

**EXPLORING THE EXPERIENCES OF REHABILITATED STROKE SURVIVORS  
AND THE PERCEPTIONS OF STAKEHOLDERS WITH REGARD TO STROKE  
SURVIVORS RETURNING TO WORK IN SOUTH-WEST NIGERIA**

**A THESIS SUBMITTED IN FULFILMENT OF THE REQUIREMENT OF THE  
DEGREE MAGISTER SCIENTIAE (OCCUPATIONAL THERAPY)**



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## DECLARATION

I, OLUMIDE AYOOLA OLAOYE, hereby declare that the work on which this thesis: *Exploring the experiences of rehabilitated stroke survivors and the perceptions of stakeholders with regard to returning stroke survivors to work in South-West Nigeria*, is my own original work (except where acknowledgements indicate otherwise), and that neither the whole work nor any part of it has been, or is to be submitted for another degree in this or any other university.

All sources that I have used or quoted have been indicated and acknowledged by means of complete references.

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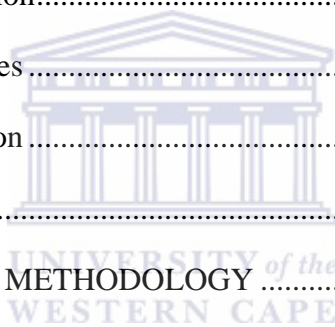
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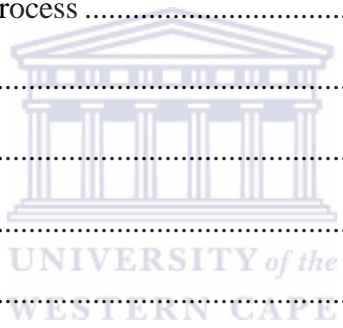
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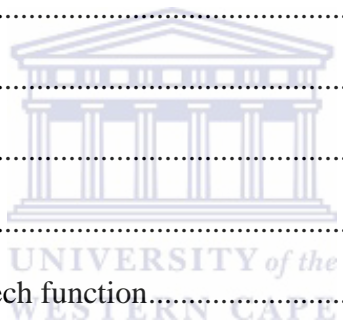


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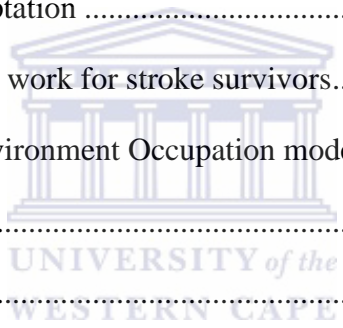


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## DEFINITION OF TERMS

**Stroke:** is defined by the World Health Organisation (WHO) as a “rapidly developing clinical signs of focal (at times global) disturbance of cerebral function, lasting more than 24 hours or leading to death with no apparent cause other than of vascular origin” (WHO MONICA Project Principal Investigators, 1988).

**Return to work:** for this study, this term refers to the period of participation in vocational tasks after the client has completed or experienced interventions such as surgical treatment, physiotherapy, occupational therapy and speech therapy.

**Disability:** is the negative aspect of interactions that exists between an individual who has a health condition and the individual’s contextual factors which includes environmental and personal factors (World Health Organization [WHO], 2001).

**Perception:** is the interpretation given to a sensory input or stimulus by the brain. It is also defined as the mental process involving the recognition and meaningful interpretation of sensory information (Crepeau, Cohn, & Schell, 2009).

**Experience:** is the knowledge or skill gained over a period of time (Waite & Hawker, 2009). It is also defined as the direct involvement in an activity over a period of time (Crepeau et al., 2009).

**Stakeholders:** in the context of this study, stakeholders are described as being the treating rehabilitation specialists and caregivers of stroke survivors.

**Rehabilitation:** in the context of this study, rehabilitation is defined as undergoing physiotherapy, occupational therapy and speech therapy (either one intervention or a combination thereof).

**Adaptation:** in the context of the study, adaptation is defined as the internal and external process through which the stroke survivor responds to the need for change by combining new occupational skills and behaviours into daily occupational performance (Moyers, 2005).

## LIST OF ABBREVIATIONS

- AF: Arterial fibrillation
- AHA: American Heart Association
- A.S.C.E.N.D.: Association for Comprehensive Empowerment of Nigerians with Disabilities
- C.M.O.P.: Canadian Model of Occupational Performance
- CAOT: Canadian Occupational Therapy Association
- CVA: Cerebrovascular Accident
- D.P.U.D.P.C.D.: Disabled Persons Unit Department for Policy Coordination
- E.C.A.: Employee's Compensation Act
- E-O: Environment-Occupation
- J.O.N.A.P.W.D.: Joint National Association of Persons with Disabilities
- M.O.H.O.: Model of Human Occupation
- N.H.I.S.: National Health Insurance Scheme
- N.S.I.T.F.: Nigeria Social Insurance Trust Fund
- O.A.U.T.H.C: Obafemi Awolowo University Teaching Hospital Complex
- O.A: Occupational Adaptation
- P.E.O.: Person Environment Occupation
- P-E: Person-Environment
- P-O: Person-Occupation
- REGARDS: Reasons for Geographic and Racial Differences in Stroke
- R.N.L.I.: Re-integration to Normal Living Index
- R.T.W.: Return to Work
- T.I.A.: Transient Ischaemic Attack
- U.N.W.S.S.D.: United Nations World Summit for Social Development
- U.W.C.: University of the Western Cape

W.A.S.P. II: Work Ability Screening Profile

WHO: World Health Organisation



## ABSTRACT

Stroke has been identified as a global cause of neurological disability with a resultant burden shared not only by the survivor but also by the society. The resumption of one's role as a worker after having a stroke is an important rehabilitation goal. South-West, Nigeria has experienced a high incidence and prevalence of stroke leaving a quarter of survivors with severe disability and difficulty in community integration after rehabilitation. As a disability resulting from a stroke could be viewed as being a dynamic interaction between the health condition and contextual factors, a client-centred approach should be focal to stroke management to facilitate return to work. Therefore, it became necessary to explore the return to work process from stroke survivors and stakeholder's perspective in order to understand the challenges stroke survivors face while adapting to their worker roles, to improve service design and delivery as well as to facilitate the return to work after having a stroke.

The study was aimed at exploring and describing the experiences of rehabilitated stroke survivors and perceptions of stakeholders about stroke survivors returning to work in South-West Nigeria. A qualitative research design was used to explore these experiences and perceptions from nineteen participants that comprised of nine stroke survivors, two key informants (rehabilitation specialists) and eight caregivers of the respective stroke survivor. Two methods of data collection were used by the researcher to access the perceptions and experiences of the participants. The researcher made use of focus groups with the caregivers while in-depth interviews were conducted with the stroke survivors and rehabilitation specialists. One pilot testing in-depth interview and eleven in-depth interviews were conducted with the stroke survivors and rehabilitation specialists while two focus group discussions were held with the eight caregivers consisting of four participants per group. The data from the study was analysed using thematic analysis. All data were managed manually.

The study was further aimed at obtaining participants' perceptions and experiences of barriers and facilitators as well as adaptation processes that influenced the stroke survivors' ability to resume their worker role. The findings were revealed in five themes. Theme one and two describes the barriers experienced by the stroke survivors while returning to work in the form of loss of former self and returning to work is a struggle. The resumption of the previous worker role by the stroke survivors was construed to be a contest which entails a struggle

between the survivor, survivor's job characteristics, rehabilitation intervention and stigma from the society. Poor access to rehabilitation interventions, inadequacy of treatment and poor insight of the stroke survivor regarding condition, job characteristics as well as social stigma related to the condition were observed as factors that posed great challenges to the participants. Theme three describes the factors that facilitated the resumption of the worker role for the stroke survivors. Engagement in rehabilitation as well as social support enabled the stroke survivors to overcome the barriers and returning to work. Theme four describes the adaptation strategies that enable the return to work for the stroke survivors. Theme four was described by an intrinsic adaptation process that involves the acceptance of the illness and being motivated to return to work and an extrinsic adaptation process that involves gradual work exposure, workplace and home adaptation. Theme five describes the participants' perception of changes needed in the rehabilitation services and policies that would facilitate the quick return to work of the stroke survivor. Promoting participation of stroke survivors in work through government policies was observed to be a necessary recommendation for the study. These were seen to be achievable through the improvement of rehabilitation resources, enabling access to rehabilitation through financial assistance, change of the regulatory environment to accommodate for the disabled and the initiation of health promotion through public awareness campaigns in the community regarding stroke.

The Person Environment Occupation model of occupational performance was used as a framework to interpret the findings of the study; the barriers, facilitators and adaptation process was placed into perspectives as they impacted on the experience of the stroke survivors' resumption of their worker role. The resumption of the worker role of the stroke survivors was observed not only to be influenced by the individual characteristics of the survivors but also by the environmental context within which the return to work process took place.



**KEYWORDS:**

Stroke, rehabilitation, return to work, disability, occupational therapy, client-centred approach, perception, experience, South-West Nigeria and qualitative research.



## CHAPTER ONE

### BRIEF OVERVIEW OF THE STUDY

#### 1. Background

This study focused on the experiences and perceptions of returning to work after stroke from the perspective of nine rehabilitated stroke survivors, eight respective caregivers of the stroke survivors and two rehabilitation specialists. The observed low return to work rates of stroke survivors while working as an occupational therapist obliged me to explore the reasons behind the successes and failures of the stroke survivor in returning to work. Also, my involvement with the rehabilitation of individuals who had experienced a stroke prompted the exploration of this phenomenon of resuming one's worker role after undergoing rehabilitation from the perspectives of the stroke survivors, their respective caregivers and the rehabilitation specialists. The perceptions and experiences of the participants would help in providing relevant information regarding the barriers and facilitators that influences the adaptation of stroke survivors into the workplace. This information was related to an existing occupational therapy model; the Person Environment Occupation (P.E.O.) model. The P.E.O. model was used to conceptualize the adaptation of the stroke survivors to their worker role. The information provided in the current study could be used by occupational therapists to facilitate the quick re-integration of stroke survivors into the workplace.

#### 1.1 Introduction

Stroke is a public health problem that has been documented to be a leading cause of global morbidity and mortality (Lopez & Mathers, 2006; Martinez-Villa & Irimia, 2004). It has also been identified as a major cause of neurological disability in developing countries such as Nigeria (Lopez & Mathers, 2006; Ogungbo, Gregson, Mendelow & Walker, 2003; Ojini & Danesi, 2003), resulting in permanent disability in half of its survivors (Klijn & Hankey, 2003). Some of the consequences of stroke include reduced functioning, participation restriction and activity limitation (D'Alisa, Baudo, Mauro, & Misco, 2005). These consequences which invariably result in work disability have been reported by Ogun and Odusote (2001) to cast a great burden on the society, friends and families of the stroke survivor. The resumption of one's worker role after having a stroke influences reestablishment to the degree possible of the stroke survivor's pre-existing roles and relationships (Merz, Bricout & Koch, 2001); which invariably

improves the survivor's life satisfaction, self-esteem, quality of life and functional ability (Robinson, 2000; McColl, Stirling, Walker, Corey & Wilkins, 1999).

Similarly, resuming one's worker role after stroke has been reported to be an important indicator of recovery following a stroke (Medin, Barajas, & Ekberg, 2006). This is indicated to be influenced by motivation or will and self-efficacy of the stroke survivor as well as external support provided to the survivor (Gilworth, Phil, Cert, Sansam, & Kent, 2009; Alaszewski A., Alaszewski, Potter, & Penhale, 2007; Medin et al., 2006; Corr & Wilmer, 2003). The ability to resume the pre-morbid worker role by the survivor is also affected by the various barriers (ibid).

## **1.2 Rationale**

The rationale for the study stems from the high incidence and prevalence of stroke in South-West, Nigeria, the observed low return to work rate among stroke survivors after rehabilitation and the limited information or understanding of the actual experiences of stroke survivors who had returned to work after undergoing stroke rehabilitation in South-West Nigeria. Stroke accounts for 4.5% of medical admission and 1.3% of total hospital admission in South-West Nigeria (Desalu et al., 2011). Twenty-five per cent of the survivors have been reported by Obembe and Fasuyi (2010) to have severe deficit in global functional status on Re-integration to Normal Living Index (R.N.L.I.). Within the context of stroke survivors resuming their worker role, there exist a paucity of data in Nigeria compared to other countries; thus suggesting a need for exploration in this area. A systematic review conducted by Baldwin and Brusco (2011) reported a 12-45 % return to work rate among stroke survivors of working age, it therefore becomes imperative to explore the factors influencing the low return to work rate. More so, existing literature on the impact of stroke and its relationship to work have been written from the expert point of view with little or no evidence from the survivors' perspectives of factors that motivate them to resume their worker role, opportunities for returning to work, the meaning and importance of work or their experiences in resuming their worker roles. Therefore, this study explored the perceptions and experiences of resuming one's worker role after stroke from the perspective of the stroke survivors and stakeholders. This will bridge the existing gap in the literature regarding the return to work of the stroke survivor as well as provide relevant information that may facilitate the re-integration of the survivors into the workplace in South-West Nigeria.

### **1.3 Research design and method**

In order to explore, describe and understand the lived experiences of return to work of rehabilitated stroke survivors from the participants, a qualitative research design was utilised. This research design allows for the interpretation of the phenomenon of return to work with regards to the meaning it brings to the study participants (Leedy & Ormrod, 2005; Denzin & Lincoln, 1994). An exploratory and descriptive approach was used.

Nine stroke survivors and two key informants (who were rehabilitation specialists) were selected purposively for the study. They were all interviewed in-depth in order to access their experiences and perception of the phenomenon. A further eight caregivers of the respective stroke survivors were selected by means of snowball sampling into the study. Focus group discussions were conducted with the caregivers to access their perceptions about the phenomenon of return to work of the stroke survivors. The interviews and focus groups discussions were audiotaped and transcribed verbatim. The data was managed using the data management principles described by Miles and Huberman (1994), namely; formatting, cross referral, indexing, abstracting and pagination while data analysis was carried out using the methods of thematic content analysis described by Morse and Field (1996), as well as Corbin and Strauss (2008).

This study adhered to the ethical principles of conducting research with human participants described by the World Medical Association Helsinki Declaration (World Medical Association, 2013). The participants' informed consents were obtained and their confidentiality and privacy also were respected.

The study incorporated the four basic criteria advocated by Krefting (1991) based on Guba's model to achieve trustworthiness. These criteria included strategies for establishing truth value, applicability, confirmability and neutrality of the data.

### **1.4 Research context**

The research context of the study was in the South-West zone of Nigeria. The research participants consisted of nine people who had experienced cerebrovascular accident and were receiving or had received rehabilitation, eight of their respective caregivers and two rehabilitation specialists. All of the stroke survivors were involved in a form of employment in the open labour market before and after the stroke. Data was gathered by means of in-depth

interviews and focus group discussions with the participants. An in-depth interview was conducted with a stroke survivor to serve as a pilot for the study. Thereafter, in-depth interviews were used to explore the study phenomenon from both the stroke survivors (numbering nine) and the two rehabilitation therapists. Likewise, two focus group discussions were held among the caregivers of the participating stroke survivors. Two of the individual in-depth interviews took place at the Obafemi Awolowo University Teaching Hospital Complex (O.A.U.T.H.C.) Ile-Ife, Nigeria; four took place at the participants' homes while three were conducted at the workplaces of the participants. The focus group discussions were conducted at the O.A.U.T.H.C.

## **1.5 Research question**

What are the experiences of rehabilitated stroke survivors and perceptions of stakeholders (caregivers and rehabilitation specialists) about stroke survivors returning to work in South-West Nigeria?

## **1.6 Overview of subsequent chapters**

### **Chapter One: Brief overview of the study**

The first chapter of this thesis provides the background for the study and introduces stroke as a public health problem. It also describes the rationale for the study, the research design and methods, the research context as well as the research question. It further provides an overview for the subsequent chapters.

### **Chapter Two: Literature review**

The second chapter of this thesis focuses on the epidemiology of stroke and the classification and impacts of stroke. It also provides discussion on rehabilitation post-stroke and the social policies that influence return to work. Furthermore, the chapter describes occupational therapy, the Person-Environment-Occupation model and work as a human occupation. Finally, the various programs utilized in returning stroke survivors to work and client-centred rehabilitation are discussed.

### **Chapter Three: Research methodology**

This chapter describes the methodological principles of the study. It provides clarification about the study design, study setting, the sampling strategy used for selecting the participants for the study, data collection technique and data analysis processes. Furthermore, the methods through

which the trustworthiness and research ethics for the study were achieved are discussed in this chapter.

#### **Chapter Four: Findings**

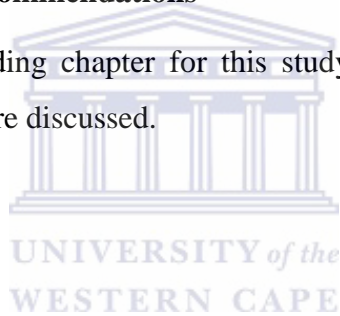
This chapter focuses on the findings of the study. It describes the patterns, trends and relationships that emerged from the analysis of the study. The findings were presented and described as themes, categories and subcategories.

#### **Chapter Five: Discussion**

This chapter discusses the findings of the study in relation to relevant literature. Thereafter, the findings were interpreted and discussed within the framework of Person-Environment-Occupation model.

#### **Chapter Six: Conclusion and recommendations**

Chapter six serves as the concluding chapter for this study where recommendations and the conclusion of the present study were discussed.



## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2. Introduction**

In section 2.1 and 2.2, the epidemiology of stroke and the classification and impacts of stroke are discussed. Sections 2.3 and 2.4 discuss the rehabilitation post-stroke and social policies affecting return to work. Sections 2.5, 2.6 and 2.7 provide discussion on occupational therapy, person-environment-occupation model and work as a human occupation respectively. Finally, the programmes utilised in returning stroke survivors to work and client-centred rehabilitation are discussed in section 2.8 and 2.9 respectively.

#### **2.1 Epidemiology of stroke**

Stroke is a cerebrovascular disease that results from death of brain cells that are most susceptible to ischaemic damage due to the disruption of the blood supply to the brain cells (Bartels, 2011). The disruption of blood supply causes a halt in the supply of essential nutrients and oxygen to the brain leading to irreversible tissue damage in the brain. This disruption could be as a result of the obstruction of arteries or the rupture of arteries (Lezak, 2004). The epidemiology of stroke is described in terms of incidence, prevalence, mortality and risk factors for stroke in the subsequent subsections.

##### **2.1.1 Incidence of stroke**

The incidence of a disease refers to the number of occurrence of new cases of that disease over a period of time (Terent, 2003; American Heart Association [AHA], 2012). The documented incidence of stroke has been found to vary in regards to age, gender, ethnicity and geographical location (Stansbury, Jia, Williams, Vogel, & Duncan, 2005).

The incidence of stroke increases progressively with advancing age. Stroke occurs with an annual incidence of 2.7 per 100,000 in children (Harvey, Roth, Yu, & Celnik, 2011). The incidence increases from 0.14 per 1000 persons in age groups lesser than 45 to 12-20 per 1000 per persons in population aged 75 and above (Feigin, Lawes, Bennett and Anderson, 2003). A systematic review involving a population based study conducted by Feigin, Lawes, Bennett, Baker-Collo and Parag (2009) reports similar results. The study report showed an increase in the age-adjusted incidence of stroke from 46 to 151 per 100000 persons in ages 75years and below

to 1030 to 2044 per 100000 persons in population aged 75 years and above (Feigin, et al., 2009). Johansson, Norrving and Lindgren, (2000) also report that 5% and 20% of people affected by stroke are younger than 45years and 65years respectively.

The distribution of stroke incidence differs among gender. Age-specific incidences are higher in men than women (American Heart Association, 2012), with men experiencing their first-ever stroke earlier (Petrea, Beiser, Seshadri, Kelly-Hayes, Kase, & Wolf, 2009) and having a 25-30% higher chance of having a stroke compared to women (Wolfe, 2000). The Framingham Heart Study (Petrea et al., 2009) reveals incidence rates of 116-1340 for men and 82-1257 for women between the ages of 45-84 years. This age-specific incidence however reverses in 85 years and above to become higher in women than men (American Heart Association, 2012).

Blacks are reported to have a higher stroke incidence rate compare to white. A longitudinal population based study (REGARDS) conducted by Howard et al. (2011) on disparity in stroke epidemiology found incidence rates of 722/100,000 and 479/100,000 among the black and white population of stroke belt region of the USA respectively.

In general, the trend and distribution of stroke incidence varies according to geographical location. A four decade report by Feigin et al. 2009 showed a decline in the trend of stroke incidence in high income countries and an increase in the trend of stroke incidence in low and medium income countries. The decrease observed in high income countries could be attributed to implementation of preventive treatments and reduction in risk factors in the countries (Heuschmann, Grieve, Toschke, Rudd, & Wolfe, 2008; Wang, Jiang, Wu, Hong, Yang, Sander, Du, & Bao, 2007) while the increase observed in developing countries could be attributed to health and demographic transitions in this countries (Connor, Walker, Modi, & Warlow, 2007). This variation could also be observed in different regions of the same country. Available hospital based statistics report stroke incidence to occur in 1.14 per 1000 in the Nigerian population (Ogungbo, Ogun, Ushewokunze, Rodgers & Walker, 2005; Ojini & Danesi, 2003; Ogun, 2000), however stroke case admission in the Northwest zone of Nigeria is lower compared to her Southwest zone. Njoku (2004) reports that stroke constituted 0.36% of total hospital admission in North Western Nigeria compared to 1.3 % in South Western Nigeria (Desalu et al., 2011). This variation could be attributed to the lower risk factors in the North-Western Nigerian population (Glew et al., 2004)



### **2.1.2 Prevalence of stroke**

The prevalence of a disease refers to the estimate of the population that have the disease at a given point in time (American Heart Association, 2012). The prevalence of stroke increases with age and is estimated to be 501 per 100000 of the world population (Terrent, 1993). Feigin et al. (2003) reported an age-standardized stroke prevalence ranging from 4610-7330 per 100000 for people aged 65years or more in a literature review involving nine population based studies. The study revealed gendered specific stroke prevalence ranging from 3220–6120 per 100 000 for females and 5880–9260 per 100000 for males aged 65 years and older. In Nigeria, a study conducted in a mixed income community by Danesi, Okubadejo and Ojini (2007) reports a prevalence of 1140 per 100000 with a lower prevalence occurring in females (69/100000) compared to males (151/100000). This prevalence however increases to 2414/100000 in people aged 65 years and above. The relative lower prevalence of stroke recorded for Nigeria when compared to high income countries could be the result of high case fatality or lower incidence.

### **2.1.3 Mortality of stroke**

Mortality of stroke is the estimate of deaths resulting from stroke in a specific period which is usually a year. The WHO (2011) lists stroke as the second leading cause of death after heart disease resulting in 15 million deaths annually. The death resulting from stroke accounts for approximately 10% of global death with a larger percentage of it occurring in low to middle income countries (Lloyd- Sherlock, 2010). The fatality of stroke is highest at the first week after event and ranges from 20% to 50% in the first month. The fatality is dependent on stroke type and severity; age and co-morbidity of patient; and the effectiveness of treatment of complications arising from the stroke (Lloyd- Sherlock, 2010). A systematic review of 56 population based studies conducted by Feigin et al. (2009) reports early stroke case fatality ranging from 17%-30% for high income countries and 18% to 35% in low to middle income countries. The study also reveals a decrease in the trend of fatality in high income countries and an increase in low to middle income countries. In Nigeria, data from hospital based studies reveal stroke mortality rate to be 126 per 100,000 with case fatality rate ranging from 28 to 45% (Desalu et al., 2011; Komolafe, Ogunlade & Komolafe; 2007; Wahab, Sani, Samaila, Gbadamosi, & Olokoba, 2007; Njoku & Aduloju, 2004). The higher case mortality and fatality rates observed in low and middle (Adika, Nzewi & Apiyantiede, 2011).

#### **2.1.4 Risk factors for stroke**

Non modifiable and modifiable risk factors have been used to categorise the risk factors for stroke based on previous relevant literature.

The non-modifiable risk factors for stroke are age, gender, race and previous history of stroke or T.I.A. These are predisposing factors that cannot be altered in terms of their influence on having a stroke. The risk of having a stroke increases with an increase in age (Petrea et al., 2009). This rate doubles for every 10 years after the age of 55 years in both male and female. With regards to gender, women are at a higher lifetime risk of having a stroke compared to men (Seshadri and Wolf, 2007). However, men experience their first-ever stroke at an earlier average age of 70 years compared to women who experience stroke at an average age of 75 years (Petrea et al., 2009; Feigin et al., 2003). The higher risk observed in female could be attributed to longer life expectancy of females (which invariably translate to a long term care need of disability) (Seshadri and Wolf, 2007). In a study conducted by Petrea et al. (2007) they report an increase in risk among men and women with a family history of stroke. With regards to race, Blacks and Hispanics have been documented to be at a higher risk of having a stroke compare to whites (Howard et al., 2011; Stansbury et al., 2005; Sacco, Boden-Albala, Abel, Lin, Elkind, Hauser, Paik & Shea, 2001). The influence of age, gender, race as risk factors for stroke is further supported by their influence on the incidence, prevalence and mortality of stroke which has been discussed earlier in the epidemiology of stroke. With regards to previous stroke or T.I.A., there is a higher risk of recurrent stroke among stroke survivors compared to the general population and this risk become more predominant in the first year post-stroke (van Wijk, et al., 2005; Burn, Dennis, Bamford, Sandercock, Wade & Warlow, 1994). Burn et al. (1994) report the risk of stroke to be 15 times greater for stroke survivors compared to the general population in their Oxford Stroke Project.

The modifiable risk factors for stroke are the risk factors that occur due to an individual's lifestyle and as such can be prevented. These risk factors include hypertension, smoking, physical inactivity, diabetes, elevated blood lipid level, alcohol abuse, psychosocial stress, abdominal obesity, drug use and cardiac diseases (O'Donnell, et al., 2010; Salter, Teasell, Foley, Bhogal, & Speechley, 2011). Redfern, McKeivitt, Rudd and Wolfe (2002) report that 87.5% of survivors of first stroke had at least one modifiable risk factor from the South London Stroke

Registry. Some of these risk factors that are well established and extensively debated in literature are discussed subsequently. These include hypertension, diabetes, smoking, alcohol abuse and cardiac diseases.

Hypertension is considered as the most significant modifiable risk factor for stroke (Salter et al., 2011) and also the major determinant of risk for stroke in the general population (Roger, et al., 2012). The risk of stroke increases proportionately with an increase in blood pressure. A higher lifetime risk of 26% and 21% has been associated with high blood pressure (SBP > 140mmHg or DBP > 90mmHg) among for men and women aged  $\geq 65$  years respectively (Seshadri & Wolfe, 2007). Similarly, literature evidence (Salter et al., 2011; Kaplan, Tirschwell, Longstreth, Manolio, Heckbert, LeValley, Lefkowitz, El-Saed & Psaty, 2006) reveals a significant reduction in the risk of stroke when hypertension is controlled. Kaplan et al. (2006) reports a 13% and 11% reduction in the relative risk for each 9mmHg drop in systolic blood pressure and 4mmHg drop in diastolic blood pressure respectively among hypertensive population.

Another well-established modifiable risk factor for stroke is diabetes. Literature evidence (Salter et al., 2011; Sarwar et al, 2010; Flemming and Brown, 2004) has shown an increased susceptibility by individuals with diabetes to atherosclerosis, hypertension, obesity and hyperlipidemia. A two-fold risk for stroke has been found to exist among diabetic individuals with no previous history of stroke (Sarwar et al., 2010). However, aggressive treatment of diabetes in individuals with or without history of hypertension and hyperlipidemia reduces the risk of stroke (Salter et al., 2011; Flemming and Brown, 2004).

Smoking and heavy alcohol consumption has been found to be a significant risk factor for stroke. A two to four fold increased risk has been found to exist among people who smoke 20 or more cigarette per day compared to non-smokers. The risk gradually declines over a five year period among smoker that quitted smoking (Bagnardi, Zatonski, Scotti, La Vecchia, & Corrao, 2008). The consumption of alcohol has a two way effect as a risk factor for stroke (Patra, et al., 2010). A meta-analysis conducted by Patra et al., reports that there is a reduced risk for ischaemic stroke among people who drink one or two glasses of alcohol per day. The author however, found an increased risk among individual that drink five or more glasses of alcohol per day compared to the people that do not consume alcohol at all. The protective effect of little consumption of

alcohol and particularly wine against stroke could be attributed to its actions on the coagulation system (Bagnardi et al., 2008; Orgogozo & Renaud 2001)

Cardiac diseases are also a well established risk factor for stroke. These diseases include arterial fibrillation (AF), cardiac failure and coronary heart disease (Salter et al., 2011; Wolf, Abott & Kannel 1999). Wolf et al., (1999) found a five-fold increased risk for stroke among individuals with AF in the Framingham Heart study. The authors also found a four-fold and two-fold increase in risk amongst individuals with cardiac failure and coronary heart disease respectively. The risk for stroke associated with these diseases has been found to reduce with anticoagulation (Salter et al., 2011).

The trend in the knowledge and awareness of the risk factors for stroke have increased over the last decades, however these awareness is still considered low among the general population especially in the developing countries (Stroebele, Muller-Riemenschneider, Nolte, Muller-Nordhorn, Bockelbrink, & Willich, 2011; Akinyemi, 2009). There is a need for public enlightenment regarding these risk factors not only for reducing the burden of stroke on individuals but also to alleviate the burden it would inadvertently place on the society.

## **2.2 The classification and impact of stroke.**

The classification of stroke type are based on syndromes that causes it and these are of two broad categories, namely, ischaemic stroke and haemorrhagic stroke (Harvey et al., 2011). Ischaemic stroke occurs from an acute occlusion of cerebral blood flow leading to tissue anoxia (Bartels, 2011). The causes of this occlusion have also been used to further classify ischaemic stroke into subtypes which include embolic and thrombotic strokes. Embolic stroke results from blockage of narrow blood vessels in the brain by a mass (which are usually blood clots from the heart) that travels through the blood vessels. However, thrombotic stroke results from the thickening of the arterial walls and narrowing of arteries from deposit of cholesterol which leads to disruption of blood flow to the brain (Harvey et al., 2011).

Haemorrhagic stroke occurs when there is rupture of cerebral blood vessels that results in bleeding into brain tissues or extra-cerebral intracranial spaces (Warlow, Sudlow, Dennis, Wardlaw, & Sandercock, 2003). The site of bleed is further used in classifying haemorrhagic stroke into subtypes of subarachnoid and intracerebral haemorrhages. Subarachnoid

haemorrhagic stroke occur when there is a bleed directly under the cerebral membrane (Donnan, Fisher, Macleod & Davis, 2008; Lezak, 2004), while intracerebral haemorrhagic stroke results from bleeds occurring at a deeper part of the brain (Donnan et al., 2008; Lezak, 2004). The degree of the stroke determines the severity of symptoms experienced by survivors.

The impact of stroke on its survivors can best be described based on the World Health Organization framework on International Classification of Impairment and Disabilities (WHO, 2001). This framework classifies consequences of stroke based on body structure and function; activity and participation and the environment. Common consequences attributed on body functions and structures are hemiplegia or hemiparesis, perceptual, cognitive, sensory and communication problems. The implication of this departure from normal body functions by the stroke survivors usually translates itself as reduced functioning, limitation in capacity to perform actions (activity limitation) and restriction experienced in the active involvement of the survivors in controlling their life in fulfilling personal and societal roles (participation).

Hence, at the societal level, the impact of stroke could be enormous not just in its cost of care but also when the stroke survivor does not return to work. Stroke care is estimated to cost more than 5% of most countries' healthcare budgets (Palmer, Valentine, Roze, Lammert, Spiesser, & Gabriel, 2005). In a study conducted in six developing countries by Pandian, Srikanth, Read and Thrift (2007), it was found that US\$1,200 – US\$2,300 was spent per treatment on 'clot busting' thrombolytic drug used to treat stroke. Nigeria spends N122.8 billion annually on non-communicable diseases which includes stroke and heart diseases and this would have accumulated to N1.2 trillion by 2015 (PM News, 2011). The subsequent serious and permanent disability experienced by stroke survivors leads to substantial care need and a lifetime adherence to drug regimens so as to limit the risk of future attacks. This has been attributed to the high cost of stroke (Lloyd-Sherlock, 2010). In this wise, the disability affects the productivity level of stroke survivors with a resultant effect on the society or country's gross domestic product.

### **2.3 Rehabilitation post-stroke**

The WHO (2001) describes rehabilitation as a restorative process which seeks to enable people with impairments and activity limitation to attain and maintain optimal functioning in physical, intellectual, psychological and social domains. Guidelines from different countries' health service systems show an agreement on the rehabilitation protocols involving stroke. In the

United Kingdom health system, stroke rehabilitation starts immediately when the survivor has been medically stabilised in a stroke unit (Intercollegiate Stroke Working Party, 2008). The stroke units make use of a multidisciplinary rehabilitation team approach that involves the expertise of the consultant physician(s); nurses; physiotherapists; occupational therapists; speech and language therapists, dieticians, clinical psychologists and social workers in the management of stroke. This approach focuses on the prevention and management of comorbid illness and medical complications; independence training and community integration; facilitation of psychosocial coping skills by stroke survivor and caregivers; enhancement of the survivor's quality of life; and prevention of recurrent stroke and other vascular conditions that occur with increased frequency in stroke survivors (Intercollegiate Stroke Working Party, 2008). Literature (Stroke Unit Trialists' Collaboration, 2007; Legg & Langhorne, 2004) reveals that stroke units with multidisciplinary team are effective in improving social participation, reducing activity limitation and improving overall functional recovery of stroke survivors.

In the Nigerian health system which advocates similar health services to that of the United Kingdom, a multidisciplinary team is used and rehabilitation services are offered in the general medical wards. However, stroke management has been reported to be suboptimal in the provision of diagnostic and treatment services; significant deficiencies have also been found in the rehabilitation and support services (Adika, et al., 2011; Ogungbo, Mendelow & Walker, 2004). The deficiencies found within the rehabilitation and support services could be attributed to reduced or unavailability of human resources in most rehabilitation centres (with some of the rehabilitation specialists especially the occupational therapist, speech therapist, social worker and clinical psychologist not within the multidisciplinary team). This invariably results in most rehabilitation services using the conventional rehabilitation protocol that lacks holistic care.

Two common approaches have been identified to be used frequently as components of neuro-rehabilitation by the multidisciplinary rehabilitation team in the management of stroke (Ivey & Mew, 2010). These two approaches are remediation and compensation. The remedial approach aims at reducing impairment resulting from stroke by improving the functional capacity of survivors through organized retraining. The remedial approach is also referred to as the restorative approach and it relies on the ability of the brain to regenerate itself otherwise known as neuroplasticity theory (Ivey & Mew, 2010). This approach has been posited by several authors (Ivey & Mew, 2010; Marshall, Perera, Lazar, Krakauer, Constantine, & DeLaPaz, 2000;

Neistadt, 1990) to use controlled stimulation (with graduation) provided through the use of normal movement, motor relearning processes and transfer of training to promote integration of sensory information and regeneration of the brain. In view of this, several successes have been reported in survivors with motor impairments while using this approach. However, the effectiveness of restoration of cognitive impairments in stroke survivors has been argued by Ivey and Mew (2010) to be less successful.

The compensatory approach utilises the residual functional capacity of stroke survivor in achieving competence in occupational performance. This approach is also referred to as the adaptive or functional approach which indicates that man's functional ability has a positive effect on his well-being and existence (Turner, Foster & Johnson cited in Ivey & Mew; 2010). Zoltan (2007) posits that this approach is often used in the rehabilitation of stroke survivors when restoration of function is unlikely or unachievable with specific emphasis on participation in activities of daily living. According to Ivey and Mew (2010), compensation for loss of function among stroke survivor is achieved through changes done in the survivor's behaviour, in the environment or in activity been carried out by the use of assistive devices, modification of tasks or continuous relearning of a task until occupational competence is achieved. Even though the compensatory approach has been reported by the above authors to be client-centred, easily administered and providing quick outcome, its popular critique however has been that the push for quick functional outcome usually undermine the recovery potential of stroke survivor thereby limiting attempts to remediate any functional essential skills.

It could be argued that deferring early engagement of a multidisciplinary team during rehabilitation of the stroke survivor (like the therapists due to mild impairment in the stroke survivor), allow survivors to compensate for impairment with suboptimal behaviour that are difficult and time-consuming to unlearn (Ivey & Mew, 2010; Duncan, Richard, Bates, Choi, Glasberg, & Graham, 2005; Stucki, Stier-Jarmer, Grill, & Melvin, 2005). Stroke survivors who have recovered from disabling stroke with severe functional limitations may be able to function in supportive employment environment. However, survivors that have recovered from disabling stroke without serious functional limitation may be able to resume their worker role if the rehabilitation process supports them sufficiently (van Velzen, van Bennekom, Edelaar, Sluiter, & Frings-Dresen, 2009; Malec, Buffington, Moessner, & Degiorgio, 2000).

## **2.4 Social policies affecting return to work**

There has been a strong focus on functional limitations arising from pathological conditions such as stroke. However, people with disabilities like stroke survivors do not live in a vacuum but interact with the environment and social contexts (Hoyle, Gustafsson, Meredith, & Ownsworth, 2012). Hence the need arises to understand the social policies influencing return to work process within the Nigerian rehabilitation system. The following policies are discussed to give a clear understanding of the social factors that affect the resumption of the worker role by the stroke survivor. These include the Nigerian National Health Insurance Scheme, the Employee's Compensation Act, the Nigerians with Disability Decree, the Lagos State Special People law; international policies influencing the worker and the Convention of the Right of Persons with Disabilities.

### **2.4.1 The Nigerian National Health Insurance Scheme and the Employee's Compensation Act**

The Nigerian National Health Insurance Scheme (N.H.I.S.) established under Act 35 of 1999 by the Federal Government of Nigeria was instituted in 2002 with the view of providing comprehensive health service to the Nigerian population at an affordable cost. However, implementation of the scheme suffered setback until the 6<sup>th</sup> of June, 2005 with the obligatory enrolment of the public sector employees which served as the first phase (Obalum & Fiberesima, 2012). The scheme provides a range of health care services from in-patient care to rehabilitation services and procurement of assistive devices for beneficiaries (ibid). The scheme has been lauded as filling a gap in providing quality healthcare at a reduced cost for the population (Iloh, Ofoedu, Njoku, Odu, Ifedigbo, & Iwuamanam, 2012; Akande, Salaudeen, & Babatunde, 2011). However, it has been argued that the non-implementation of its second phase that covers the non-formal sector of the Nigerian population and the low level of awareness among individuals in the formal sector are major setback in the achievement of its goals (Lawan, Iliayazu, & Daso, 2012).

The Employee Compensation Act (E.C.A.), enacted in 2010, addresses issues relating to the welfare of the Nigerian worker. The E.C.A. provides "an open and fair system of guaranteed and adequate compensation for all employees or their dependents for any death, injury, disease or disability of any kind arising during the course of employment" (Employee's Compensation Act, 2010, p. 5). This Act provides a solvent compensation fund for the comprehensive rehabilitation



of employees. It also provides necessary compensation for employees affected by work-related injury, disabling occupational disease or death. The E.C.A. has been lauded by human right advocacy groups, various labour unions and other stakeholders as improving health and safety at work as well as the wellbeing and morale of the Nigerian worker. It has however been argued that the scheme through which the compensation fund is managed is tantamount to duplication of duty on public institution (Olaniwun, 2011).

#### **2.4.2 The Nigerians with Disability Decree and the Lagos State Special People's Law**

The Nigerians with Disability Decree of 1993 provides a clear and comprehensive legal protection and security for the disabled population of Nigeria (Nigerians with Disability Decree, 1993). The decree establishes a standard for enforcement of the rights and privileges of people with functional limitation. To address employment equity within the populace, the decree stipulates that Nigerians with disabilities shall constitute not less than 10% of the work force within the private and public establishments. In addition, to serve as benefit for private companies that provides full time employment for people with disability; a 15% tax rebate is granted to the establishment. The decree also advocates free rehabilitation services for people with functional disability and tax-free procurement of functional aids to assist in achieving independent living. In order to achieve independence for people with disabilities, the decree mandates the establishment of vocational rehabilitation centres in all the 774 local government areas in Nigeria with the view of providing vocational skill training programmes and vocational guidance and counselling.

The Lagos State Special People's Law does not specifically address employment issue among people with functional impairments, but it however addresses discrimination and accessibility in the workplace for people with disability (Lagos State Special People's Law, 2011). The law which is restricted and enforceable within the Lagos State governed area protects the disabled community against unfair discrimination and the barriers posed in accessing the workplace and the environment in general.

#### **2.4.3 International policies influencing the worker**

International policies such as the United Nations Copenhagen Declaration on Social Development (United Nations World Summit for Social Development [U.N.W.S.S.D.], 1995) and the United Nations Standard Rules on the Equalization of Opportunities for Persons with

Disabilities (Disabled Persons Unit Department for Policy Coordination [D.P.U.D.P.C.D.], 1993), provide guidelines and standards for member states and policy makers in achieving equal rights and obligations for people with disabilities. The Copenhagen Declaration which is binding on United Nation member states recognizes persons with disabilities as one of the largest world minorities. It stipulates that persons with disabilities should be granted access to rehabilitation, independent living services and assistive technologies; and that appropriate adjustments be made in the workplace to accommodate persons with disabilities. Even though the United Nations Standard Rules on the Equalization of Opportunities for Persons with Disabilities lacks legal backing for enforcement on member states, it however provides an integrated approach through which discriminatory practices against people with disability can be prevented and an inclusive society achieved for the disabled person (D.P.U.D.P.C.D., 1993). Also of particular significance is the Americans with Disability Act (1990) which prohibits discrimination on the basis of disability in employment (United State Department of Justice, 2009). The American with Disabilities Act advocates environmental modification, job modification and the use of assistive technology within the workplace for workers with disabilities to perform their jobs optimally.

