branch of an extracranial artery to an intracranial artery (most commonly, superficial temporal to middle cerebral artery) beyond an area of obstruction with the goal of increasing cerebral perfusion. This procedure is generally reserved for those patients who do not benefit from other forms of therapy. Further study is needed to determine the benefit of this therapy over medical therapy (*Nussbaum and Erickson, 2000*).

PART II: BIOPSYCHOSOCIAL NEEDS OF PATIENTS WITH CHRONIC CEREBROVASCULAR STROKE AND NURSING MANAGEMENT

Need is necessary or required for optimum functioning (*Ellis and Nowlis, 1994*). A need assessment is the process of collecting and analyzing information to develop an understanding of the issues, resources, and constraints of the target population, as related to the development of the health promotion program. The assessment's purpose is to determine whether the needs of the people are being met (*McKenzie et al., 2002*). The data gathered from needs assessment, as well as an assets assessment, should be the basis and rationale for program planning. It is important to understand the process involved in needs assessment and the different types of needs (*Hitchcock et al., 2003*).

According to *McKenzie et al. (2002)*, there are two basic ways of examining the needs. The first is through the eyes of the health professionals, which are services needs. Services needs are the needs that health professionals believe the target population must have met in order to resolve a health problem. The second way of examining the needs is through the eyes of those in the target population. Both types of needs are important and both must be identified in order for the true needs of the target population to be identified.

Review of Literature

Certain needs are basic to all people and require satisfaction accordingly. Such needs are addressed on the basis of priority, meaning that some needs are more pressing than others. Once an essential need is met, a person experiences a need on a higher level. Approaching needs according to priority reflects Maslow's hierarchy of needs. Maslow ranked human needs as follows: physiologic needs; safety and security; belongingness and affection; esteem and self-respect; and self-actualization, which includes self-fulfillment, desire to know and understand, and aesthetic needs. Lower-level needs always remain, but a person's pursuit of higher-level needs indicates that he or she is moving toward psychological health and well-being (*Smeltzer and Bare, 2000*).

Physiological needs, the most basic in the hierarchy of needs, are the most essential to life and therefore have the highest priority. Physiological needs: oxygen, water, food, temperature, elimination, sexuality, physical activity, and rest must be met at least minimally to maintain life. Physiologic needs are often a major part of the nursing care plan for disabled and ill people who require assistance in meeting them (*Taylor et al., 2001*).

The second major need is emotional safety and security which involve trusting others and being free of fear, anxiety, and apprehension. Patients entering the health care system often

Review of Literature

fear the unknown and may have significant emotional security needs. Nurses can help meet such needs by encouraging spiritual practices that are a source of strength and support, by allowing as much independent decision making and control as possible, and by carefully explaining new and unfamiliar procedures and treatments (*Taylor et al., 2001*).

The third major need is that of love and belonging, being with bonding between the infant and mother at birth and must continue throughout life for a person to meet needs at this level. All people need to feel that they have meaningful relationships with others and that they belong to a group. People need the acceptance of their families and friends (*Rosdahl, 1999*).

According to *Maslow*, there are two types of esteem needs: esteem derived from others and self-esteem. People need to know that others think well of, admire, and respect them. Self-esteem is a person's sense of his or her own adequacy and worth. To be genuine, it must be firmly grounded in a realistic appraisal of one's strengths and weaknesses. If esteem needs go unmet, the person faces a life characterized by self-doubt and feelings of helplessness and worthlessness. What others value in a person and what that person values in himself or herself may differ and are influenced by cultural social and psychological variables (*Craven and Hirnle, 2000*).

Review of Literature

According to Maslow, the need for self-actualization is the innate need to realize fully all of one's abilities and qualities, that is, to maximize one's potential. Maslow sees this process as never-ending. Although early life experiences affect self-actualization, people have the capacity to change and to reach a state of optimal psychological health as they strive for it (*Craven and Hirnle, 2000*).

According to *Taylor et al. (2001)*, the nurse identifies and carries out interventions to help meet patient's needs, it is important to remember that this is only a framework or guideline and that, in actuality, each individual sets priorities for meeting needs on levels most important to that person. Additionally, basic human needs are interrelated and may require nursing actions at more than one level at a given time.

Feelings of anxiety, frustration, irritability, bitterness, and guilt may be expressed by some chronically ill persons who face unending pain and loss of economic and social security. Some persons become obsessed with their health problems and spend much of each day thinking about what will happen and what to do. Guilt may result from being unable to work and support oneself or from the belief, as a result of a search for some purpose or reason for the affliction, that one must deserve the suffering (*Phipps et al., 2003*).

Review of Literature

Anxiety is a normal reaction to stress and threat. It is an emotional reaction to the perception of danger, psychologically, and behaviorally. Anxiety and fear are a specific threat, anxiety to a non-specific one. A person experiencing anxiety may feel uneasy and apprehensive and may have a vague sense of dread. Nursing in almost all areas is a profession that deals continuously with anxiety. The intimate association with life, death and all the stages in between arouse within the nurse continuous and unconscious fears about own vulnerability. There are emotional night-risk situations in nursing such as intensive care unite and the emergency department, in which the nurse's understanding and management of her own anxiety as well as threat of patients and their families are vital (*Schreffer and Rogers, 2002*).

As for grief and mourning, grief is the subjective emotional response that evolves from a sense of loss. Mourning is the process through which grief is faced and ultimately resolved or altered over time. Mourning occurs when a person is forced to relinquish original hopes. The process of mourning prepares the individual to reappraise values and to accept substitutions for hope. Individuals experiencing grief may be under a great deal of stress, and stress may make them even more vulnerable to disease. They may become irritable and difficult to get along with. Sometimes they may experience a sense of guilt. Some people blame themselves for whatever they lost. They may perceive their illness and subsequent loss as a punishment from God for not having been a better person, a better parent, or a better spouse (*Linton et al., 2000*). Nursing

Review of Literature

intervention to help patients and families with the experience of grief and mourning include anticipating reactions to loss. Supporting the usual coping mechanisms, and allowing the expression of feelings are essential (*Garrity and Klein, 1999*).

The major nursing responsibilities associated with assisting a client to cope with and adapt to stress include assessing the client's ability to cope with the stressors in the environment; identifying risk factors that could lead to ineffective coping; promoting effective coping and stress management; and implementing nursing interventions to manage ineffective coping when it occurs. In addition, nurses must recognize and cope effectively with stress in their own lives (*Craven and Hirnle, 1996*).

Hope is a complex human experience that has a relationship to health. It is a mixture of feelings and thoughts that center on the fundamental belief that there are solutions to significant needs and problems. Loss of hope leads to giving-up behavior, which leads to physical and emotional disequilibrium. To help patients and families maintain or restore hope, nurses contribute to a hopeful atmosphere that comes from themselves, other the staff members, patients and the physical environment (*Pollock, 2000*).

When people get sick, their role identifies often changes. This affects the ways in which others interact with them and related to them; relationships with family and friends must be

Review of Literature

reestablished and maintained, persons with chronic illness struggle with the role of being impaired. They want to be normal as possible, yet sometimes the conditions of illness interfere with this to a large degree (*Garrity and Klein, 1999*).

**PART III: NURSING MANAGEMENT FOR
PHYSIOLOGICAL NEEDS OF PATIENTS WITH
CHRONIC CEREBROVASCULAR STROKE**

Stroke is the third most common cause of death in North America. Approximately 550,000 strokes occur per year in the United States, and about 150,000 of these individuals do not survive. According to the National Stroke Association, stroke is one of the leading causes of permanent disability in adults. Of long-term stroke survivors, 15% require institutional care, 30% are dependent in activities of daily living, and 60% have decreased socialization out-side the home (*Hudak et al., 1998*).

Nursing management of the previously discussed cerebrovascular diseases requires that the nurse have a thorough knowledge of the pathophysiology of the disease, as well as a good understanding of the treatment plan. Accurate, detailed assessment is essential. Frequently, the first sign of clinical deterioration is evidenced through subtle changes discovered in the neurologic examination (*Thelan et al., 1994*).

The nursing process includes five steps: assessment, nursing diagnosis, planning, implementation, and evaluation. It is a dynamic, continuous process as the client's needs change. The use of the nursing process promotes individualized nursing care and assists the nurse in responding to patient needs in a timely and reasonable manner to improve or maintain the patient's level of health (*Potter and Perry, 2001*).

Application of nursing process in caring of patient with cerebrovascular stroke is important. It includes the following steps:

1. Assessment:

Nursing assessment is the process of gathering information about a patient's health status to identify concerns and needs that can be treated or managed by nursing care. The information gathered may also be known as data. It comprises subjective and objective information about the patient. Data collection marks the beginning of the nursing process and continues throughout the process. As data collection, it is classified into meaningful clusters that describe the problems to be treated. Thus, assessment involves analyzing data to identify a patient's problems and arrive at appropriate nursing diagnosis (*Harkreader, 2000*).

Assessment of the needs of the new nursing system or the current one is the first step in designing. It is the continuous process of data collection, analysis, synthesis and diagnosis. Nursing task force was convened to design the nursing system. The task force gathered information on nursing system through many channels. Based on this information, knowledge of the existing nursing system, and philosophy of nursing department, the task force developed recommendations for nursing system (*Mohamed, 2004*).

Health history

Assessment data to be collected as part of the health history of a patient with a stroke include: Baseline level of function, history of hypertension and its management, coronary artery disease, diabetes, and history of transient ischemic attack (TIA) (symptoms, frequency, workup, and treatment) and/or previous stroke, medications in use: prescription, over the counter drugs, herbal preparations, smoking history, and history of alcohol or other drug use. Assessment includes also circumstances surrounding the stroke, onset, nature, severity, and duration of symptoms, presence of headache: nature and location, visual ability: acuity, diplopia, blurred vision, field cuts, ability to concentrate and follow commands, memory, emotional/affective response and family and social support network, current living situation, financial and insurance status (*Phipps et al., 2003*).

Physical examination

The findings on neurologic assessment depend on the area of the brain that is injured. The patient may have focal or global signs and symptoms. Stroke patients' level of consciousness may range from alert and oriented to coma states. After establishing a baseline, the nurse conducts the neurologic assessment every 2 hours (*Barker, 1994*).

Review of Literature

The nurse must assess vital signs (quality and rates of pulse and respiration; arterial blood gases values as indicated, body temperature, and arterial pressure), level of consciousness (Glasgow coma scale), orientation, and response to tactile stimuli, motor strength: presence and severity of paresis or paralysis, ability to communicate (speak and understand speech), stiffness or flaccidity of the neck, presence or absence of voluntary or involuntary movements of the extremities; muscle tone; body posture; and position of the head, seizures or signs and symptoms of hydrocephalus resulting from hemorrhage, eye opening, comparative size of pupils and pupillary reactions of light, and ocular position, color of the face and extremities; temperature and moisture of the skin, coordination: gait, balance, cranial nerve function, including gag and swallowing reflexes, facial movement, tongue movement, eye blink, eye movement, and pupillary response, volume of fluids ingested or administered; volume of urine excreted each 24 hours, presence of bleeding, maintenance of blood pressure within the desired parameters, and bowel and bladder function (*Smeltzer and Bare, 2000 & Phipps et al., 2003*).

Ongoing nursing assessment continues to focus on the impairment of function in the patient's daily activities, because the quality of life after stroke is closely related to the patient's functional status (*Phipps et al., 2003*).

2- Nursing Diagnosis

Nursing diagnosis defined as a clinical judgment about individual, family, or community responses to actual or potential health problems/life processes. Nursing diagnosis provides the basis for selection of nursing intervention to achieve outcomes for which the nurse is accountable (*Carpenito, 2000*).