#### **2.4.4 The United Nations Convention on the Rights of Persons with Disabilities**

The United Nations Convention on the Rights of Persons with Disabilities (2008) was informed by a need to change the attitude and approach of the larger society to person with disabilities. The convention has 153 member countries as signatories and serves as a human right instrument for person with disability. The convention recognises disability to result from attitudinal and environmental barriers and that this hinders the effective participation of people with impairments. It advocates for an open work environment that is both inclusive and accessible to persons with disability.

It could be put forward from the above discussed social policies that there has been global improvement in legislations concerning the rights of people with disability. This could invariably be interpreted as a right to work opportunities and reasonable accommodation for stroke survivors in their workplace. The implementation of the above policies by relevant bodies however, tends to be doubtful. For instance, unemployment has been a major problem for most countries across the world including Nigeria. The Nigerian National Bureau of Statistics (2011) reported a rise in Nigeria`s unemployment rate from 19.7% in 2009 to 21.1% in 2010 and 23.9%

in 2011. A country like Nigeria with an unemployment statistic as high as this must not only have strong legislations but must also enforce the legislations for an inclusive society to be achieved for her disabled citizenry. The different social policies discussed above have been reported to have failed over the years in its aims and objectives of achieving occupational justice of an inclusive society and enhancement of the quality of life of Nigerians living with disability (The Guardian, April 12, 2009; Lang & Upah, 2008). The failure might have prompted the disregard for the principle of the social model of disability and encouraged the charity and welfare based approach to disability management.

Nigeria has been a state party to the United Nations Convention on the Right of Persons with Disability for several years. Despite this, several appeals that have been made to the federal legislature (National Assembly) to pass a pending disability bill into law have fallen on deaf ears (Chinaedu, 2012). This has made different organizations to spring up to serve as lobbyist for disability groups in Nigeria with focus on public enlightenment, advocacy and education for people living with disability. However, their outreach programmes have been reported to have failed to impact on the rural communities. This has been attributed to the fact that leaders of the disability movement are based in urban area (Lang and Upah, 2008).

In conclusion, for an inclusive society to be achieved for stroke survivors and Nigerians with disability at large, it could be argued that not just improved disability legislations are necessary or required but also for these legislations to be enforced and implemented.

## **2.5 Occupational therapy**

Occupational therapy often abbreviated as OT is a health care profession based on the knowledge that engagement in purposeful activity can promote and is important to health and well-being in all aspect of daily living (World Federation of Occupation Therapy, 2012). The profession derives its core construct from occupation which is seen as those activities that people engage in and occupy their time with, as well as constructing an individual`s identity. The departure from normal health caused by injuries and diseases usually affects an individual`s performance in occupations of daily life thereby necessitating the services of occupational therapists and occupational therapy assistants in order to improve, maintain or restore their occupational performance (Moyers, 2005). Following stroke, survivors may be faced with varying degree of occupational dysfunction which impact on the performance capacity in their physical, cognitive

and/or psychosocial domains. This inevitably limits stroke survivors' adaptive capacity thereby impinging on their health and well-being (Ivey & Mew, 2010). In the context of stroke rehabilitation, the role of the occupational therapist has been described by the above authors as the enablement of the stroke survivor in regaining their competence, re-engagement in occupations and redevelopment of a positive occupational identity through treatment of the physical, cognitive and psychosocial problems arising from the stroke.

As discussed in the previous section on the rehabilitation of stroke, the occupational therapist actively uses theoretical constructs which serve as conceptual or therapeutic models to guide his/her treatment techniques and intervention strategies. The theoretical constructs align with the two key approaches of remediation and/or compensation in facilitating competence in occupational performance. These conceptual occupational therapy models have been described by Turpin and Iwama (2011) as having their influence from the biomedical, bio-psychosocial or socio-ecological perspective of health. Therapeutic models derived from bio-psychosocial and socio-ecological perspective of health are often used in describing the process of engagement or re-engagement in work following departure from normal health. Popular models used include Person Environment Occupation (P.E.O.) model, Occupational Adaptation (O.A.) model, Model of Human Occupation (M.O.H.O.) and Canadian Model of Occupational Performance (C.M.O.P.).

With occupational dysfunction resulting from stroke being a dynamic interaction between health condition and contextual factors, a client-centred approach should be focal to stroke management to facilitate return to work. The Person Environment Occupation model advocates this and considers the complex nature of human functioning and experience in the day to day lives. It embodies principles of client-centred practice and supports collaborative working partnership (CAOT, 1997), thus allowing the consideration of human development and change. Therefore, to gain insight into stroke survivor's functional status and their reintegration to the workplace in this study, the P.E.O. model will be used.

## **2.6 The Person Environment Occupation model**

The Person Environment Occupation model was developed to describe the process involved in occupational performance of an individual while carrying out occupations of daily life. It focuses on the characteristics of a person, the environment and occupation as factors that impact on

occupational performance. The model posits a dynamic relationship as existing between three components involving the person, the environment and occupation (Law, Cooper, Strong, Stewart, Rigby, & Letts, 1996). This dynamic interaction which is transactional in nature influences the occupational behaviour of an individual throughout his/her lifetime.

The P.E.O. model assumes the individual to be a distinctive being (with a variety of qualities) who concurrently takes on different roles. The qualities or attributes that make up the individual could be seen in the mind, body and spiritual sphere of the person. These sets of attributes which could be learned or innate include self-concept; personality style; cultural background and personal competencies in the form of sensory, motor, cognitive abilities. When engaging in any task, the individual utilizes these set of attributes (Law et al., 1996).

The model further acknowledges that the set of attributes of the person cannot be separated from the context in which they are used when performing a task. The environment is understood as the context within which the result of engagement in a task takes place and includes the personal, social, psychosocial, economic, political and physical environment. It influences occupational behaviour of an individual and in turn is also influenced by the person's attributes and behaviour. The environment is further assumed to be dynamic and more responsive to change compared to the person; with either an enabling or constraining consequence on occupational performance (Law et al., 1996).

The occupation component of the P.E.O. model is considered as a cluster of activities through which the individual's intrinsic needs for self-maintenance, expression and fulfilment are carried out. This cluster of meaningful and purposeful activities which are an essential function of living defines the person as an occupational being (Barrett & Kielhofner, 1998). The occupation component can further be categorised into performance areas which include activities of daily living, productivity and leisure pursuits. Work is an important form of human occupation that is central to an adult's life (Ross, 2007).

The congruence between the transactive relationship between the person, environment and occupation is observed in the quality of a person's experience (which is termed occupational performance). Changes in either the internal or external features in any of the three components of P.E.O. model results in either a reduction or an increase in the P.E.O. fit. This is generally observed in an individual's level of functioning, competence and satisfaction. The P.E.O. model

of occupational performance can be considered as the most appropriate model for conceptualising a framework to explain the interactions of the different factors that influence resumption of worker role of a stroke survivor. It allows for the analysis of the various factors that influences occupational performance of the stroke survivor (holistically) when returning to work and the appraisal of the outcomes of rehabilitation.

A study conducted by Rudman, Herbert and Reid (2006) to investigate the occupational experiences of stroke survivors who were wheelchair user and their caregivers, revealed that the occupational performance of the participants were influenced by their personal capacities, the physical and social environment as well as occupational demands. Lock, Jordan, Bryam and Maxim (2005) also explored the experiences of younger stroke survivors about returning to work in the UK. The above authors report that the physical and social environment (the rehabilitation process, employer agencies and social structures); the job characteristics as well as the participants' individual characteristics impacted on the resumption of the stroke survivors' worker role.

The subsequent section discusses work as a human occupation and the various return to work programmes of the brain injured worker.

## **2.7 Work as a human occupation**

Ross (2007) defines work as an essential form of human activity that may provide meaning within the broader context of an individual's life. The above author further posits work as the most central performance area in a person's adult life. Work does not only serve as an important goal/outcome of rehabilitation for stroke survivors but also as an age related role expectation (ibid). Work has been attributed to contribute to the development of a person's self-esteem, sense of belonging and sense of competence thereby leading to an improved quality of life (King & Olson, 2009).

Even though stroke has most times been construed as a disease of the aged, literature evidence (Gabriele & Renate, 2009; Treger, Shames, Giaquinto, & Ring, 2007; Vestling, Tufvesson, & Iwarsson, 2003) reveals 20-30% of individual who experience stroke to be of working age. With the various sequelae associated with stroke, it could be put forward that the advent of stroke on survivors might not only have a disruptive effect on their worker role but may also alter the meaning survivors attach to this role. Literature evidence further reveals that stroke survivors

within the working age experiences intense difficulty when resuming their worker role. In a systematic review conducted by Baldwin & Brusco (2011), the return to work rate of stroke survivors was 49% after they engaged in vocational rehabilitation. Various factors that have been identified by researchers to predict return to work rates among stroke survivors include: severity of stroke as indicated by the extent of cognitive and motor impairment; premorbid characteristics of survivor (such as level of education of survivor and job characteristics); availability of professional support and early involvement of an occupational physician in the rehabilitation of survivors (Doucet, Muller, Verdun-Esquer, & Debelleix, 2012; Tanaka, Toyonaga, & Hashimoto, 2011; Treger et al., 2007; Vestling et al., 2003). Not getting back to work is not only seen as a defeat in the rehabilitation milestone for the stroke survivors of working age and their caregivers, it has also been attributed to reduce the survivor's subjective well-being and life satisfaction (Vestling et al., 2003).

The value attached to work as a meaningful occupation has been considered as a major factor among the motivating factors for stroke survivors in returning to work after stroke (Alaszewski et al., 2007; Corr & Wilmer, 2003). In contrast to the above, Johannsson and Tham (2006) report a shift/restructure in the meaning of work among their study participants with work not assuming a central event in their lives but the social dimension of work becoming prominent. The study participants reflected on the meaning of life and being able to enjoy life after experiencing brain injury and they realized that work no longer gave the primary meaning to their lives anymore. Returning to work was seen by the participants as an indication of success over their struggle to return to normalcy.

## **2.8 Return to work programmes**

Participation in meaningful occupation has provided the basis of vocational rehabilitation in occupational therapy history (King & Olson, 2009). For stroke survivors, vocational rehabilitation can either take a traditional hospital route or community route. At an institutional level, work rehabilitation starts at the hospital when the stroke survivor is an outpatient. Individualised treatment programmes to address identified deficit areas in performance and simulation of the unpredictable nature of survivor's actual workplace demand are carried out (Chan, 2008). The individualised intervention is guided by work-focussed standardized assessments (such as VALPAR system; the Loewenstein Occupational Therapy Cognitive

Assessment (Katz, Itzkovich, Averbuch, & Elazer, 1989); W.A.S.P. II., Jamar grip and pinch dynamometers); followed by education and training in areas that were identified through assessment, work hardening and work conditioning. Stroke survivors that become unemployed post stroke are later referred to community vocational centres based on their interest and morbid characteristics (Chan, 2008). It could be argued that most of the vocational rehabilitation services offered for stroke survivors in Nigeria are based in the hospital environment.

For clients entering vocational rehabilitation through the community route, two broad categories of programmes exist: the training programme and the place and train programme (King & Olson, 2009). The training programme provides the survivor opportunities to improve on their work habits and skills through simulated and actual work settings while the place and train programme put clients in actual work environment requiring problem solving and work style adaptation in a real workplace. In Nigeria, the Rehabilitation Centre, Moniya, Ibadan could serve as an example of a vocational rehabilitation offering training programme while the Lagos state Rehabilitation and Training Centre, Ikorodu can serve as example of a vocational rehabilitation centre offering a train and place programme. Survivors that have undergone rehabilitation through any of this routes described above could later enter the open employment, sheltered work or day-care centres. In a retrospective study conducted by Chan (2008), a 55% return to work rate was reported among stroke survivors after community vocational rehabilitation with 34% entering open employment and 21% entering sheltered workshop.

Additional programme used to achieve return to work among the brain injured people (stroke survivor inclusive) is the holistic cognitive rehabilitation programme. This programme has been lauded to provide an easy transition to community-based services from the hospital. It is described by three stages involving; holistic remedial intervention to facilitate activities of daily living, guided vocational trials in work placement and support for the maintenance of employment (Soeker, 2010). A study conducted by Malec et al., (2000) using the holistic cognitive rehabilitation approach among 80 participants with acquired brain injury reveals a 70% return to work progress rate in the first year of competitive employment.

## **2.9 Client-centred rehabilitation**

In order to improve the quality of care that is rendered to clients by health professionals, the patients-practitioner relationship was identified as a key component through which this could be



achieved (Hughes, Bamford, & May, 2008). Similarly, Strauss, Fagerhough, Suczek, & Wiener (1997) position that there exist an asymmetrical relationship of knowledge and power between the attending health professional and the client (in the form of boss-subject) which hinders inclusiveness of the client in decision making in therapeutic process. This was asserted to have led to the disregard of the uniqueness of the client as an individual with needs and value (Corring & Cook, 2000). Implicit to recent rehabilitation's philosophy is the need to address client's biopsychosocial needs holistically (WHO, 2001), which has been described as unachievable without the inclusiveness of clients in decision making, thus necessitating client-centred rehabilitation (Siegert, Ward, Levack, & Mcpherson, 2007).

McColl (2005) describes client-centred rehabilitation as a therapeutic orientation which transpires when clients seek the services (in the form of assistance and support) of practitioners in order to aid their problem solving and the attainment of their individual goals. In Occupational Therapy, client-centredness is seen as an approach to rehabilitation where the therapist holds a philosophy of respect for the clients and partners with the clients to achieve their individual therapeutic goals. This philosophy is based on the following notions that: the client knows what he/she wants and needs to achieve from therapy; the therapist can only facilitate change and not the influence of change; as well as professional dominance in therapy being counter-productive (McColl, 2005). While various barriers to client-centred practice has been identified in literature (Bright, Boland, Rutherford, Kayes, & McPherson, 2012; Leach, Cornwell, Fleming & Haines 2010; Wressle, & Samuelsson, 2004; Sumsion, & Smyth, 2000); the advantages of client-centredness which includes but not limited to the enhancement of self-esteem and sense of empowerment in clients as well as its support for an individualized approach to treatment have made client-centredness relevant in occupational therapy practice (McColl, 2005).

Client-centred stroke rehabilitation allows the stroke survivors to be seen as a unique individual with needs and wants thereby enabling their holistic care. This can be argued to enhance the return to work rates of stroke survivors after and during rehabilitation (Govender & Kalra, 2007; O'Brien, 2007).

## **2.10 Summary**

During groundwork for the study, literature review indicated a paucity of literature regarding the return to work rate of stroke survivors after rehabilitation in Nigeria. Also available literature did

not address the personal experience of the stroke survivor when returning to work as it is applicable in the developing world. With rehabilitation approaches advocating for a holistic view of client and client-centredness in treatment protocols, it becomes imperative to explore the personal experience of stroke survivor's return to work process. The quality of treatment and rehabilitation services tend to be ineffective when stroke survivor's self-identified needs are not taking into consideration by healthcare providers (Daniëls, Winding, & Borell, 2002). It is with this in mind that this study was conducted to explore and describe the resumption of worker role after rehabilitation from the perspective of stroke survivors and stakeholders.



## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3. Introduction**

In section 3.1 and 3.2, the research problem and aim of the study of the study are discussed. In section 3.3, the objectives of the study are discussed. Sections 3.4 and 3.5 discuss the research paradigm used for the study and the description of the study setting respectively. Section 3.6 provides a discussion on the sampling strategy used for the selection of participants for the study. In section 3.7 and 3.8, the data collection technique and data analysis are discussed. Finally in section 3.9, 3.10, 3.11 and 3.12, bracketing, trustworthiness, ethical statement and limitations of the study are discussed respectively.

#### **3.1 Research problem**

There is evidence to suggest that the return to work rates for stroke survivors is poor. Many studies that focused on return to work of stroke survivors in Nigeria have been conducted from the medical experts' perspective/judgement with a minimal or no literature focusing on the stroke survivors' perspective (Obembe & Fasuyi, 2010; Peters, Buni, Oyeyemi, & Hamzat, 2013). In an attempt to understand the experiences of stroke survivors, a qualitative study was conducted.

#### **3.2 Aim of the study**

The aim of the study was to explore and describe the experiences of rehabilitated stroke survivors and perceptions of stakeholders about stroke survivors returning to work in South-West Nigeria.

#### **3.3 Objectives of the study**

- To explore and describe the stroke survivors experiences of barriers influencing their return to work.
- To describe the stakeholders perceptions of barriers influencing stroke survivors' returning to work.
- To explore and describe the factors that facilitated return to work of stroke survivors from the perspective of stroke survivors and stakeholders.

- To explore stroke survivors' perceptions and experiences of adaptation strategies that they utilised in maintaining their worker role.
- To provide recommendations on suitable strategies and methods that will facilitate the reintegration of stroke survivors to the workplace.

### **3.4 Research paradigm**

#### **3.4.1 Qualitative research**

A qualitative paradigm which enables a researcher to interpret phenomena with regards to the meaning people attached to such phenomenon was utilized in this study (Leedy & Ormrod, 2005; Denzin & Lincoln, 1994). The qualitative paradigm acknowledges that people develop a distinctive understanding of their environment through which they construct realities (Carpenter, 2004). This invariably enables the researcher to study participants with a wide-angled lens thereby providing a profound insight to the connection between the complex social, physical environment and the participants (Hammell & Carpenter, 2002). While using this paradigm, an exploratory and descriptive approach was used to gain insight about the lived experiences of stroke survivors about returning to work post-stroke and the perceptions of stakeholders about the resumption of the stroke survivor's worker role.

#### **3.4.2 Exploratory research**

Exploratory research has been described by Mouton and Marais (1996) as research that is meant to provide insight to a relatively unknown research area. This type of research is aimed at making clear concepts and constructs of the phenomenon of interest. The above authors further posit that research of this nature does not necessarily lead to a collection of accurate and replicable data but rather provides insight and comprehension to the phenomenon of interest. In order to gain meaningful insight to resumption of worker role after experiencing stroke, the participants' experiences and perceptions were explored in depth. The researcher used open ended questions to draw out information from the participants, this information was later used by the researcher to gain understanding into the perspective of the participants with regards to the resumption of worker role by stroke survivors after having a stroke.

To convey a vivid presentation of any perspective, Corbin and Strauss (2008) assert that informants usually utilize description to relate to others via their experiences. The researcher

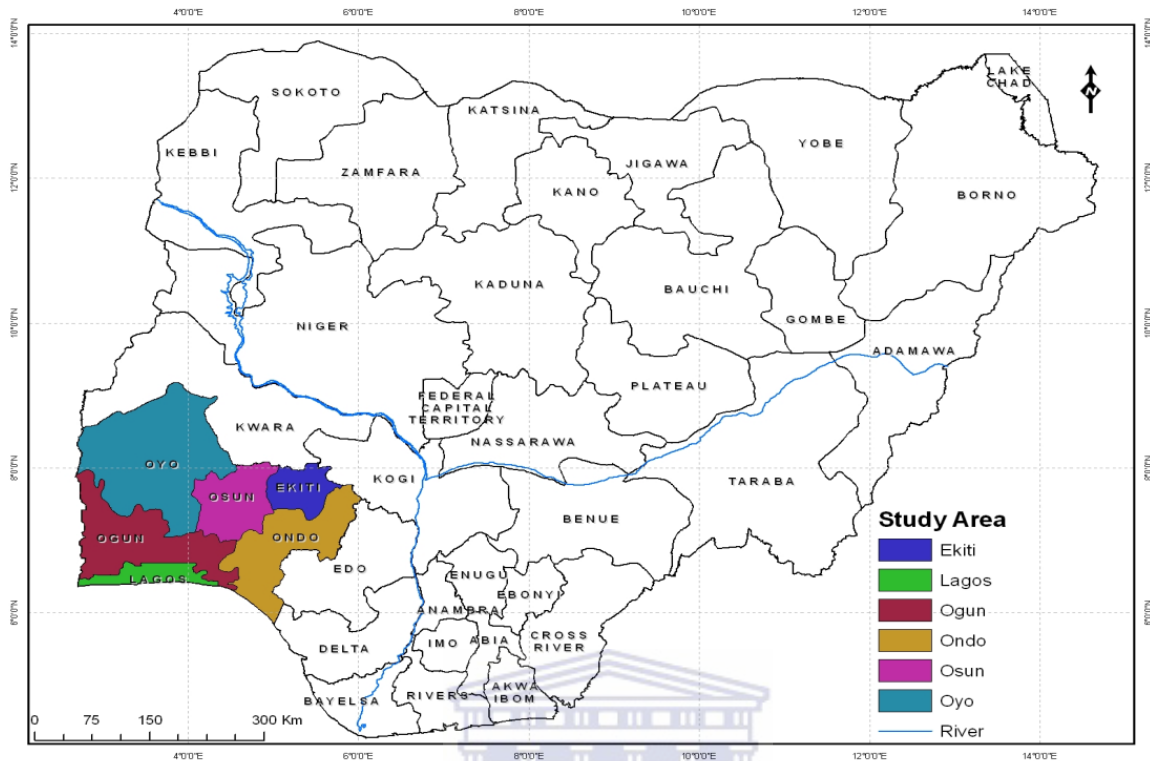
therefore used a descriptive research design to describe the perspectives of the participants in this study.

### **3.4.3 Descriptive research**

The Microsoft Encarta dictionary (2009) defines description as a process of giving an account or explanation of something. This could be linked to descriptive research as the participants in a qualitative inquiry usually give account of the phenomenon under study (Holloway & Wheeler, 2010). Polit and Hungler (1999) posit that descriptive approach in research enables the accurate representation of attributes of participants in the research project. To gather accurate data and provide a clear image of the experiences and perceptions of the participants in this study, a descriptive approach was utilized. This approach enabled the researcher to collect data from the participants; they were asked to describe what it was like to resume one's worker role after experiencing a stroke. Strebart and Carpenter (1999) posit that an open, unstructured interview is key to achieving the descriptive goal during data collection in qualitative research. In the current study, the researcher facilitated the description of participants' experiences and perceptions of the resumption of worker role of stroke survivor by bracketing his opinion. This is to allow for the unfolding of the phenomenon under investigation without unnecessary hindrance. It also allowed the researcher to present a detailed account of the experiences and perception of participants about the phenomenon. The description given by the participants include their understanding of the topic under investigation.

### **3.5 Description of study setting**

Nigeria consists of 6 geopolitical zones and 36 states. The South-West zone, with a predominant Yoruba speaking tribe is made up of 6 states with a population of 27,722,432 persons (National Population Commission, 2013). The O.A.U.T.H.C. which served as the study setting for this study, is a government owned array of hospitals located in three different towns namely; Ile-Ife, Ilesha and Imesi-Ile situated in state of Osun, South-West Nigeria.



**Figure 3.1: Map of Nigeria indicating the study area** [source: Faleyimu & Agbeja (2012, p.38)]

The O.A.U.T.H.C. was established on the 1<sup>st</sup> of July, 1975 with the aim of providing effective and quality healthcare service to the Nigerian populace. The hospitals provide preventive, promotive, diagnostic, restorative and rehabilitative services to its clients. For the purpose of this study, two of its hospital's units that provide rehabilitative healthcare services were used. The rehabilitative healthcare services are provided in the Medical Rehabilitation department of the hospitals. This department consists of physiotherapy and occupational therapy departments. The O.A.U.T.H.C. is one of the few hospitals in the South-Western zone of Nigeria that offers both occupational therapy and physiotherapy services; this made this hospital ideal for the selection of participants for the study.

### 3.6 Sampling strategy

The sampling strategy is discussed based on the selection criteria for the participants. This will be followed by the description of the study participants.

### 3.6.1 Participants' selection

Participants for this study were selected using purposive sampling and snowball sampling. The participants include stroke survivors, caregivers of the stroke survivors and key informants. The stroke survivors and key informants were selected purposively while the informal caregivers of the stroke survivor were recruited through snowballing. Purposive sampling served as the sampling method for the recruitment of the former participants because it allows the researcher to select participants through which the phenomenon under investigation could best be explored (Denzin & Lincoln 1994). Luborsky & Rubinstein (1995) identify snowballing as a sampling technique where participants serve as referral sources by recommending others they feel might be eligible for a study. As a means of getting informal caregivers of the respective stroke survivors, the stroke survivors served as a referral source for their caregivers.

Eighty-three stroke survivors were identified based on the inclusion criteria described below from the statistical records of Medical Rehabilitation department of the Obafemi Awolowo University Teaching Hospital Complex. However, only ten of the sixteen stroke survivors who met the criteria for inclusion of the study volunteered and participated in the study. A further eight caregivers of the respective stroke survivors and two rehabilitation specialists (served as key informants) involved in the rehabilitation of the stroke survivors also participated in the study.

The criteria used for the selection of participants were as follow:

Inclusion criteria for stroke survivors:

- The participants would have been diagnosed with having a stroke of a minimum of 6 months' time passage since hospitalization and rehabilitation.
- Participants must have been involved in either volunteer or paid (full-time or part-time) employment in the open labour market before having a stroke.
- Participants must have returned to volunteer or paid (full- time or part- time) employment in the open labour market for at least 3 months after rehabilitation.
- Participants must have a caregiver or spouse at home.
- Able to understand English, Yoruba or both languages.

- Participants can either be male or female within the economically active population (aged between 18-60).

Exclusion criteria for stroke survivors:

- Any serious speech difficulty and cognitive impairment.
- Evidence of any co-existing malignant or other rapidly progressive medical disease.
- Psychological condition diagnosed according to the Diagnostic and Statistical Manual IV (American Psychiatric Association, 2000).

Inclusion criteria for rehabilitation specialists:

- Been employed or volunteering at the Medical rehabilitation department of O.A.U.T.H.C. and worked in the field of stroke rehabilitation for at least 5 years.
- Able to understand English, Yoruba or both languages.

Inclusion criteria for caregiver:

- Has to be a caregiver of the stroke survivor for at least six months.
- Able to understand English, Yoruba or both languages.

The participants in this study were interviewed to the point where saturation of data was evident. As described by Bowen (2008), data saturation occurs when there is a replication and redundancy of information, this usually occurs in the research process when the collected data provides no new information. Data saturation was observed after the analysis of the in-depth interview with the ninth participant who was a stroke survivor. Further in-depth interviews were conducted with the rehabilitation professionals as well as focus groups with the caregivers. This contributed to trustworthiness in the research process.

### **3.6.2 Description of study participants**

Taking into consideration that multiple sources that include stroke survivors, caregivers and key informants were recruited for the study, the description of the participants will therefore be discussed under the following sub-headings: stroke survivors and stakeholders.



### **3.6.2.1 Participants that are stroke survivors (P1-P9).**

There were nine participants under this group with ages ranging from 41-59 years old. Seven of them were males, and two were females. In regards to their level of education, seven participants had tertiary level of education and two participants had high school level of education. Two of the participants were classified as holding a blue collar job while seven participants hold a white collar job. Two of the participants had right hemispheric CVA and seven participants were diagnosed as having left hemispheric CVA. All the participants were employed as at the time of the interview. The detailed description of the participants is as follows:

*Participant one (P1):* P1 is a fifty-seven year old male, who has a tertiary school level of education. He sustained a left hemispheric CVA on the 24<sup>th</sup> of January, 2009 that resulted in right hemiplegic condition. He was a senior lecturer in a tertiary institution before the CVA and currently he is still employed as a senior lecturer. He is married with three children.

*Participant Two (P2):* P2 is a fifty-seven year old male, who has tertiary school level of education. He sustained a left hemispheric CVA on the 15 October 2008 that resulted in right hemiplegic condition. He worked as a senior lecturer/professor at a tertiary institution and as a consultant surgeon in a tertiary hospital at the time of the injury. He currently maintains his job as a lecturer with the institution but not practising surgery. He is married with eight children.

*Participant three (P3):* P3 is a fifty-two year old male, who has a secondary school level of education. He sustained a left hemispheric CVA in October, 2006 that resulted in right hemiplegic condition and he returned to work in 2009. The participant indicated he was unconscious for three weeks in the hospital. At the time of the stroke, he worked as a typist. Currently, he is working as a clerical worker at a tertiary institution. He is married with three children.

*Participant four (P4):* P4 is a fifty-nine year old male, who has a tertiary school level of education. He sustained a right hemispheric CVA in December, 2006 that resulted in left hemiparetic condition. At the time of stroke, he worked as a vice-principal in a secondary school. Currently, he is employed as a principal with a different school. He is married with four children.

*Participant five (P5):* P5 is a fifty year old male, who has a tertiary level of education. He sustained a left hemispheric CVA on the 3<sup>rd</sup> of December, 2007 that resulted in right hemiplegic

condition. At the time of the stroke, he worked as a high school teacher. Currently, he is employed with the same high school with reduced workload. He is married with five children.

*Participant six (P6):* P6 is a fifty-four year old male, who has a tertiary level of education. He sustained a left hemispheric CVA on the 25 March, 2012 that resulted in left hemiplegic condition. At the time of the stroke, he was working as an extension manager in the agricultural industry. He indicated he returned back to his previous job on a part-time basis. He is married with five dependents.

*Participant seven (P7):* P7 is a forty-eight year old male, who has a secondary school level of education. He sustained a left hemispheric CVA in March 2010 that resulted in a right hemiplegic condition. He was a prison warder at the time of accident. He is currently working on a part time basis at his previous workplace. He is married with a child.

*Participant eight (P8):* P8 is a fifty year old female, who has a tertiary level of education. She sustained a left hemispheric CVA in March 2011 that resulted in a right hemiplegic condition. She was working as a primary school teacher at the time of the accident. Currently, she holds the same position at the same workplace as a school teacher. She is married with three children.

*Participant nine (P9):* P9 is a fifty-one year old female, who has a tertiary level of education. She sustained a right hemispheric CVA on the 11<sup>th</sup> of March, 2012 that resulted in left hemiplegic condition. At the time of accident, she was working as a secondary school teacher. She returned to work in the month of August of the same year as a class teacher in the same school. She was married before the accident but currently separated. She has three children. (*See Appendix H*)

### **3.6.2.2 Participants that are stakeholders (P10-P19)**

For the purpose of this study, stakeholders will be used to refer to the informal caregivers of the respective stroke survivors and key informants (rehabilitation specialists). The group will be discussed under the following subgroups: Informal caregivers and key informants (rehabilitation specialist)

### **3.6.2.2.1 Informal caregivers: (P10-P17)**

There were eight participants under this subgroup. Four of the participants were spouses of the respective stroke survivors, two were siblings, one was the sister-in-law to a stroke survivor while one was the child/son of a stroke survivor.

### **3.6.2.2.2 Key Informants: (P18-P19)**

*Participant Eighteen (P18):* P18 is a male principal physiotherapist that works with the neurology unit of the Medical Rehabilitation department of O.A.U.T.H.C., Ilesha.

*Participant Nineteen (P19):* P19 is a male occupational therapist that works with the Medical Rehabilitation department of O.A.U.T.H.C., Ile-Ife.

## **3.7 Data collection technique**

Two methods of data collection were used by the researcher to access the perceptions and experiences of the participants in this study. In-depth interviews were conducted with the stroke survivors and key informants while focus group interviews were held with the caregivers. The greater depth that in-depth interview provides and greater breadth that focus group gives necessitated the use of both data gathering technique for this study (Crabtree, Yanoshik, Miller, & O'Connor, 1993).

### **3.7.1 In-depth interviews**

In-depth interview which is positioned in qualitative paradigm was described by Ulin, Robinson and Tolley (2005) as a data gathering technique that involves exchange between one respondent and an interviewer which encourages the respondent to perform a more active role in the discussion. This encourages free expression of the respondent's feelings (Holstein & Gubrium, 1999), which will invariably lead to a "shared goal of understanding" (Rubin & Rubin 1995, p. 11). In-depth interview was used to explore the stroke survivors' experiences of returning to work and the perception of key informants in regards to resumption of worker role by stroke survivors. The in-depth interviews were conducted with nine stroke survivors and two key informants. One in-depth interview was conducted with each stroke survivor and key informants (except for the pilot interview which had two in-depth interviews). The interviews were audio-taped. The interview duration for the above participants ranged from thirty-five minutes to one hour thirty minutes with an average of 50 minutes per interview.

### **3.7.2 Focus groups**

According to Kitzinger (1995, p. 299) focus groups are ‘a form of group interview that capitalizes on communication between research participants in order to generate data’. The author describes this method of data collection to be useful for the exploration of people’s experience because it provides insight not only to what the participants in the group think but also the reasons to why they think the way they think. Group interaction in focus groups produces data and insight that would be less accessible without the interaction found in the group. Since participants’ knowledge are not wholly encapsulated in thought through responses to questions, the author posits that the use of dynamics in focus group allows researcher to use the different forms of everyday communication skills such as jokes, arguments to gain access to information needed (ibid). The interaction in focus group was used to explore the caregivers’ own meaning and understanding of return to work as it affects the stroke survivors. Two focus group discussion of one hour, 30 minutes in duration were held with the eight caregivers consisting of four participants per group. The interviews from the focus group were captured with an audio-tape recorder.

The in-depth and focus group interviews were held with the participants until a level of data saturation was achieved. The data for this study was collected over a period of four months (October, 2012 to January 2013).

### **3.7.3 Description of interview process**

The interview process began with the recruitment of participants following ethical approval from the O.A.U.T.H.C. research and ethics committee and the University of the Western Cape (U.W.C.) higher degrees committee. Provisional participants identified from the statistical records of the department of medical rehabilitation were contacted via telephone to ensure they met criteria for inclusion and to also arrange an appointment for discussing possible participation and interest. An introductory meeting where the aim of the study was explained both verbally and in writing was held with each participant. The participants’ informed consent were sought and obtained, after which interview dates were arranged. All but three of the introductory meetings were held at the homes of participants, the other three were held at the medical rehabilitation department of O.A.U.T.H.C.

For the in-depth interviews conducted with stroke survivors, two were held at the occupational therapy department of O.A.U.T.H.C., three interviews were held at the participants' workplace, and four took place at the participant's home. The in-depth interviews conducted with the key informant and focus group with the caregivers took place at the occupational therapy department of O.A.U.T.H.C. An information sheet (*see appendix A*) that describes the objectives of the study and what was expected of the participants were given to them. The content of the information sheet was also explained to the participants verbally. A total of eleven in-depth interviews and two focus groups were conducted.

All the interviews were conducted by the researcher with the aid of an interview guide. The researcher was able to speak and read English and Yoruba. Even though the interview guide served as a basic check-list from which questions and prompts arose, participants were allowed to direct and focus on issues they found pertinent to the discussion. The questions and prompts were open ended such that it allowed for further probing if not answered satisfactorily. Example of the questions that were asked included: What is it like to live with a stroke? Tell me about those things you felt stroke survivors experienced while returning to work. (*See Appendix B for interview guide*). The data obtained from the interviews were recorded using an audio tape.

### **3.7.4 Pilot study**

Pilot study provides a prospective researcher with the opportunity of familiarizing oneself with the procedure of a project (van Teijlingen & Hundley, 2001). It also serves as a means of appraising the effectiveness of the procedure to be used in a study. Having this in mind, the researcher conducted a one hour pilot in-depth interview with a stroke survivor. The data from this preliminary interview was analysed to appraise whether the researcher's description of the participant's experiences relates to the research questions. The same process described above for the actual study was used in analysing the pilot in-depth interview. After discussing the results from the pilot interview with the researcher's supervisors, the researcher realised that the procedure generated rich data that addressed the research questions. Minor adjustments were however made to the open ended questions used as prompts to facilitate more data from the participants. The minor adjustment included adding phrases that will generate more data regarding the stroke survivor's return to work such as '*how did you go back to work?*'. The minimal adjustment assisted the researcher to streamline the responses from the participants to

the research objectives. The data from the pilot interview was later incorporated into the main study.

### **3.8 Data analysis**

According to Burns and Grove (1998) data analysis is a process of reducing and organizing data to generate findings for interpretation by the researcher. It is a continuous process that occurs in alternating sequence from the data collection phase to the end of the study (Corbin and Strauss, 2008). The data analysis process for this study involved the following: data management and thematic content analysis.

#### **3.8.1 Data management**

Data management has been described by Miles and Huberman (1994) as a systematic process involving storage and retrieval of every information in a research work from the raw data to final study report. The above authors further state it as involving five key general principles involving formatting, cross referral, indexing, abstracting and pagination. To ensure the proper management of data in this study, the raw data which were the audio recordings from the interviews were transcribed and translated verbatim. The researcher transcribed and translated 11 of the audio recordings while the later 2 were translated by a professional transcriber to give the researcher time for other research activities. The active participation of the researcher in the transcription and translation of the raw data gave him the opportunity to immerse himself in the data through-out the research process.

#### **3.8.2 Thematic content analysis**

The thematic content analysis of this study was guided by the work of Morse and Field (1996). The authors posit four cognitive processes through which thematic content analysis in qualitative research could be achieved, namely; comprehending, decontextualizing, theorising and contextualising. This is similar to Corbin and Strauss' description of analysis process for qualitative data (Corbin & Strauss, 2008). For this study, a manual process of analysis was done.

To keenly comprehend information in the data, verbatim transcription of audio recordings from the interviews were done immediately after each interview; this gave the researcher a sense of understanding of emerging information before proceeding with further interviewing. The researcher read and re-read the transcripts for all interviews conducted to have a sense/picture of

the whole that was being described by the participants. Transcript of each interviews were then individually analysed via line by line coding. This allowed the researcher to capture the underlying meaning of texts in the transcripts thereby enhancing the understanding of the phenomenon of returning to work after experiencing stroke by participants.

Coding was first done manually for each transcript after which the transcripts were later arranged into columns on Microsoft word on computer for analysis; the researcher realised that this enabled him to have an easier and quicker comparison of data. Similar descriptions and direct quotes that emerged via line by line analysis of the data were grouped together to form categories. Thereafter, patterns and relationships that connect the categories were analysed to form themes. The process was repeated for all 13 transcripts before cross analysis of all thirteen transcripts were conducted. This provided a clear picture of the commonalities amongst transcripts. The researcher compared the various categories obtained from the analysed data with relevant literature thereby enabling the establishment of links between theories. The results would be discussed in the subsequent chapters in the context of established theoretical knowledge.

### **3.9 Bracketing**

Starks and Trinidad (2007) indicate that throughout the phases of qualitative research, the researcher assumes the position of instrument for analysing data. With this in mind, it becomes imperative for the researcher to be aware of his internal preconceptions that could influence the research process. This preconception has been identified not only to influence the presentation of data but also to influence the gathering and interpretation of data (Tuffor & Newman, 2012).

In this study, it was assumed by the researcher that the severity of stroke amongst participants that were stroke survivors will negatively influence participation during the interviews and ultimately the findings of the study. Furthermore since stroke affect survivors in different ways, the resumption of worker role by survivors with less severe functional limitations will be easier than those with a more severe functional limitation.

To bracket in qualitative research implies casting aside preconceived opinion and biases about the phenomenon under investigation and taking data in context with constant in-depth reflection (Tuffor & Newman, 2012). To achieve bracketing in this study, the researcher had to first recognize any preconception about the resumption of worker role by stroke survivors and then

suspend the biases so as to prevent its interference in the emancipation of pure portrayal of the phenomenon. The researcher also constantly discussed with his supervisor and colleagues at the Postgraduate Enrolment and Throughput programme research class to ensure that his bias did not affect the outcome of the analysis. A reflective journal was kept by the researcher as a means of entering his thoughts and experiences. After each interview, the researcher's views were also audiotaped as a method of self-debriefing. All these efforts helped the researcher in casting aside his subjective experiences and thus facilitated credibility of the research.

The subsequent section discusses how trustworthiness was achieved while carrying out the study.

### **3.10 Trustworthiness**

To achieve trustworthiness in any qualitative research, Krefting (1991) recommends 4 basic criteria based on Guba's model. These criteria which are truth value, applicability, consistency and neutrality were utilized to achieve rigor in this study.

#### **3.10.1 Truth value:**

Truth value refers to how credible the findings of a study are; it addresses the truthfulness of the reports given as results emanating from a research project (Krefting, 1991). To ensure the truthfulness of data that were obtained from this study, the researcher used an audiotape to record the interviews held with participants and transcribed the audio recordings verbatim. This allowed accurate representation of the views of the study participants. To further achieve credibility of the study, the following strategies that were posited by Krefting (1991) were used:

##### **3.10.1.1 Member checking:**

According to Lincoln and Guba (1985), member checking involves obtaining informants feedback regarding the interpretation and conclusion drawn from a study group. The transcripts from each interview were given to each participant before analysis and their views were taken into consideration. Twelve of the participants responded within the stipulated period. The stipulation arose because each transcript was to be analysed before proceeding to the next. Furthermore, the findings of the study were verified with the research participants for validation, necessary amendments were made to the findings. This ensured that the findings of the study were actual reflection of the participants' experiences and perceptions.



### **3.10.1.2 Triangulation:**

Creswell and Miller (2000) describe triangulation as a means used by researchers in establishing validity through convergence realised in multiple information sources. This was achieved in this study by the used of multiple data sources which include stroke survivors, caregivers and rehabilitation specialists and two methods of data gathering techniques which include observations and interviews.

### **3.10.1.3 Interview techniques:**

The researcher employed two interview techniques which include in-depth and focus group interviews. The two interview techniques enabled the researcher to explore the phenomenon of returning to work after stroke both broadly and at the same time in depth thereby adding rigor to the research project. The researcher also ensured that the findings of the study are reflective of the study participants by bracketing personal biases that may influence the research process.