Nursing diagnosis for the patient who has experienced a cerebrovascular accident commonly include the following: (1) Risk of injury related to weakness, paralysis, confusion, decreased consciousness, or dysphagia. (2) Impaired physical mobility related to weakness or paralysis. (3) Altered nutrition that is less than body requirements, related to impaired swallowing and hemiparesis or hemiplegia. (4) Self-care deficit related to inability to perform activities of daily living (feeding, bathing, grooming and toileting) without assistance. (5) Urinary incontinence related neurological deficits. (6) Bowel incontinence or colonic constipation related to impaired mobility and neurological impairment. (7) Risk for impaired skin integrity related to decreased mobility, paresis, or paralysis. (8) Impaired verbal communication related to inability to clearly verbalize or inability to comprehend communication. (9) Pain (painful shoulder) related to hemiplegia and disuse. (10) Altered thought processes related to

Review of Literature

brain damage, confusion and inability to follow instructions. (11) Sexual dysfunction related to neurologic deficits or fear of failure. (12) Interrupted family processes related to catastrophic illness and caregiving burdens. (13) Knowledge deficit: medication use, rehabilitation, and long-term care for CVA related to lack of experience/exposure (*Dewit, 1998, & Smeltzer and Bare, 2004*).

Also, *Ackley and Ladwing (2002)* reported that the patient with stroke had the following nursing diagnosis including disturbed sensory perception: visual, tactile, kinesthetic related to neurological deficit, chronic confusion related to neurological changes, impaired memory related to neurological disturbances, caregiver role strain related to cognitive problems of care receiver need for significant home care, disturbed body image related to chronic illness, paralysis, ineffective coping related to disability, anxiety related to situational crisis, change in physical or emotional condition and unilateral neglect related to disturbed perception form neurological damage.

3- Planning

According to *Harkreader (2000)*, planning is the phase of the nursing process during which the nurse will identify the goals of nursing care and the actions to attain those goals. The result of the planning process is a guide for health care that

Review of Literature

identifies patient problems in need of nursing care (specified by nursing diagnosis) predict, outcomes that are sensitive to nursing care, and lists interventions that will result in the expected outcomes or a nursing care plan.

The patient, family, and nurse establish the goals of nursing care in a cooperative manner. Typical goals are that the patient will (1) maintain a stable or improved level of consciousness, (2) attain maximum physical functioning, (3) attain maximum self-care abilities and skills, (4) maintain stable body functions (e.g., bladder control), (5) maximize communication abilities, (6) maintain adequate nutrition, (7) avoid complications of stroke, and (8) maintain effective personal and family coping (*Lewis et al., 2004*).

4- Implementation

Nursing intervention is the action phase of the nursing process in which nursing care is provided. It is the actual initiation of the plan and recording of nursing actions. Its purpose is to provide technical and therapeutic nursing care required to help the patient achieve an optimal level of health (*Craven and Hirnle, 2000*).

As regards a patient having a risk of injury, nursing management should include, assessment of the patient sensation and vision changes. When sensation is diminished, the patient must learn to assess the area frequently for signs of pressure and protect it from injury. In addition to teaching the patient

Review of Literature

how to avoid pressure, advise the patient not to apply heat or cold to that area. Caregivers must also remember not to pull on the affected side or use it to move or support the patient. When the patient has homonymous hemianopia, care is shifted to more challenging mode to promote the patient's adaptation to the disability, place objects in the field of the visual deficit, and remind and encourage the patient to scan the affected visual field, especially when walking, wheeling, and eating. The patient forms new habits of observation through constant practice (*Linton et al., 2000*).

Considering a patient having an impaired physical mobility, nursing management should include regular physical therapy as occupational therapy promotes optimal return of motor function. Regular exercise can cause a dramatic return of function for some stroke patients. Therefore, affected arms and legs need to be used to maintain muscular function and circulation and until neurologic ability is recovered. In the meantime, assistance is needed with motor activities. When the patient is moving, assess gait (if applicable), strength in arms and legs, and balance. When the patient has dyspraxia, to help the patient remember to initiate voluntary responses, provide verbal cues. Teach family members, about dyspraxia and advise them of the need for patience and cues to induce the desired motor performance. Remind the patient who has unilateral neglect to use and support the affected side (*Linton and Maebius, 2003*).

Review of Literature

Concerning a patient having an altered nutrition that is less than body requirements, nursing management should include; (1) Help patient relearn swallowing sequence using compensatory techniques such as a) Place ice on tongue, and encourage sucking. b) Progress to popsicle and soft foods. c) Make sure mechanical soft or pureed diet is provided, based on ability to chew. (2) Encourage small, frequent meals, and allow plenty of time to chew and swallow. (3) Remind patient to chew on unaffected side. (4) Encourage patient to drink small sips from a straw with chin tucked to the chest, strengthening effort to swallow while chin is tucked down. (5) Inspect mouth for food collection and pocketing before entry of each new bolus of food, and teach patient compensatory techniques for safe swallowing. (6) Encourage frequent oral hygiene (*Nettina, 2001*).

Regarding to a patient who has a urinary and bowel incontinence or colonic constipation, nursing management should include establishing the cause first. Typically, the patient who has had a stroke can relearn both bowel and bladder control. To begin a bladder training program, the nurse places the patient on the bedpan or the commode or offers the urinal every 2 hours. The nurse encourages the patient to have a total fluid intake of 2000ml or more per day unless contraindicated. Intermittent catheterization to check for residual urine may be done by the nurse in the early part of the bladder retraining

Review of Literature

program to ensure that the patient is emptying the bladder. Retained urine can lead to a urinary tract infection (*Ignatavicius et al., 1995*). The nurse determines the patient's normal time for bowel elimination and any routine that helps to ensure an acceptable evacuation. This routine is followed if possible, and the patient is placed on the bedpan or commode at the same time as the previous schedule at home. The nurse collaborates with the dietitian to provide a diet high in bulk and fiber. The nurse encourages the patient to drink apple or prune juice to help promote bowel elimination (*Ignatavicius and Workman, 2002*).

As for a patient who has an impaired skin integrity, nursing management should include, (1) Pressure relief by position changes, special mattresses, or wheelchair cushions; (2) Good skin hygiene; (3) Emollients applied to dry skin; and (4) Early mobility. The ideal position change schedule is side-back-side with a maximum duration of 2 hours for any position. The nurse should position the patient on the weak or paralyzed side for only 30 minutes. If an area of redness develops and does not return to normal color within 15 minutes of pressure relief, the epidermis and dermis are damaged. The damaged area should not be massaged because this may cause additional damage. Pillows can be used under lower extremities to reduce pressure on the heels (*Lewis et al., 2004*).

Review of Literature

As regards a patient who has an impaired verbal communication, nursing management should include: The nurse collaborates with the speech-language pathologist (SLP) in working with the patient who has aphasia or dysarthria. The aphasic patient requires repetitive directions to understand or complete a task. Each task should be broken down into component parts and given one step at a time. The nurse faces the patient and speaks slowly and clearly. The patient should be given sufficient time to understand and process the information and to respond. The nurse encourages the patient to communicate and reinforces this behavior positively. Facial muscle exercises may be performed to strengthen the muscles used for speech (*Ignatavicius et al., 1995*).

Regarding to a patient who has a sexual dysfunction, nursing management should include, education on (1) optional positioning of partners, (2) timing for peak energy times, and (3) patient and partner counseling (*Lewis et al., 2004*).

As for a patient who has a unilateral neglect, nursing management should include, teaching the patient to touch and use both sides of the body. For example, the nurse or assistive nursing personnel encourages the patient to wash both the affected and unaffected sides of the body. When dressing, the nurse reminds the patient to dress the affected side first. If hemianopia is present, the nurse also teaches the patient to turn

Review of Literature

his or her head from side to side to expand the visual field. This scanning technique is also useful when the patient is eating or ambulating (*Ignatavicius and Workman, 2002*).

As regards a patient who has an altered thought processes, nursing management should be supportive. The nurse reviews the results of neuropsychological testing, observes the patient's performance and progress, gives positive feedback and most importantly conveys an attitude of confidence and hope (*Smeltzer and Bare, 2004*).

Considering a patient who has a self-care deficit, nursing management should include, encouraging maximum independence within limitations imposed by an impaired physical mobility, implementing measures to facilitate patient's ability to perform self-care activities. With patient, the nurse develops a realistic plan for meeting daily physical needs, schedule care at a time when patient is most likely to be able to participate, consult occupational therapist about assistive devices available, reinforce use of these devices if indicated, allow adequate time for accomplishment of self-care activities (*Ulrich et al., 2001*).

Concerning a patient who has anxiety and ineffective coping, nursing management should include, providing a calm, restful environment, encouraging verbalization of fear and anxiety, reinforcing physician's explanations and clarifying

Review of Literature

miss-conceptions, explaining all diagnostic tests, instructing the patient about relaxation techniques and encouraging participation in diversional activities, assisting patient to identify specific stressors and ways to cope with them, administering antianxiety agents if ordered, consulting physician if actions fail to control fear and anxiety (**Robinson and Kish, 2001**).

Regarding to a patient who has interrupted family processes, nursing management should include, providing support by telling family members what is happening, what is being done, and how they can help the patient. If necessary, a referral may be made to a social worker, mental health specialist, or spiritual counselor (**Linton et al., 2000**).

Concerning a patient who has a self-concept disturbance, nursing management should include; implementing measures to assist patient to increase self-esteem as giving positive feedback about accomplishment, assisting patient to identify and utilize coping techniques that have been helpful in the past, assisting patient with usual grooming, reinforcing measures that can help patient improve his/her activity tolerance. Implementing measures to reduce patient's feelings of powerlessness, assessing for and supporting behaviors suggesting positive adaptation to change that have occurred, assisting patient's and significant other's adjustment by listening, facilitating

Review of Literature

communication, and providing information. Consulting physician about psychological counseling if needed is also a nurse responsibility (*Robinson and Kish, 2001*).

As regards a patient who has a knowledge deficit, nursing management should include; offering information only as the patient requests it in the acute stage, when fear of death and recurrence of stroke are primary concerns. Accurate, simple explanations help set the stage for more detailed teaching at a later time when the patient is better able to learn. The nurse should immediately give information about community resources to help the patient prepare for the return home, or should suggest placement options. Discharge planning requires careful consideration of alternatives to be effective. The nurse should discuss living options, home service agencies, payment options for home care, and volunteer resources such as stroke clubs, churches, or community groups for support and services (*Barker, 1994*).

5) Evaluation

The nurse must evaluate the success of nursing care and need to alter care plan, by comparing the patient's behavioral outcomes to the expected outcomes to determine to what extent goals have been achieved. If the outcomes are not met, the nurse should reassess the patient and revise the plan and interventions to meet patient's needs (*Nettina, 2001*).

Review of Literature

Evaluation is a systemic and ongoing process of examining whether expected outcomes have been achieved and whether nursing care has been effective. However, evaluation must also examine the quality of nursing care delivery and link positive patient outcomes to quality care (*Harkreader, 2000*).

Evaluation of expected outcomes may include; achieving improved mobility, having no complaints of shoulder pain, achieving self-care; performing hygienic care, using adaptive equipment, turning head to see people or objects, demonstrating improved swallowing ability, achieving normal and bladder elimination, participating in cognitive improvement program, demonstrating improved communication, maintaining intact skin without breakdown. Nurse's evaluation considers also whether family members demonstrate a positive attitude and coping mechanism and have positive attitude regarding alternative approaches to sexual expression (*Smeltzer and Bare, 2000*).

Subjects and Methods

Aim of the study

The aim of this study is to assess the biopsychosocial needs for patients with chronic cerebrovascular stroke.

Research questions

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

The present study is a descriptive survey study utilized to meet the aim of this study.

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 out patient clinics (Neurology & Physiotherapy Clinics) at Ain Shams University Hospital. This setting choose because the patients with chronic cerebrovascular stroke followed rehabilitation course in the physiotherapy clinic.

B- Subjects

Convenience sample who visited the out patient 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), who were included in the study according to the criteria for selection.

Criteria for selection:

- Both sexes.
- Diagnosed with cerebrovascular stroke.
- Patients in the chronic phase of stroke, whose irreversible illness caused permanent physical impairment and requires long-term health care (*Taylor et al., 2001*).

C- Tools of data collection

Data were collected using the following tools:

I- An interviewing questionnaire sheet, divided into two parts:

- 1- The socio-demographic characteristics of the study sample.
- 2- Activities of Daily Living Scales.

II- Geriatric Depression Scale and Taylor Anxiety Scale.

III- Social Dysfunction Rating Scale.

I- An interviewing questionnaire sheet: (Appendix 1):

An Arabic questionnaire, suitable to the study sample, was filled by the researcher.

This questionnaire sheet is divided into two parts:

- (1) The socio-demographic characteristics of the study samples such as name, age, sex, address, marital status, occupation, and level of education.
- (2) The 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

Subjects & Methods

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 o Faculty of Nursing at Ain Shams University (**Mohamed, 2001**).

- i- It was developed by **Katz et al. (1963)**. 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.

- ii- It was developed by **Lawton and Brody (1969)**. Lawton scale of instrumental activities of daily living “IADLs” includes the more complex activities that are essential to community living situation. It is commonly used to

Subjects & Methods

measure functional status to assess eight instrumental activities of daily living (use of a telephone, shopping, meal preparation, housekeeping, laundry, transportation, ability to correctly take medications, and financial management.

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 (Appendix II):

(1) Geriatric Depression Scale (short form):

The Geriatric Depression Scale (GDS) was conducted to assess the mood state of patients. It was designed originally by ***Yesavage and Brink, (1983)*** and translated and validated on Egyptian population by ***Metwally, (1998)***. And depending on the previous master of Faculty of Nursing at Ain Shams University (***Mohamed, 2001***)

Subjects & Methods

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.

(2) 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 Multiphasic 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:

Subjects & Methods

- 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 (Appendix III):

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 (*Matteson et al., 1997*).

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

(Ahmed, 2006)

II- Operational Design:

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

I. Preparatory phase:

A review of the current and past available literature and theoretical knowledge covering the various aspects of the problem were done using books, articles, periodicals, and magazines to choose the study tools for data collection.

II. 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, validity and reliability of items and time consuming. Based on the finding of the pilot study, no changes were needed on the tools.

III. Field work

Data collection of this study was carried out through six months, in the period from the beginning of January, 2005 till the end of June, 2005.

The researcher visited the selected settings six days per week from 9.00 a.m. to 1.00 p.m. as Monday and Thursday in the Neurology Clinic and other days in the Physiotherapy Clinic because it was the day off of the Neurology Clinic.

Subjects & Methods

It was necessary for the researcher to introduce herself and explain the purpose of the study for the subjects included in the study. The researcher assured them that the data collected and information will be confidential and would be used only to improve their health.

In every visit, the researcher met from 1-2 patients and some day don't met any patient, the data were collected after insuring that they fit the criteria for selection either before or after the physician visit. The researcher filled in interviewing questionnaire and the time needed was 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. An official letter was issued from the Faculty of Nursing explaining the aim of the study to obtain permission for the collection of data. 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

Results

The results will be presented in the following sequence:

Part I:

Represents socio-demographic characteristics of the studied sample (table 1 and figure 1).

Part II:

It is concerned with the activities of daily living scales ADLs and IADLs [tables (2-5)].

Part III:

Deals with psychological needs by Geriatric Depression Scale and Taylor Anxiety Scale [tables (6-9)] and correlation between different scores versus each other among chronic cerebrovascular stroke cases [table (10) and figures (2-6)].

Part IV:

Deals with social needs by Social Dysfunction Rating Scale [table (11)] and correlation between Social Dysfunction Rating Scale versus ADL, IADL, GDS and Taylor Anxiety Scale [tables (12-14) and figures (7-10)].

Results

Part I: Socio-demographic Characteristics of Patients with Chronic Cerebrovascular Stroke

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		Females		Total	
	N=39	%	N=21	%	N=60	%
<u>Age (yrs)</u>						
<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	
<u>Occupation</u>						
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
<u>Education level</u>						
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
<u>Marital status</u>						
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

Results

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%).

This same table reveals also that, the majority of patients in both sexes (males & females) were married (94.9%, 85.7% respectively).

Results

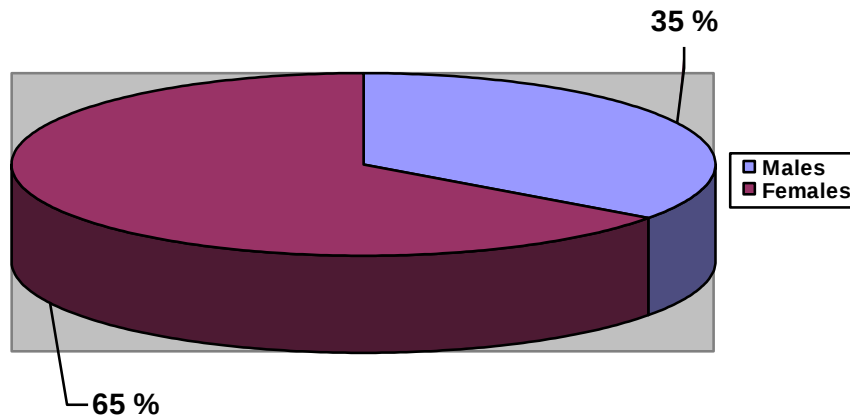


Fig. (1): Percentage distribution of cerebrovascular stroke between males and females.

As regards chronic cerebrovascular stroke, the above figure illustrates that slightly less than two thirds of patients (65%) were males, while slightly more than one third of them (35%) were females.

Results

Part II: Physical Needs of Patients with Chronic Cerebrovascular Stroke

Table (2): Basic activities of daily living in relation to gender of chronic cerebrovascular stroke cases

Gender	Basic Activities of Daily Living Scale (ADLs)					
	Independent		Partially dependant		Completely dependant	
	No	%	No	%	No	%
Males n = 39	23	59	15	38.5	1	2.6
Females n = 21	12	57.1	8	38.1	1	4.8
Total	35	58.3	23	38.3	2	3.3
Significance	$X^2 = 0.91$ $P > 0.05$					

Table (2): Regarding to basic activities of daily living, the above table reveals that (59%) of males were independent, (38.5) were partially dependent, while only (2.6%) were completely dependant. Among females there were (57.1%) of them were independent, (38.1%) were partially dependent and only (4.8%) were completely dependent.

Statistically there was no significant difference between males and females ($X^2 = 0.91$ and p-value > 0.05).

Results

Table (3): Relation between socio-demographic characteristics of chronic cerebrovascular stroke and ADLs

Socio-demographic Data	Independent		Partially Dependant		Completely Dependant		P-value
	N	%	N	%	N	%	
<u>Age (yrs)</u>							
<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	
<u>Occupation</u>							
Manual worker	14	45.2	15	48.4	2	6.5	<0.05*
Clerk worker	13	76.5	4	23.5	0	0	
Housewife	8	66.7	4	33.3	0	0	
<u>Education level</u>							
Illiterate	14	53.8	10	38.5	2	7.7	>0.05
Read and write	3	33.3	6	66.7	0	0	
Primary school	1	33.3	2	66.7	0	0	
Prep school	3	50	3	50	0	0	
Secondary school	4	80	1	20	0	0	
University	10	90	1	9.1	0	0	
<u>Marital status</u>							
Single	0	0	0	0	2	3.6	>0.05
Married	32	58.2	21	38.2	0	0	
Divorced	1	100	0	0	0	0	
Widowed	2	50	2	50	0	0	

Table (3): 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 ($p > 0.05$).

Results

Table (4): Instrumental activities of daily living in relation to gender of chronic cerebrovascular stroke cases.

Gender	Instrumental Activities of Daily Living scale (IADLs)					
	Independent		Partially Dependand		Completely Dependand	
	No	%	No	%	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					

Table (4): 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).

Results

Table (5): Relation between socio-demographic characteristics of chronic cerebrovascular stroke and IADLs

Socio-demographic Data	Independent		Partially Dependant		Completely Dependant		P-value
	No	%	No	%	No	%	
<u>Age (yrs)</u>							
<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	
<u>Occupation</u>							
Manual Worker	14	45.2	15	48.4	2	6.5	<0.05*
Clerk worker	13	76.5	4	23.5	0	0	
House wife	8	66.7	4	33.3	0	0	
<u>Education level</u>							
Illiterate	14	53.8	10	38.5	2	7.7	>0.05
Read and write	3	33.3	6	66.7	0	0	
Primary school	1	33.3	2	66.7	0	0	
Prep school	3	50	3	50	0	0	
Secondary school	4	80	1	20	0	0	
University	10	90	1	9.1	0	0	
<u>Marital status</u>							
Single	0	0	0	0	2	3.6	>0.05
Married	32	58.2	21	38.2	0	0	
Divorced	1	100	0	0	0	0	
Widowed	2	50	2	50	0	0	

Table (5): This table shows that the highest percentage of clerk workers and housewives are independent, with a statistically significant association between occupation and IADLs. On the other hand, no statistically significant relations between other sociodemographic data and IADLs were found by chi square test ($p > 0.05$.)

Results

Part III: Psychological Needs of Patients with Chronic Cerebrovascular Stroke

Table (6): Geriatric Depression Scale in relation to gender of chronic cerebrovascular stroke cases

Gender	Geriatric Depression Scale (GDS)							
	Normal		Mild		Moderate		Severe Depression	
	No	%	No	%	No	%	No	%
Males n = 39	5	12.8	10	25.6	9	23.1	15	38.5
Females n = 21	4	19	3	14.3	7	33.3	7	33.3
Total	9	15	28	46.7	16	26.7	22	36.7
Significance	$X^2 = 1.8$				$P > 0.05$			

Table (6): Using the Geriatric Depression Scale, table (6) reveals that (12.8%) of males were normal, (25.6%) showed mild depression, (23.1%) showed moderate depression and (38.5%) showed severe depression, while in females (19%) were normal, (14.3%) showed mild depression, and an equal percentage of (33.3%) showed either moderate or severe depression.

Statistically there was no significant difference between males and females ($X^2 = 1.8$ at p-value > 0.05).

Results

Table (7): Relation between socio-demographic characteristics of chronic cerebrovascular stroke and GDS

Socio-demographic data	Normal		Mild		Moderate		Severe		P value
	No	%	No	%	No	%	No	%	
<u>Age (yrs)</u>									
<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	
<u>Occupation</u>									
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	
<u>Education level</u>									
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	
<u>Marital status</u>									
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 (7): This table shows that no statistically significant relations could be detected between different sociodemographic data and GDS by chi square test ($p > 0.05$).

Results

Table (8): Taylor Anxiety Scale in relation to gender of chronic cerebrovascular stroke cases

Gender	Taylor Anxiety Scale							
	Normal		Mild		Moderate		Severe Anxiety	
	No	%	No	%	No	%	No	%
Males n = 39	1	2.6	20	52.6	17	43.6	1	2.6
Females n = 21	0	0	9	42.9	11	52.4	1	4.8
Total	1	1.7	29	48.3	28	46.7	2	3.3
Significance	$X^2 = 1.62$ $P > 0.05$							

Table (8): Using Taylor Anxiety Scale, the previous table shows that (2.6%) of males were normal, (52.6%) showed mild anxiety, (43.6%) showed moderate anxiety, and (2.6%) showed severe anxiety. However in females, (42.9%) were mild anxiety, (52.4%) showed moderate anxiety and only (4.8%) showed severe anxiety.