### **3.10.1.4 Researcher's reflexivity:**

Self-disclosure of previous assumptions and biases by the researcher helped in achieving credibility in this study. Creswell and Miller (2000) posit that acknowledging one's belief in the early stage of a research process ensures that the readers of a research project understand the stance of the researcher. He further suggested the suspension of researcher's biases as the researcher proceeds through the study. In this study, the researcher acknowledged that his previous experience as an occupational therapist in the rehabilitation of stroke could influence the results of the study. He therefore suspended all his preconceptions and captured his experiences and perception in a reflexive journal. This enabled him to reflect on how his prejudices could have influenced the findings of the study.

### **3.10.1.5 Peer debriefing:**

The researcher had constant discussions with supervisors and he also discussed the findings of the study with colleagues that are expert in the field of enquiry. Also, the researcher presented the findings of the study at the 2nd Scientific Conference of the Faculty of Community and Health Sciences' research day at the U.W.C. Through these constructive criticisms of the findings, credibility was enhanced.

### **3.10.2 Applicability:**

Applicability refers to how transferable the finding of a study is to similar settings. Even though qualitative inquiry have been discussed in various literature, the findings of a qualitative study is not intended to be generalized to other populations (Soeker; 2010), it is however expected that the findings of a study have similar meaning to other studies conducted in similar context. This was termed as fittingness of a study by Guba (1981). To achieve fittingness of this study, sufficient description of the study population, the research method, context, the participants and the participants' lived experience were provided and discussed to allow for comparison and its applicability in similar context.

### **3.10.3 Consistency:**

Consistency refers to the dependability of the findings of the study if it was conducted with the same participant or within a similar context (Krefting, 1991). The researcher achieved this by giving a detailed description of the research method and peer examination. He described the different phases of enquiry used by him in regards to exploratory and descriptive research and this further ensured the consistency of this study. The study proposal was approved by the Higher Degree and Ethics Committee of the University of Western Cape. The researcher also presented the findings of the study to his supervisors, the department of Occupational therapy and at the 2nd Scientific Conference of the Faculty of Community and Health Sciences' research day at the U.W.C.

### **3.10.4 Confirmability:**

According to Guba (1981), confirmability refers to the extent in which findings from a study are from informants and research conditions rather than from other biases and perspectives. Neutrality was the criterion used to achieve confirmability of this study. This was achieved through member checking, reflexivity on the part of the researcher and the use of an audit trail.

## **3.11 Ethical statement**

The World Medical Association Helsinki Declaration (World Medical Association, 2013) which guides the conduct of medical research involving human participants was adhered to while conducting this study. Ethical approval was sought from the University of Western Cape Ethics Committee and the Obafemi Awolowo University Ethics and Research Committee before the

commencement of the study. The study was conducted in the best interest of the participants; the participants were not harmed as the study did not involve any invasive procedure. The participants' right to dignity, confidentiality and privacy were respected as their identities were not disclosed during the documentation and reporting of the findings of the study. The aims, rationale and content of the study was fully disclosed and explained to the participants verbally and in written form. Participation was voluntary and the participants were informed they could withdraw their participation in the study at any stage during the research process. There was no consequence for withdrawing from the research process. The benefits to the participants and the knowledge gained outweighed the risk of potential harm (National Health and Research Ethics Committee, 2007). The researcher had a referral source i.e. a psychiatrist and a psychologist available during the focus groups and in-depth interviews even though none of the participants required any emotional support.

### **3.12 Limitations of the study**

This section of the chapter provides information regarding the limitations of the study.

Only two female stroke survivors were interviewed in depth in this study, this was seen as a limitation as more males participated in this study. Even though the researcher made a concerted effort to include both males and female stroke survivors in the in-depth interviews, it was however difficult to get female survivors who met the inclusion criteria of the study. Exploring the phenomenon of return to work of the stroke survivor specifically from the female's perspective is suggested as the two female participants that were stroke survivors in this study brought a different view to the study.

Developing trust among the research participants that were caregivers and stroke survivors was sometimes hard due to the background of the researcher as an allied health professional. The frustration that the participants had experienced with the healthcare system of the country caused them not to be eager to disclose information.

Qualitative research always has the limitation of generalizing its findings to a larger population. However, research that is qualitative in nature provides profound understanding of a phenomenon. This is applicable to this study as the findings are not to be generalized to a larger population of stroke survivors due to its small sample size but to provide a profound understanding of resumption of worker role by stroke survivors.

Although emphasis was made regarding the rehabilitation intervention received by the stroke survivor such as physiotherapy and occupational therapy, there was no differentiation or categorization made regarding the intensity of such treatment intervention.



## CHAPTER FOUR

### FINDINGS

#### 4. Presentation of findings

The findings from the study are discussed in the themes, categories and sub categories relating to the participant's experience and perception of the stroke survivor's resumption of his or her worker role. Five main themes emerged from the categories. Theme one and two relates to barriers hindering the resumption of the worker role of the stroke survivors while theme three relates to the facilitators that assist survivors in resuming their worker role. Theme four presents the strategies utilized by the stroke survivors in adapting to their worker role while theme five discusses the participants' experience and perception of adaptation to the rehabilitation process that will enable the quick return to work of stroke survivors. The themes are presented in figure 4.1 as follows:

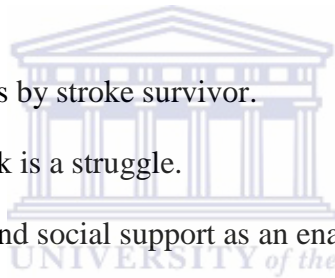
Theme One: Experience of loss by stroke survivor.

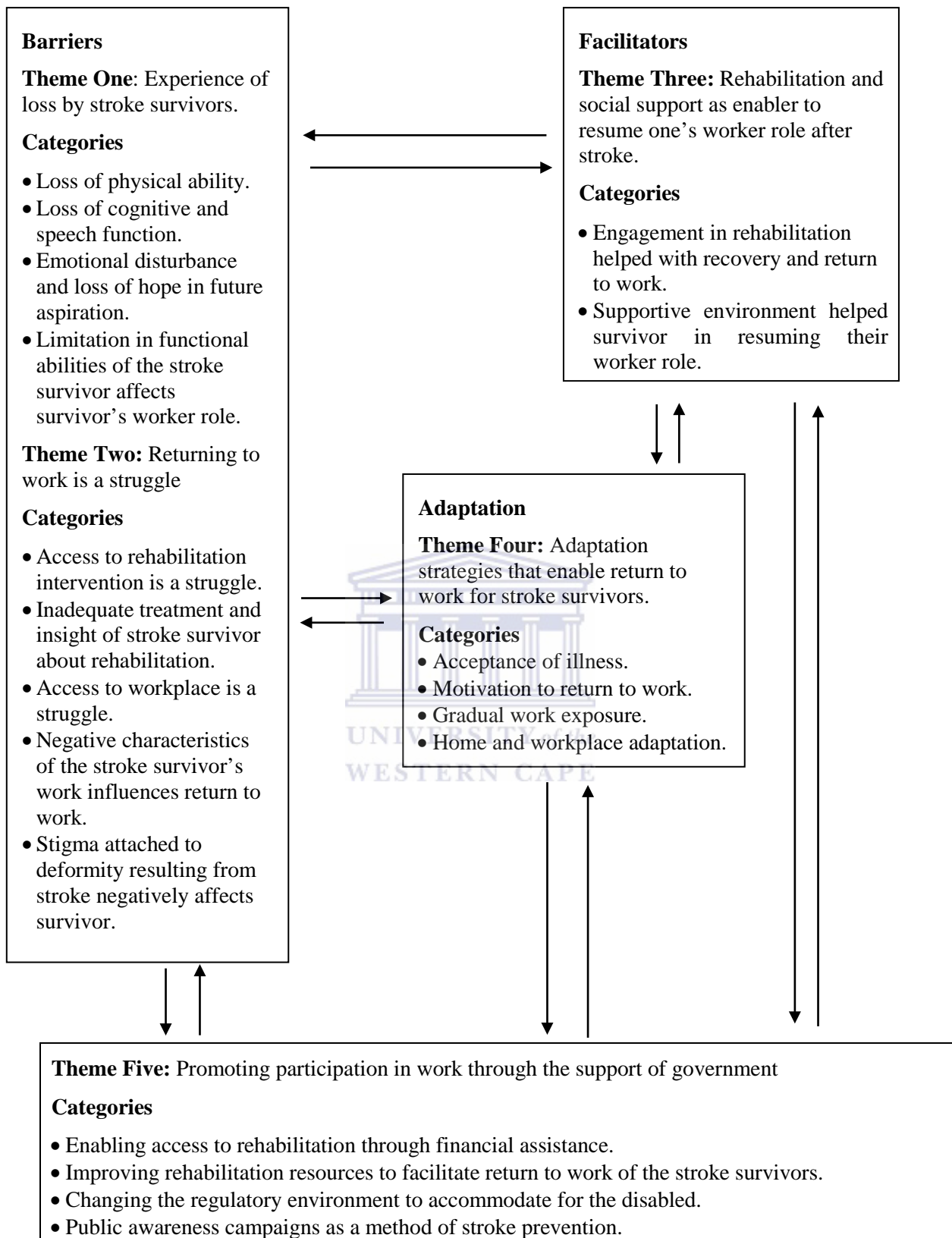
Theme Two: Returning to work is a struggle.

Theme Three: Rehabilitation and social support as an enabler to resume one's worker role.

Theme Four: Adaptation strategies that enable the return to work for stroke survivors.

Theme Five: Promoting participation in work through the support of government.





**Figure 4.1: Diagrammatic representation of themes and categories**

The themes and related categories are presented in subsequent tables 4.1, 4.2, 4.3, .4.4 and 4.5.

**Table 4.1:** Theme one and related categories

Theme one	Categories
Experience of loss by stroke survivors	<ul style="list-style-type: none"><li>• Loss of physical ability.</li><li>• Loss of cognitive and speech function.</li><li>• Emotional disturbance and loss of hope in future aspiration.</li><li>• Limitation in the functional abilities of the stroke survivor affects the survivor’s worker role.</li></ul>

**4.1 Theme one: experience of loss by stroke survivor.**

The above theme represents the participants’ experience and perceptions of loss of the stroke survivor’s former abilities and self. The participants construed this experience and perception in terms of loss of survivor’s physical, cognitive, speech and functional abilities. The loss was further interpreted by the participants in terms of emotional disturbance (instability) of survivor and loss of future aspiration. One participant captured the description by saying:

*I couldn’t walk to places I could go to before, to get to the office; you know to do things (P1: stroke survivor).*

The above quote reveals that the participants could no longer access places and participate in tasks they engaged in prior to the stroke. They pointed out that the residual disabilities resulting from the stroke made it difficult for survivors to resume their premorbid role. This experience of loss, emotionally burdens the survivor, resulting in loss of confidence in their ability. The following categories are used to discuss the foregoing theme: loss of physical ability; loss of cognitive and speech function; emotional disturbance and loss of hope in future aspirations as well as limitation in functional abilities of stroke survivor affects survivor’s worker role

#### 4.1.1 Loss of physical ability

The above category conveys the participants' descriptions of the stroke survivor's loss of physical ability and function. The loss of physical ability experienced by stroke survivors presents itself in the form of physical limitation resulting from a neuronal lesion of the stroke event. This was described by participants in terms of loss of mobility and motor function which eventually affected survivors' engagement in daily activities and vocational skills. The physical limitation was further described by participants as enhancing fear of avoidance among the survivors. One participant stated:

*It is difficult what you have been using two hands to do before, what you have been using two hands for before and you can no longer use those two hands, you are left with a normally functioning hand (P2: stroke survivor).*

The above quote indicates how the stroke event affected the use of both upper limbs of the participants in carrying out tasks which he does before stroke due to muscle weakness. He stated that this made him struggle at work.

Another participant indicated that he was no longer as fit as he used to be and that he lost voluntary control of the use of his hand.

*I'm not as fit as I was before, I can't walk, my hand is not as stable; if you notice now, the co-ordination is not there now really. You know what I mean by co-ordinations, no.... it seems as if there's a force here controlling my hand (P6: stroke survivor).*

The sequelae resulting from stroke in the form of serious impairment was described by participants as affecting the performance capacity of survivor thereby causing physical inability.

*...because their motor functions are affected, they end up becoming very weak, they are hemiparetic, there is reduced range of motion, and there is sensation issue sometimes... these people have difficulties while performing tasks and activities and it actually becomes a serious impairment to them when they are affected (P19: key informant).*

Another participant indicated that the loss of physical ability by stroke survivors makes tasks that are easily carried out, difficult to do for them.

*...the fact that they cannot do what they used to do before is a big challenge to them, difficulty in getting those things done as they used to do... take for example, I want to lift something above my head as a stroke survivor and it's difficult to do, what I have been doing easily before now take a lot of effort to do it (P18: key informant).*



The category points out that the consequences of the stroke event affected survivor's ability to perform functional tasks. The category is further described with subcategories relating to the loss of mobility function of stroke survivors affected access in the workplace; the loss of motor function to engage in daily occupations and loss of motor function affect vocational ability.

- **Loss of mobility function affected access in workplace**

This subcategory expresses the participants' description of experience and perceptions of loss of mobility function by stroke survivors. They felt that the consequences of the stroke event caused inability to walk which most of the survivors experienced immediately after the event, and some even several months after the injury. The participants further indicated that this loss affected survivor's ability to access their workplace. One of the participants described the experience by saying:

*I couldn't walk to places I could go to before, to get to the office, you know to do things (P1: stroke survivor).*

The above quote indicated that the participant had mobility problems which limited his ability to access places he was able to go to prior to his stroke especially his workplace and to perform tasks.

Another participant indicated that his inability to walk was the only thing that prevented him from resuming work. He said:

*To walk is the only thing that hindered me from going to work, there wasn't strength in this leg, this leg pains me a lot... I couldn't climb from upstairs to downstairs, I couldn't climb, you know I work at the fifth floor, I cannot climb (P3: stroke survivor).*

One participant also revealed that his inability to walk properly affected his gait pattern which caused him to stay at home in order to recover. He said:

*I realised that I couldn't walk properly again, my gait pattern had been affected that I was no longer walking properly... I had to stay back at home to recover it (P7: stroke survivor).*

A key informant explained that due to the physical limitations resulting from the stroke, survivors find it difficult to access their communities and workplaces. He said:

*...because their motor functions are affected... even moving around is a challenge to them, moving within the neighbourhood becomes a problem not to talk of going out for leisure activities and work... (P19: key informant).*

- **Loss of motor function to engage in daily occupations**

This subcategory expresses the participants' description of experience and perceptions of loss of motor function after stroke. The loss of motor function was described as affecting engagement in daily occupation. A participant described his experience stating:

*I couldn't wash cloth, because this hand, all my right hand and leg were down, if I'm to wash with just one hand it will not be clean, up till now I can't wash (P3: stroke survivor).*

The above quote indicates that the participant experienced weakness of his right hand and leg which prevented him from being able to do his laundry.

The loss of motor ability to engage in daily occupation by stroke survivors was captured by one of the caregivers with the following quote:

*...I will be the one to wash all her clothes, cook her food and I will bring her to the hospital whenever she is coming. I'm the one that helps her do whatever she wants to do, I help her to get her drugs, most of the times I will be the one to stay with her because she doesn't go out, when she wants to use the toilet I'll be the one to hold her hand to do it (P13: caregiver).*

The above participant indicated that she had to assist the stroke survivor in almost everything the survivor wants to do such as laundry, cooking, shopping, transportation and toilet use. She further revealed that the loss of motor function confined the survivor indoor.

Another participant also described the loss of motor function as affecting the stroke survivor's ability to complete necessary activities of daily living and that this poses a challenge to the resumption of their worker role. He said:

*...because their motor functions are affected, they end up becoming very weak, they are hemiparetic ...they can't complete activities they use to complete again, their necessary everyday life, everyday activities, they are not been able to carry out these activities again, so these are challenges to them (P19: key informant).*

Participants further disclosed that the loss of motor function enhances fear of avoidance which makes them to stay on a spot. One participant indicated that stroke survivors avoid engaging in activities which require them to manoeuvre in the environment due to fear of injuring themselves. He said:

*...the challenge of recurrent fall of trying to manoeuvre in the house or around is there for them and because of that, they just want to remain on one spot because of the fear that they might fall down, because I might stagger in the process, and all that (P18: key informant).*

The above subcategory points out that the stroke sequelae affected survivor's engagement in daily occupation. This loss of motor function makes them to depend on others for basic self-care tasks such as grooming, bathing, shopping, washing of clothes, feeding and toilet use. The subcategory reveals further that the loss of motor function enhances fear of avoidance amongst survivors.

- **Loss of motor function affected vocational ability**

The participants in this study revealed that the physical sequelae of the stroke affected survivors' vocational ability. Most of the stroke survivors in this study explained that their inability to use some parts of their body due to loss of motor function of those parts after stroke had a detrimental effect on their job performance. The participants further indicated that they were easily fatigued while resuming their worker role. One of the participants described his experience stating:

*I can no longer operate because of my hemiplegia... I cannot write, ehm I couldn't write; to document case notes becomes a great challenge (P2: stroke survivor).*

The above participant indicated that the hemiplegia resulting from his stroke event made it impossible for him to practice as a surgeon. He further explained that the loss of motor function affected his ability to write notes in clients' case files.

The loss of motor function was also indicated by another participant as affecting survivor's ability to write lesson note which is a duty of a teacher. The participant described that even though the survivor tried to compensate with the unaffected hand, he was still unable to write legibly. She said:

*...because before if you see his handwriting was very good but now he cannot write very well with his left hand and that cannot be compared to using his right hand before to write and as a teacher that is a huge problem (P15: caregiver).*

While trying to resume their worker role, the participants indicated they became fatigued with little exertion. A participant described this by stating:

*There are some times that with little exertion I will just get fatigued and won't have the strength to do things I normally do... I just can't do strenuous work because I'm easily fatigued (P7: stroke survivor).*

The above quote indicated that the participant get fatigued while performing activities he could do before. This made him to conclude that he would not be able to engage in any strenuous activity.

Another participant indicated that the stroke event made her tired easily; she said:

*This stroke makes one tired easily, yes it makes me tired ...this type of disease affects the chest, the heart, it affects the heart and makes one fatigued easily (P8: stroke survivor).*

The above subcategory indicates that the stroke sequelae affected survivor's re-engagement in work. This loss of motor function results in easy fatigability of the stroke survivors.

#### **4.1.2 Loss of cognitive and vocal ability**

This category represents the cognitive and speech functions that participants indicated stroke survivors lost after the stroke event. The category describes the participants' experience and perception of loss of cognitive function as it affects stroke survivors. It further captures participants' loss of speech function resulting from the stroke. One of the participants revealed that the stroke event compromised his ability to learn which made assimilation and memorization of information difficult. He described this experience by stating:

*Ehm, it affected my memory because I could not pick fast the way I use to do, by that time I could not memorize things again because if I made attempts to memorize things I'll just forget it (P4: stroke survivor).*

Another participant indicated that he had difficulty concentrating and focusing on tasks after the stroke; he said:

*This thing also affected my brain... because I realised that whenever I want to pick something for example if I want to pick this paper, I will end up picking another thing, I would have forgotten that I want to pick a paper, my brain would go to another thing entirely that has nothing to do with what I was supposed to do (P7: stroke survivor).*

A caregiver described that her husband was unable to remember information after the stroke event; she further indicated that recalling the names of people was difficult for the stroke survivor. She said:

*...you know when it happens memory will go... so he can't remember so many things; at times when somebody comes my husband can't remember their names (P15: caregiver).*

The category points out that the consequences of the stroke event affects survivor's cognitive ability. This category is further described by subcategories relating to memory loss affected vocational ability and the loss of speech function.

- **Memory loss affected vocational ability**

The participants in this study revealed that the cognitive consequences of the stroke affected survivors' vocational ability. Most of the participants in this study explained that the loss of memory by survivor negatively impacted on the survivor's worker role. A participant described that his memory loss made him to stay back from work when he realised he could not recall the spelling of certain words. He further indicated that he realised that with his memory loss, typing minutes of meetings given to him by his boss would be difficult. He said:

*I do forget things, so I don't want that thing to become worse, so I decided that let me recover my memory first, just like if I want to write havoc, I will forget 'H' and 'A' and write 'voc' instead, so with that one I couldn't go back to work immediately, I knew it would affect me at work with the typing job (P3: stroke survivor).*

Memory loss was attributed to be a major problem in relating with clients at work by participants. One participant indicated that the loss of his memory made it a huge problem relating to his farmers as an agricultural extension officer. He stated the following:

*Though you would have enjoyed it better than this but I still have some problems like I've initially told you because the thing still affects my brain, sometimes I will forget what to say and I'm not as fluent and it was never like that before, so you know as an extension officer this is a huge problem, those are the barriers I normally experience at work (P6: stroke survivor).*

Another participant indicated that after the stroke event, her husband forgot everything concerning computer use which was his main tool at work. She described this by stating:

*...but what I know is that he cannot use that computer again because he has forgotten all that he has been taught concerning the computer because he doesn't know anything about the computer again because of loss of memory (P15: caregiver).*

The loss of cognitive function experienced by stroke survivors was described by participants as casting fear and doubt on their capability. One participant described this stating:

*I also forget things easily, If I ask any of my children to bring something for me I would have forgotten but later I will then remember, this scares me a lot then because as a teacher how do I go about teaching pupils when I find it difficult remembering things (P8: stroke survivor).*

The above subcategory indicates that the memory loss experienced by survivor after the stroke event affected the survivor's re-engagement in work. This loss of memory results in fear among survivors about their capability while resuming their worker role.

- **Loss of speech function**

Under this subcategory, participants described communication problems resulting from the stroke due to loss of speech function. One participant revealed that while talking, he realized that he was incoherent in his speech and that the people he was addressing could not understand what he was saying. He further indicated that he was often laughed at due to this; he explained this description by stating:

*...and again my language too was not like this at all, I will talk and the people I'm addressing will be laughing at me, they do not know if it's Yoruba I'm speaking or maybe I should just say I'm talking (P3: stroke survivor).*

Another participant indicated that his speech was no longer fluent and that he had to break or pause while talking. He said:

*Sometimes my speech, I find it difficult to speak without pausing and breaking, my speech was no longer fluent, but I'm getting over it (P6: stroke survivor).*

Articulating words normally was also indicated as a difficulty experienced by participants. One participant captured this by stating:

*Initially my talking (speech) was not ehm proper but as time goes on I got ehm I got over that, but even now I may get to a point that articulating some words, I may find it difficult which was not like that before (P2: stroke survivor).*

The participants further revealed that the loss of speech function affected the stroke survivors' ability to re-engage in work. This was captured by a participant with the following quote.

*Hmnn that sickness was seriously worrying me then; you know with that type of sickness I couldn't talk, when I can't talk, how will I teach? With this I was unable to teach. I could not just work because of this ehm thing (P9: stroke survivor).*

Communication problems due to loss of speech function were experienced by stroke survivors; these affected their ability to re-engage in work especially for those whose work involved constant interaction with others.

### 4.1.3 Emotional disturbance and loss of future aspirations

This category describes the emotional imbalance indicated by participants as resulting from the stroke event. The participants revealed experiences and perceptions of loss of promotional opportunities and future aspirations as well as loss of confidence in capability. One participant described a feeling of devastation and chaos in the aftermath of the stroke. He said:

*When I had a stroke, I felt devastated; it was like my life was in shambles... I was thinking that everything was gone (P1: stroke survivor).*

Another participant revealed that he was tired of life and emotionally disturbed after being discharged from the hospital. He explained this by stating:

*I knew how I was when I was discharged in the hospital, I was emotional disturbed, my spirit was down. I was tired of life (P6: stroke survivor).*

Feelings of despair by survivors were also revealed by most participants. A participant indicated this by stating:

*He even sometimes wonder is this how we will continue living our lives without change someday (P16: caregiver).*

The above quote by a caregiver describes the feeling of hopelessness expressed by her husband following the stroke event.

Participants also reflected on what their lives could have been without stroke. This self-reflection brought a sense and feeling of loss. One participant explained this by stating:

*There is no doubt that occasionally I will not be thinking of what I could have done without stroke and what I could have been and I was unable to be... when you think ehm what achievement you could have made without stroke, it may want to weigh you down psychologically (P2: stroke survivor).*

This category is further discussed under the following subcategories: only the stroke survivor knows what it feels like to have a stroke; loss of promotional opportunities and future aspirations; and the loss of confidence in capability by self, caregivers and employer.

- **Only the stroke survivor knows what it feels like to have a stroke**

This subcategory describes participants' perception of others about stroke. The participants perceived that people will not really understand what they are passing through. They indicated (were of the opinion) that the effect of stroke can only be felt by survivors; that people can only

form an opinion of what survivors are going through by what the survivors have told them. One participant described this by stating:

*It is just like as you are going now, you hit your leg on a big stone, you don't know, maybe you are going there is no light, you know it will be paining you, people can only be asking what happened? What happened? You are the one that will be feeling the pain, that is what stroke does to a person (P8: stroke survivor).*

Another participant revealed that the stroke had been a setback for him; he further described that the loss resulting from his stroke could only be adequately quantified by him alone in terms of the loss he experienced. He said:

*...because this thing is a setback because before you can't meet me at home like this, I must have gone out, it's only me that really know what this has cost me (P6: stroke survivor).*

Stroke sequelae were reported by participants as seriously affecting survivors' lives. Most participants however indicated that the effects from a stroke cannot be sufficiently described and understood by others who had never experienced a stroke. A participant captured this by stating:

*It has affected my life badly, you won't really understand this, you know I can only tell you, and what you don't experience you can't know its worth; in short I will say it has affected me in not being able to do things the way I use to (P4: stroke survivor).*

- **Loss of promotional opportunities and future aspirations**

In this subcategory, participants indicated that the physical and cognitive consequences of the stroke limited the survivors' promotional opportunities after resuming their worker role. Participants further revealed a loss of future aspirations as a result of residual deficits from the stroke event. One participant described that he was promoted to the position of a principal administrator but he could not assume the position due to the residual physical deficits of the stroke. He described this by stating:

*I know what I am losing by my staying in that place after all, I was supposed to become a principal there but I couldn't report where I was supposed to go (P4: stroke survivor).*

Another participant also revealed that her husband declined a promotional opportunity at work when he realized he would not be able to meet up with the responsibilities of the position due to the stroke sequelae. She said:



*Also he was supposed to have been promoted from his vice-principal position but he couldn't take it because he knows that he won't be in school regularly (P12: caregiver).*

One participant explained that her husband had to stop his plan of returning to school for further studies due to the stroke. She said:

*Before the stroke incidence he used to say it then that he is still going back to school to become a medical doctor... it still pains him that he couldn't go further in his plans of becoming a doctor (P16: caregiver).*

Another participant explained that he had to abandon his postgraduate study after self-appraisal of his capabilities. He said:

*I was about starting my PhD programme at U.I, it was even that month that I was supposed to resume that I had the stroke. I first decided to defer the admission and resume when I'm better you know but after considering the rigors of travelling from Ife to Ibadan and you know I also have to study, write and all that; I realized that it's better I stay alive than kill myself because of a PhD (P1: stroke survivor).*

The above subcategory indicates that the opportunities for growth and promotion at the workplace were limited due to reduce work abilities and potential of participants. It also reveals that the aspirations of survivors after the stroke incident were limited as a result of a reduction in the physical and cognitive abilities of survivors.

- **Loss of confidence in one's self**

Under this subcategory, participants revealed that the inability of stroke survivors to perform previous tasks and roles when measured against what was regarded as normal made the participant's caregiver and even employers lose confidence in the participant's ability. The loss of confidence in capability by spouse was described by one participant as a barrier for him to resume his worker role even after he had been certified fit to return to work. He explained this by stating:

*For some time I had wanted to go back to work unfortunately my wife would not want me to come back; actually she didn't feel I was okay, she didn't feel I was ehm okay to come to work even though I told her that you know I was asked to come (P1: stroke survivor).*

Another participant indicated that the inability of stroke survivors to complete everyday task makes them lose confidence in themselves. He said:

*...there is this shift in normalcy, there is always this feeling by them that they are not normal again...when they can't complete activities they use to complete again,*

*their necessary everyday life, everyday activities, their inability to carry out these activities again makes them doubt themselves (P19: key informant).*

Participants further revealed that due to the impairments experienced by stroke survivors, they lose confidence in coping in the workplace. A key informant said:

*They themselves feel, some feel, they are not yet capable of going back to what they've been doing before, they think, 'I won't be able to cope with this disability with my work' ...even the employer too might think, oh, this man cannot cope again and some will think on how to retrench them (P18: key informant).*

The above quote also revealed the doubt and reservation expressed by employers in the work abilities and potentials of the stroke survivor. Employers were described by participants as losing faith and confidence in the work abilities of survivors after the stroke event. One participant indicated that her husband's colleagues and boss doubted his capability to efficiently teach his students after the stroke incident. She said:

*It got to a stage when he resumed, he said some people started talking about him,... even his principal had to make his reservation known, you won't believe it that his boss asked him how he would cope with teaching. It really affected him in school but I just thank God even till today that he was able to get over that (P16: caregiver).*

After the stroke incident, the participants indicated that survivors were faced with several hurdles when resuming their premorbid roles and tasks. The loss of confidence in the survivor's ability due to impairments limited them from resuming their worker role.

#### **4.1.4 Limitation in functional abilities affected survivors' worker role**

In this category, participants' experiences and perceptions relating to stroke survivor's limitation in functional abilities are described. The loss of survivors' former functional abilities was indicated by participants as affecting survivors' worker role. Also, the extent of damage caused by the stroke was revealed by participants as a major influence on survivors' work ability and potential. One participant explained that the reduced functional ability of one of his co-workers who is a stroke survivor caused him to lose his job when his employer became dissatisfied with his job performance. He said:

*Ehm I gave an example of somebody who was a staff of here who lost his job after surviving stroke you know, he told me that he lost it after sometime when he couldn't work very well (P1: stroke survivor).*

Another participant indicated that he was unable to resume work due to his bad health. He said:

*If you're healthy, you'll be able to go back to work and discharge your duties in the best way your boss wants, to your best ability but if your health is bad, that is the end when my health was bad I can't go to work, it is the healthy that performs one duty or the other in the office (P6: stroke survivor).*

The residual functional impairments resulting from the stroke were described by participants as negatively affecting survivors' worker role. One participant explained this by stating:

*...of course of course, residual challenges, residual physical disabilities; I mean you cannot you cannot underrate that, that is what really hindered me, that's what really hindered me, residual functional disabilities, problems with speeches, problem with writing ehm yes you cannot wish that away (P2: stroke survivor).*

Another participant indicated that her husband's reduced functional ability after the stroke made it difficult for him to perform previous work related tasks. As a result, his boss recommended that he take a leave away from work. She said:

*...because his action was known before he fell sick that no matter how difficult science problem poses he will solve it but now it is not so and as a result he was told to take a rest at home. (P16: caregiver).*

This category reveals that stroke survivors struggled to function in their premorbid capacity. The extent of struggle was further identified by participants to be determined by the damage and severity caused by the stroke.

- **Severity of the stroke**

Under this subcategory, participants indicated that the extent of damage to survivor's health as a result of the stroke incident influences the resumption of their worker role. One participant counted himself lucky to have recovered from his stroke after few weeks, attributing his recovery to the fact that he experienced a minor stroke. He said:

*What happened to me was even considered as a minor stroke, I was told if it were to be a major stroke I would have known that it is really a decapacitating disease. The major stroke is very decapacitating that one will be bedridden for long, mine was just for a few weeks and I was lucky to have recovered quickly (P7: stroke survivor)*

Another participant described that the severity of her brother's stroke caused him not to be able to do anything for himself. With this, the participant said, the survivor could not even think of resuming his worker role. She said:

*His stroke was powerful because he couldn't do anything by himself because the strength was not there again, this hindered him from thinking of going to work then (P10: caregiver).*

Most participants attributed the disabling effect of the stroke as an influence on the survivor's resumption of their worker role. A participant described this by stating:

*But when I first got to my place of work I couldn't teach, hmnn that sickness was still worrying me then; you know with that type of sickness I couldn't talk too much so I wasn't teaching (P9: stroke survivor).*

In summary the theme, experience of loss by stroke survivors was discussed. The participants revealed that they experienced the loss of their physical, cognitive and speech functions. Emotional disturbances arise as a result of these losses which cast a feeling of despair on the survivors. Finally, the limitation in functional abilities of survivor was described as negatively affecting the stroke survivors' worker role.

**Table 4.2:** Theme two and its related categories

Theme Two	Categories
Returning to work is a struggle	<ul style="list-style-type: none"> <li>• Access to rehabilitation intervention is a struggle.</li> <li>• Inadequate treatment and insight of stroke survivor about rehabilitation.</li> <li>• Access to the workplace is a struggle.</li> <li>• Negative characteristics of the stroke survivor's work influences return to work.</li> <li>• Stigma attached to deformity resulting from the stroke negatively affects the survivor.</li> </ul>

#### 4.2 Theme: returning to work is a struggle

The above theme represents the barriers identified by participants as restricting the return to work process of stroke survivors. Participants described returning to work as a contest which entails a struggle between the survivor, survivor's job characteristics, rehabilitation intervention and stigma from the society. The participants described that the survivor's experience and

perception of inaccessibility of the workplace and rehabilitation negatively affected their ability to resume their worker role. Participants also indicated that the misconceptions about the stroke resulting from stigma prevented most stroke survivors from resuming their worker role. One participant captured this by stating:

*I realised sometimes that the problem is not just him because he put his best into getting better, you know getting good treatment is a challenge money-wise, getting to work is also something else; we strive every day to get over these but definitely not everybody will be able to (P11: caregiver).*

The above quote by a caregiver reveals that accessing treatment and getting to the workplace was a huge challenge for her brother. She further indicated that not all stroke survivors will be able to overcome these challenges.

The following categories are used to discuss the foregoing theme: access to rehabilitation intervention is a struggle; inadequacy in treatment and insight of stroke survivor about rehabilitation; access to workplace is a struggle; negative characteristics of the stroke survivor's work influences return to work; and stigma attached to deformity resulting from stroke negatively affects the survivor.

#### **4.2.1 Access to rehabilitation intervention is a struggle**

Under this category, participants described that the inability of the survivor to access rehabilitation intervention poses a threat to the resumption of the survivor's worker role. Most participants were of the opinion that the cost of treatment and the location of the rehabilitation centres made it difficult for survivors to access rehabilitation. One participant captured this description by stating:

*Accessing rehabilitation because of finance and distance is a major problem preventing people from returning to work (P4: stroke survivor).*

This category is explained further with subcategories relating to cost of treatment and financial constraint by stroke survivors limit access to rehabilitation and the distance to rehabilitation facilities from survivors' homes limit access to rehabilitation intervention.

- **Cost of treatment and financial constraint by stroke survivors limit access to rehabilitation**

This subcategory conveys the participants' descriptions of their inability to access rehabilitation intervention. Most of the participants in this study were of the opinion that the high cost of treatment hindered the stroke survivors from accessing rehabilitation intervention. One participant indicated that through his interaction with the caregiver of a survivor, he realized the survivor could not afford the cost of treatment which caused him not to attend rehabilitation, and this consequently affected the survivor's recovery. He said:

*I realized from my discussion with her that her dad was not attending rehabilitation the way he should due to financial constraint; it was not enough because of the money they asked them to pay, that #2500 for 5 treatment session (P7: stroke survivor).*

Another participant indicated that she depended solely on her salary to finance her treatment and that she had to miss out on rehabilitation for three months due to her inability to foot her treatment bills.

*...whenever we are not paid early, finance becomes a hindrance because when I want to go to the hospital now there is no money on me. It has been three months I have come to the hospital last, there is no money, whenever I collect my salary, it is the children I spend it on (P8: stroke survivor).*

The chronic nature of stroke was described by participants as financially draining to survivors. A participant indicated that the unavailability of social welfare grants makes it difficult for survivors to afford to pay for rehabilitation. He said:

*We find out that stroke is a condition that is managed on a long term basis, people can be under treatment for a year and when there is no social welfare, so that these people, even paying for treatment bills, is a problem... (P19: key informant).*

Another participant revealed that managing stroke is expensive. He said:

*...that is what I'm saying, if you're not financially buoyant, anybody who is visited by stroke will go in for it o, its money intensive to manage (P6: stroke survivor).*

- **The distance to rehabilitation facilities from survivors' homes limit access to rehabilitation intervention**

Most of the participants in this study were of the opinion that the distance of rehabilitation centres to residential area hindered stroke survivors from accessing rehabilitation intervention.

They indicated that transportation fares to the rehabilitation centres were unaffordable and also that poor transportation routes from their homes to rehabilitation centre poses a threat to accessing treatment. A participant explained that survivors had difficulty attending treatment sessions due to their inability to get a means of transport from their homes to the rehabilitation centre. He said:

*Some of the people that we receive treatment together will be asked why didn't you come for the last appointment; they will say well, they couldn't get bike [transport] from their house to this place (P4: stroke survivor).*

Another participant indicated that she sought referral to a physiotherapy clinic close to her home but had difficulty accessing occupational therapy until an OT clinic was set up in the rehabilitation centre close to her community. She described this by stating:

*I went to someone who told me about physio in General and I went there for physiotherapy and when I saw that the place was far, I started coming to Wesley for physiotherapy, it was there that I got referral too for OT to Ife but it was far I could not attend it like that of physio until they now had a department here at Wesley (P8: stroke survivor).*

A key informant described the experience of a stroke survivor who fainted on getting to his clinic for rehabilitation; he indicated that the stroke survivor trekked 6 kilometres from his house to the clinic due to his inability to afford the transport fare. He said:

*There was a stroke survivor that got to the clinic and few minutes after getting to the clinic, he fainted right here, I was wondering, "baba, what happened after we revived him and all that" and he told me he trekked from his house, more than 6 kilometres to the hospital, he said he had missed certain appointments overtime because of inability to get transport fare and he was determined that he would trek (P18: stroke survivor).*

The above subcategory indicates that a lack of access to transport services and the long distance needed to travel to rehabilitation centres negatively affected access to rehabilitation.

#### **4.2.2 Inadequate treatment and insight of stroke survivor about rehabilitation**

This category is representative of participants' experiences and perceptions of inadequacies in treatment of survivors as well as the poor insight of survivors regarding their medical condition and rehabilitation. Most of the participants were of the opinion that the latter affected rehabilitation outcome which invariably reduced their chance of returning to work. One participant felt that the treatment duration during rehabilitation was inadequate. He further

revealed that hospital based treatments for survivors were replaced with home programmes carried out by survivors without supervision of therapists, thus making rehabilitation sometimes ineffective. He said:

*I think ehm the rehab people have been doing well except that they spent limited time with people, giving appointments to us with days intervals; I think instead of those home programmes, we should be able to come to the clinic every day for the treatment to be effective (P7: stroke survivor).*

Another participant described that survivors spend limited time focussing on rehabilitation during the week which makes it difficult for survivors to get better. She said:

*...we come to the hospital once or twice a week; and the therapist spends like 35 minutes or maximum one hour with you. How do you justify that with the remaining hours of the day? (P9: stroke survivor).*

Most of the participants were of the opinion that having an unmitigated treatment on daily basis would improve the recovery rate of stroke survivors. One participant captured the description by stating:

*...but what I'm saying is that instead of one or two weeks treatment if people can be given total treatment on daily basis, if we have the facilities I feel people will recover fast (P12: stroke survivor).*

The category is further described with subcategories relating to participants' experiences and perception of ill equipped/inadequate rehabilitation facilities resources in the community and poor insight of the survivor about rehabilitation.

- **Inadequate rehabilitation resources in the community**

This subcategory conveys the participants' descriptions of inadequate rehabilitation resources in their communities. Most of the participants in this study were of the opinion that facilities in most rehabilitation centres were inadequate. One of the participants indicated that equipment that were needed to improve the work ability of participants are lacking in most of the rehabilitation centres. He described this by stating:

*...then I know they have some facilities while some needed replacement and that bicycle ergometer for endurance training, you know they went back to that of manual, the one that was automatic has gone bad that one that takes pulse while on it is no more working so all those things need to be replaced and lot more... without all this things there is little that this people can do but they are trying (P4: stroke survivor).*



Another participant explained that the unavailability of rehabilitation specialists in most community rehabilitation centres limits the holistic rehabilitation of stroke survivors and reduces their ability to return to work. He further indicated that the rehabilitation specialists are most times aligned to the tertiary health facilities located in urban communities thereby limiting the return to work outcome for survivors in the rural communities. He said:

*...there are sometimes that the occupational therapist will not even be included, from neurology they go to physiotherapy and after that the patient is left on his own, this happens because of lack of personnel in our rehab facilities, thereby making allocation of resources I mean rehab specialists now streamlined to the tertiary health providers; where a good rehabilitation team is operational, these teams that manage patients, these facilitates early return to work by stroke survivors; it will be difficult for patient to go back to work most times because the right amount of rehabilitation team are not available (P19: key informant).*

Lack of follow-up care was also described by participants as affecting the recovery of the stroke survivors. A participant revealed that stroke survivors had difficulty integrating into the community after discharge from the hospital. She further indicated that not having assistance from rehabilitation specialists within the community causes the stroke survivor to lose confidence in returning to work. She said:

*They should do follow-up care whether the patient is improving or deteriorating and they should also go to their homes to advise them because for most survivor if they are unable to get along well in their homes, they can't even think of going back to work so if not that we got someone [PT] to help him at home it would have been difficult thinking of returning to work and I'm sure most people go thru the same thing (P8: stroke survivor).*

The above subcategory lays credence to the notion that inadequate rehabilitation resources within the community affected the resumption of the participant's worker role.