Statistically no significant difference between males and females was detected ($X^2 = 1.62$ at P value > 0.05).

Results

Table (9): Relation between Socio-demographic characteristics of chronic cerebrovascular stroke and Taylor Anxiety Scale

Socio-demographic Data	Mild		Moderate		Severe		P Value
	No	%	No	%	No	%	
<u>Age (yrs)</u>							
<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	
<u>Occupation</u>							
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	
<u>Education level</u>							
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	
<u>Marital status</u>							
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 (9): This table shows that no statistically significant relations could be detected between different socio-demographic data and Taylor Anxiety Scale by chi square test ($p > 0.05$).

Results

Table (10): *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 $p > 0.05$

Table (10): This table shows highly statistically significant positive correlation between GDS versus Taylor Anxiety Scale and ADL versus IADL by correlation coefficient 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.

Results

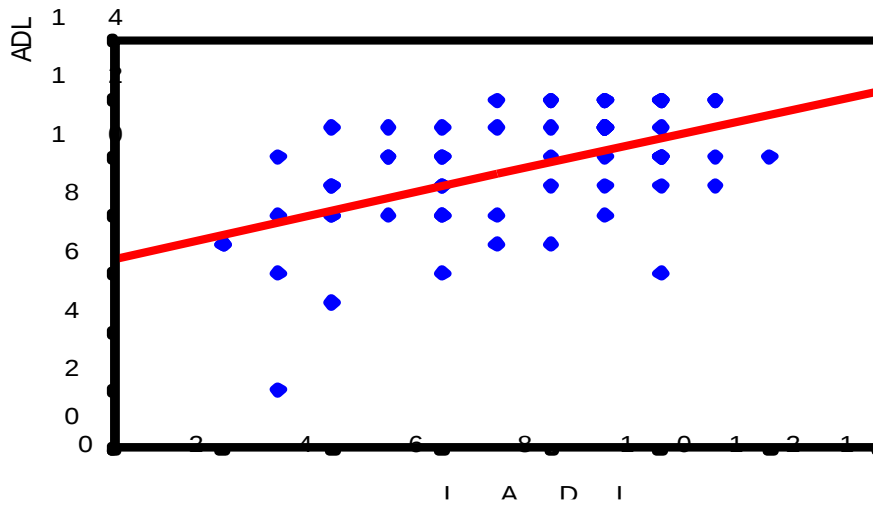


Fig. (2): Correlation between ADL and IADL.

There is a highly statistically significant positive correlation between ADL versus IADL ($p = 0.52^{**}$).

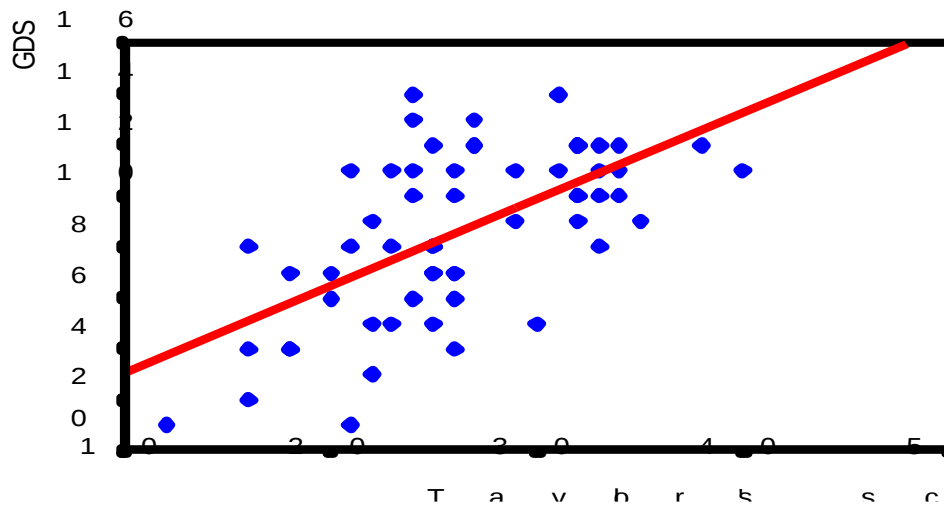


Fig. (3): Correlation between GDS and Taylor Anxiety Scale.

There is a highly statistically significant positive correlation between GDS versus Taylor Anxiety Scale. ($p = 0.63^{**}$)

Results

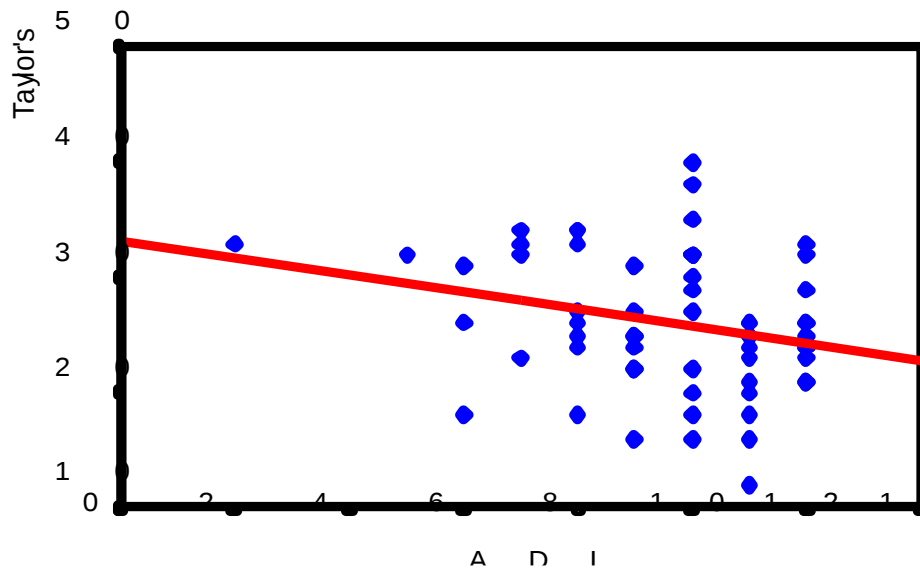


Fig. (4): Correlation between ADL and Taylor Anxiety Scale.

There is a statistically significant inverse correlation between ADLs and Taylor Anxiety Scale ($p = -0.25^*$).

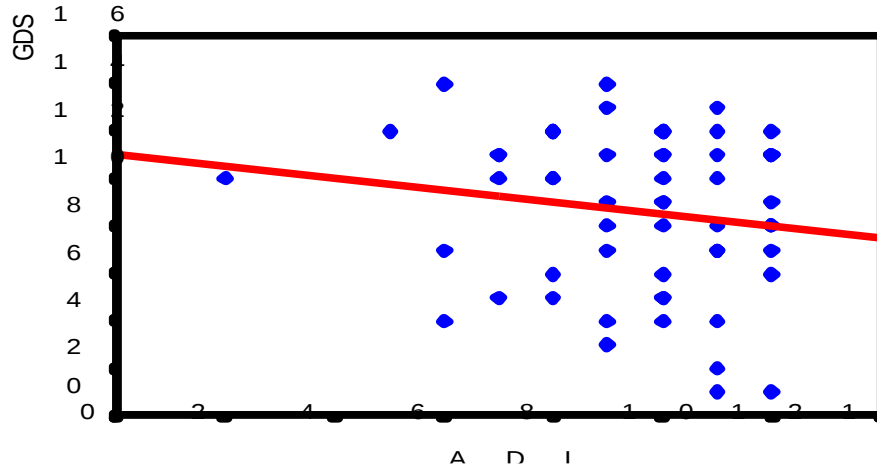


Fig. (5): Correlation between GDS and ADL.

There is a statistically insignificant inverse correlation between GDS and ADL. ($p = -0.12$).

Results

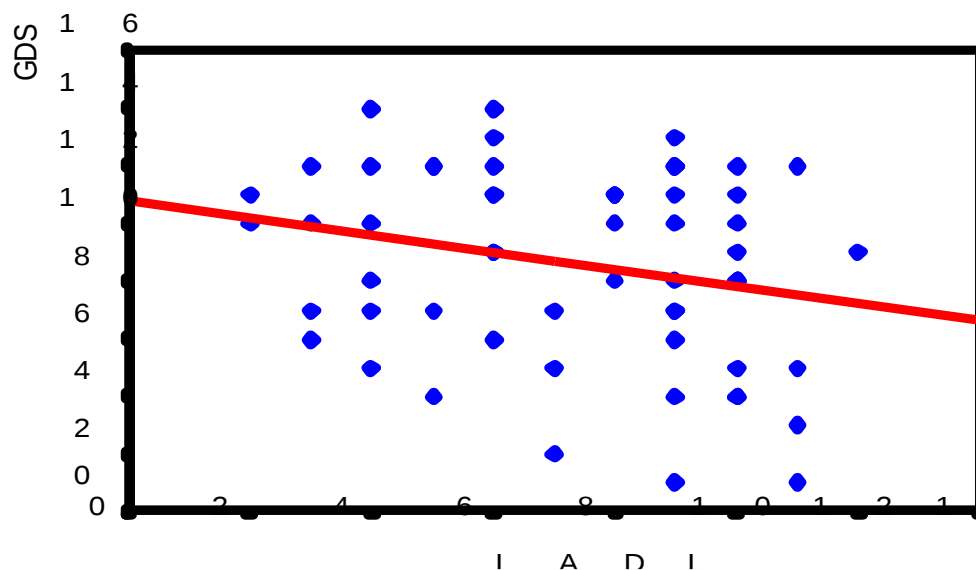


Fig. (6): Correlation between GDS and IADL

There is a statistically insignificant inverse correlation between GDS and IADL. ($p = -0.22$) .

Results

Part IV: Social Needs of Patients with Chronic Cerebrovascular Stroke

Table (11): 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 (11): 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 ($X^2 = 2.6$ at $p > 0.05$).

Results

Table (12) *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**

Table (12): 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 ($r=-0.56$; $p< 0.01^{**}$).

Results

Table (13): *Correlation between Social Dysfunction Rating Scale versus ADL, IADL, GDS and Taylor Anxiety Scale among males*

Variables	r	P
ADL	0.29	<0.05*
IADL	0.27	>0.05
GDS	-0.74	<0.01**
Taylor Anxiety scale	-0.63	<0.01**

Table (13): This table shows a statistically significant positive correlation between Social Dysfunction Rating Scale and ADL ($r = 0.29$; $p < 0.05^*$), and highly statistically significant inverse correlation between Social Dysfunction Rating Scale and GDS as well as Taylor Anxiety Scale by using correlation co-efficient test ($r = -0.74$ and $r = -0.63$ respectively; $p < 0.01^{**}$)

Results

Table (14): *Correlation between Social Dysfunction Rating scale versus ADL, IADL, GDS and Taylor Anxiety scale among females*

Variables	r	P
ADL	0.49	<0.01**
IADL	0.07	>0.05
GDS	-0.25	>0.05
Taylor Anxiety scale	-0.46	<0.05*

Table (14): This table shows a highly statistically significant positive correlation between social dysfunction rating scale and ADL ($r = 0.49$; $p < 0.01^{**}$), and a significant inverse correlation versus Taylor Anxiety Scale by using correlation co-efficient test ($r = -0.46$; $P < 0.05^{*}$).

Results

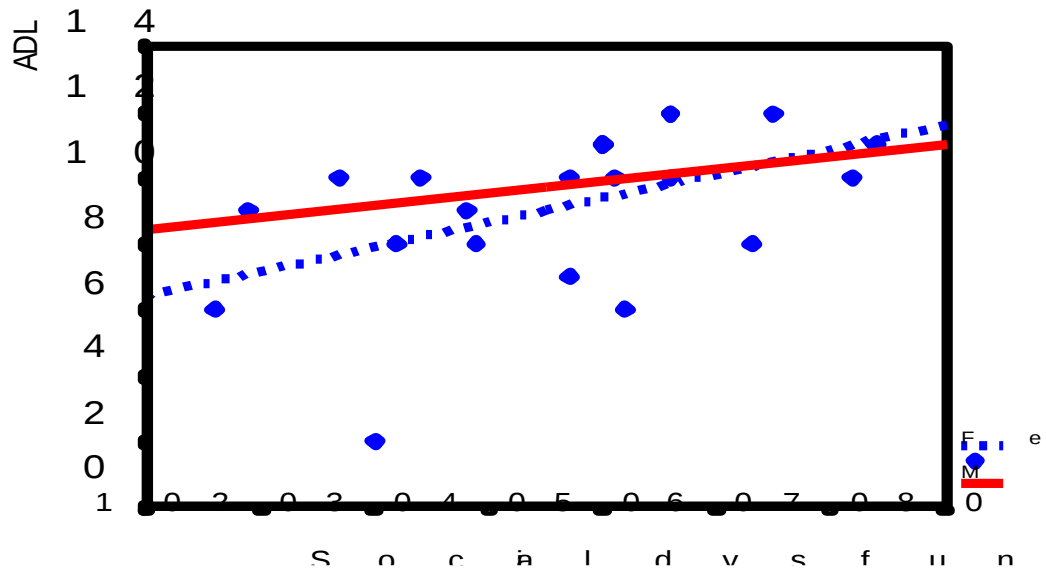


Fig. (7): Correlation between Social Dysfunction Rating Scale and ADL among males and females.

There is a significant positive correlation between SDRS versus ADLs among males by using r test ($r = 0.29$; $p < 0.05^*$) and a highly statistically positive correlation among females by using r-test ($r = 0.49$; $p < 0.01^{**}$)

Results

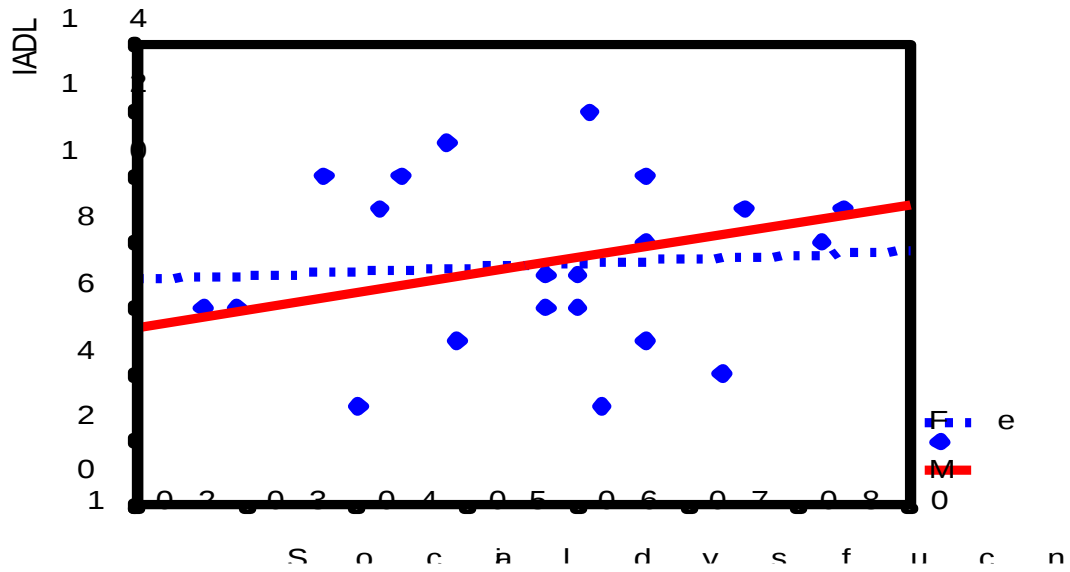


Fig. (8): Correlation between Social Dysfunction Rating Scale and IADL among males and females.

There is no statistically significant correlation between SDRS versus IADLs among males and females by using r-test ($r=0.27$; $p > 0.05$) in males and ($r=0.07$; $p > 0.05$) in females.

Results

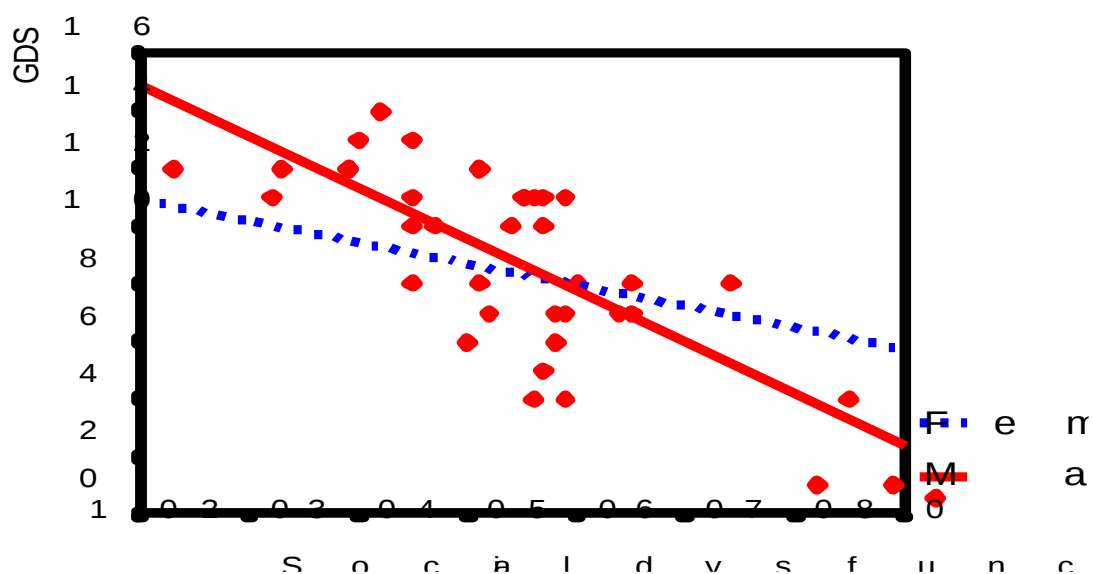


Fig. (9): Correlation between Social Dysfunction Rating Scale and GDS among males and females.

There is a highly statistically significant inverse correlation between SDRS and GDS among males by using r-test ($r = -0.74$; $P < 0.01^{**}$).

On the other hand no statistically significant inverse correlation was detected between SDRS and GDS among females by using r-test ($r = -0.25$; $P > 0.05$).

Results

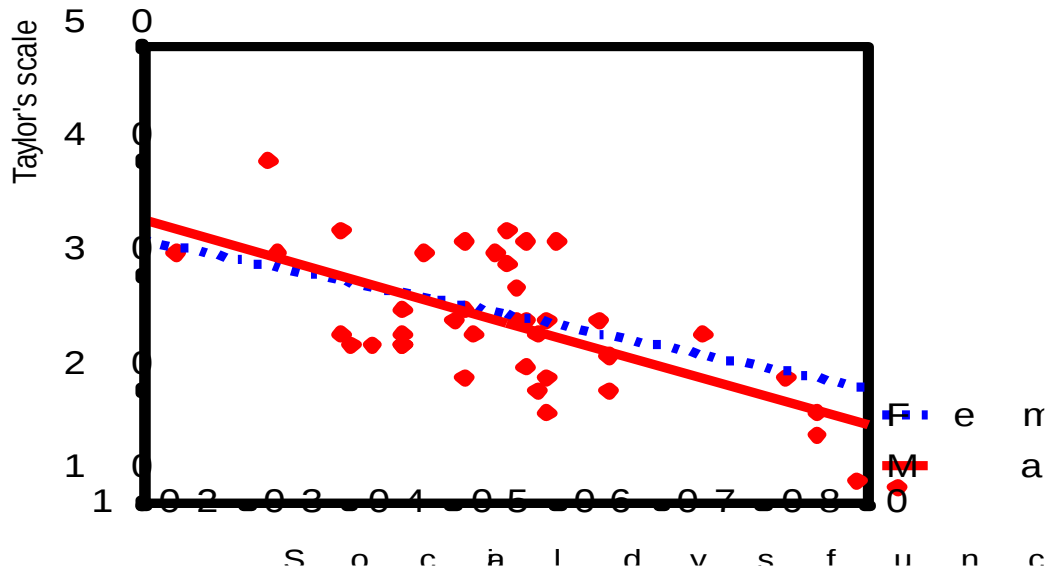


Fig. (10): Correlation between Social Dysfunction Rating Scale and Taylor Anxiety Scale among males and females.

There is a highly statistically significant inverse correlation between SDRS and Taylor Anxiety Scale among males by using r-test ($r = -0.63$; $p < 0.01^{**}$). On the other hand, a statistically significant inverse correlation between SDRS and Taylor Anxiety Scale among females by using r-test ($r = -0.46$; $P < 0.05^{*}$).

Discussion

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 (*Dressman and Hunter, 2002 & Maulden et al., 2005*).

So, stroke is a major cause of death and disability and accounts for 10-20% of all annual deaths in industrialized countries (*Martino et al., 2000*).

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 (*Medical Records at Ain Shams Specialized Hospital, cited in Saad, 2003*).

The study was aiming to assess the biopsychosocial needs for patients with chronic cerebrovascular stroke.

Discussion

The 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?

Discussion of the findings will cover four main areas: first, socio-demographic characteristics of the study group; second, assessment of physical needs of study group; third, assessment of psychological needs of study group; and fourth, assessment of social needs or conditions of study group.

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 *El-Tamawy and Abdul El-Ghani, (2002)*. In this respect, *Martinson et al. (2002)*, found that at age 55 years, stroke incidence rates double with every decade of life. In another study done by *Kannoon (2002)*, 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, *Ahmed (2006)*, in 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.

Discussion

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 **Lai et al. (2005)**, 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 **Mohamed (2003)**, 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 were 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, **Abd El-Ghani and El-Tamawy (2001)**, found that stroke in Egypt was more common in males (59.5%) than in females (40.5%). In a study carried out by **Kannoon (2002)**, males constitute about 52% of CVS patients. On the other hand, **The American Heart Association (2002)**, 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. **The Internet Stroke Center (2005)**, stated that each year, about 40.000 more women than men have stroke. Recently, **Ahmed (2006)**, stated that

Discussion

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, **Ahmed (2006)**, 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 **Ahmed (2006)**, 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, **Ross et al. (1997)**, 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.

Discussion

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 **Hamed, (2003)** and **Mohamed, (2003)** 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, **Abd El Ghany (2000)**, 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 **Hamed (2003)**, 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 **Van de Port et al. (2006)** in a recent study revealed that, mobility decline is an essential concern in

Discussion

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 **Ahmed (2006)**, 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 **Martinson et al. (2002)**, who stated that 47% of patients surviving a stroke will be physically dependent on others. The previous results were also supported by **Kauko (2000)**, 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.

The present study revealed a relation between socio-demographic data and ADL, as slightly more than three quarters of clerk workers and two thirds of housewives are independent compared to the other occupations with a statistically significant association between occupation and ADL.

On the same line, **Hamed (2003)**, denoted statistically insignificant difference between self-care dependency and patient's age, and inconsistency as regards to educational level

Discussion

of the patients and all self-care dependency activities. There were highly statistically significant difference .

The previous findings are in agreement with **Lin and Change (2000)**, who found that, a large proportion of the unexplained variance in rehabilitation efficiency and effectiveness was due to non medical factors, but to demographic characteristics as age, occupation, educational level and marital status. However, the present study showed a statistically significant difference between occupation and ADL.