- **Poor insight about one's condition and rehabilitation**

This subcategory is representative of the participants' description of experience and perceptions of stroke survivors' insight about their condition and rehabilitation as it affects the resumption of the worker role of the survivor. Most of the participants described that poor insight by survivors about their condition and rehabilitation makes survivors to abscond from treatment to seek for help elsewhere. One participant indicated that not having a clear understanding of her condition made her to fall prey to fraudster who exploited money from her, and that this made her sought medical assistance late. She said:

*...so had it been that I had enough information about stroke I would have come straight to the hospital and I wouldn't have fallen into their hands and I would have become better than this (P8: stroke survivor).*

A key informant explained that survivors sometimes abscond from rehabilitation to seek spiritual treatment due to poor improvement in their health. He said:

*Sometimes the patient gets tired of coming to the clinic; maybe when improvement is poor or limited and all that so, if they stop coming to the clinic, it will be difficult for the patient to go back to work (P19: key informant).*

Another participant described this by stating:

*...most people don't believe that they should attend rehabilitation; I have seen someone that stopped attending rehabilitation after two months. He said he wasn't seeing any changes. His condition became worse until my experience was shared with him after a year by a colleague of mine. He was told that I attended rehabilitation religiously and did the necessary things; that that was what made me return to work. He said his health wasn't improving so he believed that he should stay back at home because this person I told you about has just started walking slowly now, he has now seen that going for rehabilitation pays (P7: stroke survivor).*

The above quote described the deterioration in health experienced by a stroke survivor after he stopped attending rehabilitation due to his poor insight regarding rehabilitation. Having poor insight about one's condition and rehabilitation by stroke survivor, as revealed by participants, has a negative influence on the resumption of worker role of the survivor.

#### **4.2.3 Access to workplace is a struggle**

The category conveys the description of participants' experiences and perceptions of the inaccessibility of the survivor's work environment to the resumption of the survivor's worker role. Participants indicated they struggled to access their workplace due to physical barriers in the environment. One participant described this by stating:

*To get to my workplace was a major challenge, you see I am always reluctant to climb that steps that link my house from the road. Sometimes I would have climbed the steps but to move over the drainage was another thing (P8: stroke survivor).*

The excerpt above indicates that the stroke survivor had difficulty getting to her workplace from home due to architectural barrier within her house.

The category is discussed further with subcategories relating to difficulties posed by the physical structures in the work environment and poor transportation routes to and from the workplace which limited survivors' ability to return to work.

- **Inaccessibility of workplace physical environment**

The subcategory is representative of the participants' description of experience and perception of barriers to the resumption of survivor's worker role resulting from architectural and physical barriers in the workplace. One participant stated that the absence of hand railings on most of the stairs and steps at his workplace limited his mobility and performance at work. He further indicated that this prevented him from going to classrooms to teach. He said:

*...in our school you have to go from one classroom to another and you have to climb stairs and steps. I wasn't able to do all that again because there are no hand railings on most of the stairs (P5: stroke survivor).*

Participants felt that a non-conductive work environment act as an additional burden to the sequelae of stroke on stroke survivor. They further revealed that a non-conductive work environment negatively affects the performance of the stroke survivors. One participant captured this description by stating:

*...because some people can't do certain things after surviving stroke and if the environment is not conducive for them, they won't be able to function properly (P1: stroke survivor).*

A key informant indicated that inaccessibility of the physical work environment poses a threat to the resumption of survivor's worker role. He said

*Going back to work is usually a problem when there are architectural barriers, if the work environment is not accessible for the stroke survivor (P19: key informant).*

- **Poor transportation routes to and from the workplace**

Participants described that stroke survivors struggle to get to work due to poor transportation routes within their communities and the workplace. One participant revealed that she had difficulty getting to her workplace from her home (vice-versa) due to the poor transportation network within her community. She said:

*And even to get to the main road from my house because taxis don't get to our area and it is always difficult to get bike riders. To see bike [a means of public transport] is difficult and even to mount on the bike with the leg. (P8: stroke survivor).*

Another participant indicated that his dad had difficulty using public buses due to the height of the buses from the ground. He said:

*...even using the bus sometimes was a problem because he doesn't have his own car so using a public transport was a problem, the buses are high up above the ground with no steps and hand support; he has to be assisted so these were some of the barriers (P17: caregiver).*

Stroke survivors without their own personal vehicle to use as transport experienced difficulties when using public transport. One participant revealed this by stating:

*...for somebody who has to transport himself from his house down to the place of his work and he's not driving or does not have a car of his own to drive, have to go to the bus stop or probably take public transport and all that, the challenges of the hustling and bustling of the city, running after bus or taxi or cab or the motorcycle are there, this prevents them from resuming at work (P18: key informant).*

The above subcategory thus strengthens the notion that poor transportation networks within the stroke survivors' home environment and workplace negatively affect the resumption of their worker role.

#### **4.2.4 Negative characteristics of the stroke survivor's work influences return to work.**

The above category conveys the participants' descriptions of the influential role of their job characteristics and how it contributed to their chances of resuming their worker role. The participants in this study indicated that working in a public organization provided them with the opportunity of returning to their work after the stroke. They further revealed that working with a private company would not have allowed them to focus on recovery and getting better. A participant described this by stating:

*...if one is working in a private establishment, to stop work will be a difficult thing, they will dismiss one because what they are after is productivity level (P3: stroke survivor).*

The above quote described the perception of a stroke survivor who indicated that working with a privately owned company (private sector company) would not have provided him with the reasonable accommodation he got at his workplace due to his reduced productive capacity after the stroke. He further revealed that the stroke might have led to his dismissal at the workplace.

Another participant indicated that her brother's employer kept his job open for him which allowed him to resume his worker role. She further indicated that civil service has a better employer-employee work relationship compared to companies in the private sector.

*Thank God civil service work is better compared to any other job because the sickness held him down for about two years... [how?] because he would have been sacked (P10: caregiver).*

The category will be described further with subcategories relating to being involved in manual or labour intensive jobs impair the resumption of survivor's worker role as well as being senior on the job provides the survivor with a chance of quick work integration.

- **Being involved in manual or labour intensive jobs impair the resumption of the survivor's worker role**

Most of the participants were of the opinion that being involved in a labour intensive job would reduce the chances of a survivor resuming his or her worker role. Participants in this study attributed their ability to return to work to the non-manual nature of their jobs and indicated that they would have struggled to return to work should their work have been labour intensive prior to the stroke. A participant captured this description by stating:

*If I'm not a lecturer if I were to be an artisan, it will be very difficult; it will be very difficult so those are the things (P2: stroke survivor).*

A key informant indicated that survivors that hold labour-intensive jobs would have difficulty in assuming their previous worker role due to the requirements of such jobs. He said:

*Imagine if the person is a labourer that really needs strength to do his or her work and motor functions are impaired, such a person might find it difficult to return back to that work even when the therapist is advising the person to return back to work (P19: key informant).*

Another participant described that the inability of a stroke survivor to meet the expectations of his job after his stroke caused him to lose his job. He said:

*Ehm I gave an example of somebody who was a staff of here who lost his job after surviving stroke you know, he told me that he lost it after sometime when he couldn't work very well, I think he was a gardener so that is it (P1: stroke survivor).*

- **Being senior on the job provides the survivor with a chance of quick work integration**

In this subcategory, participants described that the senior position they held at their workplace enhanced their chance of returning to work. They further revealed that stroke survivors who are junior workers would have difficulty in adapting to their work. One participant described that being a senior correctional officer made it easier for him to fit in at his workplace due to the supervisory nature of his job. He said:

*...more so I'm a senior person on the job now, I don't have to do much so it is my junior ones that do most of the walking around, I just supervise them, they do most of the job (P7: stroke survivor).*

Another participant described that his position as the principal administrator of his school enabled him to get along at work. He indicated that he no longer received orders from anyone but was now the one setting the rules at work which made it easier for him to fit in at work. He said:

*You know immediately I became Principal I was posted out of that place, I was taken to a place to head another school so by that time I was the one giving out the orders I don't receive order from anybody and the school is run to my taste (P4: stroke survivor )*

A participant indicated that he was able to assume a supervisory role as a surgeon after his stroke due to his position as a senior consultant; he further asserted that the resumption of his worker role would have been difficult if he had been a junior surgeon. He said:

*...so I was not going to theatre regularly because there were junior ones under me, there is no need going to the theatre. They just come to report it to me that this is what we have done in this that is all... [what if you were to be a junior registrar?]. I know if I were to be a junior person it would have been difficult or out rightly impossible (P2: stroke survivor).*

The above subcategory indicates that the premorbid job position of the stroke survivors had an influence on their re-integration at work.

#### **4.2.5 Stigma attached to deformity resulting from stroke negatively affects survivor.**

The category conveys the participants' description of experience and perception of stigmatization. Most participants in this study indicated that the stigma attached to deformity caused the stroke survivors not to attend rehabilitation and to return to work. One participant revealed that the shame of moving with an abnormal gait caused him to leave his home early in

the morning to attend to rehabilitation to prevent his neighbours from seeing him. He described this by stating:

*Like if someone has to move from this my house to that tarred road and people have to hold your hand seeing you, so the shame of moving like that even with people, it gives you psychological problem. Throughout the time if I do not come out of the car, people will not know that anything is wrong, by the time I get to physiotherapy, I will get there very early because I will drive down (P4: stroke survivor)*

Participants felt that most times the survivors' work ability might not be the issue preventing them from resuming their worker role but rather the stigma attached to the deformity caused by the stroke. One participant described this by stating:

*You know I told you before that when I'm walking, people will be staring at me, the way I'm walking, that may be I'm deformed ... because of deformity, a person might not be able to go back to work not because they can't perform enough, but principally because of the stigmas attached to deformity, the stigmas yes that's what I want to tell you (P6: stroke survivor).*

This category is further described with subcategories relating to acceptance of survivor's illness by the society affects the success of treatment and return to work; reflection on other stroke survivors' life brought a feeling of doubt about the future; and misconception about stroke leads to inadequacy in treatment.

- **Acceptance of survivor's illness by society influences the success of treatment and return to work**

Participants revealed that how the society will accept stroke survivor's illness usually casts a huge burden on the stroke survivor, thereby complicating the health of the survivor. One participant described this by stating:

*...he was emotionally down, thinking of how people will react to him, the way people will accept the condition and even his colleagues, there is this psychological problem, he became a bit frustrated, he shakes his body and as a result of all these, the way people will see and accept him started giving him concern (P17: caregiver).*

One of the caregivers described that the spouse of a stroke survivor confined him at home so as to prevent people from seeing the survivor in his present condition. He said:

*...initially he was confined at home but through expert's counsel that he should interact with the environment, it was a big challenge that his wife does not want to*

*reason with because of stigmatization that people will start to make jest of their family (P14: caregiver).*

Participants indicated that stroke survivors reject the use of assistive devices. The participant further explained that the stigma attached to the use of assistive devices makes stroke survivor to reject the usage of such devices by them. One caregiver described that her husband threw away the mobility aid given to him after discharge from the hospital because the survivor felt he was too young to use a walking stick. She said:

*When he was about to be discharged at the hospital he was given a walking stick which he threw away and claimed he doesn't need it because he felt he was too young to use something like that, he kept on struggling that no o, he will walk on his own and it affected him as he falls sometimes... (P16: caregiver).*

The above subcategory indicates that societal acceptance of illness influences the success of treatment and the resumption of the worker role by the stroke survivor.

- **Reflection on other stroke survivors' life brought a feeling of doubt about the future**

The lives of other stroke survivors in the society was reflected on by participants and they indicated that this casted a huge feeling of doubt and loss of hope regarding the future for them. One participant captured this experience by stating:

*I was confused one way or the other because I saw so many that it has affected before, I saw the ways of their lives, the way they're living, the way they behave or the way they do because I know that it is a long term something you understand? I was having the feeling that can I get better? Will I recover from this? (P6: stroke survivor).*

Societal rejection of stroke survivors caused the feeling of despair among stroke survivors. One caregiver described that, with her husband having the knowledge that survivors are treated like a burden to the society; he was devastated when he was told he just had a stroke.

*...because they looked at them like somebody who don't have anything to offer the society anymore, just as if they are burden to them for example there was this my neighbour that had stroke, you won't belief it that his colleagues abandoned him, even his children too; I now imagined how my husband felt when he regained consciousness, he was devastated (P12: caregiver).*

The above subcategory reveals that participants' reflection on how the lives of previous stroke survivors were in the society resulted in a feeling of despair.



- **Misconception about stroke leads to inadequacy in treatment**

Participants revealed that stroke was viewed by some communities as an affliction from the gods that requires spiritual rituals and attention. This misconception was described to prevent stroke survivors from seeking early medical intervention. One participant indicated that some stroke survivors would prefer to seek spiritual healing and would only seek medical intervention after their condition had deteriorated. He said:

*...some of them didn't attend the medical treatment if they're affected, some will take it to be an affliction and will seek treatment with the herbalist so by that time, their condition would have worsen, they will now come to the hospitals after several months there; all this things formulated to their not going back to work again that's one of the major thing (P6: stroke survivor).*

The above participant further indicated that he was encouraged to be taken to the traditional healers when he had a stroke but insisted on seeking medical treatment. This decision, he said, aided his recovery. He described this by stating:

*If not because I seek medical intervention, it would have been worse than this and this is what has been affecting our people because when the thing happened some people were telling me oh it happened to somebody, they should take me to this place and that place (P6: stroke survivor).*

Another participant indicated that he did not know that what he had experienced was a stroke but thought it was a spiritual affliction which made him not to seek medical treatment. He said:

*...I thought I was attacked because I did not know that people who have stroke this is what they experience, I just hear about it but I don't know this is how it use to happen to people because had I known, I would have gone to the hospital earlier (P7: stroke survivor).*

The above subcategory reveals that the misconception about stroke caused stroke survivors to seek medical intervention many months after the stroke.

In summary the theme reveals that returning to work for the participants of this study was a struggle that involves the stroke survivor's insight about rehabilitation, survivor's access to rehabilitation intervention, the accessibility of the work environment and the job characteristics of the stroke survivors. The theme also reveals that participants struggle with the societal stigma attached to disabilities from stroke while returning to work.

**Table 4.3:** Theme three and its related categories

Theme Three:	Categories
Rehabilitation and social support as enabler to resume one’s worker role after stroke.	<ul style="list-style-type: none"><li data-bbox="773 352 1435 443">• Engagement in rehabilitation helped with recovery and return to work.</li><li data-bbox="773 464 1435 554">• Supportive environment helped survivor in resuming their worker role.</li></ul>

### **4.3 Theme three: Rehabilitation and social support as enabler to resume one’s worker role after stroke**

The theme describes the participants’ experience and perception of rehabilitation and social support that aided the stroke survivor’s resumption of their worker role. The participants in this study revealed that engaging in rehabilitation led to improvement in the health condition of the stroke survivors. They further indicated that this improvement in health facilitated the resumption of the survivors’ worker role. Participants also described that they were supported and encouraged at home and at work to resume their previous worker role. One participant indicated this by stating:

*The rehabilitation people they helped me, their contribution is vital because they are the one that really makes one resume back to work because like me, they engaged me and also direct me in doing different exercises so they quicken my recovery and this helped me to resume at work (P8: stroke survivor).*

The above participant indicated that she valued the contribution of rehabilitation as being vital to her recovery and resumption of her worker role. She further revealed that her boss and colleagues were also instrumental in assisting her to resume her worker role by providing financial and moral support. She said:

*...if not for the salary then, I would have been discouraged, so that was part of the support I received at work; they paid my salary while I was seriously sick that I couldn’t come to work (P8: stroke survivor).*

The above theme is explained further with categories such as engaging in rehabilitation helped with recovery and supportive environment helped the survivor with the resumption of their worker role.

#### **4.3.1 Engagement in rehabilitation helped with recovery and return to work**

Under this category, participants described that engaging in rehabilitation facilitated their recovery and the resumption of their worker role. One participant indicated that he would have had difficulty in performing basic daily tasks and returning to work if he had not engaged in rehabilitation. He said:

*Without rehabilitation I wouldn't have been able to walk not to now even talk that I want to go back to work (P7: stroke survivor).*

Participants revealed that engaging in rehabilitation encouraged them to live their lives as normal; this caused them to consider returning to work. One participant described this by stating:

*...those people in rehabilitation encouraged me, they gave me attention as regards physical and occupational therapy and they encouraged me to go back to work, to be doing things as if I'm normal, as if nothing happened (P2: stroke survivor).*

A caregiver described that rehabilitation assisted not only the survivor to live a normal life, but also everyone involved in caring for the survivor in living a normal life. He said:

*The rehabilitation part of the treatment has gone a long way in assisting us in living a normal life and him to return back to work (P12: caregiver).*

This category is further explained with subcategories such as the use of private and home treatment facilitated recovery; traditional rituals aided recovery; and improvement in health facilitated the return to work.

- **Use of private and home rehabilitation by survivors facilitated recovery**

Participants indicated that they engaged the services of private rehabilitation specialists at home to complement the treatment received at the public tertiary hospitals. Some of the participants were of the opinion that the services they received at the rehabilitation centre were inadequate, and this led to the engagement of the services of private occupational therapists and physiotherapists. The participants indicated that this aided their recovery. One participant described this by stating:

*I mean there are certain things you need to be doing at home, if you don't have anybody to be assisting you with the home programmes, so many things will not be done. Like me now, there are so many things I couldn't do on my own because I don't have you know children staying with me to help me and all that, so sometimes when I have the fund, I would ask somebody to come home to help me to do physiotherapy so all these, they have helped me to recover. (P1: stroke survivor).*

Participants also indicated that the longing to return to work caused them to engage the services of private rehabilitation specialist for home treatment. One stroke survivor captured this description by stating:

*I knew what I was missing while I was away from work and needed to get better I even pay some people, I mean the physios to treat me at home because I needed to get better and this really helped (P4: stroke survivor).*

The above subcategory lays credence to the notion that the assistance and treatment by private rehabilitation specialist within the participant`s home aided the recovery of the stroke survivors.

- **Rituals and faith aided recovery after the stroke**

This subcategory is representative of participants` description of rituals and faith that aided the survivors` recovery process. One participant indicated that her husband engaged the service of a traditional healer for her who through rituals improved her health condition. She said:

*...he went to Ife with his friend to bring a man because I couldn`t move my mouth then, I don`t really know whether my mouth was shifted to one side, the second day, the man brought some traditional things because he`s kind of a traditional healer. He then did some things for me and he said it was as if the thing is spiritual so he took a thing and spoke to it and said whosoever that said I shouldn`t stand because he told me it was someone that afflicted me with; he said I will stand up by the second day and truly I stood up the second day but couldn`t walk too much (P8: stroke survivor).*

Another participant described that the use of traditional medicine and herbs by her brother aided his recovery. She said:

*There was also a time I used traditional medicine. One boy introduced me to it, he gave me something to rub on his cold legs and hands and I saw a positive change when I started using it, then I started giving him hot things to drink including herbs and then he will sleep, because he doesn`t really get to sleep (P10: caregiver).*

One participant sought recourse with God after the stroke event. He further revealed that he placed great faith in God as he felt that God was the only power that would be able to assist him during the rehabilitation process.

He said:

*What could I do without God`s assistance even when I`m agile enough? What can I do if God does not wish it for me? Is there anything you can do? So in everything I*

*thank him because it is through Him I was able to make it this far (P2: stroke survivor).*

- **Health recovery facilitated survivors' resumption of worker role**

The improvement in the health condition of stroke survivors was described by participants as an expediter to the resumption of survivors' worker role. One participant indicated that her sister-in-law was accepted back at her workplace due to her improved mobility and work ability. She said:

*Because she could now talk, walk and write, the school was able to accept her back otherwise I don't think the school would have accepted her back (P13: caregiver).*

Another participant indicated that the improvement in her spouse's mobility function to cover long distance prompted him to resume his worker role. She said:

*...so unlike before that he cannot walk from a long distance, now he can walk even from the bus top to the secretariat with that he was able to return to work (P15: caregiver).*

Improvement in the confidence of survivors in carrying out tasks after rehabilitation was revealed by participants as a facilitator for the resumption of their worker role. One participant described this by stating that:

*I started treatment you know taking my drugs and ehm physiotherapy and you know and all that started giving me weight and confidence and all that allowed me to return to work because I realized I was able to do things myself (P1: stroke survivor).*

It thus could be stated that health conditions of stroke survivor that were participants of this study improved during and after rehabilitation, and this was attributed to be a positive influence on the resumption of the worker role of the stroke survivors.

#### **4.3.2 Supportive environment helped stroke survivor in resuming their worker role**

This subcategory conveys the participants' description of the influence of a supportive environment. Participants revealed that support was a prominent deciding factor in returning to work after experiencing stroke. One participant indicated this by stating:

*It can never be under estimated because family support is the major thing when it comes to returning to work after any illness, it might not be financial but moral support (P6: stroke survivor).*

Another participant stated that a stroke survivor without financial or moral support after experiencing a stroke would have difficulty recovering from the illness. He said:

*So I have found out that somebody who has not gotten the financial wherewithal or somebody to assist you, the person may not recover in time to even talk of going back to work (P4: stroke survivor).*

Participants attributed their successful re-engagement at work to the support they received at their workplace; medical support received in form of health insurance; as well as the support from family and friends. The subsequent subcategories are discussed based on these support systems.

- **Workplace support helped with resumption of the worker role**

Participants described that workplace support was crucial to the stroke survivor's resumption of the worker role. They revealed that reasonable accommodation at their workplace enabled their re-engagement at work. One participant indicated that the reduction of his dad's workload after stroke by his employer enabled the survivor to work within his limits. He said:

*He doesn't work more than what he can manage, so there was reduction in work load that was done for him by his employer... (P17: caregiver).*

Participants also revealed that they enjoyed the support of their colleagues at work who often assisted them with strenuous duties. One participant described this by stating:

*I'm so grateful for the kind of co-worker I have here, because I can walk into one office, pick a draft of a job to work on with anybody but mind you, it is not all offices they are doing that, it's not all office where they do that. (P3: stroke survivor).*

Financial assistance from the workplace was also described by participants as providing financial security for the stroke survivors. Financial assistance, the participants indicated, provided a means for the survivor for accessing treatment and therefore encouraging them to resume work. A caregiver described this by stating:

*...those things that helped him to return to work, his salary was not stopped because without money there was nothing we can do. It would have been difficult to get treatment, how do we get money to foot the bills without this? (P16: caregiver).*

- **Support in form of health insurance**

The N.H.I.S. was indicated by most of the participants in this study as being helpful to them in accessing rehabilitation. One participant attributed the ability of his brother to actively participate in rehabilitation to the N.H.I.S. He said:

*In addition to what assisted him to go back to work is the weekly rehabilitation that he comes to O.A.U.T.H.C. to do on the platform of N.H.I.S. once he discovers that he can come and register here free of charge and only needs to pay for his card, he comes in every Tuesday and Thursday so that also improve his BP, muscles and physique (P14: caregiver).*

Another participant described that N.H.I.S. takes the responsibility for the payment of 90% of the treatment bills of his dad. He said:

*Then N.H.I.S. also helped us to pay just 90% of the bill, if not for that I don't know what would have become of him not to even talk of going back to work (P17: caregiver).*

- **Support from family and friends enhanced survival after stroke**

Participants in this study described that they would not have survived after the stroke incident without the assistance of their families and friends. One participant indicated that the support he got from his immediate family helped him to return to his normal self. He said:

*In regards to what helped me in returning to work I will add this that I have the co-operation of my children, my wife too has been so nice, she has been following me to the hospital, I haven't gotten any discouragement from her since I started going back to work. She just wants me to get back to my normal self again, all my children they love me so much (P5: stroke survivor).*

Another participant indicated that her husband and children assisted her with meal preparation so as to enable her resume work. She said:

*Even my children and my husband, they helped me at home so as to get to work early they help me in the preparation of food for the family (P8: stroke survivor).*

Most of the participants in this study explained that they were assisted by friends for transportation to and from the rehabilitation centres and the workplace. The participants further indicated that their recovery and return to work would have been difficult without this support.

One participant captured this description by stating:

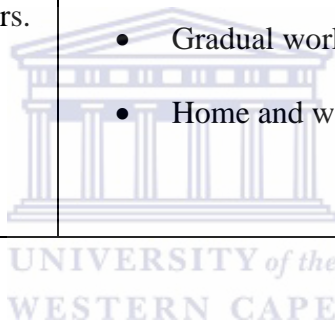
*...it might be a person that took me to the clinic and a different person that will take me back; so I had the support of my friends, they came to my aid in terms of transportation going to and coming back from the clinic and to work (P7: stroke survivor).*

The above subcategory thus reveals that the support from family and friends enhanced the survival of the stroke survivors that were participants of this study.

In summary, the theme: rehabilitation and social support as enabler to resume one’s worker role after stroke is an indication that stroke survivors’ engagement in rehabilitation intervention, as well as the social support received by stroke survivors from the workplace, government, families and friends, are all important as they aided the recovery and the eventual return to work of the stroke survivors that were participants of this study.

**Table 4.4:** Theme four and related categories.

Theme four	Categories
Adaptation strategies that enable return to work for stroke survivors.	<ul style="list-style-type: none"> <li>• Acceptance of illness.</li> <li>• Motivation to return to work.</li> <li>• Gradual work exposure.</li> <li>• Home and workplace adaptation.</li> </ul>



#### **4.4 Theme four: Adaptation strategies that enable the return to work for stroke survivors**

The theme is representative of participants’ description of adaptation strategies that aided stroke survivor’s recovery, return to work and optimal functioning at work. The theme is clarified in categories relating to internal and external adaptation strategies.

##### **4.4.1 Internal adaptation strategy**

The internal adaptation strategy is indicative of the innate adjustment process described by the participants that helped them adapt to the stroke and to return to work. Participants revealed that the bulk of work, needed to be done in order to get better, was in their control and that this caused them to place more effort into improving their condition. One participant indicated that he wanted to live and this caused him to engage in activities that would improve his health condition.



*...the first thing was that I wanted to live, so anything that will make me better I was doing it (P4).*

The internal adaptation strategy is explained with categories relating to acceptance of illness and motivation to return to work.

#### **4.4.1.1 Acceptance of illness**

This category is indicative of the participants' description of the acceptance of their condition. Most of the participants in this study revealed that a stroke is a condition that they could do nothing about, other than to work towards getting better. One participant explained that he realized there was nothing he could do to make the stroke go away after he had the experience other than to live a fulfilling life. He said:

*I felt that I have had it; I have had it and then ehm there is nothing I can do about it , well I have it, it has come it has come, there is nothing I can do about it so that's it I just have to live with it (P6: stroke survivor).*

Another participant indicated that he knew he could still achieve some things as long as he was still alive. He said:

*...because I know that if I am still alive I can still do some things (P4: stroke survivor).*

Participants were of the opinion that dwelling in self-pity while they do nothing about their condition will result in additional damage to their health condition. Hence they had to accept their present state of life. One of the participants explained this by stating:

*If a stroke survivor is dwelling in self-pity, if he allows his or her psychology to be burdened, life will be difficult for him or her. So that's it, the stroke survivor must know that life must go on and you do as much as you can do post-stroke. That was what happened (P2: stroke survivor).*

Participants revealed that different factors influenced their decisions to come to terms with their condition, and to cope with it. The subsequent subcategories discuss the various factors.

The above category is explained with sub-categories such as the spirituality and belief of the stroke survivor influenced acceptance, medical knowledge influenced acceptance, and taking control of your life and taking responsibility for rehabilitation.

- **Spirituality and belief of the stroke survivor influenced acceptance of their condition**

This subcategory conveys the participants' description of the influence of stroke survivors' spirituality and belief system on the acceptance of their condition. One participant explained that his religious belief as a Muslim helped him to accept his condition and to cope with the challenges of the stroke. He said:

*But other things that influenced it is that I am a Muslim and once you are a Muslim anything that comes to you, you take it as the wish of God. So that helped me a lot because I was going through the challenges of stroke with ehm with ehm being psychologically sound... (P2: stroke survivor).*

Another participant indicated that her faith as a Christian made her to accept her condition and to determine to get better. She said:

*It was through determination and hope because God has not created me this way, what God created, it was all beautiful, God created me very well (P9: stroke survivor).*

The participants were of the opinion that the belief of the stroke survivors was crucial to the survivors' acceptance of their limitation as well as their desire and efforts to get better. One participant explained that her husband was able to come to terms with his condition after he realized that there was still a way to thank God for his residual ability.

*So I will like to tell the survivors to surrender to God who owns their live, his refusal to come back to hospital again I mean my husband is that he is stubborn, the pastors had to talk to him even after the stroke that he should be patient and put his hope in God because it still pains him that he couldn't go further in his plans of becoming a doctor. So with that he realised that it's a big challenge that there's nothing one can do, because there's still a way to thank God, so he had to get out of it (P16: caregiver).*

Participants described that spending time with people that shares the same belief with them assisted them in coping with their condition. One participant captured this notion by stating:

*You know I have started going to church now, I have started going, you will see sometimes that you will have to be in the midst of fellow that shares the same belief with you that will be encouraging you (P9: stroke survivor).*

- **Medical knowledge influenced acceptance**

Some of the participants in this study were of the opinion that their medical knowledge and insight about the stroke influenced the acceptance of their condition. One participant indicated that the medical advice given to the stroke survivor during hospital admission assisted the survivor and their family to come to terms with their father's condition. He said:

*We knew the implication of not taking his drugs after he had the stroke, so with all the advice given in the hospital, he was able to get over it and take responsibility to get out of it. This has helped all of us to focus on his recovery (P17: caregiver).*

Another participant indicated that his knowledge as a medical practitioner influenced his decision on suggestions given after he had the experience.

*Well it's likely that my knowledge as a medical practitioner helped, it is likely, that my medical knowledge influences the way, the way ehm ehm my reaction to suggestions around me for example, you know when you have a stroke, the people around you will be guessing what caused it but I knew the real cause, I knew I had to get over it (P2: stroke survivor).*

- **Taking control of your life and taking responsibility for rehabilitation**

Participants' description of the control they have on their life, especially with respect to the desire to get better, is encapsulated in this subcategory. According to the participants, taking control of their life, especially in terms of getting better and living a fulfilled life in their present condition, was also a way of expressing their acceptance of their condition. One participant explained that self-determination as well as having a positive attitude towards life, made him engage in activities that helped him with his recovery and his eventual return to work. He said:

*Stroke is a condition that can shatter one's life if one succumbs to the belief that he cannot make it in life but one who knows or feels he can make it and has the encouragement has no problem. I believe that when one is positive about life and determined to go back to work, he will do everything to go back, you know when you are determined ehm you will engage in activities that will make you go back and this really helped me (P1: stroke survivor).*

Participants indicated that they took responsibility for their recovery and did not allow the stroke to limit or control their lives. One participant said:

*Taking your stance against the sickness matters a lot, that I don't want this sickness to control my life. This sickness must go and with this comes commitment to the treatment programmes. You know most of the treatment given to survivors must be strictly adhered to, so, that determination must be there that I want to get better by following those home programmes; it helped me a lot (P9: stroke survivor).*

Participants also explained that even though they were determined to go back to their normal lives, they had to accept their current abilities so as not to injure themselves. One participant who was a caregiver indicated this by stating:

*..., fine it's good to be determined to do those things they used to do but they should still follow the advice and use the gadgets given at the hospital so as to avoid falling or hurting themselves (P14: caregiver).*

#### **4.4.1.2 Motivation to return to work**

Participants' description of the stroke survivors' driving force to resume their worker role is presented in this category. Participants explained that stroke survivors resume their worker role so as to help them meet up with their financial obligations. One participant indicated that she had to resume work due to the fact that she needed money to take care of herself, while also averting the loss of her job. She said:

*So I can say that it was because I needed to earn money to take care of myself and not lose my job number one (P9: stroke survivor).*

Another participant who was a caregiver described that his brother had almost exhausted the time frame given to him as sick leave, so he had to resume work so as not to lose the job. He said:

*...otherwise after 2yrs of not working and one is not back at work and not that it's a work leave, you can be retrenched, because of this he had to go back to work (P14: caregiver).*

Participants revealed different reasons for returning to work after the stroke event. These reasons are discussed in the subsequent subcategories.

- **The value attached to work**

Participants of this study revealed that the value they attached to their work acted as a motivating factor for the resumption of their worker role. One participant explained that he had to get to the peak of his career due to the fact that he had put a lot of effort in building it. He said:

*... I knew I've put a lot of years, I've done a lot of work and if I do not come back to that work, if I do not reach the peak of my profession then it is a very bad thing for me (P4: stroke survivor).*

Another participant described that staying away from his job for a considerable period of time would cause him to be unfit and to lose the skills required for the performance of the job. He indicated this by stating:

*And the nature of my job doesn't support one to just stay back at home doing nothing, you know it is paramilitary now, it will definitely affect me at work so it was one of the things that geared me to get back to work (P7: stroke survivor).*

Most of the participants indicated that work was a very important part of their life. One participant said:

*Working was a very important part of my life I mean going to work even if I have to be driven to work (P1: stroke survivor).*

Participants revealed that not being at work caused them to lose out on promotional opportunities that were available at work. This, the participant said, geared them to go back to work. One caregiver said:

*Another thing was that one of his colleagues was already a principal which was a challenge to him, so he wanted to recover fast so that he could tender his letter for the post of a principal and he knew he couldn't do that on a sick bed, all these gingered [geared] him back to work (P12: caregiver).*

- **Active participation in work by survivor influences recovery**

This subcategory explains the participants' perception and experience of the influence of re-engagement in work on the stroke survivors' recovery. Participants revealed that engaging in work was healthy for them, while it also positively influenced their recovery. One participant said:

*It is through exercises, active participation at work then discussing with friends that all these things can go, staying alone with this type of sickness is not good, this made me to go back to work 'cause I won't be thinking when I'm at work (P9: stroke survivor).*

Another participant indicated that he started teaching as soon as he was back at work due to the fact that he knew teaching will serve as a form of rehabilitation for his speech function. He said:

*I started teaching immediately because I know that in teaching I will be talking and that will form, that is a form of rehabilitation for my speech (P2: stroke survivor).*

Participants also indicated that passivity will be detrimental to the survivor's health. One participant explained this by stating:

*I had to return to work because staying back at home will not make me use my limbs, my legs could not quickly pick if I don't go to work, it will not be working properly the way it should, it will just be staying dormant (P7: stroke survivor).*

Returning to work was also described by participants as bringing peace of mind to the stroke survivors. One of the caregivers explained this by stating:

*He also has peace with himself going to work and coming back in the evening (P10; caregiver).*

- **Societal role and responsibility ascribed to man**

Most of the participants revealed that it was their social responsibility to work as well as to fend for their family. One participant indicated that it was expected of him to wake every morning to go to work. He said:

*As a man I am expected to wake up and go to work so why will I just stay back at home doing nothing? (P7: stroke survivor).*

Another participant also described this by stating:

*If someone is a man of himself, one should just go to work and come back home, it's only the lazy type that will not go to work and that is not normal, go to work and return home, so it's a role expected of a man (P3: stroke survivor).*

Most of the participants also explained that people depended on them for their daily bread, and thus they could not afford to fail in the social responsibility of providing for their children. One participant said:

*My children that are in school will go to school, one is in the university another will resume soon and I have another one in private school. Will I now say because of sickness ask my children to drop out of school because I couldn't assist their father in my little way or start to beg for money when there is a way out of it in terms of going back to work? So I had to go back (P8: stroke survivor).*

This above subcategory shows that the roles and social responsibilities of the stroke survivors that were participant in this study spurred them to resume their worker role.

- **Boredom and loneliness**

This subcategory is indicative of the participants' description of boredom and loneliness as a motivator for resuming their worker role. One participant described that his neighbourhood was always deserted during the working hours of the week which resulted in him becoming bored. This, he indicated, motivated him to return to work. He said:

*...because my neighbourhood is always deserted during working hour and it becomes strange and boring so I had to find somewhere to go which is my workplace (P3: stroke survivor).*

Another participant pointed out that he had to go back to work so as to avoid being alone as well as to avoid being bored.

*I had to go back to work so that I won't just be sitting down at home doing nothing, there won't be anybody at home and it will be so boring (P7: stroke survivor).*

Boredom was also revealed by another participant as one of her driving force to resume her worker role. She said:

*Another thing that helped me was that I don't like staying at home because there will be nobody at home with me, when it is about 10am, there will be nobody at home, there won't be anybody, it even makes me to go to school every time because I will just be bored at home doing nothing (P8: stroke survivor).*

#### **4.4.2 External adaptation strategies**

This external adaptation strategy is representative of the participants' description of external changes made by the stroke survivors that aided their recovery as well as their eventual return to work. Participants revealed that they conditioned their work and home environment to suit their functional ability after the stroke. One participant said:

*We just condition the environment of work to their present state of recovery so that things will not be difficult for them in doing, the person [stroke survivor] might change the work station completely or discuss with the employer on modifying the work station to soothe her present state of rehabilitation (P18: key informant).*

The external adaptation strategy is discussed with categories relating to gradual work exposure as well as workplace and home modification.

##### **4.4.2.1 Gradual work exposure**

This category conveys the participants' experience and perception of the stroke survivors' evolution into the workplace after hospital discharge. Participants indicated that they gradually moved/transited into their previous worker role. One participant explained this by stating:

*The day I started, when I got to the office I think I stayed just about 30mins, we were chatting in the office but the next time I went, I stayed up to about ehm 1½hrs, so the third time I visited the office I stayed more than 2hrs, but it was right inside my office, it was never a field visit but now I can stay longer (P6: stroke survivor).*

Another participant indicated that she initially resumed at work on a part time basis before transitioning to full time. She said:

*Before I use to go three times in a week, Monday, Wednesday and Fridays but now I go to work every day (P8: stroke survivor).*

Another participant who was a teacher indicated that he initially resumed work just to get used to teaching again. He said:

*...so I was just going to the office staying in the office I couldn't work, I couldn't teach at all then, for long I didn't teach. I was just going to work just to be present at the work environment, just to get used to being at work (P4: stroke survivor).*

The gradual transition of the participant into the workplace is described further with subcategories relating to work time and workload reduction.

- **Work time reduction facilitates adaptation to the worker role**

Most of the participants in this study stated that reasonable accommodation in the workplace in the form of work hour's reduction assisted them in adapting to their worker role. One participant said:

*...so they don't want me to do strenuous work, just supervision work and after spending like 3 to 4 hours, I might decide to leave and they normally allow me to do that (P7: stroke survivor).*

Another participant explained that his work hour duration was reduced by two and half hours when he initially resumed work. He said:

*When I resumed back at work, I do leave my place of work around 1:30pm, but now, I leave work at the same time 4pm together with my colleagues (P3: stroke survivor).*

Another participant also described this by stating:

*When I resumed, it was initially for a few hours you know 1 hour, 2 hours then it increases to about 4 hours (P1: stroke survivor).*

- **Workload reduction facilitates adaptation to the worker role**

This subcategory conveys participants' experience and perception of workload reduction as a means of adaptation to their worker role. One participant described that his father's workload was reduced and later gradually increased based on his performance capacity. He said:

*He doesn't work more than what he can manage, so there was a reduction in work load that was done for him... he started improving and the work he does for long time he started doing them fast and his work load was gradually increased (P17: caregiver).*

Another participant also indicated the reduction of workload to accommodate for his work ability, stating that his teaching load was reduced by 90%. He said:



*I got back to teaching in September, 2009 at 10% level; before stroke it was I was teaching thirty something periods in a week with administrative work but after stroke it became 3 periods a week and the administrative work (P4: stroke survivor).*

Another participant revealed that the lectures as well as courses taught by him were reduced to three. He said:

*When I started working again, they reduced my lectures and my courses to about three (P1: stroke survivor).*

#### **4.4.2.2 Workplace and home adaptation**

This category is representative of the participants' description of modifications made at the workplace and home in order to improve their occupational roles inclusive of the worker role. One participant explained that he had to readjust his office to enable him to have easy access to documents and books.

*Yeah the first thing was that my table was not like this when I had the stroke, my table was very close to the door and I was facing eh where my television is now. I had to readjust it myself with some of my colleagues here who helped me to be able to have access so that I can easily manipulate or check things. I just realised that it is better to put my table this way (P1: stroke survivor).*

Another participant indicated that she changed her office from the first floor at her workplace to the ground floor so as to have easy access to her office.

*Now first of all, in my place of work, my office is upstairs but they have provided another one for me downstairs now, so I use to sit downstairs now because I can't climb stairs now (P9: stroke survivor).*

Some of the participants described that they modified their home environment to facilitate easy access within the home. One caregiver indicated this by stating:

*Things were changed in the house which actually helped him to be faster because while in the toilet he could carry out his self-care himself (P14: caregiver).*

This category is described further with subcategories relating to changes done by the survivors to their work routine as well as their worker role.

- **Change of work station as well as the use of ergonomics and energy conservation techniques in the workplace**

Participants described that they had to change their place of work by working in areas closer to their home environment so as to conserve energy as well as to reduce the difficulty they

encountered while transporting themselves to the workplace. One participant who was a key informant captured this assertion by stating:

*...changing their work station, like somebody, a stroke survivor who had to travel a long distance to her workplace sought for a transfer to a nearby centre, a branch of her office nearer to her residence so that she won't have to go or travel a long distance (P18: key informant).*

Another participant indicated that he asked to be transferred to a better work environment due to the fact that his previous work environment was not conducive for him. He said:

*The first place I was posted to, as a principal wasn't conducive for me very well that made me seek to be posted out of the place, so later on I got another posting, I left that place, I went to a better school (P4: stroke survivor).*

Most of the participants described that they had to devise various means to conserve energy by seeking assistance as well as help when needed at the workplace. One participant indicated that he employed the service of a driver when he realized that he had difficulty driving himself to work as well as using public transportation to get to his workplace. He said:

*...so then I had to get a driver who drives the car to my place of work. I walk from the car down to the office, no problem (P1: stroke survivor).*

- **Change of work routine**

This subcategory conveys the participants' experience and perception of changes in work routine which facilitated the survivors' adaptation to their worker role. Participants revealed that they had to change their usual mode of working to match their present work ability. One participant explained that he had to be placed on a permanent morning shift at work so as to accommodate for his present work ability. He said:

*I might be in any of the three duty shifts before I had stroke but now I am on a permanent morning duty (P7: stroke survivor).*

Another participant who is a scenographer as well as a lecturer indicated that he stopped making productions at night. He said:

*I had to stop coming to work at night and that has been part of my life, doing productions at night, lighting shows and all that, see you know, most of the time now I go back home in the evening so the only thing I have not been able to do is to come back to work at night (P1: stroke survivor).*

One participant explained that she now sits while teaching her classes in her office whereas before she used to stand when teaching.