The present study results revealed that, regarding to IADLs, more than half of males were partially dependent, while less than half of them were completely dependent. However, among females, more than half of them were partially dependent and less than half were completely dependent. Statistically, a non-significant difference between both males and females was detected. In a thesis of, **Ahmed (2006)**, she concluded that about half of the study males and the majority of control males were dependent in performing IADLs, while most of females in the study and control groups were dependent in their function of IADLs preprogram.

The present study revealed that as regards the relation between socio-demographic data and IADLs, more than three quarters of clerk workers and more than two thirds of

Discussion

housewives are independent compared to the other patients with different occupations, with a statistically significant association between occupation and IADLs. On the other hand, no statistically significant relations were found between age, educational level, marital status and IADLs.

III- Assessment of Psychological Needs of the Study Group:

The present study revealed that more than four fifths of male patients were depressed, more than one third of them had severe depression, less than one quarter had moderate depression and more than one quarter had mild depression. As well, more than four fifths of female patients were depressed, however an equal percentage of one third of them had either sever or moderate depression and more than one tenth of them had mild depression, with no statistically significant difference between both males and females.

Ahmed (2006), concluded in her thesis that, more than three fifths of patients in the study group and more than three quarters of subjects in the control group were severely depressed. On the same line, *Fogel et al. (2000)*, stated that in a longitudinal study on depression, investigators found about two thirds of post-stroke depression, and patients continue to be depressed by 8 to 9 months after the initial evaluation. By the one-year follow-up, the major depressive episodes have

Discussion

mostly resolved. Those patients with minor depression have a less favorable prognosis, with only 30% having recovered by 2 years after the stroke. However, this finding was inconsistent with *Abu-Zeid (1999)*, who concluded that only 10% of his sample had depression distributed as 26.5% with severe depression, 60% with moderate depression and only 6.6% with mild depression. In the same context, *Li et al. (2003)*, emphasized that 27.4% of stroke survivors had mild depression and only 7.5% had moderate to severe depression.

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, *Burvill et al. (1995)* revealed that one third of the men and half of the women with post-stroke anxiety disorders showed evidence of either depression or an

Discussion

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 *El-Shafiey et al., (2000)* 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.

The present study revealed that regarding to relation between socio-demographic data and Taylor Anxiety Scale there were no statistically significant differences between age, occupation, educational level and marital status with Taylor Anxiety Scale.

The present study revealed, highly statistically significant positive correlation between GDS versus Taylor Anxiety Scale and ADL versus IADL. On the other hand, there was a statistically significant inverse correlation between ADL versus Taylor Anxiety Scale. Otherwise insignificant inverse correlation between GDS and ADL, GDS and IADL, and IADL and Taylor Anxiety Scale by correlation co-efficient test.

IV- Assessment of Social Needs of the Study Group:

Social functioning is an integral part of assessing recovery after stroke (*Lai et al., 2003*). 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 *Ahmed (2006)*, 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 *Dowswell (2000)*, 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.

Discussion

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.

On the same line, *Gordon et al. (2004)*, 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.

This study results revealed the presence of a statistically significant positive correlation between social dysfunction rating scale and ADL, a highly significant inverse correlation between social dysfunction rating scale and both GDS and Taylor Anxiety Scale, and a non significant positive correlation between social dysfunction rating scale and IADL among males .

The current study findings indicated, a highly statistically significant positive correlation between social dysfunction rating scale and ADL and a significant inverse

Discussion

correlation between social dysfunction rating scale and Taylor Anxiety Scale. On the other hand, there were a non-significant positive correlation between social dysfunction rating scale and IADLs and a non-significant inverse correlation between social dysfunction rating scale and GDS among females.

To summarize, the present study results documenting that patients with disability and defect of physical condition in the chronic phase of stroke that affected their psychological (depression and anxiety status) and social conditions answer the research questions that, those patients have physical and psychosocial needs.

Conclusion and Recommendations

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- Counselling for patients and their families is highly recommended to improve the physical and psychosocial conditions.
- 3- 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.
- 4- A network, such as the internet stroke center for Egyptian stroke patients, as a communication tool and support group should be developed.

Conclusion and Recommendations

In researches:

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

Summary

A stroke is a sudden onset of non-traumatic focal neurological defect of a vascular etiology, that either causes death or lasts more than 24 hours (*Kendall et al., 2005*). The majority of all stroke affect the older population (*Phipps et al., 2003*). Stroke is a major health problem, not only due to its fatality, but also due to a large number of survivals with disability and dependency (*Abdel-Gawad, 2005*). A disability is physical or mental impairment that substantially limits one or more major life activities (*Swanson and Nies, 1997*).

Aim of the study:

This study was 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:

This study was based on answering the following questions:

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

Subjects and Methods:

Research setting:

This study was conducted in the out patient clinics (Neurology & Physiotherapy Clinics) at Ain Shams University Hospital.

Subjects:

The subjects of the present study consisted of sixty patients with chronic cerebrovascular stroke from both sexes, (21) females and (39) males.

Tools for data collection:

- (1) An interviewing questionnaire sheet:

The questionnaire sheet consisted of two parts:

- The socio-demographic characteristics of subjects (name, age, address, marital status, occupation, and level of education).
- The activities of daily living scales (Basic activity of daily living scale and Instrumental activity of daily living scale) to assess physical needs.

- (2) Geriatric Depression Scale, and Taylor Anxiety Scale to assess psychological needs.

Summary

(3) Social Dysfunction Rating Scale to assess social needs.

Results:

The important findings that were obtained from the study can be summarized as follows.

- As regards physical needs of patients with chronic cerebrovascular stroke:
 - Basic activities of daily living, (59%) of males were independent, (38.5) were partially dependent, while (2.6%) were completely dependant. Among females, there were (57.1%) of them independent, (38.1%) were partially dependent and only (4.8%) were completely dependent.
 - Instrumental activities of daily living, (53.8%) of males were partially dependent, while (46.2%) were completely dependent and among females there were (52.4%) of them partially dependent and (47.6%) were completely dependent.
- As regards psychological needs of patients with chronic cerebrovascular stroke:
 - Geriatric Depression Scale, (12.8%) of males without depression, (25.6%) showed mild depression, (23.1%)

Summary

showed moderate depression and (38.5%) showed severe depression, while in females (19%) of them without depression, (14.3%) with mild depression, (33.3%) with moderate depression and (33.3%) with severe depression.

- Taylor Anxiety Scale, (2.6%) of males without anxiety, (52.6%) with mild anxiety, (43.6%) with moderate anxiety and (2.6%) with severe anxiety, while in females (42.9%) were mild anxiety, (52.4%) with moderate anxiety and only (4.8%) with severe anxiety.
- As regards social needs of patients with chronic cerebrovascular stroke:
 - Social Dysfunction Rating Scale, (12.8%) of males were mild social dysfunction, (56.4%) with moderate social dysfunction, (28.2%) with high social dysfunction, and (2.6%) with very high social dysfunction, while in females (19%) were mild social dysfunction, (42.9%) with moderate social dysfunction, (28.6%) with high social dysfunction and (9.5%) with very high social dysfunction.

Conclusion

The 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.

Recommendations

The study recommended:

- 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- Counselling for patients and their families is highly recommended to improve the physical and psychosocial conditions.
- 3- Further research is required to study the effect of implementing the developed self care guide on such a group of patients.

References

References

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

Abd El-Ghany, F.A., (2000): 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, p. 110.

Abdel Gawad, M.D., (2005): Hypertension Control in Primary and Secondary Prevention of Stroke and Management of Hypertension in Acute Stroke, Thesis for the degree of Master, Neuro-Psychiatry, Faculty of Medicine, Ain Shams University, p. 152.

Abdul Ghani, M.O., (1994): Epidemiology of Stroke in Egypt. 10th Thessaloniki Conference of the South East European Society for Neurology and Psychiatry, Vienna, Australia.

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

References

- Abu-Zeid, M., (1999):*** Suicide in A Sample of Vascular Depression, The Egyptian Journal of Neurology, Psychiatry and Neurosurgery, 36(2), p. 158.
- Ackley, J.B. and Ladwing, B.G., (2002):*** Nursing Diagnosis: Hand Book A Guide to Planning Care, 5th ed., Mosby Company, Toronto, p.p. 41-42.
- Ahmed, A.F., (2006):*** Rehabilitation of Hemiplegic patients After Cerebro-Vascular Stroke, Thesis for the degree of Doctorate, Medical Surgical Nursing, Faculty of Nursing, Ain Shams University, p.p. 75, 133-134, 137-138, 141.
- Alexander, F.A., Fawcett, N.J., and Runciman, J.P., (2000):*** Nursing Practice, Hospital and Home, The Adult, 2nd ed., Churchill Livingstone, Toronto, P.P. 352-353.
- Barker, E., (1994):*** Neuroscience Nursing 1st ed., Mosby Company, Toronto, p.p. 470, 490,495.
- Barnett, H.J., Moher, J.P., and Stein , B.A., (1998):*** Stroke: Pathophysiology, Diagnosis, and Management, 3rd ed., Churchill Livingstone, New York, p. 1529.
- Bennett, C.J. and Plum, F., (1996):*** Text Book of Medicine, 20th ed., W.B. Saunders Company, London, p. 2065.

References

- Black, M.J. and Jacobs, M.E., (1997):*** Medical Surgical Nursing: Clinical Management for Continuity of Care, 5th ed., W.B. Saunders Company, Tokyo, p. 814.
- Broderick, B.M., (1999):*** Guidelines for The Management of Spontaneous Intracerebral Hemorrhage, Stroke, 30(5), p. 905.
- Burvill, P.W., Johnson, G.A., Jamrozik, K.D et al., (1995):*** Anxiety Disorders After Stroke: Results from the Perth Community Stroke Study, The British Journal of Psychiatry, 166 (1), p. 328.
- Carpenito, J.L., (2000):*** Nursing Diagnosis Application to Clinical Practice, 8th ed., Lippincott Company, Baltimore, p. 1142.
- Clochesy, M.J., Breu, C and Cardin, S., (1996):*** Critical Care Nursing, 2nd ed., W.B. Saunders Company, Tokyo, p.p. 713, 792.
- Clochesy, M.J., (2004):*** Critical Care Nursing, 3rd ed., Lippincott Williams and Wilkins Company, London, P.P. 125-127.
- Craven, F.R. and Hirnle, J.C., (1996):*** Fundamentals of Nursing: Human Health and Function, 2nd ed., J.B. Lippincott Company, New York, P. 1498.

References

- Craven, F.R. and Hirnle, J.C., (2000):*** Fundamentals of Nursing: Human Health and Function, 3rd ed., Lippincott Company, New York, p.p. 63,212.
- Davenport, R. and Dennis, M., (2000):*** Neurological Emergencies: Acute Stroke, Neurol Neurosurgery psychiatry, 68(3), p. 277.
- Dewit, C.S., (1998):*** Essentials of Medical Surgical Nursing, 4th ed., W.B. Saunders Company, Toronto, p. 359.
- Dowswell, G., (2000):*** Investigating Recovery from Stroke: A qualitative study, Journal of Clinical Nursing, 9(4), p. 507.
- Dressman, L., and Hunter, J., (2002):*** Stroke Awareness and Knowledge Retention in Children: The Brain Child Project, stroke, 33(1), p. 623.
- Easton, J.D., (1998):*** Current Advances in The Management of Stroke, Neurology, 51(3), P.P. S₁-S₂.
- Ellis, R. J. and Nowlis, A.E., (1994):*** Nursing A Human Needs Approach, 5th ed., J.B. Lippicott Company, Philadelphia, p. 84.
- El-Shafiey, A.O., Saad, S. and Lang, P., (2000):*** Follow up of Ischemic Stroke Patients: A study for two years, Faculty of Medicine, Al-Azhar University, P. 16.