*Before the event I teach them in the classroom but now whenever I am to have classes with them, I would have arranged chairs for them in the office and teach them in my office (P9: stroke survivor).*

- **Change of worker role**

Participants' experience and perception of change of worker role that facilitated their quick adaptation to the workplace is presented in this category. Some of the participants revealed that they had to change their worker role from full time to part-time. One participant captured this by stating:

*I couldn't go to work, I was away from work for almost a year and when I resumed at work I got back to work not fully, I wasn't going to work fully; it was more of a part time thing (P7: stroke survivor).*

Another participant indicated that her husband resumed at work on a part-time basis so as to allow him to participate in his rehabilitation sessions. She said:

*When he resumed back at work it wasn't full-time as such, there are a lot of times when he would miss school two days in a week, usually Tuesday and Thursday to attend rehabilitation because he would have to rest. (P11: caregiver).*

Some participants also revealed that they had to change their jobs or concentrate on alternative work options available to them. One participant who was a surgeon prior to the stroke event indicated that he had to forgo operating in the theatre to concentrate on teaching students and junior colleagues. He said:

*I'm not doing that now in terms of operating, I cannot do surgery, that does not prevent me from going to the clinic, teaching medical students, that does not prevent me from coming on the ward round if I like, okay that's it. Like for example, a doctor just came in now, he came to collect a signature for his project part II FMSC project (P2: stroke survivor).*

A key informant revealed that most stroke survivors change their worker role from full time to part-time when the disability that resulted from the stroke limits their performance.

*...many of them would try to change it [their job] entirely if the disability is quite much that they won't be able to get back to full duty that they have been doing before (P18: key informant).*

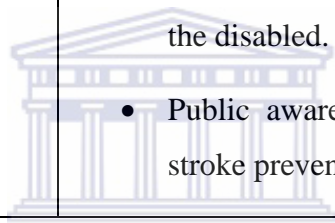
The change of the worker role of the stroke survivors therefore facilitated the adaptation to their worker role.

In summary, the theme reveals that the participants had an intrinsic adjustment process which involved acceptance of their illness, thereafter they developed the motivation to resume their

worker role. The theme also revealed that workplace adaptation aided the stroke survivors to gradually re-integrate themselves to the work place and their worker role.

**Table 4.5:** Theme five and related categories

Theme five	Categories
Promoting participation in work through the support of government	<ul style="list-style-type: none"> <li>• Enabling access to rehabilitation through financial assistance.</li> <li>• Improving rehabilitation resources to facilitate return to work of the stroke survivor.</li> <li>• Changing the environment to accommodate for the disabled.</li> <li>• Public awareness campaigns as a method of stroke prevention.</li> </ul>



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#### **4.5 Theme five: Promoting participation in work through the support of government**

The above theme represents the participants’ perception of changes needed to facilitate the quick return to work of the stroke survivor. Participants indicated that government intervention through policy formulation and enactment, improvement of rehabilitation resources, as well as financial assistance would enable the stroke survivor to re-engage in their worker role. Most of the participants were of the opinion that the rehabilitation workers as well as the government were responsible for the functional limitations that result because of the condition. They further revealed that to enable an effective return to work, policies that will facilitate stroke survivors’ access to quality rehabilitation intervention and the community integration of the stroke survivor must be implemented. One caregiver said:

*I believe that the doctors and the government are contributory factors in making the disease common; they should make the treatment free in order for people with this type of sickness to reduce out there, they should make policies that will ensure that stroke survivor can fit into the society (P11: caregiver).*

Another participant indicated that public awareness as well as encouragement through the provision of free rehabilitation services for stroke survivors would facilitate recovery and the return to work of survivors. She said

*Government should also make rehabilitation free after enlightening the people on the sickness and encourage them to come to the hospital. By this, people will recover and be able to go to work (P12: caregiver).*

The above theme is explained by the following categories: enabling access to rehabilitation through financial assistance; improving rehabilitation resources; changing of the regulatory environment to accommodate for the disabled and public awareness as a method for stroke prevention.

#### **4.5.1 Enabling access to rehabilitation through financial assistance**

This category conveys the participants' description of the means by which rehabilitation services can be made accessible to stroke survivors. Most of the participants were of the opinion that when rehabilitation services are accessible to all stroke survivors, they will be able to resume their worker role. One participant said:

*You know that when people with stroke don't receive adequate treatment it will be difficult to function not to now talk of going back to work. If every one of us can have access to adequate treatment on a daily basis through this rehabilitation; definitely survivors will be able to resume at work (P4: stroke survivor).*

The reduction in the cost of treatment, wider health insurance scheme coverage, as well as provision of disability grants were indicated by participants as ways of enabling rehabilitation accessibility to stroke survivor which could lead to the resumption of their worker role. The different ways of enabling accessibility to rehabilitation are discussed in the subsequent subcategories.

- **Reduction of the cost of treatment would enable access to rehabilitation**

Most of the participants were of the opinion that the reduction of the cost of treatment will increase patronage of rehabilitation services. This, the participants said, will hasten recovery as well as facilitate the return to work of stroke survivors. One participant captured this assertion by stating:

*It is not everybody who can pay what they charge so some of them only come to the clinic once or twice a week and usually it is not enough.... ehm if they get*

*assistance through reduction of the fee charged, many people will like to make use of their service and this will quicken recovery. You know if one recovers than he will be able to return to work (P1: caregiver).*

Another participant indicated that eliminating treatment charges will encourage stroke survivors to attend rehabilitation, thereby facilitating the resumption of their worker role. She said:

*...when they come, government should make the treatment free, because the money they bill us here is too much, with that people will come for treatment and get better to resume work (P15: caregiver).*

The above description was also described by another participant who said:

*The facilities here are provided by government, so they should reduce the treatment charges because I feel that this is responsible for many people with stroke not returning to work. Why did I say this? I will tell you; now when you come for treatment twice or three times they will tell you that your money has expired which also send patients away until there is a pain again. (P4: stroke survivor).*

- **Extension of health insurance scheme to cover the whole population**

Most of the participants indicated that health insurance cover assisted them to access rehabilitation. They further asserted that making the N.H.I.S. available to everyone will enable access to rehabilitation services for stroke survivor, while also improving their recovery and facilitating the resumption of their worker role. One participant revealed this by stating:

*I thank God for N.H.I.S. so now we are using it and my husband is using for drugs, for his treatments and all those things should be available for all those people having this problem, this will make people go for treatment. At least with that, their health will improve, it is then they can now say I want to go back to work (P15: caregiver).*

Another participant pointed out that providing health insurance cover for the population will ensure access to quality treatment intervention at affordable rates for stroke survivors. He said:

*They should provide, for example, the N.H.I.S. that is going on, not everybody benefits from it; we were just lucky to have been part of it. The government should make it available to everybody whether you are in the civil service or private sector; this helped us to get quality treatment at cheaper rate and I know this will help others in our situation (P17: caregiver).*

- **Financial assistance to stroke survivor**

Most of the participants in this study indicated that financial support in the form of disability grant for stroke survivors would assist survivors to pay for rehabilitation services while they were out of work. One participant captured this assertion by stating:

*Government should also provide fund for the stroke survivor since they are not working so that the funds can be used to provide for drugs and the patient's needs and hospital treatment so that the rate of people not going back to work or even dying can be reduced (P15: caregiver).*

Participants indicated that the creation of policies that would ensure financial grants are provided for people who are incapable of gainful employment during rehabilitation would assist stroke survivors in accessing quality rehabilitation service. A caregiver said:

*There is no disability grant in the constitution which are available in other countries and with that, once one is qualified to benefit from this grant the government provide for such an individual by providing something to survive on so all these are things that should be put in place so that stroke survivors can enjoy life while they are away from work. With this they will be able to focus on getting better (P17: caregiver).*

This subcategory indicates that the provision of financial assistance could facilitate the stroke survivors' ability to access rehabilitation services, hence aiding the resumption of their worker role.

#### **4.5.2 Improving rehabilitation resources to facilitate return to work of the stroke survivor**

This category is representative of participants' description of improvement in rehabilitation resources needed to facilitate stroke survivors' return to work. Participants were of the opinion that providing rehabilitation resources in community hospitals, while also equipping those in tertiary rehabilitation centres, would enhance return to work rates of stroke survivors. One caregiver indicated this by stating:

*Whatever is meant for the hospital should be provided so as to make it grow especially the hospitals at rural areas these should be equipped for the benefits of the people, for their health, for recovery because the distance from here to people houses is much but one has to come here since the facilities available here are not in the general hospitals like the Physios and OTs, so we have to come (P16: caregiver).*

Another participant who is a key informant described the need for the improvement in rehabilitation equipment to ensure adequate work assessment and treatment of stroke survivors. He said:

*Also for the facilities needed within the hospital should be provided, those things that need to be improved so as to simulate the ideal environment of the patient, how his home or her home look like, how the work station looks like should be simulated while the process of simulation is going on in the clinic, the patient*

*should go through all those things he needs to go through at home so that it will not be strange to her by the time she gets home, he had to be rehabilitated along the line of what she might likely encounter at home, in the office and even on the street (P19: key informant).*

A team effort was described by participants as necessary not only at the hospital rehabilitation phase of the stroke survivor, but also during community integration for the successful integration of the stroke survivor to his or her worker role. One participant described this by stating:

*We talk about the team work, the issue of visiting patients' work station should be jointly done by the physiotherapist, the occupational therapist and the social workers so that everybody will continue their role in making the patient fit for her work station to perform optimally at her work station, so the team work should be encouraged among the rehabilitation team (P18: key informant).*

#### **4.5.3 Changing the environment to accommodate for the disabled**

Most of the participants were of the opinion that changing and regulating the environment to accommodate for people with disability through government policies will facilitate the re-integration of stroke survivors to their worker role. One of the caregivers explained this by stating:

*So it should be known that this people should be assisted then in our surroundings they should remove all physical barriers like gutters, crossing of gutters with no slabs and the likes, using public transport, all these buses that are high from the ground should have steps, access to buses these are the things that should be done and this cannot be done without changing the regulatory environment through government policy (P17: caregiver).*

Participants indicated that modification and readjustment of the physical work environment will facilitate access in the workplace for stroke survivors. One participant described this by stating:

*Where you have step units, they can put ramps, ramps will enable people climb gradually without stressing themselves, and even people on wheelchair will be able to go through in the workplace (P1: stroke survivor).*

#### **4.5.4 Public awareness campaigns as a method of stroke prevention.**

This category describes the importance of disseminating information about the prevention and treatment of stroke in the community. The participants were of the opinion that public awareness campaigns regarding risks factors and consequences of stroke could be used as a measure to inform the public about stroke prevention, treatment, as well as needed accommodation at the workplace by the stroke survivors. Participants felt that engaging in public awareness campaign



for stroke as it is done for HIV/AIDS, malaria and poliomyelitis will reduce stigmatization as well as ensure participation in rehabilitation among stroke survivors. One participant said:

*If I had heard that type of thing, I wouldn't have had the experience. I'm sure if the same noise they are making about AIDS is being made on stroke, yes I'm telling you emh I wouldn't have had any attack. It should have been given public enlightenment campaign; they make people to know that this can happen. In fact it will reduce the influx of people to the hospital as well as affect people' reaction to stroke survivor (P4: stroke survivor).*

Another participant captured this description by stating:

*Then the way people accept this health condition is not right; there should be awareness programmes that stroke can be cured, that it's not an affliction or an evil disease, it's not an affliction from witch crafts, or wizard, so it's just like any other disease like malaria... (P17: caregiver).*

The above quote describes that informing the public about stroke could help with the societal acceptance of the condition.

Conclusively, the theme reveals that the effective return to work of stroke survivors could be facilitated by enabling access to rehabilitation for stroke survivors through financial assistance, the improvement of rehabilitation resources, as well as the creation of an enabling environment that accommodates people with disability. The theme also reveals that public awareness campaign can influence people's perception about stroke, thus enhancing participation of stroke survivors within the community.

#### **4.6 Summary**

By drawing on the participants' experiences and perceptions regarding returning to work after rehabilitation by stroke survivors, the objectives of the study were achieved. Theme one and theme two described the participants' experiences and perceptions of the barriers that hindered the resumption of the worker role of the stroke survivors. Theme three presented the participants' experiences and perceptions of the factors that aided (also referred to as facilitators) the resumption of worker role of the stroke survivors. Theme four described the participants' experiences and perceptions of the adaptation processes utilised by the stroke survivors in fitting into their worker role. Theme five presented the participants' perception of adaptation to the rehabilitation process that could enable the quick return to work of stroke survivors.

The diagrammatic representation (see figure 4.1) reveals the interactions between the themes. The barriers (theme one and two) and facilitators (theme 3) are shown as influencing the adaptation process of the stroke survivor (theme four). When the facilitators are able to overcome the barriers, the adaptation process of returning to work is considered to be successful. However, when the facilitators are challenged and overwhelmed by the barriers, the adaptation process of returning to work is termed a failure. The changes needed within the rehabilitation process of the stroke survivors that were revealed in theme five when carried out/effected would both influence the barriers and the facilitators to achieve the quick adaptation/re-integration of stroke survivors into the workplace.



## CHAPTER FIVE

### DISCUSSION

#### 5. Introduction

In this chapter the barriers and facilitators that influenced the resumption of the worker role of the stroke survivors are discussed. The strategies utilised by the participants in adapting to their worker role as well as the various changes needed in the return to work process to facilitate the quick re-integration of stroke survivors to the workplace are also discussed. The results of this study are interpreted within the Person Environment Occupation model of occupational performance. This model is used to discuss and explain the participants' perceptions and experiences related to stroke survivors adapting to their worker role. The model highlights the relationship that existed between the stroke survivors and occupation, the stroke survivor and the environment, as well as the environment and occupation. It also shows the interactions that occurred within the three sub-systems of the stroke survivor to ensure the successful work re-integration for the stroke survivors.

#### 5.1 Barriers

The term barrier signifies those factors that hinder or negatively affects the participation of stroke survivors in the resumption of their worker role. Barrier was defined by the World Health Organization as factors that, through their absence or presence in an individual's environment limit the functioning of the individual, while it also creates disability (WHO, 2001). These factors, according to WHO (2001), include the physical environment that is inaccessible, dearth of relevant assistive technology, and negative attitudes of people towards disability, as well as services, systems and policies that are either non-existent or that hinder the involvement of all people with a health condition in all areas of life. Further to this, the stroke sequelae as well as the functional limitations resulting from the stroke were interpreted as barriers preventing the resumption of the participants' worker role.

The results of this study indicated a significant agreement among the participants regarding what the stroke survivors experienced as barriers. Theme one "experience of loss by stroke survivor," describes one of the barriers that hindered the adaptation of the stroke survivors to their worker roles. The Microsoft Encarta dictionary (2009) define 'loss' as having less of something or not

having what an individual used to possess in the past. The experience of loss was in consonance with a qualitative meta-synthesis conducted by Salter, Hellings, Foley, and Teasell, (2008) who report a similar experience of loss by stroke survivors in their study. The losses experienced by the participants in this study were felt in the physical, cognitive, speech, emotional and functional domain.

### **5.1.1 Loss of physical ability**

The loss of physical abilities experienced by the stroke survivors in this study could be ascribed to motor impairments that manifested itself in the form of hemiplegia or hemiparesis, abnormal reflexes and muscle tone as well as spasticity on the affected side after the stroke. These affected the stroke survivors' ability to engage in daily occupations inclusive of their worker role (Orchanian & Jamison, 2011). For example, one participant indicated that the hemiplegia resulting from the stroke resulted in his inability to practice surgery.

The recovery of physical abilities after stroke has traditionally been reported to peak within the first three months after the onset of the stroke followed by a slower recovery in the succeeding one year (Orchanian & Jamison, 2011). The participants in this study indicated that the slow recovery of physical abilities especially of mobility function caused them to stay at home for a considerable period of time to recover before resuming at work.

### **5.1.2 Loss of cognitive and speech function**

According to Zinn, Bosworth, Hoenig and Swartzwelder (2007), a common consequence of stroke is reduction in the efficiency, speed and persistency of thinking that is necessary for occupational performance. This sequelae, which is often referred to as cognitive deficits, could affect either global or specific mental functions of the survivor. The cognitive deficits could also range from problems regarding initiation, recognition, attention, orientation, sequencing, categorization, concept formation, spatial operations, problem solving and learning abilities (Orchanian & Jamison, 2011). For instance, participants in this study revealed that they had difficulty in the assimilation, memorization and recalling of information, as well as difficulty in focusing on tasks after the stroke. These cognitive problems persist after they returned to work as they strived to remember task directives and to relearn new tasks.

The participants also indicated that they had difficulty communicating with people due to language dysfunction. Gillen (2006) posits that stroke may result in a range of language or speech disorders that could vary in severity from mild to severe. These disorders occur frequently in stroke survivors that had experienced a left hemispheric CVA while it is less frequent amongst survivors with right hemispheric CVA. For instance, one participant revealed that he was incoherent in his speech and that the people he was addressing could not understand what he was saying. The foregoing situation or language disorder is congruent to what Gillen (2006) describes as global aphasia which results from damage to the middle cerebral artery. These communication problems affected the ability of the participants to relate with people especially their co-workers before and after resuming at work.

### **5.1.3 Emotional disturbance and loss of future aspirations**

The participants in this study revealed that they felt devastated and hopeless after the stroke event. Orchanian and Jamison (2011) assert that the stroke survivor may experience a number of psychological changes, such as depression, irritability, low tolerance for stressful situations, fear and anxiety, anger, frustration, swearing, emotional lability, and catastrophic reactions after stroke. Depressive episodes were also experienced by the participants as one participant indicated that he was tired of life and emotionally disturbed after being discharged from the hospital. As Carota and Bogousslavsky (2008) further suggest, the inability to perform previous tasks that were considered easy lead to emotional outburst and expressions such as sobbing and the feeling of hopelessness. The participants revealed that the loss of their independent functioning in daily occupations such as self-care, leisure and work brought feelings of hopelessness and chaos into their life. These psychological changes affected the participants' work ability and eventual resumption of their worker role, a development that is consistent with the findings of Carota and Bogousslavsky (2008) and Thompson and Ryan (2009).

Also, the participants indicated that they were no longer interested in those things they had pre-morbidly yearned, strived and worked for after the stroke event. Most of them that had looked forward to promotional opportunities lost interest in it while others rejected promotional offers at work due to their reduced work ability. Alaszewski et al. (2003) state that the experience of stroke by survivors is a clear defining moment that makes them challenge and rethink who they are and what they want. The experience, Alaszewski et al. (2003) suggest, make survivors to

review their goals, expectations and ambitions. The participants' inability to perform their previous occupational roles made them to lose hope in their aspirations. This could be seen amongst the participants of this study as one participant indicated that he abandoned his postgraduate studies after self-appraisal of his capabilities. Participants further revealed that it took them ample time to recover and to accept their capabilities to build new goals and aspirations. This could be due to what Wood, Connelly and Maly (2010) refer to as the uncertainty that stroke survivors experienced in their day-to-day lives which make them to take each day as it comes. This loss of future aspirations, specifically work ambitions considerably affected the participants' ability to resume their work.

Alaszewski et al. (2003) assert that the experience of having a stroke causes survivors to undermine the basic trust and confidence they have in themselves and in the world. The undermining of this basic trust and confidence of the survivors made them to perceive that people do not really understand what they were experiencing as stroke survivors as the effect of the stroke on their lives cannot be clearly described and understood by someone who had never experienced a stroke. This point of view could have resulted in a feeling of doubt in treatment intervention and rehabilitation specialist's skill as well as in caregiver's attitude by the survivor.

- **Loss of confidence in one's self**

The participants in this study revealed that their inability to perform previous tasks caused them to lose confidence in themselves and their work ability. This, according to them, also resulted in the loss of confidence in their work ability by their spouse, co-worker and employer. Literature evidence reveal that the inability to re-integrate into the community, live independently and fulfil expectations set by stroke survivors results in and reinforces a feeling of dependence and loss of confidence (Wood, Connelly, & Maly, 2010; Robison, Wiles, Ellis-Hill, McPherson, Hyndman, & Ashburn, 2009). The stroke survivor's spouse, co-worker and employer also had reservations regarding the survivor's capability and resumption of their worker roles. This was attributed to the survivor having a second stroke and having marked physical impairments observed by their spouse, co-workers and employers while they were back at work. This fear of a second stroke and marked physical impairments has been indicated to significantly impact on the confidence, self-identity and the resumption of the stroke survivor's worker role (Reed, Harrington, Duggan, & Wood, 2010; Robison et al., 2009; Alaszewski et al., 2003).

#### **5.1.4 Limitation in functional abilities affected survivors' worker role**

The participants reported they experienced limitation in their former functional abilities that resulted in performance deficits in their activities of daily living inclusive of their worker role. This limitation in functional abilities have been found to have a dual role i.e. impact on the stroke survivors' participation in valued occupations as well as disrupt their established pattern of interactions in familial relationships, employment, social roles and communal engagements (Robison et al., 2009; Alaszewski et al., 2007). A participant mentioned that her husband's reduced functional ability after the stroke made it difficult for him to perform previous work related tasks. The foregoing notion substantiates the findings in a longitudinal study conducted to investigate work loss following stroke among 71 participants, where the authors report the participants' functional abilities as the most important predictor for return to work (Gabriel & Renate, 2009). Even though literature evidence reveals that survivors with better functional abilities are generally likely to resume their worker role after stroke, it could be argued that such predictors may have limited value for younger stroke survivors with mild cognitive impairments as this might not necessarily result in functional limitations but could influence vocational outcomes (Busch, Coshall, Heuschmann, McKeivitt, & Wolfe, 2009).

- **Severity of the stroke**

Participants reported that the extent of damage to the stroke survivors' health as a result of the severity of the stroke influenced the resumption of their worker role. Literature evidence reveals the severity of the stroke to be an independent predictor for vocational outcome for stroke survivor (Busch et al., 2009; Treger et al., 2007). In a population based study conducted by Busch et al. (2009), the acute and chronic severity of the stroke had a strong negative influence on return to work of stroke survivors. This could be seen in the current study as some participants indicated that they were lucky to have only experienced a minor stroke. The significance of the severity of the stroke on the resumption of the participants' worker role is indicated by the neurological parameters involving the extent of motor and cognitive impairments (Treger et al., 2007).

#### **5.2 Barrier- Returning to work is a struggle**

The theme "returning to work is a struggle" was viewed by the participants of this study as a barrier. This barrier was interpreted as the struggle they encountered while trying to fit in at work

due to their job characteristics, societal stigma, as well as the difficulty experienced in accessing rehabilitation intervention and their workplace.

### **5.2.1 Access to rehabilitation intervention is a struggle**

According to Abdullah, Mannava, and Annear (2013), the inaccessibility of rehabilitation services cast a great burden to the prevention, treatment, and recovery of non-communicable disease in low and middle income countries. The participants in this study encountered difficulty while accessing rehabilitation services due to the high cost of treatment and the distant location of the rehabilitation centres that provide the services. A study conducted by Brainin, Teuschl, Kalra (2007) reported that the long-term management of stroke is hindered by inaccessibility as well as unavailability of adequate rehabilitation facilities in developing countries. The high cost of treatment and long term management of stroke made access to acute treatment as well as rehabilitation services for the stroke survivors unaffordable and improbable. This was evident in the research conducted by Wahab (2008) who asserted that the lack of affordability of treatment intervention increases the burden of stroke in Nigeria. These hindered the recovery, community integration as well as the eventual return to work of the stroke survivors.

- **The distance to rehabilitation facilities from survivors' homes limit access to rehabilitation intervention**

Johansson and Wild (2010) opine that differences in access to rehabilitation services may occur due to geographical barriers and inadequate resources. The participants in this study were prevented from accessing rehabilitation intervention due to distant geographical location of the rehabilitation centres from their homes as well as limited transportation resources within their communities. Despite the move towards a primary health care approach in Nigeria, the unavailability of adequate acute care and rehabilitation services in primary and secondary health service centres have been indicated to make the burden on tertiary health service centres problematic. This has been attributed to the relative availability of human and material resources in the tertiary health service centres which causes health consumers to patronise the tertiary health service centres, leading to the abandonment or neglect of the primary and secondary health service centres (Amaghionyeodiwe, 2008; Adeyemo, 2005).

In order to access comprehensive rehabilitation services, the participants had to travel several kilometres from their communities to the treatment centres which is often hindered by poor



transportation routes from their communities and unaffordability of transportation cost by the participants. Rhoda, Mpofu and Deweerdt (2009) assert that larger percentages of stroke survivors could be disadvantaged from accessing rehabilitation services due to unavailability of rehabilitation services at the primary level of care as well as long distance of travel needed to access such services by stroke survivors at a tertiary level of care.

### **5.2.1 Inadequacy of treatment and poor insight of stroke survivors affects participation in rehabilitation**

The study participants were of the opinion that the treatment and rehabilitation services provided to them were inadequate thus reducing their chances of recovery and return to work. Johansson and Wild (2010) report from their review of literature that the lack of monitoring facilities and equipment as well as unavailability of adequate rehabilitation facilities, leads to poor rehabilitation outcomes amongst stroke survivors in developing countries. Similarly, Adika et al. (2011) mention that suboptimal provision of diagnostic and treatment services, significant deficiencies in rehabilitation and support services for stroke survivors negatively influenced the outcome of stroke management in Nigeria. These were reported by the participants of this study as they indicated that they were involved in rehabilitation for restricted periods of the week and made to do more home programmes due to inadequate human resources (rehabilitation specialists) in the rehabilitation centres. Also, they indicated that many of the specialists needed for the effective rehabilitation of their conditions were not readily available which made follow up care within the community impossible.

The inadequacy in treatment observed by the participants was not only due to inadequate rehabilitation resources but also resulted from poor insight of stroke survivors regarding rehabilitation. The participants indicated that inadequate information regarding the stroke caused some stroke survivors to have poor insight about their condition, and this further resulted in them not seeking medical intervention. According to Brainin et al. (2007), poor awareness of stroke among stroke survivors and poor compliance with treatment is a huge constraint on the long term management of a stroke. Similarly, Culler, Wang, Byers, and Trierweiler (2011) report poor insight regarding stroke deficits and capability as a barrier to the resumption of the stroke survivor's worker role. The resultant effect of these is manifested in the poor recovery rate of stroke survivors with an extended influence on the resumption of their worker role.

### **5.2.2 Access to workplace is a struggle**

The participants of this study had difficulty accessing their workplace due to physical barriers within the environment. According to Culler et al. (2011), inaccessibility of the workplace environment remains a significant hindrance to community integration of the stroke survivor especially when returning to work. The above authors report in their study on barriers and facilitators of return to work among stroke survivors, that inaccessibility of the work environment (with regards to disabled parking space and distance of survivors' offices from parking garage) has a negative influence on return to work. They further report the absence of public transportation within the work environment and the unavailability of transportation systems for people with disability as a barrier to the resumption of stroke survivor's worker role. The findings of this study was in consonance with the findings of Culler et al. (2011) discussed above as the participants identified poor transportation routes and unavailability of transportation that could accommodate people with disability within their communities, as factors that contributed to their difficulty in accessing the environment and eventual return to work. The absence of implemented and enforced disability legislations that prohibits as well as punishes discriminatory practices against people with disability within the Nigerian society can be attributed to be a reason for the participants' experience of inaccessibility to the workplace caused by architectural barriers, and inability to use public transportation (Chinaedu, 2012; Lang and Upah, 2008).

### **5.2.3 Negative characteristics of the stroke survivor`s work influences return to work.**

Job characteristics have been unanimously recognized as having an influence on the resumption of the stroke survivors' worker role in the literature. Literature evidence (Tanaka, Toyonaga, & Hashimoto, 2013; Culler et al., 2011; van Velzen, van Bennekom, van Dormolen, Sluiter, & Frings-Dresen, 2011) asserts that job characteristics such as the type of work such as blue or white collar categorization, level of education, job position among others coupled with other factors influences the return to work of stroke survivors. In this study, participants indicated that their involvement in a non-manual type of job provided them with the opportunity to resume their work after the stroke. This is consistent with findings from studies conducted by Tanaka et al. (2013); Hannerz, Pedersen, Poulsen, Humle, and Andersen, (2011); as well as Vestling et al. (2003). The foregoing authors report that being involved in a manual or blue collar type of job

negatively influences the resumption of stroke survivor's worker role. Along similar lines, the participants revealed that their premorbid work position influenced the resumption of their worker role. They indicated that being senior on the job provided them with opportunities to assume a supervisory role after returning to work which would have been impossible for a junior worker.

Furthermore, participants asserted that working within the private sector negatively influenced return to work of stroke survivors. This was attributed to be due to the lack of provision of reasonable accommodation in the workplace by private owned companies, as participants disclosed that the push for high productivity level in these companies would have led to most stroke survivors' retrenchment from work. In contrast, participants indicated that working in the civil service (public service) have a positive influence on the resumption of their worker role as the civil service encourages reasonable accommodation for people with disabilities thereby ensuring longer retainment of their jobs. Culler et al. (2011) states that a mismatch between stroke survivors' current capabilities (work abilities) and precise job requirements endangers (acts as a barrier to) the resumption of the worker role of stroke survivor. The lack of reasonable accommodation for the stroke survivors that work with privately owned companies would lead to a mismatch between their work abilities and job requirements thereby endangering their productivity at work as well as job retainment (van Velzen et al., 2011).

#### **5.2.4 Stigma attached to deformity resulting from stroke negatively affects survivor's return to work**

The Microsoft Encarta dictionary (2009) defines stigma as a shame or disgrace ascribed to things that are considered as socially unacceptable. Most of the participants in this study revealed that the stigma attached to deformity in the society caused stroke survivors not to attend rehabilitation and to return to work. Omu and Reynolds (2012) report in their qualitative investigation of the quality of life of stroke survivors in Kuwait that disability-related stigma negatively affected the quality of life of their study participants. The above authors further indicate that the shame attached to having an altered walking pattern led to social withdrawal of stroke survivors which inevitably affected their quality of life. This is somewhat similar to the results of the current study as the participants indicated that the shame of walking awkwardly within the society caused social withdrawal among stroke survivors.

Also, participants of this study indicated that misconceptions about stroke in the society resulted in inadequacy in their rehabilitation. Owoeye (1996) asserts that misconceptions regarding chronic disease conditions such as stroke cause individuals to droop to superstitious and socio-cultural practices. He further states that disease conditions that results in physical disabilities are seen as afflictions from evil gods that requires rituals which caused them not to seek medical intervention as they are left to suffer unnecessarily while appeasing the gods. The foregoing is congruent with the findings of this study, as some of the participants sought medical intervention late due to the misconception that the stroke they had experienced was an affliction from the evil world. This, they said, negatively affected their recovery and eventual return to work.

### **5.3 Facilitators to the resumption of one's worker role after stroke.**

Theme three “rehabilitation and social support as enabler to resume one's worker role after stroke” was interpreted as facilitators by the participants of this study. The Microsoft Encarta dictionary (2009) defines facilitator as somebody or something that enables a process to happen. The WHO (2001) gives a more encompassing definition of facilitators by describing it as those factors that their absence or presence in an individual's environment improve functioning and reduce disability. These factors were described to include the physical environment that is accessible, presence of relevant assistive technology, and positive attitudes of people towards disability, as well as services, systems and policies that promotes the participation of all people with a health condition in all areas of life. In this study, the facilitators were described by the participants in terms of the characteristics of rehabilitation and the environment which includes but not limited to social support that aided the stroke survivor's resumption of the worker role.

#### **5.3.1 Engagement in rehabilitation helped with recovery and return to work**

The participants in this study felt that their engagement in rehabilitation aided their recovery and eventual return to work. Rehabilitation interventions such as occupational therapy, physical therapy and vocational rehabilitation among others have been reported in the literature to improve recovery and return to work among stroke survivors (Langhorne, Bernhardt, & Kwakkel, 2011; Dohle, Püllen, Nakaten, Küst, Rietz, & Karbe, 2009). However, rehabilitation interventions conducted one year or more after stroke was reported by Aziz, Leonardi-Bee, Phillips, Gladman, Legg and Walker (2009) to provide inconclusive evidence regarding stroke survivors' outcome. In the current study, most of the participants engaged in rehabilitation intervention for periods

greater than one year and reported improvement in their health function even after they had returned back to work. Participants indicated that they made use of rehabilitation services provided by the occupational therapist and/or physiotherapist. To complement treatment services, some of the participants engaged home-based therapy services which they said, aided their recovery. Although the effectiveness of such home-based therapy services has not been proven to supersede those received at hospital based rehabilitation centre (Roderick, et al., 2001), it has however been reported to improve the stroke survivor's satisfaction (Holmqvist, von Koch, & de Pedro-Cuesta, 2000).

According to Hofgren, Bjorkdahl, Esbjornsson and Stibrant-Sunnerhagen (2007), the improvement in cognitive and neurological function following rehabilitation is a significant factor in the resumption of stroke survivors' worker role after stroke. The participants of this study indicated that the improved function they experienced after rehabilitation enhanced their confidence and their work ability. This, they said aided the resumption of their worker role.

#### **5.3.1.1 Rituals and faith aided recovery after the stroke**

Some of the participants felt that rituals and faith aided their recovery and return to work. The participants engaged in spiritual rituals and prayers which they indicated improve their health function. A participant described that she engaged the service of a traditional healer who invoked some spirit and incantation which helped her recovery. Even though quantitative measure of religious faith was reported by Omu, Al-Obaidi, and Reynolds (2012) not to have any influence on life satisfaction or self-efficacy of stroke patients, Dalvandi, Ekman, Maddah, and Heikkilä (2013) however report contrasting findings from their qualitative inquiry as participants felt that faith in God assisted them in coping with their emotions and improvement of self-efficacy. In the current study, recourse with God by participants after the stroke event assisted participants with coping and recovery while rituals and prayers were also reported to positively influence recovery. The influence of spirituality of stroke survivors on recovery has been linked with emotional and psychosocial recovery (Lamb, Buchanan, Godfrey, Harrison, & Oakley, 2008; Giaquinto, Spiridigliozzi, & Caracciolo, 2007).

#### **5.3.2 Supportive environment helped stroke survivor in resuming their worker role.**

The participants of this study revealed that a supportive environment was a major enabler for the resumption of their worker role. These supportive environments were indicated to be workplace

support, supports from family and friends, medical support in the form of health insurance. At the workplace, return to work policies that offer work trials, alternative work placement and reasonable accommodation to the participants while returning to work were described as beneficial to the resumption of their worker role. In returning an injured employee to work, Friesen, Yassin and Cooper (2001) assert that return to work programmes play an essential role. Such programmes, when accompanied with employer's positive attitude, flexible work hours and good adaptation to stroke survivor's needs could lead to successful return to work (Alaszewski et al., 2007; Koch, Egbert, Coeling, & Ayers, 2005; Lock et al., 2005). The participants of this study revealed that their employer's positive attitude towards their resumption of working role and reasonable accommodation provided to them through flexible work hours facilitated their return to work. Most of the participants indicated that financial assistance given at the workplace provided them with the opportunity of early and comprehensive rehabilitation as well as early return to work. This assertion by the participants is in consonance with the result from Hofgren et al. (2007), Treger et al. (2007) and Heinemann, Roth, Cichowski, and Betts (1987) who indicate that environmental factors such as the nature of welfare system influence return to work. Even though the financial support from government in the form of social security disability income or injured worker settlement fund were not available in Nigeria for the participants as it would have been for stroke survivors in other countries such as the US, UK and South Africa among others, the financial assistance provided at the workplace through the payment of participants' salaries while they were out of work could be argued to have served the same purpose. In contrast to the above, the availability of compensation or salary for injured workers such as the stroke survivor could make the survivor not to resume work even after the recovery of work ability (Hartke, Trierweiler, & Bode, 2011). As revealed by a participant of this study, the payment of compensation in the form of salary of the stroke survivors that were in the process of recovery might cause them to stay away from work. They may claim to be unable to work even after regaining work function or to put minimal effort into regaining their work ability.

Some of the participants also felt that the support received through their health insurance cover whereby they were only made to pay 10% of their medical bills facilitated the resumption of their worker role. This, they said allowed them to access rehabilitation services and to procure medications needed for their recovery. Health insurance has been asserted to provide a link or

bridge in facilitating access to healthcare through the reduction of the burden of cost of treatment of the injured individual in the world (Cristancho, Garces, Peters, & Mueller, 2008). Being insured could be attributed to availability of more therapeutic, preventive and diagnostic services for the insured individual as well as providing the insured individual with the opportunity of seeking early medical care (Hadley, 2003). It could be adduced from the foregoing that the participants' medical insurance cover provided them the opportunity to a relatively unhindered treatment and rehabilitation service which aided the resumption of their worker role.

### **5.3.2.1 Support from family and friends enhanced survival after stroke**

The family and friends were described to be an essential aspect of support for the participants in this study. The participants described that the assistance they received from their immediate family in performing self-care activities and attending rehabilitation programmes played a significant role in getting back to their normal self. Medin et al. (2006) identify family support from the stroke survivors' spouses, children or parents to play a major role in their recovery and return to work. The result from this study was also in consonance with findings from the study conducted by Alaszewski et al. (2007) who report social support from the family, friends or work colleagues as an important determinant in their study participants' return to work. Assistance offered in the form of social support to ameliorate difficulties that hinder participation in daily activities by the family, friends or work colleagues helped the stroke survivors in building confidence and overcoming such difficulties. The participants of this study averred that the assistance given to them by friends and work colleagues was of crucial help in overcoming the hurdles posed by inaccessibility of the rehabilitation centres and their workplace caused by poor transportation routes. They indicated that their recovery and return to work would have been difficult without this support.

Stroke survivors with small social networks of family, friends and co-workers are usually presented with fewer opportunities of engaging in meaningful occupation, felt like burdens on others and at the same time with low motivation. This was observed from the study as a participant indicated that having friends around him availed him the opportunity not to be seen as a burden to just an individual but to be able to reach out to different people for help. He captured it with an excerpt by stating that it might be a colleague at work that assisted him with

transportation to the workplace and another friend that helped him access rehabilitation. This, he asserted, caused him not to feel like a burden to an individual during his recovery.

#### **5.4 Adaptation to the cerebrovascular accident and return to work**

While there are different strategies in coping with chronic disease such as stroke, the participants of the current study emphasized both intrinsic and extrinsic strategies through which stroke survivors that were participants of this study adapted to their cerebrovascular accident and return to work. Theme four; “adaptation strategies that enable the return to work for stroke survivors” was interpreted as participants’ effort in adapting to their health condition and returning to work. Moyers (2005) defines adaptation as an internal process through which an individual responds to the need for change by combining new occupational skills and behaviours into daily occupational performance. In this study, the participants adapted to the cerebrovascular accident they experienced by returning to work through an intrinsic process that involved accepting their condition and being motivated to return to work. These intrinsic processes aided the participants in adapting to their ability to cope. The participants further described an extrinsic process of adapting through gradual work exposure as well as workplace and home adaptation. These extrinsic processes also aided the participants’ ability to adjust/adapt with their work and to fit the environment as well as the job to their functional capacity. While the intrinsic and extrinsic strategies are some of the ways to cope with the stroke event, they are not an end in themselves, as the two strategies employed by the participants could be seen as a dynamic process of reconciliation occurring within the participants’ past and present selves (Salter et al., 2008).

Schultz (2009) in her occupational adaptation theory describes the process of adaptation of an individual to influence the functional performance of the person while performing activities. These processes of adaptation was theorized by the author to occur in three overarching elements comprising the individual as the internal factor, the occupational environments as the external factor, as well as the interaction occurring between the two factors as they influence each other. Similarly, the adaptation of the participants to the stroke could be observed in their occupational performance areas as described with the Person Environment Occupation model by Law et al. (1996). The P.E.O. indicates the adaptation of the individual (occupational performance) to be transactively influenced by the individual’s inherent characteristics, the environment and the task or occupation being carried out. In the context of this study, the adaptation of the participants to



resume their worker role after rehabilitation is explained with the process of acceptance of illness, motivation to return to work, gradual work exposure as well as workplace and home adaptation.

#### **5.4.1 Acceptance of illness**

The acceptance of the illness was described and seen by the participants to be a turning point in taking hold of their lives. They indicated that after realizing there was nothing they could do to reverse the stroke event, they had to move on to living fulfilling lives in their present condition. Although the process of acceptance was seen to be unique for each individual as the participants have unique personalities occurring within peculiar social context and support systems, the acceptance of the condition was however observed to cut across the study participants and reported to be the first step in adapting to the stroke condition. Soeker (2011) reports similar results in his study on occupational adaptation following mild to moderate brain injury in South Africa. The above author observed the acceptance of the condition by his study participants to be the foremost step in adapting to brain injury.

Ch'Ng, French and Mclean (2008) in their description of coping with the challenges of recovery after stroke describe an experience of uncertainty and confusion (while dealing with the physical deficits and the challenges of medical care) to precede the acceptance of the condition by the stroke survivor. This also was an experience that was common among the participants of this study as they indicated to have struggled with the sense of loss of formal self while accessing rehabilitation and getting back to normal life. There was an increasing awareness of the limitations placed by the impact of stroke on the stroke survivors. This, the participant revealed, resulted in feelings of distress as they struggled to return to work. Acknowledging these serious consequences of stroke has been reported to be an evolving process which is also preceded by a feeling of denial (Salter et al., 2008) and bedevilled or threatened by constant reference to premorbid life (Dowswell, Lawler, Dowswell, Young, Forster, & Hearn, 2000). The above assertion is consistent with the findings of the current study as participants described feelings of nostalgia. The participants constantly looked back to what life would have been without stroke and always felt devastated. This comparison with premorbid self has been posited by Rochette, Tribble, Desrosiers, Bravo and Bourget (2006) to be ineffective and to bring feeling of frustration for the survivor that had experienced a mild stroke.

Furthermore, acceptance of the realities of stroke was asserted by Ch'Ng et al. (2008) to be a critical factor that leads to an experience of less distress and positive adjustment. This was also evident in the recovery of the participants of this study as they indicated that accepting their current functional status caused them to work towards getting better to improve their quality of life as they strived to live a fulfilling life. Acceptance of stroke was described to be influenced by different factors that include the spirituality and belief of the participants as well as the insight provided through survivor's participation in rehabilitation intervention. The influence of spirituality and belief on participants' acceptance of their condition could be compared to what Tipton-Burton, McLaughlin and Englander (2005) describe as bargaining in their study on brain injured individual whereby the individual sought God's help in regaining their functional abilities as they diligently partake in rehabilitation. Most of the participants in this study placed great faith in God as they felt that this was the only power that has control over their lives and could assist them with their recovery. Participants further revealed that their involvement in rehabilitation enhanced their insight regarding stroke thereby causing them to accept their capabilities and reconcile their goals with it. Knowledge has been indicated to have an overarching influence on the insight and choices of action in recovering and adapting to stroke (Kessler, Dubouloz, Urbanowski, & Egan, 2009). The knowledge accrued while undergoing rehabilitation by the participants of this study influenced their acceptance of the stroke and the choices that they made towards recovery. This finding is in agreement with the findings of Kessler et al. (2009) who report that the knowledge that their study participants accrued during rehabilitation, influenced decisions related to their recovery and health. It also influenced the examination of their approach of living with functional limitations.

#### **5.4.2 Motivation to return to work**

Resuming previous roles and abilities such as work after experiencing a stroke is not only an important milestone in recovery but has also been reported to boost confidence, self-worth and sense of achievement of the stroke survivor (Burningham, 2001). Motivation is documented to play a significant role and a major driving force for the stroke survivor in achieving this milestone (Vestling, Ramel, & Iwarsson, 2013; Dekkers-Sánchez, Wind, Sluiter & Frings-Dresen 2011; Hartke, et al. 2011, Alaszewski et al., 2007; Corr & Wilmer 2003). Most of the participants of this study revealed that they were being motivated through various factors to resume their worker role. This is consistent with the findings from the study conducted by

Dekkers-Sánchez et al. (2011) who report work motivation and a positive attitude to work to be the most significant determining factor in returning people to work after long term sick leave. These could be attributed to the fact that motivated injured workers employ inherent positive attitudes to explore available options to achieve their goal of work return.

In the context of the current study, the fear of losing one's job, the value stroke survivors attached to their worker role, societal role and responsibilities as well as boredom and loneliness were described as factors that motivated the participants to resume their worker role. This is consistent with findings from studies conducted by Hartke et al. (2011), Alaszewski et al. (2007), and Corr and Wilmer (2003). The foregoing authors report the value attached to work and the benefits derived from work (such as financial gains in terms of money, escape away from boredom and provision of a social status) to be motivation for stroke survivors to resume work after they had experienced stroke. With the absence of disability grant or social security, most of the participants of this study strived to regain their work ability through participation in rehabilitation in order not to lose their source of income. Economic and financial pressure has been reported to be a driving force in motivating stroke survivors in resuming their worker role after stroke (Corr & Wilmer 2003). This could be seen in the current study as participants indicated that in order to meet the social responsibility as a father or mother as well as to achieve sense of worthiness to the society, they had to resume previous worker role or take up new worker roles. Here, it is not only about resuming work to earn money but also to substantiate their parenthood in their families.

The participants in this study also revealed that their knowledge about the positive influence of engagement in work after stroke motivated them to return to work. It could be reasoned that most of the participants who accepted their functional limitations and adapted to their medical impairments fully participated in rehabilitation and some occupational tasks such as self-care, work and leisure. In the first few weeks after the stroke, the inability to engage in and perform premorbid occupational tasks by most of the participants resulted in depression and social isolation. The improvement in health function and well-being of the participants after rehabilitation made them to realize the progress they had achieved thereby reinforcing the feeling that active participation in occupational tasks could and would influence their recovery. This is in consonance with Wilcock's assertion (1993) that humans engage in occupation for their survival and for the intent of their well-being. Similarly, Johansson and Tham (2006) in their

study conducted with acquired brain injured participants indicate work to be a stimulator of activity and also a means of preventing their study participants from developing feelings of self-pity as well as improving their self-esteem. The importance or value placed on work was seen to influence motivation to return to work among most participants of this current study. For instance, returning to work was indicated as serving as a form of rehabilitation for survivors' functional abilities and as an important structure to their daily life. Likewise, attaining the peak of their career was considered as important for the participants. This, the participants revealed, motivated them to resume their worker role. The above findings were consistent with the findings of Johansson and Tham (2006) who reported work to serve as a means of rehabilitation and a significant part of daily living for their study participants. Rubenson, Svensson, Linddahl and Björklund (2007) also share similar assertion regarding individual valuation of work as a significant influence on resuming one's worker role after acquired brain injury.

### **5.4.3 Strategies of work return**

The process of return to work by most of the participants of this study entailed a gradual transition into the workplace. This process is similar to the return to work plan and intervention phase of traditional or standard vocational rehabilitation procedure described by Ross (2007). The above author explains a return to work plan to entail a planned/organized graduated programme that enable the injured worker to return to work on suitable duties with necessary accommodation. This plan which is usually drawn out in collaboration with the injured worker and employer include but are not limited to modification to the workplace environment, work hours and workload, as well as needed training and support. Ross (2007) describes the intervention phase to involve supporting the injured worker through encouragement from family and co-workers, development of in-work support group for the workers, work hardening during rehabilitation as well as employer education (advising employer on their responsibilities). This two phases share similarities with the strategies used in getting the stroke survivors that were participants of this study back to work. Even though the phases (return to work [R.T.W.] plan and intervention) were not strictly adhered to, and also not the same for all participants (due to inadequacies in rehabilitation resources), they however shared similar patterns and peculiarities among participants. These strategies are discussed in subsections relating to gradual work exposure and, workplace and home adaptation.

#### **5.4.3.1 Gradual work exposure**

The participants indicated they gradually developed into their previous or new worker role through a dual process of being present in the workplace without an assigned duty (specific work assignment) and a reduction of their work duration and workload. This gradual work exposure entailed an initial re-entry into the workplace by first going to the workplace for the participants and doing nothing in order to re-develop their worker identity. For instance, a participant indicated that when he initially resumed at work, he was not teaching but staying at the workplace just to get used to teaching again. This could be considered as one of the needed training and support that was described by Ross (2007). With the aforementioned, it could then be argued that the participants were trying to rediscover their worker identity by presenting themselves at the workplace even while they had no assigned duties given to them.

Graded exposure or transition to work tasks after an injury or illness during work rehabilitation has been reported to facilitate the quick re-entry of the injured worker to his/her worker role by ensuring a fit between the job demand and the functional capacity of the worker (Cook and Lukersmith, 2010). In the context of this study, being present in the work environment without specific work assignment (meaning not doing actual work or resuming work duties) during recovery availed the participants the opportunity of familiarising themselves with the actual work environment after several months of work absence. This phase of being present at the workplace could have been achieved easily if a comprehensive work assessment, simulated work environment and/or work-based rehabilitation involving the pre-vocational programme (such as supported employment) had been available for all of the participants during rehabilitation. A comprehensive vocational rehabilitation programme enables quick adaptation of the participants to their worker role by providing needed work skills training to enhance the work ability of the stroke survivor through job site analysis thereby enabling work retraining in actual or a simulated work environment (Sinclair, Radford, Grant, & Terry, 2013; Wolfenden & Grace, 2009; Stock, 2006). This would have helped the stroke survivor in adjusting or overcoming the barrier of getting used to being at work after a long work absence. However, in order to overcome the inadequacies in the rehabilitation programmes, the participants took actions by themselves and gradually adapted themselves into their worker role with the available workplace support. The adaptation was observed to have been facilitated through an initial reduction of work time and workload followed by a subsequent gradual increase in the duration spent at work and the

workload after achieving competence at a preceding level. This process was indicated by the participants to have taken a variation in time (fewer months for some while others could only achieve this over a period of one to two years) before plateauing. The subsequent subheading; reduction in work time and work load, is used to describe further how the gradual work exposure strategy utilized by the participants enhanced their return to work and retention of their worker role.

- **Reduction in work time and workload**

Literature evidence asserts that the successful re-integration of an injured worker into the workplace involves the re-establishing of necessary work capabilities of the individual via retraining and rehabilitation, adapting the individual worker and the workplace to a new situation post-injury and encouraging effort to support safe and sustained work (Wolfenden & Grace, 2009; Shaw, Hong, Pransky, & Loisel, 2008; Ross, 2007). In order for the participants of this study to successfully re-integrate into the workplace (after availing themselves at the work environment without specific work assignment), they had to create a new situation with which they could work in their post-morbid work ability. It could be said that finding the appropriateness or fit between the study participants' job demand and work ability led to the reduction in their work time and work load. Most of the participants indicated that the work demand of their premorbid job was not met with their current functional capacity which necessitated a compromise to be sought to enable them perform their worker role. Suitability of job placement after rehabilitation has been asserted as a key component for the resumption of the stroke survivors' worker role (Logan & Skelly, 2010). The reduction in work time in the form of reasonable accommodation at the workplace enabled the participants to adapt to their worker role thereby ensuring accurate placement of most of the participants on the job tasks based on their work ability. The participants indicated that they became fatigued with little exertion which caused them to need constant rest after returning to work. Gradual increase of the duration spent on the job assisted most of the participants to increase their work tolerance thereby enabling them to adapt to their worker role. A study conducted by van Velzen et al. (2011) report tiredness to be a significant factor that hinders the resumption and the retention of the worker role of individuals with acquired brain injury. Work flexibility allowed most of the participants of this study to gradually increase the hours they spent on their job as they return to the workplace. This finding is congruent with the results of the study conducted by Medin et al.

(2006) who report that the reasonable accommodation and flexibility at the workplace of their study participants provided opportunities for them to facilitate their ability to return to work. The participants of this study further revealed that they initially reduced their workload to fit their work ability, and that this was subsequently followed by a gradual increase in the workload. Medin et al. (2006) report similar findings that involved a gradual step by step increase of the workload of their study participants as they achieve efficacy with their work performance and work ability. This step by step increase in workload afforded the participants of this study the opportunity to adapt to their worker role.

#### **5.4.3.2 Home and workplace adaptation**

Within the context of this study, the participants also recognized a need for change in their homes, workplace and work routine in order to successfully integrate into their previous occupational roles. Most of the participants indicated that the barriers/struggles they encountered while performing daily occupations inclusive of their worker role necessitated a proactive measure that required modification of their homes and workplace. This is consistent with the findings of a study conducted by Talbot, Viscogliosi, Desrosiers, Vincent, Rousseau and Robichaud (2004) who report home modification as an essential rehabilitation need of their study participants to enable active participation. The participants of this study indicated that changing the home environment enables easy access and quick completion of self-care activities that could have negatively affected them in getting to work early thereby improving their work abilities. The changes which entailed environmental modification were not limited to structural changes within the participants' homes but also outside the home. Not all the participants were able to modify their home or workplace to align with their functional capacity; which resulted in restricted occupational choices for some of the participants. For example, the inability to provide ramps in place of steps and presence of open drainage in one of the participants' home environment restricted her mobility. However, for other participants who were faced with the same environmental barrier but however made changes to their physical environment by covering open drainages and having ramps in place of steps, the restriction experienced when performing daily occupations were reduced. Whiteford (2000) reveals that modifying the environment to ensure accessibility and reduce occupational imbalance could be hindered by limited financial resources, and or impoverished or discriminatory environment. In the context of this study, it could be argued that home modification for some of the participants were hindered

by the financial implication of readjusting the home. More so, some of the participants reside in rented apartments which makes the process of modifying apartments that do not belong to them difficult.

Also, the participants indicated they made changes to their work environment and work routine to facilitate easy adaptation to their worker role while returning to work. This was made possible by the reasonable accommodation provided to them at the workplace. This is consistent with Wolfenden and Grace (2009) as well as Saeki's (2000) assertion that workplace accommodation through employer's attitude and support is influential and of great importance in modification of the workplace and work routine. The reasonable accommodation provided at the workplace enabled the participants of the current study to change their work routine through modified work schedules and the use of transitional or alternative worker roles. In other words, the participants changed their previous mode of carrying out their job task to conform to their work ability. Some participants, who for instance were teachers, had to teach their classes in their offices in a sitting position as opposed to their premorbid routine of standing in the classrooms while teaching. Other participants who also were teachers were assisted by teaching assistants who helped them in writing on boards while the participants teach the students. This could also be interpreted as a measure used by the participants at conserving energy. This is congruent with the findings of Culler et al. (2011), who report changing the manner in which the job tasks is being performed by the stroke survivors after the stroke as facilitating the adaptation of the stroke survivors to their worker role.

Furthermore, the participants described that the survivors transferred to work stations that supported their body ergonomics in order to conserve energy and prevent deterioration of their health function. For one of the stroke survivors, when efforts made at his initial work station towards modifying his office to fit his present level of functioning did not yield positive result, he transferred to another work station that provided an office with in-built facilities that suited his present functioning capacity. Similarly, participants transferred to workplaces that were closer to their home environment so as to reduce the difficulties encountered while transporting themselves to workplaces distant to their homes. It could be interpreted that work accommodation provided for some of the participants were not adequate for their survival at their initial workplace which necessitated a change to workplaces or work stations that provided such adequate work accommodation. These latter workplaces were seen by the affected participants as



providing ergonomic interventions that fit them to their job. Consideration of not only the human control but also the engineering and administrative controls during job designs and more importantly while fitting the job to the injured worker has been indicated to enhance effective work integration (King & Olson, 2009). This definitely will cost the organization responsible for changing such controls required for fitting the job to the stroke survivor considerable amount of money. The financial implication that such modification have on the employer could have been a dissuading/deterring factor to providing the needed changes for the successful job integration of the participants especially for those employers whose employees had put in limited years to the growth of the organization before the stroke condition. It is noteworthy to reveal that some of the participants indicated that they use technology to enhance their productivity at work. For instance, a participant revealed he now uses a desktop computer for preparing his lecture notes as opposed to writing it out in notebooks due to the legibility of his handwriting. Similarly, another participant who changed to an alternative worker role of teaching described the use of technological device to improve his work ability thus enabling him to cope at work.

Some of the participants indicated that the stroke survivors change their worker role while resuming at work. This, the participants indicated, enabled stroke survivors to match the occupational demand of their respective job with their work ability. For instance, participants whose jobs involve working at night had to stop working at night while other participants had to pick up alternative worker role that fit their work ability. Alternative worker roles available for some of the participants of this study were teaching and clerical work. A participant who was a surgeon prior to the stroke event had to change to an alternative worker role of a lecturer due to the reduced dexterity function of his hand which he experienced after the stroke event. Similarly, another participant whose duty as an agricultural extension officer entails field visit changed his worker role to another which strictly confines his duty within his office after the stroke event. Most of the participants indicated they had to change their full-time worker role to part-time in order to avail themselves for rehabilitation and also to enable them rest. The demand of the participants' respective jobs were thus reduced invariably through the work duration. These findings align with the findings of Dekkers-Sanchez et al. (2011) who report work modification, workplace accommodation, control over work schedules and rest as important and necessary strategies for adapting to one's worker role and sustaining job retention after long term sick leave. They further reveal that the use of ergonomic work stations during and after recovery from

illness in the workplace, transitional and alternative duty led to the enhancement of workplace adaptation.

### **5.5 Promoting participation in work for stroke survivors**

Theme five; “promoting participation in work through the support of government policies” was interpreted by participants to constitute the needed change to the existing rehabilitation process of stroke survivors that would facilitate successful work re-integration. The Bangkok Charter for Health Promotion in a Globalized World advocates similar position. The Charter puts forward that attaining health equity and social participation is dependent on the supportive environment through which health promotion is advocated (WHO, 2007; Jackson, Perkins, Khandor, Cordwell, Hamann, & Buasai, 2006). This could be interpreted in the context of this study as the promotion of stroke survivor’s participation in work as being dependent on a supportive legislative or political environment. This is also in consonance with the Commission on Social Determinants of Health’s policy statement on the attainment of health equity for all, that avers health promotion through the support of government to serve as a means of preventing chronic disease conditions such as stroke, alleviating its attendant consequences and eliminating poverty (Marmot, Friel, Bell, Houweling, & Taylor, 2008). Participants felt that the intervention of government in the existing rehabilitation process would eliminate some of the barriers that were experienced by the stroke survivors thereby facilitating work re-entry. One of such suggestions was enabling access to rehabilitation through the provision of financial assistance. The participants felt that reducing the cost of treatment would enable most survivors to access rehabilitation thereby facilitating the resumption of their worker role. This is consistent with the findings of Olaleye and Suddick (2012) that investigated the factors influencing participation in rehabilitation of stroke survivors in Nigeria; they conclude that the high cost of treatment contributes to the challenges of accessing rehabilitation in Nigeria. The above authors further indicate that reducing the high charges or subsidizing charges of treatment by the Nigerian government will facilitate access to necessary rehabilitation services needed by the stroke survivors. Similarly, Talbot et al. (2004) acknowledge this in their exploratory study to identify rehabilitation needs of stroke survivors. They indicate that improving access to health services for stroke survivors facilitated better social reintegration and the recovery of their occupational roles such as worker role. Therefore it could be argued that as work is an essential and central

part of a working age stroke survivor's life (Ross, 2007), participation in work should be promoted and not neglected as revealed by the barriers to work re-entry in the current study.

Furthermore, the participants indicated that expanding the existing health insurance scheme to cover the entire population would enable access to needed rehabilitation services at affordable cost for survivors. This is in consonance with the assertion of Lawan et al. (2012) that argue about the benefits of providing access to healthcare through N.H.I.S. The authors indicate in their study report that the first phase of implementation of the N.H.I.S. allowed individuals employed within the formal sector of the economy inclusive of stroke survivors to access comprehensive health services at an affordable cost. The implementation of the second phase which covers a larger percentage of the Nigerian population employed within the informal sector has however suffered setback and this has provoked agitations from the public. Lawan et al. (2012) further reveal that the non-implementation of this second phase had been a major setback for accessing health services for the citizens employed in the informal sector of the economy.

Also, in the current study, participants indicated that the creation of policies that would ensure financial grants are provided for people who are incapable of gainful employment during rehabilitation would assist stroke survivors in accessing quality rehabilitation service. It was realised from this assertion that most of the stroke survivors were unaware of the available legislations and policies that made provision for compensation of injured workers in or out of the workplace during the course of their employment such as the Employee's Compensation Act. This might have reinforced the request for the provision of disability grants in the legislation for stroke survivors by the participants. The lack of awareness of such legislations could be argued to have contributed to the feeling expressed by the participants that the financial support they received from the workplace to be act of generosity on the part of their employer rather than what they were entitled to.

- **Improving rehabilitation resources to facilitate return to work of the stroke survivor**

The improvement of rehabilitation resources was identified by the participants to be an important means through which quick work re-entry could be facilitated for stroke survivors. Participants were of the opinion that providing rehabilitation resources in community hospitals, while also adequately equipping and staffing tertiary rehabilitation centres, would enhance the return to work rates of stroke survivors. Chamberlain, Moser, Ekholm, O'Connor, Herceg, & Ekholm

(2009) share similar sentiment in their education review of vocational rehabilitation. The authors indicate that the efficacy, quality and quantity of rehabilitation sessions and resources are important determinants for successful work resumption after vocational rehabilitation. They further reveal that improving resources such as stakeholder and team collaboration as well as the education of the recipients of vocational rehabilitation improved their ability to resume their worker role after ill-health.

- **Changing the environment to accommodate for the disabled**

The participants indicated that changing and regulating the environment to accommodate for people with disability through government policies will facilitate the reintegration of stroke survivors to their worker role. This is in agreement with the social model of disability that acknowledges the influential contribution of environmental barriers to non-participation in occupation. The social model further advocates for the dismantling of this environmental barriers to enable full participation of people with disability (Oliver & Barnes, 1998). Participants in this study indicated that the implementation and enforcement of environment laws and policies which include but not limited to the Lagos Special People's Law (2012) and the United Nations Standard Rules on the Equalization of Opportunities for Persons with Disabilities (D.P.U.D.P.C.D., 1993) would remove environmental barriers that prevent the reintegration of stroke survivors into the society. Environmental laws and policies like the above in the developed countries have been reported to have assisted in achieving an inclusive society for people with disability into the workforce (Soeker, 2010; Barnes & Mercer, 2005; Miller, Parker, & Gillinson, 2004; Gard & Larsson, 2003) and also in reducing the impairments that result from medical conditions such as a stroke. Even though the enactment of laws and ratification of policies like the aforementioned has been formulated by the Nigerian government, the actual implementation of these laws and policies has been questionable.

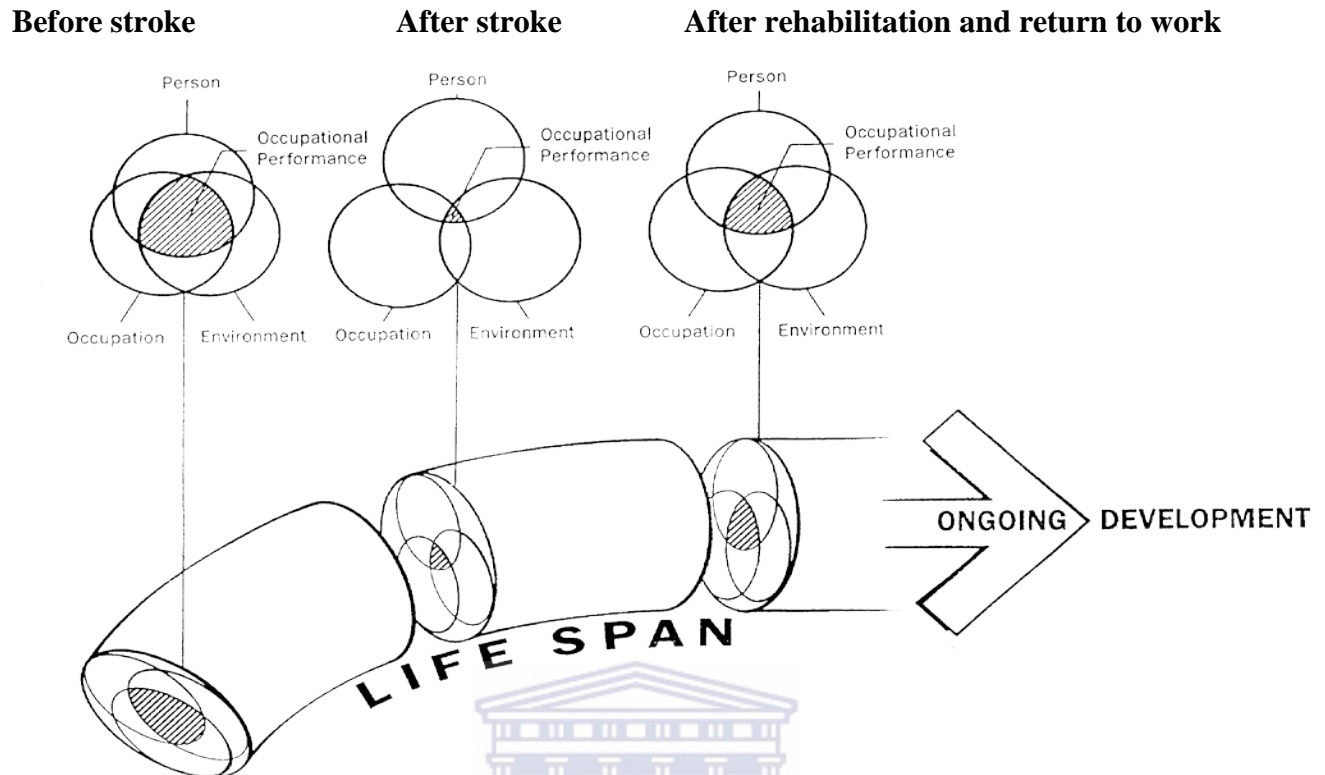
- **Public awareness campaigns as a method of stroke prevention.**

The participants were of the opinion that public awareness campaign can influence people's perception about stroke, thus preventing the onset of strokes and enhancing participation of stroke survivors within the community. Similarly, Chamberlain et al. (2009) indicate that health promotion and awareness campaigns facilitated recovery of social roles such as the worker role and also facilitated social re-integration for people living with chronic disease in their

communities. The participants' assertion was based on their knowledge regarding the influence of health promotion campaigns on prevention of chronic diseases such as poliomyelitis and HIV/AIDS, as well as the reduction of stigma and discriminatory practice against people living with HIV. The education of the public about stroke and its causes and consequences has been viewed as a means of increasing the knowledge base of stroke amongst the Nigerian population (Eze, Agu, Kalu, Maduanusi, Nwali, & Igwenyi, 2013; Obembe, Olaogun, Bamikole, Komolafe, & Odetunde, 2013; Onyekwere, Okwuchi, & Samuel, 2013). There is however a paucity of evidence regarding the success of such awareness campaigns in improving the participation of stroke survivors and reducing discrimination within the community. It could be argued that other contending factors hindering social integration of the stroke survivor within the Nigerian context such as environmental laws and disability policies overshadowed the success that could have been recorded through these public awareness campaigns (Akinyemi, et al., 2009)

#### **5.6 Relation to the Person Environment Occupation model**

The Person Environment Occupation model was used as a conceptual lens through which the findings of the study were interpreted. The P.E.O. model has been used effectively in other studies that conceptualized individuals returning to work after rehabilitation from chronic conditions which include but not limited to rheumatoid arthritis (Backman, Kennedy, Chalmers, & Singer, 2004), mental illness (Krupa, 2010), traumatic brain injury (Liu, Wei, Fergenbaum, Comper, & Colantonio, 2011), as well as people with disabilities (Westmorland, Williams, Strong, & Arnold, 2002). It has also been used in conceptualizing other occupational roles such as spousal relationship; mobility and feeding among stroke survivors (van Nes, 2004). Even though there had been a paucity in the application of the P.E.O. model in research studies, the P.E.O. model provides a conceptual framework for stroke survivors' returning to work after being diagnosed with a stroke.



**Figure 5.1: The P.E.O. model as it relates to the stroke survivor before stroke, after stroke and after their return to work (adapted from Law et al., 1996)**

The Person Environment Occupation model explains occupational performance to be the consequence of the dynamic relationship that exists between three subsystems which are people, their occupations and roles, and the environment in which these occupations and roles takes place (Law et al., 1996). This dynamic relationship is observed to be transactive in nature between the aforementioned subsystems. The P.E.O. model has been deemed a framework through which occupational roles such as the worker role can be analysed (Broome, McKenna, Fleming, & Worrall, 2009; Sharon, 2006; Strong, Rigby, Stewart, Law, Letts, & Cooper, 1999; Law, et al., 1996). The worker role of the participants is of particular significance in this study and it is for this purpose that the model has been used as a method of describing the conceptualisation of the various factors influencing job success.

In the context of this study, the occupational performance is described as return to work (or the quality of the participant's experience with regards to their level of satisfaction and functioning after resuming at work), while the person is seen as a stroke survivor with a set of attributes which are learned or innate. The environment is described in terms of the context within which

the result of engagement which is returning to work or work took place and includes the personal, social, psychosocial, economic, political and physical environment, while the occupation is the job or work that has been returned to by the stroke survivor. The different subsystems described above are discussed further under the following subsections; person, environment, occupation, and occupational performance as return to work.

### **5.6.1 Person**

According to Law et al. (1996), the person is made of a composite of mind, body and spiritual qualities, and defined by a set of attributes and life experiences. In the context of this study, the person refers to the stroke survivors with their inherent and learned attributes through which they strive to resume their worker role. The participants influenced the P.E.O. fit with some set of attributes which impacted either positively or negatively on the resumption of their worker role. These set of attributes that were discussed in the preceding chapter could be seen in the participants' health status such as physical abilities, cognitive and speech functions, interest and values (such as motivation and self-esteem), level of education as well as previous work history. They all add up to translate to the work ability of the participants.

### **5.6.2 Environment**

Strong et al. (1999) conceptually define environment as those factors within the context of an individual that affects occupational performance. These factors which include the cultural, institutional, physical and social factors occur outside the individual and elicit responses from the individual. The environment could be described as the context within which the attempts at returning to work by the participants of this study took place. In the context of this study, the environment includes the sociocultural environment, as well as the home and work environment, which can be referred to as the physical environment of the participants. Others are institutional (legal and political) and economic environments that the participants interacted with as they engaged in rehabilitation during the process of resuming their worker role. The environment was observed as having a dynamic interaction on the stroke survivors as well as their work.

### **5.6.3 Occupation**

According to Strong et al. (1999), occupations are chosen to fulfil a purpose, value and meaning in an individual or group's life. Occupation in the context of the study refers to work or the job to

which the participants returned to after experiencing stroke (competitive employment in the open labour market). The work which the participants returned to was observed as having its own demand that requires physical and cognitive skills as well as competencies. The occupational component also comprises the opportunities that were available at work such as promotional offers.

#### **5.6.4 The Person-Occupation, Person-Environment, Environment-Occupation, Person-Environment-Occupation interactions**

- **Person-Occupation interaction**

The Person-Occupation (P-O) interaction refers to the dynamic relationship that occurs as the person interacts with his or her various occupations. In the context of the current study, the P-O interaction implies the interaction that occurred as the stroke survivors engage in tasks at their work place. It shows how the innate and learned attributes of the stroke survivors influence the work and job task completion and also how the work, work demands and workplace influenced the stroke survivors. The participants indicated a reduction in survivors' personal competencies (experience of loss) after the stroke event which caused them to be away from work for a particular period of time. The loss that was observed in the physical domain of the participants' lives affected the execution of tasks, especially those tasks that require bilateral hand function for survivors who had residual impairment on their dominant side. Accessing the workplace was observed to be negatively affected as a result of the loss of mobility function experienced by the stroke survivors. In such instances, places where participants could go within the workplace to perform work tasks before the stroke later became inaccessible to them. Also, completing self-care activities became difficult for most of the participants that were stroke survivors immediately after the stroke event. This, they said had a ripple effect on their ability to return to work early as it now takes a longer time to complete basic self-care tasks such as grooming, bowel and bladder control. The survivors' inability to independently complete self-care tasks caused them not to focus on their worker role and mainly focus on improving their health condition. The loss in personal competence instilled fear of avoidance in activities and loss of confidence in participants, thereby affecting their interest and the way they value work after the stroke. The motivation to resume work was no longer there for them due to the fact that the skills and necessary work ability needed to meet the demands of their work were limited as a result of



reduced functional abilities. For some participants that attempted to return to work with reduced work ability during the early stages of their recovery, they became frustrated owing to the fact that they could not cope at work. The frustration that resulted from this unsuccessful job task completion (work integration) led to a lower/reduced self-esteem for the stroke survivors. Whereas for participants who were able to successfully complete tasks, they indicated that the job task enhanced their self-esteem. For participants who had their workload reduced or that were provided with a different worker role, they indicated that this aided the recovery of their functional ability. This could be interpreted as the occupation having a positive dynamic influence on the person as described by Law et al (1996). Cognitive and speech dysfunction experienced by most of the participants was described as interfering and hindering tasks execution at the work place. This could also be seen as the influence of the person on their occupation.

Furthermore, the influence of occupation on the person could be observed amongst participants who were teachers and who had speech dysfunction. They revealed that they realised their speech function improved in the course of teaching students, and this went a long way in improving the stroke survivors' self-efficacy and motivation to return to work. For other stroke survivors, fatigue was an issue that negatively influenced task execution at the workplace. They got fatigued with little exertion on their job which made them lose confidence in work ability. However, having control over the work task for the stroke survivor allowed them to fit the demands of the job to their work ability. This, they said gave them the opportunity of having intermittent rest while performing the task. Completing work tasks even at a reduced rate helped improve survivors' self-efficacy as indicated with the gradual work exposure as discussed in the previous subsection on adaptation strategy.

Also, stroke survivors' attitude in terms of the acceptance of their illness, motivation, values, goals and interest was observed to influence their engagement in work related task. Acceptance of their present condition enabled them to take responsibility for getting better which includes rediscovering their worker identity. The acceptance of the illness in turn reignited their values, goal and interest in their worker role. Likewise, the value which the job add to the survivors in terms of satisfactions, finance and escape out of boredom made them to actively engaged in work.

The work demand and type of the occupation returned to by the participants also influenced the stroke survivors. For instance, the nature of the job in regards to manual intensive or non-manual job was observed by participants as a vital determinant for rediscovery the survivor's worker identity. For most stroke survivors who had a pre-morbid manual intensive job that required no specialized skills, having a residual physical disability was reported as negatively influencing their re-entering into the workplace. Participants also felt that being senior on the job or holding a senior position at the workplace after the stroke that require little or no manual efforts enhanced the worker identity of stroke survivor as this enable them to have control over their work tasks.

- **Person-Environment interaction**

In the context of this study, the person-environment (P-E) interaction refers to the dynamic transactive relationship that occurred between the stroke survivors and the environment. It indicates how the individual attributes of the stroke survivors influenced and affected the physical, social, institutional environment as they sought treatment and return to work. It also reveals the influence of the environment on the stroke survivors. The residual impairments experienced by the stroke survivors were observed as affecting their relationship with employers and co-workers as they doubted the survivors' functional abilities. This in turn affected the stroke survivors by making some of them lose confidence in their own abilities. For instance, the loss of mobility function by the stroke survivors affected their ability to access buildings (physical environment) and to interact with the social environment such as socializing with friends and colleagues. This in turn caused the survivors' spouses, employers and co-workers to doubt their work ability thereby negatively influencing their motivation and valuation of work. The aforementioned relays how doubt expressed by spouses, employers and co-workers reinforced a sense of loss of self-confidence in the participants.

Also, changes done in the physical environment such as the workplace and home environment improved the survivors' personal competencies during mobility and in accessing buildings. In the same vein, the social environment was identified to have affected the survivors' well-being as misconceptions about stroke influenced their motivation to access treatment and ultimately their recovery. However, when these misconceptions were corrected with appropriate information by friends and colleagues of the stroke survivors, they sought treatment and their

health improved. The foregoing showed the transactive relationship that occurred between the learned and innate attributes of the stroke survivors and the environment. This is similar to the P-E interaction described by Westmorland et al. (2002) in their study on work re-entry for people with disabilities.

Furthermore, the stigma related to having a stroke in the society caused some of the participants to reject the use of assistive device and this affected their personal competencies. For instance, the communication problem that stroke survivors encountered as a result of their speech function which made people to laugh at them, could be interpreted as reinforcing the feeling within the survivor that people around them do not feel what they are going through thereby making the survivors to doubt the validity of people's benevolence to them. Reflection by participants on fellow stroke survivors that had experienced stroke before them casted a huge burden on them and emotionally disturbed the stroke survivors. The foregoing laid credence to the influence of the social environment on the stroke survivor's innate and learned attributes.

Similarly, the financial capability of the stroke survivor as dictated by support in the form of social grants or legislation such as Employees Compensation Act influenced their access to rehabilitation intervention which in turn influenced the recovery of their functional abilities. The availability of financial support was observed as positively influencing motivation of the participants as they felt that their employers or workplace are not just after improving their output but also interested in their recovery. It could therefore be argued that support within the familial and workplace environment enhanced survivor's motivation which in turn improved their work ability. For instance, emotional, financial and physical assistance regarding transportation to and from the hospital and workplace rendered by family members and friends helped improve the functional abilities as well as the attributes of the survivor. Societal expectations in the form of occupational roles (being a parent) also influenced the stroke survivors' motivation. For instance, the stroke survivors indicated that they were expected to wake up and go to work throughout the week in order to provide for their families. This, they said enhanced their motivation regarding their worker role. Also, changes made in the physical environment of the work place influenced survivor's work ability. Contrarily, the financial support was also revealed to have negatively influenced/repressed some participants' sense of self as a worker even after regaining their work ability. The participants also indicated that the distance of the survivors' home to the rehabilitation centre influenced the stroke survivors'

participation in rehabilitation thereby affecting their recovery process. Inadequacy of rehabilitation resources within the treatment centres could also be described as another example of how the environment influenced the stroke survivor. The dearth of rehabilitation resources within some of the communities were felt by stroke survivors as negatively influencing the recovery of their functional and work abilities. This then caused some of them to seek private and home treatment. In order to enhance their rehabilitation programmes survivors also sought treatment at centres with more equipped resources to improve their work abilities.

- **Environment-Occupation interaction**

The Environment-Occupation (E-O) interaction represents the dynamic relationship that exists between the individual environment and the occupation. It reveals the influential role all aspects of the environment have on the occupation. In the context of the study, the O-E interaction describes the transactive influence of the stroke survivors' environment on the job they returned to, while also revealing how the job task the survivors returned to influence their environment. The foregoing could be observed in their physical work environment as it limited survivors' ability to carry out some tasks even when they possess the necessary work skills required for the job task execution. For instance, survivors were unable to access classrooms located above the ground floors to teach. However, when changes were made by relocating such classes to the ground floors, the survivors were able to teach. Also, social support from the workplace as indicated by the provision of reasonable accommodation assisted survivors. The reasonable accommodation occurred as changes in survivors' work routine and worker role. In some instances however, the social environment in regards to societal stigma was seen as limiting the interaction of the stroke survivor at the workplace.

Similarly, the support from families and friends were observed to enhance the survival of stroke survivors at the workplace. For instance, the participants indicated that the assistance they got with self-care activities by family members, as well as assistance with transportation to the workplace by friends and co-worker enabled their workplace participation.

In another vein, the lack of implementation of social policies (such as the Nigerian with disability Decree, 1993; Lagos Special People's Law, 2011; and the Employee Compensation Act) affected the availability of workplace support and or accommodation for some stroke survivors thereby negatively influencing their work performance. Similar E-O transactive

relationship was reported by Backman et al. (2004) as affecting participation at work for people with rheumatoid arthritis. The authors report that social support availability from family members, co-workers, and supervisors influenced the work demands of their study participants. This in turn influence the participants work performance.

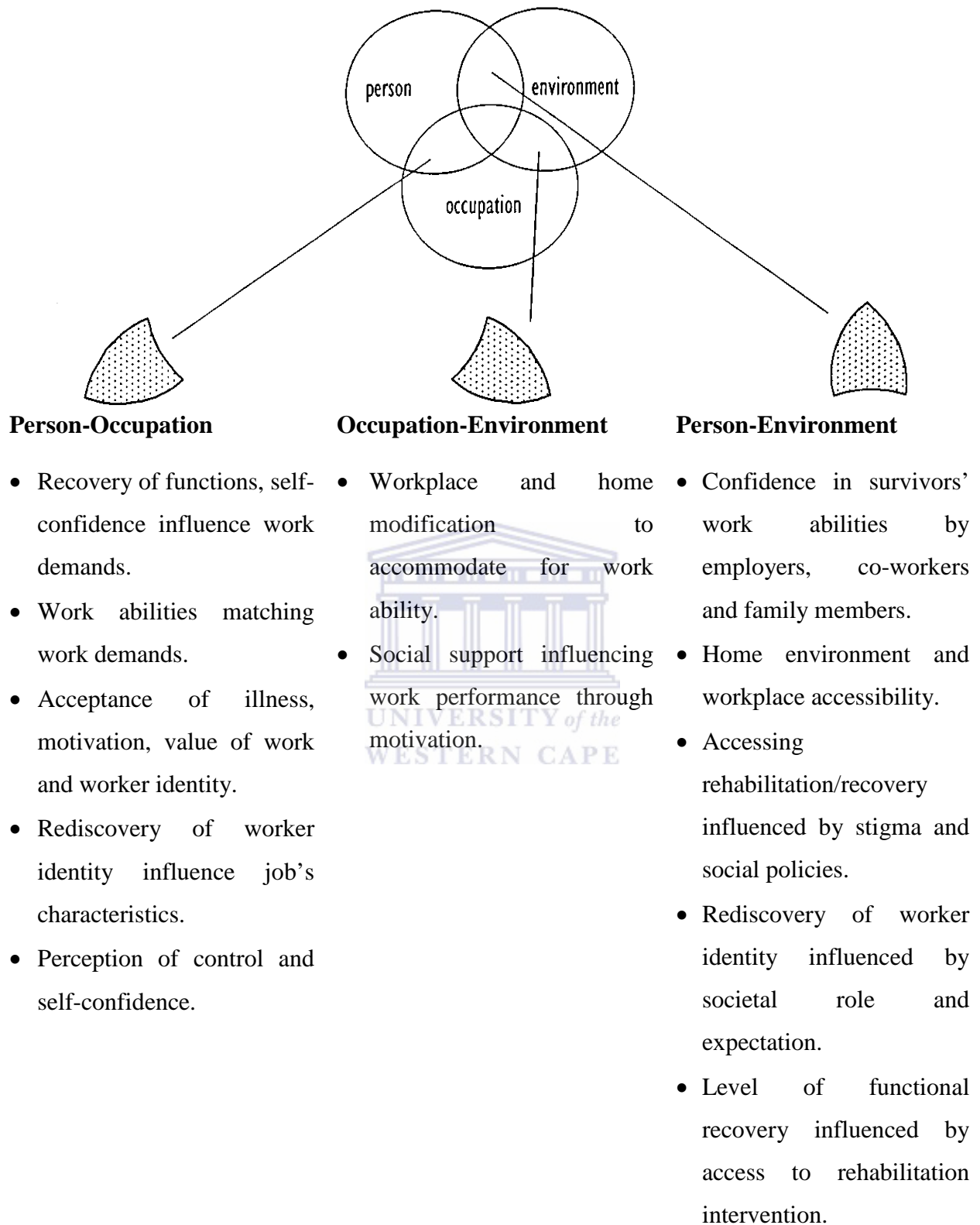
- **Person-Environment-Occupation interaction**

The person-environment-occupation (P-E-O) interaction refers to the dynamic relationship that exists between the individual, the occupation and the environment. The confluence of this interaction produces the outcome referred to as the occupational performance. In the context of the current study, the P-E-O interaction describes the relationship that occurred between the stroke survivors, their environment and the job they returned to while the occupational performance is the return to work process (or the quality of the participant's experience with regards to their level of satisfaction and functioning after resuming at work). The point to which occupational performance is possible or effective was dependent on the goodness of fit among the stroke survivors, their environment which include but not limited to the physical, social and institutional environment, and the job task returned to by the survivors. The P-O, P-E, O-E, interactions discussed above all relate to one another to affect the fit of the stroke survivors as they perform work task in their environment. The P-E-O fit or occupational performance can further be described as the product of adaptation or compromise reached to achieve the resumption of worker role by survivors. In this study, the occupational performance or return to work process is constantly changing as a result of the other variables that interact to form the confluence changes. The level of functioning after resuming at work for the participants increased or expanded when the stroke survivors acquired new skills or improved on their personal competencies. Likewise, expansion in the P-E-O fit occurred when work schedules of the stroke survivors were accommodating, stigma was decreased, social supports were made available and obtained, as well as when physical barriers were eliminated. Brown (2009) indicates similar assertions regarding occupational performance among people with disabilities in her explanation of the ecological models in occupational therapy.