References

- El-Tamawy, M. and Abdul El-Ghani, O., (2002):*** Mediterranean Stroke Reality, Second International Symposium on New Therapeutic Strategies in Ischemic Stroke, p. 54.
- Ezekowitz, A.J., (2003):*** Stroke: Strategies for Primary Prevention, American Family Physician, 68(12),p. 2379.
- Fogel, S.B., Schiffer, B.R., and Rao, M.S., (2000):*** Synopsis of Neuropsychiatry, 1st ed., Lippincott Williams and Wilkins, London, p. 289.
- Gall, A.H. and Judith, R.D., (1996):*** Medical Surgical Nursing: Total Patient Care, 1st ed., W.B. Saunders Company, London, p. 954.
- Garrity, T. and Klein , R., (1999):*** Emotional Response and Clinical Severity: As Early Determinants of Six Month Mortality After Myocardial Infection, Heart and Lung, 4 (5), p. 737.
- Gilroy, J., (2000):*** Basic Neurology, 1st ed; McGraw-Hill, New York , P. 573.
- Gordon, F.A., Gulanick ,M., Costa, F., et al., (2004):*** Physical Activity and Exercise Recommendations for stroke Survivors, American Heart Association, 109 (1), P.P. 2031-2032.

References

- Greener, J. and Langhorne, p., (2002):** Systematic Reviews in Rehabilitation for Stroke: Issues and Approaches to Addressing Them J Clinical Rehabilitation, 16(3), p. 69.
- Hamed, A.N., (2003):** Self-Care Rehabilitation Model for Cerebro-Functional Disabilities, Thesis for the degree of Doctorate, Community Health Nursing, Faculty of Nursing, Ain Shams University, p.p. 165-167.
- Hansen, M., (1998):** Pathophysiology Foundations of Disease and Clinical Intervention, 1st ed., W.B. Saunders Company, Tokyo, P.P. 606-607.
- Harkreader, H., (2000):** Fundamentals of Nursing: Caring and Clinical Judgment, 1st ed., W.B. Saunders Company, U.S.A., p. 221.
- Hartshorn, C.J. and Sole, L.M., (1997):** Introduction to Critical Care Nursing, 2nd ed., W.B. Saunders Company, London, p. 315.
- Haslett, C., Chilvers, R.E., Hunter, A.J., and Boon, A.N., (1999):** Davidson's Principles and Practice of Medicine, 18th ed., Churchill Livingstone Company, New Yourk, p.p. 979, 981-983.

References

- Haslett, C., Chilvers, R.E., Boon, A.N., and College, R.N., (2002):*** Davidson's Principles and Practice of Medicine, 19th ed., Churchill Livingstone Company, Toronto, p.p. 1160-1167.
- Hegner, R.B., Accello, B., and Caldwell, E., (2005):*** Nursing Assistant: A nursing Process Approach, 9th ed., Thomson Delmar Learning, U.S.A, P. 688.
- Hitchcock, E.J., Schubert, E.P., and Thomas, A.S., (2003):*** Community Health Nursing Caring in Action, 2nd ed, Thomson Delmar Learning, U.S.A, P. 312.
- Hudak, M.C., Gallo, M.B., and Morton, G.P., (1998):*** Critical Care Nursing: A holistic Approach, 7th ed., J.B. Lippincott Company, New York, P. 687.
- Ignatavicius, D.D., Workman, L.M., and Mishler, A.M., (1995):*** Medical Surgical Nursing: A nursing Process Approach, 2nd ed., W.B. Saunders Company, London, p.p. 1261-1262.
- Ignatavicius, D.D. and Workman, L.M., (2002):*** Medical Surgical Nursing: Critical Thinking for Collaborative Care, 4th ed., W.B. Saunders Company, New York, P.p. 976-978.

References

Internet Stroke Center, (2005): Stroke Statistics (2004)
www.stroke center.

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

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

Kauko, P., (2000): 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, p. 45.

Kelly, H., (1995): Transient Ischemic Attack, American
Journal of Nursing, 95(9), p.p. 42-43.

Kendall, G., Shiu, Y.K. and Johnston, L.S., (2005): Medicine
and Surgery: A Concise Text Book, 1st ed.,
Blackwell Publishing, Australia, p. 295.

Kidd, P.S. and Wagner, K.D., (2001): High-Acuity Nursing,
3rd ed., Prentice Hall Company, Tokyo, p. 422.

References

- Kolb, B. and Whishaw, Q.I., (2001):** An introduction to brain and Behavior, 1st ed., Worth Publishers, New York, p. 48.
- Krenzer, M., (1999):** Unplugging The Mystery of Carotid Endarterectomy Patient Care, Critical Care Nursing Clinics of North America, 11 (2), p. 189.
- Lai, M.S., Duncan, W.P., Dew, P., and Keighley, J., (2005):** Sex Differences in Stroke Recovery, Available from: URL. <http://www.cdc.gov/pcd/issues/2005>
- Lai, P., Sue, M., Perera, S., Duncan, P.W. and Bode, R., (2003):** Physical and Social Functioning after Stroke: Comparison of The Stroke Impact Scale and Short Form- 36, Stroke, 34(5),p. 488.
- Lawton, M.P. and Brody, E.M., (1969):** Assessment of older people: Self-Maintaining and Instrumental Activities of Daily Living, Gerontologist, 9(1), p.p. 179-186.
- Lewis, M.S., Collier, I.C. and Heitkemper, M.M., (1996):** Medical Surgical Nursing: Assessment and Management of Clinical Problems, 4th ed., Mosby – Year Book, London, p.p. 1521, 1530, 1533.

References

- Lewis, M.S., Heitkemper, M.M., and Dirksen, R.S., (2004):** Medical Surgical Nursing: Assessment and Management of Clinical Problems, 6th ed., Mosby Company U.S.A., p.p. 1528-1538.
- Li, S., Wang, K., and Lin, J., (2003):** Depression and Related Factors in Elderly Patients with Occlusion Stroke, Journal of Nursing Research, 11(1), p. 9.
- Lin, J.H. and Change, C.M., (2000):** Efficiency and Effectiveness of Stroke Rehabilitation after first stroke, Journal of Medical Association, 99(6), p. 90.
- Lindsay, K. and Bone, I., (1997):** Neurology and Neurosurgery Illustrated, 3rd ed., Churchill Livingstone, Edinburgh, p. 684.
- Lindsey, J., (2000):** Implementing A Stroke Risk Assessment Program in A Community Setting, Journal of Neuroscience Nursing, 32(5), p.p. 266-270.
- Linton, A.D. and Maebius, K.N., (2003):** Introductory Nursing Care of Adults, 3rd ed., W.B. Saunders Company, New York, P.P. 412, 416, 420-425.
- Linton, A.D., Matteson, M.A., and Maebius, K.N., (2000):** Introductory Nursing Care of Adults, 2nd ed., W.B. Saunders Company, Tokyo, p.p. 405-423, 1124.

References

- Manzella, S. and Galante, K., (2000):*** Establishment of Stroke Treatment Plans: One Hospital's Experience, *Journal of Neuroscience Nursing*, 32(6), p.p. 306-310.
- Martino, R., Pron, G., and Diamant, N., (2000):*** Screening for Oropharyngeal Dysphagia in Stroke: Insufficient Evidence for Guidelines, *Dysphagia*, 15(1), p. 19.
- Martinson, I.M., Widmer, A.G., and Portill, C.J., (2002):*** Home Health Care Nursing, 2nd ed., W.B., Saunders Company, Philadelphia, p.p. 347, 353.
- Matteson, M.A., McConnell, E.S., and Linton, A.D., (1997):*** Gerontological Nursing Concepts and Practice, 2nd ed., W.B. Saunders Company, U.S.A, p.p. 98-99.
- Maulden, A.S., Gassaway, J., Horn, D.S. et al., (2005):*** Timing of Initiation of Rehabilitation After Stroke, *Archives of Physical Medicine and Rehabilitation*, 86(12), p. 34.
- McKenzie, F., Pinger, R., and Kotecki, E., (2002):*** An Introduction to Community Health, 4th ed., Library of Congress, U.S.A., p.p. 123-124.

References

Medical Records at Ain Shams Specialized Hospital, (1999):

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

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

Mohamed, M.H., (2003): 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, p.p. 84, 88.

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

Monahan, F.D. and Neighbors, M. (1998): Medical Surgical Nursing Foundations for Clinical Practice, 2nd ed., W.B. saunders Company, Philadelphia, p. 412.

References

- Moore, K. and Trifiletti, E., (1994):** Stroke: The First Critical Days, Nursing Research, 57(2), p.p. 22-24.
- Nettina, M.S., (2001):** Manual of Nursing Practice, 7th ed., Lippincott Company, New York, P. 19, 458-461.
- Nevid, S., Rathus, A., and Rubenstein, R., (1998):** Health The New Millennium, 1st ed., Warth Publishers, New Your, p. 414.
- Nussbaum, E.S. and Erickson, D.L., (2000):** Extracranial Intracranial Bypass for Ischemic Cerebrovascular Disease Refractory to Maximal Medical Therapy, Neurosurgery, 46(3), p. 37.
- Phipps, J.W., Monahan, D.F., Sands, K.J. et al., (2003):** Medical Surgical Nursing: Health and Illness perspectives, 7th ed., Mosby Company, Toronto, P.P. 81-82, 1293-1295, 1364-1369.
- Polaski, L.A. and Tatro, E.S., (1996):** Luckmann's Core Principles and Practice of Medical Surgical Nursing, 1st ed., W.B. Saunders Company, London, p. 321.
- Pollock, S., (2000):** Human Responses to Chronic Illness: Physiological and Psychological Adaptation, Nursing Research, 35(2), p. 90-91.

References

- Potter, A.P. and Perry, G.A., (2001):** Fundamentals of Nursing, 5th ed., Mosby Company, Toronto, p.p. 262, 291.
- Price, A.S. and Wilson, M.L. (2003):** Pathophysiology Clinical Concepts of Disease Processes, 6th ed., Mosby Company, U.S.A., p.p. 826-827.
- Robinson, D. and Kish, P. (2001):** Care Concepts in Advanced Practice Nursing, 1st ed., Mosby Company, London, P. 516.
- Rosdahle, B.C., (1999):** Text Book of Basic Nursing, 7th ed., Lippincott company, New York , p.p. 54, 1146-1147.
- Ross, R., Yuan, J., Henderson, B., Park, J., Geo, Y.U., and Yu, M., (1997):** Prospective Evaluation of Dietary and Other Predictor of Fatal Stroke in Shanghi, China, Circulation, 96(4), p. 50.
- Saladin, S.K. and Porth, M.C., (1998):** Anatomy and Physiology: The Unity of Form and Function, 1st ed., WCB/Mc Graw Hill, New York, p. 463.
- Schrefer, S. and Rogers, A., (2002):** Text Book of Basic Nursing, 2nd ed., Mosby Company, U.S.A., P. 512.