Prior to the stroke event, the personal competence of the stroke survivors in regards to their values, interests, cognitive and physical abilities were sufficient/strong enough to meet the demand of the job and the challenges of the environment (physical, institutional, social

environment among others). This could be observed as the fit shown in the Venn diagram in figure 5.2. After the stroke event however, the stroke survivors experienced losses in their personal competencies which casted doubt in their self-confidence and their sense of self as a worker. The environment compounded the loss that was experienced by the survivors in its social and physical component in the form of stigma, inaccessibility of workplace of home, cost of treatment among others to decrease the fit in the P-E-O confluence. With the aforementioned, the survivors' work ability could not match the demand of their previous jobs. This reinforced the feeling of doubt they experienced and loss of confidence in self. The figure 5.1 provides a diagrammatic illustration of the decrease or shrink in the P-E-O. fit during this period. The shrink represents the unhealthy relationship that existed between the stroke survivors, the environment and their jobs.

In order to resume back at work, the survivors sought treatment in hospitals and modified their environment to fit their present level of functioning. More importantly, their job tasks were adapted to match their current work abilities. The changes or shift in person's circle or spiral were observed in the survivors' acceptance of the illness which led to the rediscovery of their sense of self as a worker and the improvement in their personal competence. The survivors' interest and values also changed thus enhancing their motivation in resuming their worker role. Adjustment in the environment sphere in the form of support from family members, friends, and workplace as well as the workplace and home modification increased the fit or confluence in returning to work. Similarly, the work demands, work routine and worker role of the stroke survivors were changed to accommodate for a better fit or confluence for returning to work. The aforementioned describes the interaction that existed in the P-E-O sphere as the stroke survivors went through the different phases of the stroke condition through rehabilitation and finally to resuming their worker role.



**Figure 5.2: Analysis of the P-O, O-E, P-E relationship as applicable to the current study**

## **5.7 Recommendations on strategies and methods for workplace reintegration**

The recommendations on strategies and methods needed for the quick reintegration of stroke survivors to the workplace will be explored in the subsequent/succeeding chapter.





## CHAPTER SIX

### CONCLUSION AND RECOMMENDATIONS

#### 6. Introduction

In this chapter, the conclusion and recommendations from this study that focused on the re-integration of stroke survivors to the workplace are discussed.

#### 6.1 Conclusion

The study highlighted the experiences and perceptions of returning to work after a stroke from the perspective of the stroke survivors, caregivers and rehabilitation specialist. This study revealed that when the stroke survivors returned to work, they experienced barriers and facilitators that invariably influenced their adaptation to their worker role. The barriers in the study was identified as “experience of loss by the survivor” and “returning to work is a struggle”. The experience of loss was observed in the participants’ physical abilities, cognitive and speech function, emotional balance and future aspirations, as well as functional abilities. The participants while returning to work struggled to fit in at work due to their job characteristics, societal stigma, as well as the difficulty they experienced in accessing rehabilitation intervention and their workplace. Facilitators that assisted the resumption of the participants’ worker role included participation in rehabilitation and a supportive environment.

Adaptation within this study was a dynamic process of reconciliation that occurred between the participants’ past and present self. It entailed an intrinsic process of acceptance of the survivors’ condition and being motivated to return to work. Acceptance of the illness caused the participants to take hold of their lives and to take responsibility for rehabilitation. Acceptance was seen as the first step in adaptation and was influenced by the spirituality and belief of the stroke survivor, as well as medical knowledge about the stroke. Also, motivation to return to work as an intrinsic adaptation process was observed to be influenced by their value attached to work; boredom and loneliness; financial and health benefits of participating in work as well as societal obligation as parents.

Coupled with the intrinsic adaptation process, an extrinsic process of adapting to the worker role was further observed. This entailed a process of gradual work exposure and workplace as well as home adaptation. In order to adapt into the workplace, the stroke survivors gradually transitioned

into their work by initially reducing their work time and workload, subsequently followed by a gradual increase in the work time and workload. Further to this, modifications were also made to their work routines, worker roles, work and home environment.

The person environment occupation (P.E.O.) model provided a theoretical framework through which the resumption of the worker role of the stroke survivors that were participants of this study was analysed. The P.E.O. model provided insight into how the stroke survivor's characteristics (such as their personal competencies, interest and values, level of education as well as previous work history); the environment (legal, social, institutional and physical) and the occupation (work demand) influenced one another. The experiences of loss of former self by the stroke survivors impacted on their personal competencies thereby influencing the P.E.O. relationship. Furthermore, stigma, non-implementation of some social policies as well as inaccessibility of the workplace and home physical environment compounded the impact of the personal competency loss on the survivors. All these caused the participants to be unable to meet the demands of their jobs. When there were improvements in the survivors' personal competencies, interests and values coupled with modifications in the workplace and home environment, these improved the interactions between the P.E.O. components. Also, reasonable accommodation within the workplace that allowed for modification in work time, workload and work routine improved the fit of the survivors' work abilities to their work demands.

The fit or overlap amongst the three components of the P.E.O. determined the quality of the participant's experience with regards to their level of satisfaction and functioning after resuming work. The more the match or fit amongst the participants' personal competencies, interest, values, motivation, the social, legal, institutional and physical environments; and the demands of the work that was returned to, the more the level of satisfaction and level of functioning after returning to work. However if there was a smaller the percentage of overlap, the less the level of satisfaction and level of functioning after returning to work.

The findings of the current study provided insight regarding the factors hindering and/or facilitating worker role adaptation of stroke survivors from the perspectives of the stroke survivors, caregivers and rehabilitation specialists, the environment and occupation. The study also provided an opportunity for the participants to make recommendations to the existing rehabilitation process that could enhance the quick re-integration of the stroke survivor into the

workplace. The study further revealed that promoting participation in work through government policies and support could enhance the re-integration of the stroke survivor into the workplace.

Finally, this study has established that the resumption of the worker role of stroke survivors was not only influenced by the individual characteristics of the survivors but also by the environment in which the return to work process took place as well as the occupation (work) returned to.

## **6.2 Recommendations**

The phenomena of return to work explored in this thesis provides findings that point out certain implication for practice. Thus, in order to ensure an effective and quick re-integration of stroke survivors during and after rehabilitation, the following recommendations are deemed necessary for the practice of occupational therapy; health professionals; the Ministry of Health and Labour; Advocacy and health promotion; the enhancement of the Nigerian Employee's Compensation Act, and research in occupational therapy.

### **6.2.1 Recommendations for occupational therapy practice**

- In order to be more involved in the return to work process of the stroke survivors, it is recommended that occupational therapists evaluate their role as a member of the rehabilitation team and not limit themselves to hospital-based rehabilitation of the stroke survivors as observed in this study but also be actively involved in community re-integration, on-the-job evaluation as well as placement, training and retraining of the stroke survivors.
- Occupational therapists should align with stakeholders to advocate for the establishment of return to work programmes for survivors within the workplace in a bid to effectively rehabilitate stroke survivors.
- Work screening as well as work site visits should be conducted regularly for stroke survivors by occupational therapists especially those that specialize in the area of vocational rehabilitation as this will address the lack of follow-up care revealed by the participants of this study.
- The results of this study revealed that home based rehabilitation service played a vital role in improving the health function of the stroke survivors. Based on this, it is suggested that home based occupational therapy services be implemented and put into practice by occupational therapists to supplement conventional hospital based services.

This will reduce the difficulty experienced by stroke survivors in accessing rehabilitation as a result of the distance and high cost of transportation to rehabilitation centres.

- Social support from the stroke survivors' family, friends and co-workers enhanced the survivors' ability in adapting to their worker roles in this study. Occupational therapists should examine and focus on the importance of support within the social environment during the rehabilitation process as this could assist stroke survivors to get the needed environmental support to enhance their work ability as well as adapt to their worker role.
- It is recommended that occupational therapists should promote their services in the Nigerian healthcare system more aggressively as only four out of the nine participants that were stroke survivors in this study received occupational therapy intervention. This will ensure that stroke survivors receive comprehensive rehabilitation services that will facilitate the resumption of their worker role.

### **6.2.2 Recommendations for multidisciplinary intervention strategies**

- It is proposed that rehabilitation and work re-integration programmes should improve the stroke survivors' insight regarding their condition and rehabilitation as this may cause them not to abscond from rehabilitation as well as enhance their compliance with treatment regimen.
- Rehabilitation and R.T.W programmes should enable the stroke survivors to appreciate the importance of taking responsibility for their individual rehabilitation. This could be realized with the utilization of client-centred approaches in rehabilitation practices.
- In order to prevent stroke survivors from losing their sense of self as a worker, health practitioners should incorporate early treatment intervention that addresses the barriers identified in this study that impact on the work abilities of stroke survivors during rehabilitation. The survivors should be encouraged to appraise the beliefs and values they hold regarding the improvement of their health condition and worker role.
- It is suggested that employers be informed about the return to work progress of the stroke survivor early during rehabilitation as this will give the employers ample time to acquire the knowledge regarding stroke and its consequences, and to make provision for the accommodation of the stroke survivor in the workplace.

### 6.2.3 Ministries of Health and Labour

- One of the barriers identified as hindering the return to work process of the stroke survivor in this study is the inadequacy of rehabilitation resources. With this in mind, the researcher recommends that more rehabilitation resources that includes but not limited to equipment for work hardening and rehabilitation personnel be provided at existing rehabilitation centres.
- Existing acute intervention for stroke survivors should be encouraged in stroke units as this will allow for a comprehensive intervention from a multidisciplinary team thereby ensuring adherence to global practice for stroke management. This will further reduce the sequelea of stroke on survivors experienced in the form of loss of former self that impacted on the resumption of their worker role.
- The establishment of more rehabilitation centres that capture all aspect of rehabilitation inclusive of the vocational component of rehabilitation in communities is also recommended.
- Vocational rehabilitation centres that focus not only on prevocational training for those without previous work skills but also for individuals with previous worker experience should be established in every state of the federation of Nigeria to ensure access of stroke survivors to comprehensive vocational rehabilitation intervention that will facilitate the resumption of their worker role.
- It is suggested that existing environmental laws that makes the physical environment accessible in the community and workplace be implemented and enforced such as the Lagos Special People Law and Nigerians with Disability Decree. Also, the pending Nigeria Disability Act that makes provision for the compulsory employment and reasonable accommodation of 10 % of people with disability in every workplace should be signed into law. This will contribute to the integration of stroke survivors who have significant impairment in terms of functioning in the community and workplace.
- The National Health Insurance Scheme should be broadened to cover the entire population of the country; thereby making provision for voluntary contribution from employees not currently covered in the formal sector. The N.H.I.S. enabled some of the stroke survivors to have access to rehabilitation service that would have previously been difficult for them to access due to financial constraints. With health insurance cover

available for the whole population, stroke survivors that are not employed within the formal sector of the economy would have access to comprehensive rehabilitation at an affordable rate thereby facilitating the resumption of their worker role.

#### **6.2.4 Advocacy and health promotion**

- The findings of the current study should be disseminated to advocacy groups and organizations such as the Joint National Association of Persons with Disabilities (J.O.N.A.P.W.D.) and Association for Comprehensive Empowerment of Nigerians with Disabilities (A.S.C.E.N.D.) for lobbying for the rights of people with disabilities to have access to high quality health care.
- The Health promotion programme should focus on stroke prevention, the risk factors for stroke and the promotion of intervention programmes for individuals who are diagnosed with a stroke. Public awareness campaign should be embarked on by concerned bodies such as health professionals, government agencies, disability right groups and non-governmental organizations in order to curb the stigma and misconceptions about stroke as identified in this study. Such campaign programmes could utilize the medium of social media and television to educate the general population.

#### **6.2.5 Recommendations for the enhancement of the Nigerian Employee's Compensation Act**

- The various labour unions should embark on thorough awareness and sensitization campaigns of E.C.A. amongst the workforce. The awareness campaigns will improve knowledge of people with disabilities inclusive of stroke victims about their right to compensatory funds and needed rehabilitation as stipulated by the E.C.A. This may also encourage the employer to be compliant to the E.C.A. in the workplace.
- The Nigeria Social Insurance Trust Fund (N.S.I.T.F.) that administers the needed compensation and assistance stipulated by the E.C.A. should partner with hospitals and rehabilitation centres in order to improve the disbursement of fund or claims. This could reduce the difficulty experienced by participants in accessing rehabilitation due to high cost of treatment.
- The N.S.I.T.F. should appoint case managers such as an occupational therapists or nurses who could be instructed to manage the E.C.A. claims while also ensuring that all the

rehabilitation possibilities are explored by the stroke survivors. The case managers should focus on the best practice for returning the stroke survivors to work instead of focusing on how much financial compensation the survivor should receive.

#### **6.2.6 Recommendation for future occupational therapy research**

- It is recommended that similar studies be conducted in other zones in Nigeria. These studies will broaden information available relating to return to work process of the stroke survivor.
- Further research that provides qualitative data regarding the perspective of employers of labour and co-workers of the stroke survivor about the return to work process of the stroke survivor would provide a further depth to the study that focus on return to work process of stroke survivors. Such a study should involve employers of stroke survivors in both the public and private sector that had return to work in the labour market.
- It is recommended that a quantitative study be conducted whereby Quality of Life surveys are administered to stroke survivors who are currently participating in vocational rehabilitation programmes in all provinces in Nigeria in order to determine whether these programmes improve their quality of life. The information obtained from the surveys will serve as evidence for the effectiveness of these programmes.
- Further research is needed to develop a R.TW. model for stroke survivors that could be used and easily called upon by rehabilitation team in the Nigerian context. Such model, when developed could be applied to other populations of stroke survivors in other contexts.
- It is further recommended that a return to work model for the stroke survivor should focus on methods of disseminating knowledge of stroke and its prevention. This could be in the form of Health Promotion initiatives such as the education of the stroke survivors, their families, employers, co-workers and the general public as well as other workers.

## REFERENCES

- Abdullah, A., Mannava, P., & Annear, P. (2013). *Non-Communicable Diseases and Health Systems in the Asia Pacific Region: A Review of the Literature*. Melbourne: Nossal Institute for Global Health.
- Adeyemo, D. O. (2005). Local government and health care delivery in Nigeria: a case study. *J Hum Eco.*, 18(2), 149-160.
- Adika, O. V., Nzewi, N., & Apiyantiede, A. F. (2011). Knowledge and Opinion on stroke rehabilitation and outcome among stroke patients in Bayelsa, Nigeria. *International Journal of Tropical Medicine*, 6(4), 90-96.
- Akande, T., Salaudeen, A., & Babatunde, O. (2011, April). The effects of national health insurance scheme on utilization of health services at Unilorin Teaching Hospital staff clinic, Ilorin, Nigeria. *Health Science Journal*, 5(2), 98-106.
- Akinyemi, R. O., Ogah, O. S., Ogundipe, R. F., Oyesola, O. A., Oyadoke, A. A., Ogunlana, M. O., et al. (2009). Knowledge and perception of stroke among hospital workers in an African community. *European Journal of Neurology*, 16(9), 999-1003.
- Alaszewski, A., Alaszewski, H., Potter, J., & Penhale, B. (2007, December). Working after a stroke: Survivors' experiences and perceptions of barriers to and facilitators of the return to paid employment. *Disability and Rehabilitation*, 29(24), 1858 – 1869.
- Alaszewski, H., Alaszewski, A., Potter, J., Penhale, B., & Billings, J. (2003). Life after stroke: Reconstructing everyday life. *Centre for Health Services Studies: University of Kent*.
- Amaghionyeodiwe, L. A. (2008). Determinants of the choice of health care provider in Nigeria. *Health Care Management Science*, 11(3), 215-227.
- American Heart Association. (2012). *Heart and Stroke statistics*. Retrieved June 6, 2012, from American Heart Association: [http://www.heart.org/HEARTORG/General/Heart-and-Stroke-Association-Statistics\\_UCM\\_319064\\_SubHomePage.jsp#](http://www.heart.org/HEARTORG/General/Heart-and-Stroke-Association-Statistics_UCM_319064_SubHomePage.jsp#)
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders: DSM-IV*. (4th ed.). Washington, DC: Amer Psychiatric Pub Inc.
- Aziz, N. A., Leonardi-Bee, J., Phillips, M., Gladman, J. R., Legg, L., & Walker, M. F. (2009). Therapy-based rehabilitation services for patients living at home more than one year after stroke. *The Cochrane Library*, 2.



- Backman, C. L., Kennedy, S. M., Chalmers, A., & Singer, J. (2004). Participation in paid and unpaid work by adults with rheumatoid arthritis. *The Journal of Rheumatology*, 31(1), 47-56.
- Bagnardi, V., Zatonski, W., Scotti, L., La Vecchia, C., & Corrao, G. (2008). Does drinking pattern modify the effect of alcohol on the risk of coronary heart disease? Evidence from a meta-analysis. *J Epidemiol Community Health*, 62, 615-619.
- Baldwin, C., & Brusco, N. K. (2011, Sept - Oct). The Effect of Vocational Rehabilitation on Return-to-Work Rates Post Stroke: A Systematic Review. *Top Stroke Rehabil*, 18(5), 562-572.
- Barnes, C., & Mercer, G. (2005). Disability, work, and welfare challenging the social exclusion of disabled people. *Work, Employment & Society*, 19(3), 527-545.
- Barrett, L., & Kielhofner, G. (1998). Theories derived from occupational behaviour perspectives. In M. E. Neistadt, & E. Crepeau (Eds.), *Willard & Spackman`s occupational therapy* (9th ed.). Philadelphia: Lippincott Williams and Wilkins.
- Bartels, M. N. (2011). Pathophysiology and medical management. In G. Gillen, *Stroke rehabilitation: A function-based approach* (3rd ed., pp. 1-30). St. Louis, Missouri: Mosby Elsevier Inc.
- Bowen, G. A. (2008). Naturalistic inquiry and the saturation concept: a research note. *Qualitative research*, 8(1), 137-152.
- Brainin, M., Teuschl, Y., & Kalra, L. (2007). Acute treatment and long-term management of stroke in developing countries. *The Lancet Neurology*, 6(6), 553-561.
- Bright, F. A., Boland, P., Rutherford, J., Kayes, N. M., & McPherson, K. M. (2012). Implementing a client-centred approach in rehabilitation: An autoethnography. *Disability and Rehabilitation*, 34(12), 997-1004.
- Broome, K., McKenna, K., Fleming, J., & Worrall, L. (2009). Bus use and older people: A literature review applying the Person-Environment-Occupation model in macro practice. *Scandinavian journal of occupational therapy*, 16(1), 3-12.
- Brown, E. C. (2009). Ecological Models in Occupational Therapy. In E. B. Crepeau, E. S. Cohn, & B. A. Schell, *Willard and Spackman`s occupational therapy* (11th ed.). Philadelphia: Wolters Klover Lippincott Wiliams & Wilkins.
- Burningham, S. (2001). Going back to work. *Stroke News*, 19(3), 24-26.
- Burn J, Dennis M, Bamford J, Sandercock P, Wade D, Warlow C. (1994) Long-term risk of recurrent stroke after a first-ever stroke. The Oxfordshire Community Stroke Project. *Stroke*. 25(2):333-337.

- Burns, N., & Grove, S. K. (1998). *The practice of nursing research: conduct, critique and utilization*. Philadelphia: Sage.
- Busch, M. A., Coshall, C., Heuschmann, P. U., McKeivitt, C., & Wolfe, C. D. (2009). Sociodemographic differences in return to work after stroke: the South London Stroke Register (SLSR). *Journal of Neurology, Neurosurgery & Psychiatry*, 80(8), 888-893.
- CAOT. (1997). *Enabling Occupation: An occupational therapy perspective*. Canada: CAOT Publications.
- Carota, A., & Bogousslavsky, J. (2008). Stroke-related psychiatric disorders. *Handbook of Clinical Neurology*, 93, 623-651.
- Carpenter, C. (2004). The contribution of qualitative research to evidence-based practice. . In K. W. Hammell, & C. Carpenter, *Qualitative research in evidence-based rehabilitation* (pp. 1-13). Edinburgh: Churchill Livingstone.
- Chamberlain, M. A., Moser, V. F., Ekholm, K. S., O'Connor, R. J., Herceg, M., & Ekholm, J. (2009). Vocational rehabilitation: an educational review. *Journal of Rehabilitation Medicine*, 41(11), 856-869.
- Chan, M. L. (2008). Description of a return-to-work occupational therapy programme for stroke rehabilitation in Singapore. *Occupational therapy international*, 15(2), 87-99.
- Chinaedu, D. B. (2012, March 14). Disability Rights: The Need for Safeguard. *SSRN eJournal*, 1-12.
- Ch'Ng, A. M., French, D., & Mclean, N. (2008). Coping with the Challenges of Recovery from Stroke Long Term Perspectives of Stroke Support Group Members. *Journal of Health Psychology*, 13(8), 1136-1146.
- Connor, M. D., Walker, R., Modi, G., & Warlow, C. P. (2007). The burden of stroke in Black populations in sub-Saharan Africa. *Lancet Neurol* 2007; 6: 269-78. *Lancet Neurol*, 6, 268-178.
- Cook, C., & Lukersmith, S. (2010). Work rehabilitation. In M. Curtin, M. Molineux, & J. Supyk-Mellson, *Occupational Therapy and Physical Dysfunction: Enabling Occupation* (6th ed., pp. 391-408). Edinburgh: Churchill Livingstone.
- Corbin, J. M., & Strauss, A. L. (2008). *Basics of qualitative research : Techniques and procedures for developing grounded theory* (3rd ed.). Los Angeles: Sage Publications.

- Corr, S., & Wilmer, S. (2003). Returning to work after a stroke:an important but neglected area. *Br J Occup Ther*, 66(5), 185–192.
- Corring, D., & Cook, J. (2000). Client-centred care means that I am a valued human being. *Canadian Journal of Occupational Therapy*, 67(1), 15-21.
- Crabtree, B. F., Yanoshik, M. K., Miller, W. L., & O'Connor, P. J. (1993). Selecting individual or group interviews. *Successful focus groups: Advancing the state of the art*, 137–149.
- Crepeau, E. B., Cohn, E. S., & Schell, B. A. (2009). *Willard and Spackman`s occupational therapy* (11th ed.). Philadelphia: Lippincott Williams & Wilkins.
- Creswell, J. W., & Miller, D. L. (2000). Determining validity in qualitative inquiry. *Theory into practice*, 39(3), 124-130.
- Cristancho, S., Garces, D. M., Peters, K. E., & Mueller, B. C. (2008). Listening to rural Hispanic immigrants in the Midwest: A community-based participatory assessment of major barriers to health care access and use. *Qualitative Health Research*, 18(5), 633-646.
- Culler, K. H., Wang, Y. C., Byers, K., & Trierweiler, R. (2011). Barriers and facilitators of return to work for individuals with strokes: perspectives of the stroke survivor, vocational specialist, and employer. *Topics in Stroke Rehabilitation*, 18(4), 325-340.
- D'Alisa, S., Baudo, S., Mauro, A., & Misco, G. (2005). How does stroke restrict participation in long term stroke survivors? *Acta Neurological Scandinavica*, 112(3), 157-162.
- Dalvandi, A., R, K. H., Ekman, S. L., Maddah, S. S., & Heikkilä, K. (2013). Everyday Life Condition in Stroke Survivors and Their Family Caregivers in Iranian Context. *International Journal of Community Based Nursing and Midwifery*, 1(1), 3-15.
- Danesi, M., Okubadejo, N., & Ojini, F. (2007). Prevalence of stroke in an urban, mixed-income community in Lagos, Nigeria. *Neuroepidemiology*(28), 216–23.
- Daniëls, R., Winding, K., & Borell, L. (2002). Experiences of occupational therapists in stroke rehabilitation: Dilemmas of some occupational therapists in inpatient stroke rehabilitation. *Scandinavian Journal of Occupational Therapy*, 9(4), 167-175.
- Dekkers-Sánchez, P. M., Wind, H., Sluiter, J. K., & Frings-Dresen, M. H. (2011). What promotes sustained return to work of employees on long-term sick leave? Perspectives of vocational rehabilitation professionals. *Scandinavian journal of work, environment & health*, 37(6), 481-493.
- Denzin, N. K., & Lincoln, Y. S. (1994). Introduction: Entering the field of qualitative research. In N. K. Denzin, & Y. S. Lincoln, *Handbook of Qualitative Research* (pp. 1-17). Thousand Oaks, CA: Sage Publication.

- Desalu, O. O., Wahab, K. W., Fawale, B., Olarenwaju, O. T., Busari, O. A., et al. (2011). A review of stroke admissions at a tertiary hospital in rural Southwestern Nigeria. *Annals of African Medicine*, 10(2), 80-85.
- Disabled Persons Unit Department for Policy Coordination United Nations. (1993). *The UN standard rules on the equalisation of opportunities for persons with disabilities*. New York: United Nations.
- Dohle, C., Püllen, J., Nakaten, A., Küst, J., Rietz, C., & Karbe, H. (2009). Mirror therapy promotes recovery from severe hemiparesis: a randomized controlled trial. *Neurorehabilitation and neural repair*, 23(3), 209-217.
- Donnan, G. A., Fisher, M., Macleod, M., & Davis, S. M. (2008). Secondary prevention of stroke—Authors' reply. *The Lancet*, 372(9643), 1036.
- Doucet, T., Muller, F., Verdun-Esquer, C., & Debelleix, X. B. (2012). Returning to work after a stroke: A retrospective study at the Physical and Rehabilitation Medicine Center “La Tour de Gassies”. *Annals of physical and rehabilitation medicine*, 55(2), 112-127.
- Dowswell, G., Lawler, J., Dowswell, T., Young, J., Forster, A., & Hearn, J. (2000). Investigating recovery from stroke: a qualitative study. *Journal of clinical nursing*, 9(4), 507-515.
- Duncan, P. W., Richard, Z., Bates, B., Choi, Y. J., Glasberg, J., Graham, et al. (2005). Management of adult stroke rehabilitation care a clinical practice guideline. *Stroke*, 36(9), e100-e143.
- Employee's Compensation Act. (2010). *The Employee's Compensation Act*. Abuja: Federal Republic of Nigeria.
- Eze, C. O., Agu, C. E., Kalu, U. A., Maduanusi, C. A., Nwali, S. T., & Igwenyi, C. (2013). The Pattern and Presentation of Stroke in Federal Teaching Hospital Abakaliki (FETHA) South-East Nigeria. *Journal of Biology, Agriculture and Healthcare*, 3(11), 141.
- Faleyimu, O. I., & Agbeja, B. O. (2012). Constraints to Forest Policy Implementation in the Southwest Nigeria: Causes, Consequences and Cure. *Resources and Environment*, 2(2), 37-44.
- Feigin, V. L., Lawes, C. M., Bennett, D. A., & Anderson, C. S. (2003). Stroke epidemiology: a review of population based studies of incidence, prevalence, and case-fatality in the late 20th century. *Lancet Neurology*, 2(1), 43–53.
- Feigin, V., Lawes, C., Bennett, D., Baker-Collo, S., & Parag, V. (2009). ‘Worldwide stroke incidence and early case fatality reported in 56 population-based studies: A systematic review’. *The Lancet Neurology*, 8, 355-359.

- Flemming, K. D., & Brown, R. D. (2004). Secondary prevention strategies in ischemic stroke: Identification and optimal management of modifiable risk factors. *Mayo Clinic Proceedings*, 79(10), 1330-1340.
- Friesen, M. N., Yassi, A., & Cooper, J. (2001). Return-to-work: The importance of human interactions and organizational structures. *Work: A Journal of Prevention, Assessment and Rehabilitation*, 17(1), 11-22.
- Gabriele, W., & Renate, S. (2009). Work loss following stroke. *Disability & Rehabilitation*, 31(18), 1487-1493.
- Gard, G., & Larsson, A. (2003). Focus on motivation in the work rehabilitation planning process: a qualitative study from the employer's perspective. *Journal of Occupational Rehabilitation*, 13(3), 159-167.
- Giaquinto, S., Spiridigliozzi, C., & Caracciolo, B. (2007). Can faith protect from emotional distress after stroke? *Stroke*, 38(3), 993-997.
- Gillen, G. (2006). Cerebrovascular accident/stroke. In M. H. Pendleton, & W. Schultz-Krohn, *Pedretti's occupational therapy: Practice skills for physical dysfunction* (pp. 802-837). U.S: Elsevier.
- Gilworth, G., Phil, M., Cert, A., Sansam, K. A., & Kent, R. M. (2009). Personal experiences of returning to work following stroke: An exploratory study. *Work*(34), 95-103.
- Glew, R. H., Conn, C. A., Vanderjagt, T. A., Calvin, C. D., Obadofin, M. O., Crossey, M., et al. (2004, December). Risk factors for cardiovascular disease and diet of urban and rural dwellers in northern Nigeria. *Journal of Health, Population and Nutrition*, 22(4), 357-369.
- Govender, P., & Kalra, L. (2007). Benefits of occupational therapy in stroke rehabilitation. *Expert Review of Neurotherapeutics*, 7(8), 1013-1019.
- Guba, E. G. (1981). Criteria for assessing the trustworthiness of naturalistic inquiries. *Educational Resources Information Center Annual Review Paper*, 29, pp. 75-91.
- Hadley, J. (2003). Sicker and poorer—The consequences of being uninsured: A review of the research on the relationship between health insurance, medical care use, health, work, and income. *Medical Care Research and Review*, 60(2 suppl), 3S-75S.
- Hammell, K., & Carpenter, C. (2002). Introduction to qualitative research in occupational and physiotherapy. In W. K. Hammell, C. Carpenter, & I. Dyck, *Using Qualitative Research: A Practical Introduction for Occupational and Physical Therapists* (pp. 1-12). London: Elsevier Science Limited.

- Hannerz, H., Pedersen, B. H., Poulsen, O. M., Humle, F., & Andersen, L. L. (2011). A nationwide prospective cohort study on return to gainful occupation after stroke in Denmark 1996–2006. *BMJ open*, *1*(2), 1-6.
- Hartke, R. J., Trierweiler, R., & Bode, R. (2011). Critical factors related to return to work after stroke: a qualitative study. *Topics in Stroke Rehabilitation*, *18*(4), 341-351.
- Harvey, L. R., Roth, J. E., Yu, T. D., & Celnik, P. (2011). Stroke syndromes. In L. R. Braddom, *Physical medicine and rehabilitation* (4th ed., pp. 1177-1222). Philadelphia: Elsevier Saunders.
- Heinemann, A. W., Roth, E. J., Cichowski, K., & Betts, H. B. (1987). Multivariate analysis of improvement and outcome following stroke rehabilitation. *Archives of neurology*, *44*(11), 1167-1172.
- Heuschmann, P. U., Grieve, A. P., Toschke, A. M., Rudd, A. G., & Wolfe, C. D. (2008, August). Ethnic group disparities in 10-year trends in stroke incidence and vascular risk factors: the south London stroke register (SLSR). *Stroke*, *39*(8), 2204-2210.
- Hofgren, C., Bjorkdahl, A., Esbjornsson, E., & Stibrant-Sunnerhagen, K. (2007). Recovery after stroke: Cognition, ADL-function and return to work. *Acta Neurologica Scandinavica*, *115*(2), 73-80.
- Holloway, I., & Wheeler, S. (2010). *Qualitative research in nursing and healthcare* (3rd ed.). Oxford: John Wiley & Sons.
- Holmqvist, L. W., von Koch, L., & de Pedro-Cuesta, J. (2000). Use of healthcare, impact on family caregivers and patient satisfaction of rehabilitation at home after stroke in southwest Stockholm. *Scandinavian journal of rehabilitation medicine*, *32*(4), 173-179.
- Holstein, J. A., & Gubrium, J. F. (1999). Active interviewing. In A. Bryman, & R. G. Burgess, *Qualitative research* (Vol. 2, pp. 105-121). London: Sage.
- Howard, V. J., Kleindorfer, D. O., Judd, S. E., McClure, L. A., Safford, M. M., Rhodes, J. D., et al. (2011, Jan 6). Disparities in stroke incidence contributing to disparities in stroke mortality. *Annals of Neurology*, *69*(4), 618-627.
- Hoyle, M., Gustafsson, L., Meredith, P., & Ownsworth, T. (2012, July). Participation After Stroke: Do We Understand All the Components and Relationships As Categorised in the ICF? *Brain Impairment*, *13*(1), 4-15.
- Hughes, J. C., Bamford, C., & May, C. (2008). Types of centredness in health care: themes and concepts. *Medicine, Health Care and Philosophy*, *11*(4), 455-463.

- Iloh, G., Ofoedu, J., Njoku, P., Odu, F., Ifedigbo, C., & Iwuamanam, K. (2012, October). Evaluation of patients' satisfaction with quality of care provided at the National Health Insurance Scheme clinic of a tertiary hospital in South-Eastern Nigeria. *Nigerian Journal of Clinical Practice*, *15*(4), 469-474.
- Intercollegiate Stroke Working Party. (2008). *National clinical guidelines for stroke* (3rd ed.). London: Royal College of Physician.
- Ivey, J., & Mew, M. (2010). Theoretical Basis. In J. Edmans, *Occupational Therapy and Stroke* (2nd ed., pp. 24-48). Oxford: Wiley-Black.
- Jackson, S. F., Perkins, F., Khandor, E., Cordwell, L., Hamann, S., & Buasai, S. (2006). Integrated health promotion strategies: a contribution to tackling current and future health challenges. *Health Promotion International*, *21*(suppl 1), 75-83.
- Johansson, B., Norrving, B., & Lindgren, A. (2000). Increased stroke incidence in Lund Orup, Sweden, between 1983 to 1985 and 1993 to 1995. *Stroke*, *31*(2), 481- 486.
- Johansson, T., & Wild, C. (2010). Telemedicine in acute stroke management: systematic review. *International journal of technology assessment in health care*, *26*(2), 149-155.
- Johansson, U., & Tham, K. (2006). The meaning of work after acquired brain injury. *The American journal of occupational therapy*, *60*(1), 60-69.
- Kaplan, R., Tirschwell, D., Longstreth, W., Manolio, T., Heckbert, S., LeValley, A., et al. (2006). Blood pressure level and outcomes in adults aged 65 and older with prior ischemic stroke. *J Am Geriatr Soc*, *54*(9), 1309-1316.
- Katz, N., Itzkovich, M., Averbuch, S., & Elazer, B. (1989). Loewenstein Occupational Therapy Cognitive Assessment (LOTCA) battery for brain injured patients: reliability and validity. *American Journal of Occupational Therapy*, *43*(3), 184-192.
- Kessler, D., Dubouloz, C. J., Urbanowski, R., & Egan, M. (2009). Meaning perspective transformation following stroke: the process of change. *Disability & Rehabilitation*, *31*(13), 1056-1065.
- King, M. P., & Olson, L. D. (2009). Work. In B. E. Crepeau, S. E. Cohn, & B. A. Schell, *Willard & Spackman's Occupational Therapy* (11th ed., pp. 615-632). Philadelphia: Lippincott Williams & Wilkins.
- Kitzinger, J. (1995). Qualitative research: Introducing focus groups. *British medical journal*, *311*(7000), 299-302.
- Klijn, C. J., & Hankey, G. J. (2003). Management of acute ischaemic stroke: new guidelines from the American Stroke and European Stroke initiative. *Lancet Neurol*, *2*, 698-701.

- Koch, L., Egbert, N., Coeling, H., & Ayers, D. (2005). Returning to work after the onset of illness: experiences of right hemisphere stroke survivors. *Rehabilitation Counseling Bulletin*, 48(4), 209-218.
- Komolafe, M. A., Ogunlade, O., & Komolafe, E. O. (2007, July). Stroke mortality in a teaching hospital in southwest Nigeria. *Tropical doctor*, 37(3), 186-188.
- Krefting, L. (1991, March). Rigor in Qualitative Research: The Assessment of Trustworthiness. *The American Journal of Occupational Therapy*, 45(3), 214-222.
- Krupa, T. (2010). When Motivation for Vocational Assistance is Unclear. In C. Lloyd, *Vocational Rehabilitation and Mental Health* (pp. 79-93). United Kingdom: Wiley-Blackwell.
- Lagos State Special People's Law. (2011). *The Lagos State Special People's Law*. Lagos: Lagos State of Nigeria. (policy reference?)
- Lamb, M., Buchanan, D., Godfrey, C. M., Harrison, M. B., & Oakley, P. (2008). The psychosocial spiritual experience of elderly individuals recovering from stroke: a systematic review. *International Journal of Evidence-Based Healthcare*, 6(2), 173-205.
- Lang, R., & Upah, L. (2008). *Scoping Study: Disability issues in Nigeria*. Nigeria: DFID.
- Langhorne, P., Bernhardt, J., & Kwakkel, G. (2011). Stroke rehabilitation. *The Lancet*, 377(9778), 1693-1702.
- Law, M., Cooper, A. B., Strong, S., Stewart, D., Rigby, P., & Letts, L. (1996, April). The Person-Environment-Occupation Model: A transactive approach to occupational performance. *Canadian Journal of Occupational Therapy*, 63(1), 9-23.
- Lawan, U. M., Iliyasu, Z., & Daso, A. M. (2012, January-February). Challenges to the scale-up of the Nigerian National Health Insurance Scheme: Public knowledge and opinions in urban Kano, Nigeria. *Annals of Tropical Medicine and Public Health*, 5(1), 34-39.
- Leach, E., Cornwell, P., Fleming, J., & Haines, T. (2010). Patient centered goal-setting in a subacute rehabilitation setting. *Disability & Rehabilitation*, 32(2), 159-172.
- Leedy, P. D., & Ormrod, J. E. (2005). Quantitative Research Methodologies. In *Practical Research: Planning and Design* (8th ed., pp. 131-160). New Jersey: Pearson Education, Inc.
- Legg, L., & Langhorne, P. (2004). Rehabilitation Therapy services for stroke patients living at home: Systematic review of randomised trials'. *The Lancet*, 363(9406), 352-356.



- Lezak, M. D. (2004). *Neuropsychological Assessment* (4th ed.). New York: Oxford University Press.
- Lincoln, Y., & Guba, E. (1985). *Naturalistic inquiry*. Beverly Hills, CA: Sage.
- Liu, M., Wei, W., Fergenbaum, J., Comper, P., & Colantonio, A. (2011). Work-related mild-moderate traumatic brain injury and the construction industry. *Work: A Journal of Prevention, Assessment and Rehabilitation*, 39(3), 283-290.
- Lloyd-Sherlock, P. (2010). Stroke in Developing Countries: Epidemiology, Impact and Policy Implications. *Development Policy Review*, 28(6), pp. 693-709.
- Lock, S., Jordan, L., Bryan, K., & Maxim, J. (2005). Work after stroke: focusing on barriers and enablers. *Disability & Society*, 20(1), 33-47.
- Logan, P., & Skelly, F. (2010). Resettlement. In J. Edmans, *Occupational therapy and stroke* (pp. 173-207). Oxford: Wiley-Black.
- Lopez, A. D., & Mathers, C. D. (2006). Measuring the global burden of disease and epidemiological transitions: 2002-2030. *Annals of tropical medicine and parasitology*, 100(5-6), 481-499.
- Luborsky, M. R., & Rubinstein, R. L. (1995, March). Sampling in Qualitative Research : Rationale, Issues, and Methods. *Research on Aging*, 17(1), 89-113.
- Malec, J. F., Buffington, A. L., Moessner, A. M., & Degiorgio, L. (2000). A medical/vocational case coordination system for persons with brain injury: An evaluation of employment outcomes. *Archives of Physical Medicine and Rehabilitation*, 81(8), 1007-1015.
- Marmot, M., Friel, S., Bell, R., Houweling, T. A., & Taylor, S. (2008). Closing the gap in a generation: health equity through action on the social determinants of health. *The Lancet*, 372(9650), 1661-1669.
- Marshall, R. S., Perera, G. M., Lazar, R. M., Krakauer, J. W., Constantine, R. C., & DeLaPaz, R. L. (2000). Evolution of cortical activation during recovery from corticospinal tract infarction. *Stroke*, 31(3), 656-661.
- Martinez-Villa, E., & Irimia, P. (2004). The cost of stroke. *Cerebrovasc Dis*, 17(1), 124-129.
- McCull, M. A. (2005). Occupational Therapy Interventions in a Rehabilitation Context. In C. H. Christiansen, C. M. Baum, & J. Bass-Haugen, *Occupational therapy: Performance, Participation, and Well-being* (pp. 450-466). New Jersey: Slack Incorporated.

- McCull, M. A., Stirling, P., Walker, J., Corey, P., & Wilkins, R. (1999). Expectations of independence and life satisfaction among aging spinal cord injured adults. *Disability and Rehabilitation*, 21(5-6), 231-240.
- Medin, J., Barajas, J., & Ekberg, K. (2006). Stroke patients' experiences of return to work. *Disability & Rehabilitation*, 28(17), 1051-1060.
- Merz, M. A., Bricout, J. C., & Koch, L. C. (2001). Disability and job stress: Implications for vocational rehabilitation planning. *Work*, 17(2), 85-95.
- Microsoft Encarta dictionary. (2009).
- Miles, B. M., & Huberman, A. M. (1994). Early steps in analysis. In B. M. Miles, A. M. Huberman, & 2nd (Ed.), *An Expanded Sourcebook: Qualitative Data Analysis* (pp. 50-84). London: Sage.
- Miller, P., Parker, S., & Gillinson, S. (2004). Work revisited: Towards flexible work and personalized support. In P. Miller, S. Parker, & S. Gillinson, *Disablism: How to tackle the last prejudice* (pp. 42-53). London: Demos.
- Morse, J. M., & Field, P. A. (1996). *Nursing research: The application of qualitative approaches*. Nelson Thornes.
- Mouton, J., & Marais, H. C. (1996). *Basic concepts in the methodology of the social sciences* (5th ed.). Pretoria, South Africa: Human Sciences Research Council.
- Moyers, P. (2005). Introduction to occupation based practise. In C. H. Christiansen, C. M. Baum, & J. Bass-Haugen, *Occupational therapy: performance, participation & well being (3rd edition)*. (p. 221). Thorofare, New Jersey: Slack incorporated.
- National Health and Research Ethics Committee. (2007, August 13). *National code of health research ethics*. Retrieved May 22, 2012, from National health and research ethics committee: <http://www.nhrec.net/nhrec/offline.html>
- National Population Commission. (2013, April 23). *State Population*. Retrieved April 23, 2013, from National Population Commission, Nigeria: <http://www.population.gov.ng/index.php/state-population>
- Neistadt, M. E. (1990). A critical analysis of occupational therapy approaches for perceptual deficits in adults with brain injury. *The American Journal of Occupational Therapy*, 44(4), 299-304.
- Nigerian National Bureau of Statistics. (2011). *Annual Socio-Economic report: Nigerian unemployment report*. Abuja: National Bureau of Statistics.

- Nigerians with Disability Decree. (1993, January). *Nigeria: Nigerians with Disability Decree 1993*. Retrieved June 2, 2013, from Cornell university ILR school: <http://digitalcommons.ilr.cornell.edu/gladnetcollect/133/>
- Njoku, C. H., & Aduloju, A. B. (2004). Stroke in Sokoto, Nigeria: A five year retrospective study. *Annals of African Medicine*, 3(2), 73-76.
- Obalum, D. C., & Fiberesima, F. (2012). Nigerian National Health Insurance Scheme (N.H.I.S.): An overview. *The Nigerian postgraduate medical journal*, 19(3), 167-174.
- Obembe, A. O., Olaogun, M. O., Bamikole, A. A., Komolafe, M. A., & Odetunde, M. O. (2013). Awareness of Risk Factors and Warning Signs of Stroke in a Nigeria University. *Journal of Stroke and Cerebrovascular Diseases*.
- Obembe, A., & Fasuyi, T. (2010, October). Community reintegration in Nigerian stroke survivors. *International Journal of Stroke*, 5, 428-431.
- O'Brien, L. (2007). Achieving a successful and sustainable return to the workforce after ABI: a client-centred approach. *Brain Injury*, 21(5), 465-478.
- O'Donnell, M. J., Xavier, D., Liu, L., Zhang, H., Chin, S. L., Rao-Melacini, P., et al. (2010, July 10). Risk factors for ischaemic and intracerebral haemorrhagic stroke in 22 countries (the INTERSTROKE study): a case-control study. *The Lancet*, 376, 112-123.
- Ogun, S. A. (2000). Acute stroke mortality at Lagos University Teaching- a five-year review. *Nigerian Quarterly Journal of Hospital Medicine*, 10(1), 8-10.
- Ogun, S. A., & Odusote, K. (2001). Effectiveness of high dose dexamethasone in the treatment of acute stroke. *West African journal of medicine*, 20(1), 1-6.
- Ogungbo, B. I., Gregson, B., Mendelow, A. D., & Walker, R. (2003). Cerebrovascular diseases in Nigeria: what do we know and what do we need to know? *Trop. Doct.*, 33, 25-30.
- Ogungbo, B., Mendelow, A. D., & Walker, R. (2004). The epidemiology, diagnosis and treatment of subarachnoid haemorrhage in Nigeria: What do we know and what do we need to know? *British Journal of Neurosurgery*, 18(4), 362-366.
- Ogungbo, B., Ogun, S. A., Ushewokunze, A. D., Rodgers, H., & Walker, R. (2005). How can we improve the management of stroke in Nigeria, Africa? *African Journal of Neurological Sciences*, 24(2), 9-19.
- Ojini, F., & Danesi, M. (2003). The pattern of neurological admissions at the Lagos University Teaching Hospital. *Niger. J. Clin. Pract.*, 5, 38-41.

- Olaleye, O., & Suddick, K. (2012). A study of perceived factors affecting patients' participation in outpatient stroke physiotherapy exercise in Nigeria. *International Journal of Therapy and Rehabilitation, 19*(10), 581-590.
- Olaniwun, A. (2011, February 11). Employer and employee relations: The Employee's Compensation Act. Ikoyi, Lagos, Nigeria: Olaniwun Ajayi LP.
- Oliver, M., & Barnes, C. (1998). *Social policy and disabled people: From exclusion to inclusion*. London: Longman.
- Omu, O., & Reynolds, F. (2012). Quality of life in stroke survivors living in Kuwait: health professionals' perspectives. *Diversity and Equality in Health and Care, 9*(1), 9-18.
- Omu, O., Al-Obaidi, S., & Reynolds, F. (2012). Religious faith and psychosocial adaptation among stroke patients in Kuwait: A mixed method study. *Journal of religion and health, 1*-14.
- Onyekwere, O. K., Okwuchi, E. V., & Samuel, E. S. (2013). Knowledge of hypertension among adults in Owerri senatorial zone of Imo State, Nigeria. *Mediterranean Journal of Social Sciences, 4*(5), 69-79.
- Orchanian, D. P., & Jamison, P. W. (2011). Cerebrovascular Accident. In B. J. Atchison, & D. K. Dirette, *Conditions in Occupational Therapy: Effect on Occupational Performance* (4th ed., pp. 127-152). Philadelphia: Lippincott Williams & Wilkins.
- Orgogozo, J. M., & Renaud, S. (2001). Alcohol and Stroke. In J. W. Norris, & V. Hachinski, *Stroke Prevention* (pp. 43-64). New York: Oxford University Press.
- Owoeye, I. O. (1996). The Role of Medical Rehabilitation in Nigeria's health care delivery. *Journal of the Nigeria Medical Rehabilitation therapists, 6*-15.
- Palmer, A. J., Valentine, W. J., Roze, S., Lammert, M., Spiesser, J., & Gabriel, S. (2005). Overview of costs of stroke from published, incidence-based studies spanning 16 industrialised countries. *Current Medical Research and Opinion, 21*(1), 19-26.
- Pandian, J., Srikanth, V., Read, S., & Thrift, A. (2007). Poverty and stroke in India: A time to act. *Stroke, 38*(11), 3063-3069.
- Patra, J., Taylor, B., Irving, H., Roerecke, M., Baliunas, D., Mohapatra, S., et al. (2010). Alcohol consumption and the risk of morbidity and mortality for different stroke types--a systematic review and meta-analysis. *BMC Public Health, 10*(258), 1-12.
- Peters, G. O., Buni, S. G., Oyeyemi, A. Y., & Hamzat, T. K. (2013, March). Determinants of return to work among Nigerian stroke survivors. *Disability and Rehabilitation, 35*(6), 455-459.

- Petrea, R., Beiser, A., Seshadri, S., Kelly-Hayes, M., Kase, C., & Wolf, P. (2009). Gender differences in stroke incidence and poststroke disability in the Framingham Heart Study. *Stroke, 40*(4), 1032-1037.
- PM News. (2011, September 21). *Heart Disease, Stroke Cost Nigeria \$800m Yearly*. Retrieved April 25, 2012, from PN News Agency: <http://pmnewsnigeria.com/2011/09/21/heart-disease-stroke-cost-nigeria-800m-yearly/>
- Polit, D. F., & Hungler, B. P. (1999). *Nursing research: methods, appraisal and utilisation*. Philadelphia: Lippincott.
- Redfern, J., McKeivitt, C., Rudd, A. G., & Wolfe, C. D. (2002). Health care follow-up after stroke: opportunities for secondary prevention. *Family Practice, 19*, 378-382.
- Reed, M., Harrington, R., Duggan, Á., & Wood, V. A. (2010). Meeting stroke survivors' perceived needs: a qualitative study of a community-based exercise and education scheme. *Clinical Rehabilitation, 24*(1), 16-25.
- Rhoda, A., Mpfu, R., & DeWeerd, W. (2009). The rehabilitation of stroke patients at community health centres in the Western Cape. *South African Journal of Physiotherapy, 65*(3), 1-6.
- Robinson, J. E. (2000). Access to employment for people with disabilities: Findings of a consumer-led project. *Disability and Rehabilitation, 22*( 5), 246–253.
- Robison, J., Wiles, R., Ellis-Hill, C., McPherson, K., Hyndman, D., & Ashburn, A. (2009). Resuming previously valued activities post-stroke: who or what helps? *Disability & Rehabilitation, 31*(19), 1555-1566.
- Rochette, A., Tribble, D. S., Desrosiers, J., Bravo, G., & Bourget, A. (2006). Adaptation and coping following a first stroke: a qualitative analysis of a phenomenological orientation. *International Journal of Rehabilitation Research, 29*(3), 247-249.
- Roderick, P., Low, J., Day, R., Peasgood, T., Mullee, M. A., Turnbull, J. C., et al. (2001). Stroke rehabilitation after hospital discharge: a randomized trial comparing domiciliary and day-hospital care. *Age and Ageing, 30*(4), 303-310.
- Roger, V. L., Go, A. S., Lloyd-Jones, D. M., Benjamin, E. J., Berry, J. D., Borden, W. B., et al. (2012). Heart disease and stroke statistics—2012 Update: A report from the American Heart Association. *Circulation, 125*, e2-e220.
- Ross, J. (2007). The meaning and value of work. In J. Ross, *Occupational therapy and vocational rehabilitation* (pp. 33-49). London: John Wiley & Sons.

- Rubenson, C., Svensson, E., Linddahl, I., & Björklund, A. (2007). Experiences of returning to work after acquired brain injury. *Scandinavian journal of occupational therapy*, 14(4), 205-214.
- Rubin, H. J., & Rubin, I. S. (1995). *Qualitative interviewing: the art of hearing data*. Thousand Oaks, CA: Sage.
- Rudman, D. L., Hebert, D., & Reid, D. (2006). Living in a restricted occupational world: the occupational experiences of stroke survivors who are wheelchair users and their caregivers. *Canadian Journal of Occupational Therapy*, 73(3), 141-152.
- Sacco, R. L., Boden-Albala, B., Abel, G., Lin, I.-F., Elkind, M., Hauser, W. A., et al. (2001, August). Race-ethnic disparities in the impact of stroke risk factors: the Northern Manhattan stroke study. *Stroke*, 32, 1725-1731.
- Saeki, S. (2000). Disability management after stroke its medical aspects for workplace accommodation. *Disabil Rehabil*(22), 578–582.
- Salter, K., Hellings, C., Foley, N., & Teasell, R. (2008). The experience of living with stroke: a qualitative meta-synthesis. *Journal of Rehabilitation Medicine*, 40(8), 595-602.
- Salter, K., Teasell, R., Foley, N., Bhogal, S., & Speechley, M. (2011, June). Secondary prevention of stroke. *Evidence-Based Review of Stroke Rehabilitation*, pp. 1-306.
- Sarwar, N., Gao, P., Seshasai, S. R., Gobin, R., Kaptoge, S., Di Angelantonio, E., et al. (2010). Diabetes mellitus, fasting blood glucose concentration, and risk of vascular disease: a collaborative meta-analysis of 102 prospective studies. *Lancet*, 375(9733), 2215-2222.
- Schultz, S. (2009). Theory of Occupational Adaptation. In B. E. Crepeau, S. E. Cohn, & B. A. Schell, *Willard & Spackman's Occupational Therapy* (11th ed., pp. 462-475). Philadelphia: Lippincott Williams & Wilkins.
- Seshadri, S., & Wolf, A. P. (2007). Lifetime risk of stroke and dementia: current concepts, and estimates from the Framingham Study. *Lancet Neurol*, 6, 1106 – 1114.
- Sharon, B. (2006). Person Environment Occupation Model: An Analysis Tool for Workplace Dynamics. *International Forum on Disability Management*. Brisbane.
- Shaw, W., Hong, Q. N., Pransky, G., & Loisel, P. (2008). A literature review describing the role of return-to-work coordinators in trial programs and interventions designed to prevent workplace disability. *Journal of Occupational Rehabilitation*, 18(1), 2-15.
- Siegert, R. J., Ward, T., Levack, W. M., & Mcpherson, K. M. (2007). A Good Lives Model of clinical and community rehabilitation. *Disability & Rehabilitation*, 29 (20-21), 1604-1615.

- Sinclair, E., Radford, K., Grant, M., & Terry, J. (2013). Developing stroke-specific vocational rehabilitation: a soft systems analysis of current service provision. *Disability & Rehabilitation*, 1-9.
- Soeker, M. S. (2010). *Occupational Self Efficacy: An occupational therapy practice model to facilitate returning to work after brain injury*. Ph.D Thesis. Department of Sport, Recreation and Exercise Science. Cape Town: The University of the Western Cape.
- Soeker, M. S. (2011). Occupational Adaptation: A Return to Work Perspective of Persons with Mild to Moderate Brain Injury in South Africa. *Journal of Occupational Science*, 18(1), 81-91.
- Stansbury, J. P., Jia, H., Williams, L. S., Vogel, W. B., & Duncan, P. W. (2005). Ethnic disparities in stroke: Epidemiology, acute care, and postacute outcomes. *Stroke*, 36(2), 374-386.
- Starks, H., & Trinidad, S. B. (2007). Choose Your Method: A Comparison of Phenomenology, Discourse Analysis, and Grounded Theory. *Qualitative Health Research*, 17(10), 1372-1380.
- Stock, S. (2006). *Employment For Persons With Brain Injuries In Oregon*. Oregon: Oregon Competitive Employment Project.
- Strauss, A. L., Fagerhough, S., Suczek, B., & Wiener, C. (1997). *Social organization of medical work*. (A. L. Strauss, Ed.) Social organization of medical work, London: Transaction Publishers.
- Strebart, H. J., & Carpenter, D. R. (1999). *Qualitative research in nursing: advancing the humanistic imperative*. Philadelphia: Lippincott.
- Stroebele, N., Muller-Riemenschneider, F., Nolte, C. H., Muller-Nordhorn, J., Bockelbrink, A., & Willich, S. N. (2011, February). Knowledge of risk factors, and warning signs of stroke: a systematic review from a gender perspective. *International Journal of Stroke*, 6(1), 60-61.
- Stroke Unit Trialists' Collaboration. (2007). Organised inpatient (stroke unit) care for stroke. *Cochrane Database Systematic Review*, 4(4).
- Strong, S., Rigby, P., Stewart, D., Law, M., Letts, L., & Cooper, B. (1999). Application of the Person-Environment-Occupation model: A practical tool. *Canadian Journal of Occupational Therapy*, 66(3), 122-133.
- Stucki, G., Stier-Jarmer, M., Grill, E., & Melvin, J. (2005). Rationale and principles of early rehabilitation care after an acute injury or illness. *Disability & Rehabilitation*, 27(7-8), 353-359.

- Sumsion, T., & Smyth, G. (2000). Barriers to client-centredness and their resolution. *Canadian Journal of Occupational Therapy*, 67(1), 15-21.
- Talbot, L. R., Viscogliosi, C., Desrosiers, J., Vincent, C., Rousseau, J., & Robichaud, L. (2004). Identification of rehabilitation needs after a stroke: an exploratory study. *Health and Quality of Life Outcomes*, 2(53), 1-9.
- Tanaka, H., Toyonaga, T., & Hashimoto, H. (2011, May). Functional and occupational characteristics associated with very early return to work after stroke in Japan. *Archives of Physical Medicine and Rehabilitation*, 92(5), 743-748.
- Tanaka, H., Toyonaga, T., & Hashimoto, H. (2013). Functional and occupational characteristics predictive of a return to work within 18 months after stroke in Japan: Implications for rehabilitation. *International archives of occupational and environmental health*, 1-9.
- Terent, A. (2003). Trends in stroke incidence and 10-year survival in Soderhamn, Sweden, 1975-2001. *Stroke*, 34(6), 1353-1358.
- Terrent, A. (1993). Stroke morbidity. In J. P. Whisnant (Ed.), *Stroke: Populations, cohorts and Clinical Trials* (. ed., pp. 37-58). Boston: Butterworth-Heinman Ltd.
- Thabane, L., Ma, J., Chu, R., Cheng, J., Ismaila, A., Rios, L. P., et al. (2010). A tutorial on pilot studies: the what, why and how. *BMC medical research methodology*, 10(1), 1.
- The Guardian. (2009, April 12). *Nigerian amputated in Sierra Leone, devotes life to helping the disabled*. Retrieved May 3, 2009, from The Guardian: <[http://www.nguardiannews.com/sunday\\_magazine/article05//indexn3\\_html?pdate=120409&ptitle=Nigerian%20Amputated%20In%20Sierra%20Leone,%20Devotes%20Life%20To%20Helping%20The%20Disabled&cpdate=160409](http://www.nguardiannews.com/sunday_magazine/article05//indexn3_html?pdate=120409&ptitle=Nigerian%20Amputated%20In%20Sierra%20Leone,%20Devotes%20Life%20To%20Helping%20The%20Disabled&cpdate=160409)>
- Thompson, H. S., & Ryan, A. (2009). The impact of stroke consequences on spousal relationships from the perspective of the person with stroke. *Journal of clinical nursing*, 18(12), 1803-1811.
- Tipton- Burton, M., McLaughlin, R., & Englander, J. (2005). Traumatic brain injury. In H. M. Pendleton, & W. Schultz- Krohn, *Pedretti's occupational therapy: Practise skills for physical dysfunction* (6th ed.). Philadelphia: Elsevier Mosby.
- Treger, I., Shames, J., Giaquinto, S., & Ring, H. (2007). Return to work in stroke patients. *Disability & Rehabilitation*, 29(17), 1397-1403.
- Tuffor, L., & Newman, P. (2012). Bracketing in Qualitative Research. *Qualitative Social Work*, 11, 80-96.



- Turpin, M., & Iwama, M. K. (2011). *Using occupational therapy models in practice: A fieldguide*. Toronto: Churchill Livingstone Elsevier.
- Ulin, R. P., Robinson, T. E., & Tolley, E. E. (2005). Collecting Qualitative Data: The Science and the Art. In R. P. Ulin, T. E. Robinson, & E. E. Tolley, *Qualitative Methods in Public Health: A Field Guide for Applied Research* (pp. 71-113). San Francisco: Jossey-Bass.
- United Nations Convention on the Right of Persons with Disabilities. (2008). *Convention on the Right of Persons with Disabilities*. Retrieved July 19, 2012, from United Nations enable: <http://www.un.org/disabilities/default.asp?id=150>
- United Nations World Summit for Social Development. (1995). *Report of the world summit of social development*. Copenhagen: United Nations Department of Economic and Social Affairs.
- United State Department of Justice. (2009, July). *A guide to disability rights laws*. Retrieved July 7, 2012, from U.S department of justice, civil rights division, disability rights section: <http://www.ada.gov/cguide.htm#anchor62335>
- van Nes, F. (2004). *One body, three hands and two minds: Individual and co-narratives of an elderly couple after stroke*. M.Sc Thesis. Institute of Occupational Therapy. Amsterdam: Academy for European masters degree study in occupational therapy.
- van Teijlingen, E., & Hundley, V. (2001). The importance of pilot studies. *Social research update*(35), 1-4.
- van Velzen, J. M., van Bennekom, C. A., Edelaar, M. J., Sluiter, J. K., & Frings-Dresen, M. H. (2009). How many people return to work after acquired brain injury?: a systematic review. *Brain Injury*, 23(6), 473-488.
- van Velzen, J. M., van Bennekom, C. A., van Dormolen, M., Sluiter, J. K., & Frings-Dresen, M. H. (2011). Factors influencing return to work experienced by people with acquired brain injury: a qualitative research study. *Disability & Rehabilitation*, 33(22-23), 2237-2246.
- van Wijk, I., Kappelle, L. J., van Gijn, J., Koudstaal, P. J., Franke, C. L., Vermeulen, M., et al. (2005, June). Long-term survival and vascular event risk after transient ischaemic attack or minor ischaemic stroke: a cohort study. *The Lancet*, 365(9477), 2098-2104.
- Vestling, M., Ramel, E., & Iwarsson, S. (2013). Thoughts and experiences from returning to work after stroke. *Work: A Journal of Prevention, Assessment and Rehabilitation*, 45, 201-211.
- Vestling, M., Tufvesson, B., & Iwarsson, S. (2003). Indicators for return to work after stroke and the importance of work for subjective well-being and life satisfaction. *Journal of Rehabilitation Medicine*, 35(3), 127-131.

- Wahab, K. W. (2008). The burden of stroke in Nigeria. *International Journal of Stroke*, 3(4), 290-292.
- Wahab, K. W., Sani, M. U., Samaila, A. A., Gbadamosi, A., & Olokoba, A. B. (2007). Stroke at a tertiary medical institution in northern Nigeria: patients' profile and predictors of outcome. *Sahel Medical Journal*, 10(1), 6-10.
- Waite, M., & Hawker, S. (2009). *Oxford paperback dictionary & thesaurus* (3rd ed.). Oxford: Oxford University Press.
- Walker, R. W., McLarty, D. G., Kitange, H. M., Whiting, D., Masuki, G., Mtasiwa, D. M., et al. (2000). Stroke mortality in urban and rural Tanzania. Adult Morbidity and Mortality Project. , . *The Lancet*, 355(9216), 1684-1687.
- Wang, W. Z., Jiang, B., Wu, S. P., Hong, Z., Yang, Q., Sander, J. W., et al. (2007). Change in stroke incidence from a population-based intervention trial in three urban communities in China. *Neuroepidemiology*, 28, 155-61.
- Warlow, C., Sudlow, C., Dennis, M., Wardlaw, J., & Sandercock, P. (2003). Stroke. *Lancet*, 362(9391), 1211-1224.
- Westmorland, M. G., Williams, R., Strong, S., & Arnold, E. (2002). Perspectives on work (re) entry for persons with disabilities: Implications for clinicians. *Work: A Journal of Prevention, Assessment and Rehabilitation*, 18(1), 29-40.
- Whiteford, G. (2000). Occupational deprivation: Global challenge in the new millennium. *The British Journal of Occupational Therapy*, 63(5), 200-204.
- Wilcock, A. A. (1993). A theory of the human need for occupation. *Journal of occupational science*, 1(1), 17-24.
- Wolf, P. A., Abbott, R. D., & Kannel, W. B. (1999). Atrial fibrillation as an independent risk factor for stroke: the Framingham Study. *Stroke*, 22(8), 983-988.
- Wolfe, C. D. (2000). The impact of stroke. *British Medical Bulletin*, 56(2), 275-286.
- Wolfenden, B., & Grace, M. (2009). Returning to work after stroke: a review. *International Journal of Rehabilitation Research*, 32(2), 93-97.
- Wood, J. P., Connelly, D. M., & Maly, M. R. (2010). 'Getting back to real living': a qualitative study of the process of community reintegration after stroke. *Clinical Rehabilitation*, 24(11), 1045-1056.

WHO MONICA Project Principal Investigators. (1988). The World Health Organization MONICA Project (monitoring trends and determinants in cardiovascular disease): a major international collaboration. *Journal of clinical epidemiology*, 41(2), 105-114.

World Federation of Occupation Therapy. (2012). *About Occupational Therapy*. Retrieved October 23, 2013, from World Federation of Occupational Therapists: <http://www.wfot.org/AboutUs/AboutOccupationalTherapy/DefinitionofOccupationalTherapy.aspx>

World Health Organization. (2001). International classification of functioning disability and health (ICF)., (pp. 1-303). Geneva.

World Health Organization. (2007). The Bangkok charter for health promotion in a globalized world. *Health Promotion International*, 21(suppl 1), 10-14.

World Health Organization. (2011, June). *The top 10 leading cause of death*. Retrieved June 28, 2012, from World Health Organization: <http://www.who.int/mediacentre/factsheets/fs310/en/index.html>

World Medical Association. (2013, October 19). *Declaration of Helsinki- Ethical principles for medical research involving human subjects*. Retrieved November 07, 2013, from World Medical Association: <http://www.wma.net/en/30publications/10policies/b3/>

Wressle, E., & Samuelsson, K. (2004). Barriers and bridges to client-centred occupational therapy in Sweden. *Scandinavian Journal of Occupational Therapy*, 11(1), 12-16.

Zinn, S., Bosworth, H. B., Hoenig, H. M., & Swartzwelder, H. S. (2007). Executive function deficits in acute stroke. *Archives of physical medicine and rehabilitation*, 88(2), 173-180.

Zoltan, B. (2007). *Vision, Perception and Cognition: A Manual for the Evaluation and Treatment of the Adult with Acquired Brain Injury* (4th ed.). Thorofare, New Jersey: Slack Incorporated.

## **APPENDICES**

### **APPENDIX A**

#### **INFORMATION SHEET**

##### **Title of Research:**

Exploring the experiences of rehabilitated stroke survivors and the perceptions of stakeholders with regard to stroke survivors returning to work in South-West, Nigeria

##### **What is this study about?**

The resumption of one's worker role following a stroke has a great influence on the re-establishing of pre-existing roles and relationships. Not only does this reduce the huge burden stroke cast on the Nigerian society but it also improves the survivor's life satisfaction, self-esteem, quality of life and functional ability. With the serious and permanent disability resulting from stroke being a dynamic interaction between health condition and contextual factors it becomes imperative to ask about the challenges stroke survivors experience when resuming their worker role after the completion of rehabilitation programme in south west, Nigeria. The study therefore wishes to explore stroke survivors' perceptions and experiences of adaptation strategies that they utilise in maintaining their worker role. Their experiences, perspectives and opinions will present great insight into providing service quality and efficiency.

##### **What will be asked if I agree to participate in this study?**

The proposed time frame for this study is 12 months. The researcher will invite 12 stroke survivors from the O.A.U.T.H.C., Osun State in Nigeria, 12 caregivers of the respective stroke survivors and 2 rehabilitation specialists from O.A.U.T.H.C. to partake in the study. Two methods of data collection will be used for the purpose of obtaining their perspectives and experiences namely; focus groups for the caregivers and in-depth interviews with the stroke survivors and rehabilitation specialists. You will be asked to sign a consent form and will have the opportunity to ask questions prior to giving consent. You will be asked to describe your experiences of returning to work after you have completed rehabilitation. You will also be asked to describe some of the challenges you experienced when working.

### **What are the risks of this research?**

There are no known physical or psychological risks involved in this study but due to the nature of focus groups, interviews and the topic in question, a professional referral source will be made known to the participants if they at any time require counselling or guidance regarding personal matters that may be evoked during the research process.

### **What are the benefits of this research?**

The research study is intended to inform stroke rehabilitation practice. Moreover, there's a paucity of information regarding resumption of worker's role among Nigerian stroke survivors. This may be critical in understanding community integration among Nigerian stroke survivors. Information gathered in this study will not help you personally but may help to advance knowledge and intervention strategies in returning stroke survivors to work after rehabilitation.

### **Do I have to be in this research and may I stop participating at any time?**

Participation in this research is voluntary. Once you've consented to partake you may withdraw your participation at any time during the process without penalty.

### **What if I have questions?**

The research is being conducted by Olaoye Olumide Ayoola under the guidance of the Department of Occupational Therapy at the University of the Western Cape. If at any time you have queries regarding the nature of the study you could contact the researcher at the details given below:

Researcher: Mr. Olumide Ayoola Olaoye

Email: oaolaoye@oauife.edu.ng

Cell: 08030763794/ +27834714208

Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, you may also contact:

Supervisor: Dr. Shaheed Soeker (Senior lecturer)

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**APPENDIX B**  
**INTERVIEW GUIDE**

*Stroke Survivors*

- Could you tell me about yourself and your family
  - What you do before having a stroke
- Tell me what it is like to live with stroke
  - How has it affected your life with regards to family and leisure?
- Could you tell me about your experience of returning to work after having a stroke
  - How did you go back to work?
  - What are those things that served as hindrance/facilitators for you to really fit in at work?

*Caregivers*

- Being a caregiver of a stroke survivor, how has it affected you?
  - What are some of the challenges you face?
- Describe what some of the challenges you feel the stroke survivor faces in resuming his/her worker role?
  - How has returning to work after stroke affected him/her?
- In which/what way(s) has/have rehabilitation impacted on the stroke survivors return to work?
- What changes did you have to make to your life to accommodate for caring for the stroke survivor?
- If you were given the opportunity to give advice to rehabilitation specialists about rehabilitation programmes, what would it be?

*Rehabilitation specialists (Occupational Therapist and Physiotherapist)*

- From your experience what would you say are the challenges of a stroke survivor?
  - Are these challenges addressed and how?

- How involved are the stroke survivors in their treatment programme?
  - To what extent does the choice of the stroke survivor influences treatment?
- What challenges do stroke survivors face when resuming their worker role?
- How does the rehabilitation centre influences return to work among stroke survivors?
  - How do you facilitate the survivors' re-entry into work force?
- In your opinion what would be the ideal rehabilitation programme that would enable stroke survivors to return to work after the stroke and maintain their worker role?





**APPENDIX C**  
**CONSENT FORM**

**Title of Research: Exploring the experiences of rehabilitated stroke survivors and the perceptions of stakeholders with regard to stroke survivors returning to work in South-West, Nigeria.**

The study has been described to me by means of the Information Sheet, in a language that I understand and I freely and voluntarily agree to participate. My questions about the study have been answered. I understand that my identity will not be disclosed and that I may withdraw from the study without giving a reason at any time and this will not negatively affect me in any way.

Participant's Name: ..... Participant's Signature: .....

Witness: .....

Date: .....

Should you have any questions regarding this study or wish to report any problems you have experienced related to the study, please contact the researcher.

Researcher: Mr. Olumide Ayoola Olaoye

Email: oaolaoye@oauife.edu.ng

Cell: 08030763794/ +27834714208

**APPENDIX D**

**CONSENT FORM - FOCUS GROUP MEMBER**

**Title of Research: Exploring the experiences of rehabilitated stroke survivors and the perceptions of stakeholders with regard to stroke survivors to work in South-West, Nigeria.**

**Section A**

The study has been described to me by means of the Information Sheet, in a language that I understand. I freely and voluntarily agree to participate. My questions about the study have been answered. I understand that my identity will not be disclosed and that I may withdraw from the study at any time during the research process and this will not negatively affect me at all.

Participant's Name: ..... Participant's Signature: .....

Witness: .....

Date: .....



**Section B**

In agreeing to be part of the focus group discussion, I understand that I need to respect the privacy of the other participants by not revealing the information that has been discussed in the group session/s. In addition, I will not record or document any personal, identifying information of other group members nor speculate about their identity. In so doing, I shall maintain confidentiality of their identity and the information discussed.

Participant's Signature: .....

Date: .....

Signed at: .....

Section C

To ensure that the information is obtained without omitting vital information, the sessions will be audio-taped. These tapes/recordings will be kept in a secure place where only the researcher and the researcher’s supervisor will be aware of its location and will have access to its information.

**I agree** to be audio-taped during my participation in the study.

Participant’s Signature: .....

Date: .....

**I do not** agree to be audio-taped during my participation in the study.

Participant’s Signature: .....

Date: .....

Section D

Declaration by Researcher: I ..... (first name) declare that:

- The research study and process has been explained to the participants verbally and via an information sheet.
- Each participant was given the opportunity to have their questions answered prior to partaking in the study.
- As a researcher I will maintain and protect the participants’ rights to privacy, in identity and in the information obtained.
- The research study is for academic purposes and not for any personal gain.

Researcher Signature: .....

Date: .....

Signed at: .....

Should you have any questions regarding this study or wish to report any problems you have experienced related to the study, please contact the researcher.

Researcher: Mr. Olumide Ayoola Olaoye

Email: oaolaoye@oauife.edu.ng

Cell: 08030763794/ +27834714208

Should you have any questions regarding your rights as a research participant, you may also contact:

Supervisor: Dr. Shaheed Soeker ( Senior lecturer)

Occupational Therapy Department

Tel: 021 959 9339

Fax: 021 959 1259

Email: [msoeker@uwc.ac.za](mailto:msoeker@uwc.ac.za)

Co-supervisor: Prof. M. O. B Olaogun

Department of Medical Rehabilitation

Obafemi Awolowo University, Nigeria

Tel: +2348037260562

E-mail: [mobolaogun@yahoo.co.uk](mailto:mobolaogun@yahoo.co.uk)



## APPENDIX E

### ETHICAL APPROVAL FROM O.A.U.T.H.C

**OBAFEMI AWOLOWO UNIVERSITY TEACHING HOSPITALS' COMPLEX**  
**P.M.B. 5538, ILE-IFE, NIGERIA**  
Tel.: 036-23071-2 Fax: 036:230141  
E-mail: oauthc.ethicalcommittee@yahoo.com

**CHAIRMAN: Prof. (Mrs.) E.A. Adejuyigbe MBChb (IFE) EMC Paed.**

**REGISTRATION NUMBER:**

**INTERNATIONAL: IRB/IEC/0004553**

**NATIONAL: NHREC/27/02/2009a**

#### **CLEARANCE CERTIFICATE**

**PROTOCOL NUMBER:** ERC/2012/10/09

**PROJECT TITLE:** EXPLORING THE EXPERIENCES OF REHABILITATED STROKE SURVIVORS AND THE PERCEPTIONS OF STAKEHOLDERS WITH REGARDS TO RETURNING STROKE SURVIVORS TO WORK IN SOUTH WEST, NIGERIA.

**INVESTIGATOR:** MR. OLAOYE, OLUMIDE AYoola

**DEPARTMENT/INSTITUTION:** DEPARTMENT OF OCCUPATIONAL THERAPY, FACULTY OF COMMUNITY AND HEALTH SCIENCES, UNIVERSITY OF THE WESTERN CAPE, BELLVILLE, SOUTH AFRICA.

**DATE OF RECEIPT OF VALID APPLICATION:** 13/08/2012

**DATE WHEN FINAL DETERMINATION ON ETHICAL APPROVAL WAS MADE:** 24/10/2012

**DURATION OF APPROVAL:** Six (6) months

This is to inform you that the research described in the submitted protocol, the informed consent forms and other participant information materials have been reviewed and given full approval by the **OAUTHC Ethics and Research Committee**.

The approval is from **24/10/2012** to **23/04/2013**. You are to inform the Committee the commencement date of the research and if there is any delay in starting the research, please inform the Committee so that the date of approval can be adjusted accordingly. All informed consent forms used in the study must carry the **OAUTHC/ERC** protocol number and duration of approval of the study. In multi-year research, you are to submit an annual report in order to obtain renewal of approval.

The National Code of Health Research Ethics requires that you comply with all institutional guidelines, rules and regulations including ensuring that all adverse events are reported promptly to the **OAUTHC/ERC**. No changes are permitted in the research without prior approval by the **OAUTHC/ERC**. The **OAUTHC/ERC** reserves the right to conduct compliance visit to your research site without previous notification.

  
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**Prof. (Mrs.) E.A. Adejuyigbe,**  
**Chairman, OAUTHC/ERC**

## APPENDIX F

### ETHICAL APPROVAL FROM HIGHER DEGREES COMMITTEE, U.W.C.



UNIVERSITY of the  
WESTERN CAPE

#### OFFICE OF THE DEAN DEPARTMENT OF RESEARCH DEVELOPMENT

20 August 2012

#### To Whom It May Concern

I hereby certify that the Senate Research Committee of the University of the Western Cape has approved the methodology and ethics of the following research project by:  
Mr O Olaoye (Occupational Therapy)

Research Project: Exploring the experiences of rehabilitated stroke survivors and the perceptions of stakeholders with regard to returning stroke survivors to work in South West Nigeria.

Registration no: 12/6/29

Any amendments, extension or other modifications to the protocol must be submitted to the Ethics Committee for approval.

The Committee must be informed of any serious adverse event and/or termination of the study.

A handwritten signature in black ink, appearing to read 'Josias'.

*Ms Patricia Josias  
Research Ethics Committee Officer  
University of the Western Cape*

Private Bag X17, Bellville 7535, South Africa  
T: +27 21 959 2988/2948 . F: +27 21 959 3170  
E: pjosias@uwc.ac.za  
www.uwc.ac.za

A place of quality,  
a place to grow, from hope  
to action through knowledge

## APPENDIX G

### APPROVAL TO USE OCCUPATIONAL THERAPY DEPARTMENT FOR FOCUS GROUP DISCUSSION

#### **OBAFEMI AWOLOWO UNIVERSITY TEACHING HOSPITALS COMPLEX**

Chairman:

**Chief Medical Director:** Prof. O. Adejuyigbe MBBS (Ibadan) FMCS (Nig) FWACS

**Chairman, Medical Advisory Committee:** Prof. F. J. Owotade BchD (Ife), FWACS

**Director of Administration:** M. A. Oyelami B. Sc (Ib); M. Sc (Econ); M. Div (Osh); F.HAN, MCIRM

Medical Rehabilitation Department - Physiotherapy/Occupational Therapy

P. M. B. 5538

ILE - IFE

NIGERIA

Tel: +2348152092751

+2348152092755

+2348152092999

E-mail: info@oauthc.com

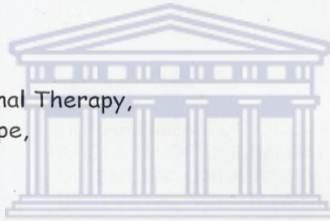
Website: www.oauthc.com



Our Ref:.....OAUTHC/PHY.6/209

14<sup>th</sup> January, 2013.....

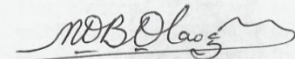
Mr. Olaoye A.O.  
Department of Occupational Therapy,  
University of Western Cape,  
Belleville,  
Republic of South Africa.



**RE: REQUEST TO CARRY OUT RESEARCH IN THE DEPARTMENT OF  
MEDICAL REHABILITATION, OAUTHC**

Please refer to your application dated 10<sup>th</sup> December, 2012, together with the Ethical Clearance Certificate -Protocol Number IRB/IEC/0004553- in respect of the above subject matter. Your application has been favourably considered. Your request is granted. You are to liaise with the head of Neurology Unit, Mr. A.A. Akinya, and the Consultant Occupational Therapist, Lt. Col.(Rtd.) Emechette, in the department for the logistics of the in-depth interview and focus group discussion with the selected stroke survivors.

All the best.

  
Prof. M.O.B. Olaogun,  
Head of Department

## APPENDIX H:

### PARTICIPANTS' DESCRIPTION (P1-P9)

Name	Age as at 2012	Type of injury	Gender	Education	Job Description	Employment Status	Marital Status	Type of rehabilitation received after the CVA
Participant 1	57	Left CVA on 24/01/2009	M	Tertiary education	<b>Current job:</b> Lecturer <b>Previous job:</b> Lecturer	Employed	Married	<b>In/out patient:</b> physiotherapy and occupational therapy <b>Service provider:</b> private and state
Participant 2	57	Left CVA on 15/10/2008	M	Tertiary education	<b>Current job:</b> Lecturer <b>Previous job:</b> Lecturer and consultant surgeon	Employed	Married	<b>In/out patient:</b> physiotherapy, occupational therapy and speech therapy <b>Service provider:</b> private and state
Participant 3	52	Left CVA in 10/2009	M	Secondary / high school education	<b>Current job:</b> Clerk <b>Previous job:</b> Typist	Employed	Married	<b>In/out patient:</b> physiotherapy and occupational therapy <b>Service provider:</b> state
Participant 4	59	Right CVA in 12/2006	M	Tertiary education	<b>Current job:</b> Principal and school administrator <b>Previous job:</b> Vice-principal and teacher	Employed	Married	<b>In/out patient:</b> physiotherapy <b>Service provider:</b> private and state
Participant 5	50	Left CVA on 03/12/2007	M	Tertiary education	<b>Current job:</b> Teacher <b>Previous job:</b> Teacher	Employed	Married	<b>In/out patient:</b> physiotherapy and occupational therapy <b>Service provider:</b> state
Participant 6	54	Left CVA in 25/03/2012	M	Tertiary education	<b>Current job:</b> Agriculture extension manager <b>Previous job:</b> Agriculture extension manager	Employed	Married	<b>In/out patient:</b> physiotherapy <b>Service provider:</b> private and state
Participant 7	48	Left CVA in 03/2010	M	Secondary / High school education	<b>Current job:</b> Correctional officer <b>Previous job:</b> Correctional officer	Employed	Married	<b>In/out patient:</b> physiotherapy <b>Service provider:</b> private and state
Participant 8	50	Left CVA in 03/2011	F	Tertiary education	<b>Current job:</b> Teacher <b>Previous job:</b> Teacher	Employed	Married	<b>Out patient:</b> physiotherapy and occupational therapy <b>Service provider:</b> state
Participant 9	51	Right CVA in 11/03/2012	F	Tertiary education	<b>Current job:</b> Teacher <b>Previous job:</b> Teacher	Employed	Divorced	<b>In/out patient:</b> physiotherapy <b>Service provider:</b> state