References

- Seely, R.R., Stephens, D.T. and Tate, P., (2002):*** Essentials of Anatomy and Physiology, 4th ed., Mc Graw-Hill Higher Education, Toronto, p. 207.
- Smeltzer, C.S. and Bane, G.B., (2000):*** Brunner and Suddarth's: Text Book of Medical Surgical Nursing, 9th ed., Lippincott Company, New York, p.p. 16, 1608-1610, 1655-1662.
- Smeltzer, C.S. and Bare, G.B., (2004):*** Brunner and Suddarth's: Text Book of Medical Surgical Nursing, 10th ed., Lippincott Williams and Wilkins Company, London, p.p. 1888-1889, 1892, 1899.
- Souhami, L.R. and Moxham, J. (2002):*** Text Book of Medicine, 4th ed., Churchill Livingstone, Toronto, p.p. 1342-1345.
- Stanhope, M. and Lancaster, J., (2002):*** Foundations of Community Health Nursing: Community Oriented Practice, 1st ed., Mosby Company, U.S.A, P. 167.
- Stoudemire, A., (1998):*** Clinical Psychiatry, 3rd ed., Lippincott-Raven Publishers, New York, P. 75.
- Swanson, J. and Nies, M., (1997):*** Community Health Nursing: Promoting The Health of Aggregates, 2nd ed., W.B. Saunders Company, Philadelphia, p. 266.

References

- Swearingen, L.P., (2003):** Manual of Medical Surgical Nursing Care: Nursing Intensive and Collaborative Management, 5th ed., Mosby Company, Toronto, p. 371.
- Taylor, C., Lillis, C., and Le Mone, P., (2001):** Fundamentals of Nursing: The Art and Science of Nursing Care, 4th ed., Lippincott Williams and Wilkins Company, New York, p.p. 25-26, 464.
- The American Heart Association, (2002):** (2001) Heart and Stroke Statistical update, www.AHA.com.
- The Ministry of Health and Population Statistics in Egypt, (2004):** From 2001-2003.
- Thelan, A.L., Davie, K.J., Urden, D.L., and Lough, E.M., (1994):** Critical Care Nursing: Diagnosis and Management, 2nd ed., Mosby Company, London, p. 533.
- Thompson, M.J., McFarland, K.G., Hirsch, E.J., and Tucker, M.S., (1997):** Clinical Nursing, 4th ed., Mosby Company, Wiesbaden, p.p. 223-224.
- Thompson, M.J., McFarland, K.G., Hirsch, E.J., and Tucker, M.S., (2002):** Clinical Nursing, 5th ed., Mosby Company, Toronto, P.P. 285-288.

References

- Tierney, M.L., McPhee, J.S., and Papadakis, A.M., (2003):** Current Medical Diagnosis and Treatment, 24th ed., the McGraw- Hill Companies, London, p.p. 964-966.
- Timby, K.B. and Smith, E.N., (2007):** Introductory Medical Surgical Nursing 9th ed., Lippincott Williams and Wilkins, New York, p.p. 709-710.
- Travers, P.L., (1999):** Poststroke Dysphagia: Implications for Nurses, Rehabilitation, 24(2), P. 69.
- Ulrich, P., Canale, W., and Wendell, A., (2001):** Medical Surgical Nursing Care Planning Guides, 3rd ed., Library of Congress, London, p. 453.
- Van de Port, I.G., Kwakkel, G., Van Wijk, I., and Lindeman, E., (2006):** Susceptibility to Deterioration of Mobility Long-Term After Stroke: A prospective Cohort Study, Stroke, 37(1), p. 167.
- Wagner, D.K., Johnson, K., and Kidd, S.P., (2006):** High Acuity Nursing, 4th ed., prentice Hall, New Jersey, p. 432.
- Walsh, M., (1997):** Watson's Clinical Nursing and Related Sciences, 5th ed., Baillier Tindall, London, P.P. 688, 724.

References

- Walsh, M., (2002):** Watson's Clinical Nursing and Related Sciences, 6th ed., Baillière Tindall, Toronto, P.P. 671, 680-683.
- World Health Organization (WHO), (1998):** The World Health Organization Report 1998. Life in the 21st Century: A Vision for All. Geneva: WHO, Cited In, **Mohamed, M.H., (2003):** 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, p.p. 1-2.
- Yesarage, J.A. and Brink, T.L., (1983):** Development and Validation of A Geriatric Depression Screening Scale: A preliminary Report, Journal of Psychiatric Research, 17(1), p.p. 37-49.

المخلص العربي

تعتبر السكتة الدماغية حدث مفاجئ بدون اصابة ولكن سببها خلل في بؤرة معينة في الأوعية الدموية بالمخ ، وهى تسبب الوفاة ولكن يمكن أن يعيش المريض إذا تجاوز فترة ٢٤ ساعة الأولى بعد الإصابة ، ومن أكثر الناس إصابة بهذا المرض هم كبار السن ، كما أن مرض السكتة الدماغية يعتبر مشكلة صحية كبرى ليس فقط بسبب أنه يؤدي إلى الوفاة ، ولكن لأن عدد كبير من المصابين يعانون من إعاقة والاعتماد على غيرهم ، وتكون الإعاقة جسمية أو عقلية وتؤثر على واحدة أو معظم أنشطة حياتهم .

الهدف من الدراسة :

تهدف هذه الدراسة إلى :

- (١) تقييم الاحتياجات الجسمية لمرضى السكتة الدماغية المزمنة .
- (٢) تقييم الاحتياجات النفسية والاجتماعية لمرضى السكتة الدماغية المزمنة.

أسئلة البحث:

هذه الدراسة تعتمد على الاجابة على هذه الأسئلة :

- (١) ما هى الاحتياجات الجسمية لمرضى السكتة الدماغية المزمنة؟
- (٢) ما هى الاحتياجات النفسية والاجتماعية لمرضى السكتة الدماغية المزمنة؟

مكان البحث:

هذه الدراسة أجريت فى العيادات الخارجية (عيادة الأعصاب والعلاج الطبيعى) فى مستشفى عين شمس الجامعي .

عينة البحث :

تتكون عينة البحث من ستون مريض بالسكتة الدماغية المزمنة من الجنسين (٢١ سيدة ، ٣٩ رجل).

أدوات البحث :

أ-استمارة استبيان عند المقابلة الشخصية للمريض:

إستمارة الاستبيان تتكون من جزئين :

١- البيانات الشخصية للعينة المختارة مثل (الاسم ، السن ، العنوان ، الحالة الاجتماعية ، الوظيفة ، مستوى التعليم).

٢- مقياس الأنشطة اليومية (مقياس الأنشطة اليومية البسيطة ومقياس الأنشطة اليومية المركبة) لتقييم الاحتياجات الجسمية.

ب- مقياس الاكتئاب المصغر فى المسنين ومقياس تيلور للقلق لتقييم الاحتياجات النفسية.

ج- مقياس معدل الخلل الاجتماعى لتقييم الاحتياجات الاجتماعية.

النتائج المهمة التى حصلت عليها الدراسة تتلخص كالاتى:

- بالنسبة للاحتياجات الجسمية لمرضى السكتة الدماغية المزمنة.

- الأنشطة اليومية البسيطة ٥٩% من الرجال لا يعتمدوا على غيرهم ، ٣٨,٥% يعتمدوا على غيرهم جزئياً ، بينما ٢,٦% يعتمدوا على غيرهم

كلياً . بالنسبة للنساء ٥٧,١ % لا يعتمدن على غيرهن ، ٣٨,١ % يعتمدن على غيرهن جزئياً ، ٤,٨ % فقط يعتمدن على غيرهن كلياً.

- بالنسبة للأنشطة اليومية المركبة ، ٥٣,٨ % من الرجال يعتمدوا على غيرهم جزئياً ، بينما ٤٦,٢ % يعتمدوا على غيرهم كلياً ، أما بالنسبة للنساء ٥٢,٤ % يعتمدن على غيرهن جزئياً ، ٤٧,٦ % يعتمدن على غيرهن كلياً.

- بالنسبة للاحتياجات النفسية لمرضى السكتة الدماغية المزمنة.

- مقياس الاكتئاب المصغر للمسنين أثبت أن ١٢,٨ % من الرجال لا يعانون من الاكتئاب ، ٢٥,٦ % يعانون من الاكتئاب بنسبة بسيطة ، ٢٣,١ % يعانون من الاكتئاب بنسبة متوسطة و ٣٨,٥ % يعانون من الاكتئاب بنسبة عالية ، بالنسبة للنساء ١٩ % لا يعانون من الاكتئاب ، ١٤,٣ % يعانون من الاكتئاب بنسبة بسيطة ، ٣٣,٣ % يعانون من الاكتئاب بنسبة متوسطة و ٣٣,٣ % يعانون من الاكتئاب بنسبة عالية.

- مقياس تيلور للقلق ، أثبت أن ٢,٦ % من الرجال لا يعانون من القلق ، ٥٢,٦ % يعانون من القلق بنسبة بسيطة ، ٤٣,٦ % يعانون من القلق بنسبة متوسطة و ٢,٦ % يعانون من القلق بنسبة عالية ، بالنسبة للنساء ٤٢,٩ % يعانون من القلق بنسبة بسيطة ، ٥٢,٤ % يعانون من القلق بنسبة متوسطة و ٤,٨ % فقط يعانون من القلق بنسبة عالية.

- بالنسبة للاحتياجات الاجتماعية لمرضى السكتة الدماغية المزمنة.

- مقياس معدل الخلل الاجتماعي اثبت أن ١٢ % من الرجال يعانون من خلل اجتماعي بسيط ، ٥٦,٤ % يعانون من خلل اجتماعي متوسط ، ٢٨,٢ % يعانون من خلل اجتماعي قوى ، ٢,٦ % يعانون من خلل اجتماعي

قوى جداً. بينما فى النساء ١٩% يعانون من خلل اجتماعى بسيط،
٤٢,٩% يعانون من خلل اجتماعى متوسط، ٢٨,٦% يعانون من خلل
اجتماعى قوى، ٩,٥% يعانون من خلل اجتماعى قوى جداً.

الاستنتاجات :

الدراسة الحالية تتلخص كالاتى:

- توصل البحث الى أن مرضى السكتة الدماغية منهم حوالى ثلاث أخماس من الرجال ، وأيضاً ثلاث أخماس من النساء لا يعتمدوا على غيرهم فى الأنشطة اليومية البسيطة مثل (الاستحمام ، اللبس ، استخدام الحمام، الانتقال ، التحكم فى الاخراج والتغذية).
- بالنسبة للأنشطة اليومية المركبة مثل (القدرة على استخدام التليفون ، التسوق، اعداد الطعام ، النظافة المنزلية ، الغسيل ، وسيلة الانتقال ، المسؤولية اتجاه الأدوية ، القدرة على التعامل المالى) فى هذه الدراسة، وجد أن كلا من الرجال والنساء بنسبة أكثر من نصف العينة يعتمدون على غيرهم جزئياً بينما أقل من النصف يعتمدون على غيرهم كاملاً.
- بالنسبة للاحتياجات النفسية ، اكثر من اربعة أخماس العينة من الرجال يعانون من اكتئاب وكذلك أكثر من أربع أخماس من النساء يعانون من اكتئاب، أما بالنسبة للقلق فإن أغلبية الرجال يعانون من القلق بينما كل النساء يعانون من القلق .
- بالنسبة للاحتياجات الاجتماعية وجد أن كل المرضى يعانون من خلل اجتماعى.

التوصيات:

توصيات هذه الدراسة كالاتى:

- عمل برامج تعليمية مستمرة لكى تساعد الفريق ا لصحى الذى يعمل بوحداث التأهيل وخاصة الذين يقوموا بتقديم الرعاية التمريضية للمرضى الذين بهم اعاقه مثل الشلل النصفى أو الشلل النصفى فى الطرفين السفليين وذلك لتصحيح واكتساب وتطوير معلوماتهم وأدائهم واتجاهاتهم التى يحتاجونها للتعامل مع هذه المجموعة من المرضى .
- تقديم المشورة للمرضى وعائلاتهم لتحسين حالاتهم الجسمانية والنفسية والاجتماعية.
- اعداد بحث لتطوير أداء مرضى السكتة الدماغية بتقديم ارشادات عن الرعاية الذاتية .