Health Seeking Pathways for Stroke Clients in a Rural Setting: Optimising Early Intervention for Stroke Rehabilitation in Occupational Therapy

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Abstract

Background: *Health seeking behaviour and health seeking pathways are interdependent concepts underpinning access to healthcare. Understanding these concepts is critical for appropriate and time-dependant stroke interventions.*

Method*: An explorative qualitative study design using one-on-one semi-structured interviews was conducted with 16 participants. The Socio-Ecological Model (SEM) was used to guide data collection and discussion of the findings in line with the objectives of this study.*

Findings: *The Traditional Health Practitioners (n=11) were the most preferred first encounter followed by the Public Hospital (n = 2) and Private Hospital (n=1) while (n=2) self medicated. On the average, it took 30 days for stroke clients to navigate the health system. The health seeking delays, and the health seeking behaviour factor themes were the two themes to emerge in this study.*

Conclusions: *A combination of factors influenced the health seeking delays at the levels of the SEM. The participants' health seeking behaviours were influenced by the knowledge, attitude and beliefs at individual and interpersonal levels and unsatisfactory health services at organizational and public policy levels of the SEM. In the South African rural settings, stroke clients seek help from multiple service providers due to diverse factors.*

Keywords: *Health Seeking Behaviour, Health Seeking Pathways, Occupational Therapy Stroke Interventions*

INTRODUCTION

Stroke contributes to mortality and morbidity globally where temporal or permanent disabilities are caused[1,2]. Stroke is one of the leading causes of death contributing to a burden of diseases and economic burden in South Africa (SA)[3]. Occupational Therapy (OT) is one of the key role players in the rehabilitation of stroke clients and their main role is achieving independence in ADLs[2]. However, a few clients and families delay in seeking consultation and care[4]. Some clients manage to arrive in time within the health system but go through the system without the OT intervention[5]. Furthermore, stroke is a time-dependant condition which can become complicated if not treated immediately. Studies have shown that receiving specialist care as soon as one suffers from stroke saves lives and reduces disability[6,7]. Access to specialist care is often delayed and, in some instances, does not happen at all[8,9,6]

Delays in early interventions at any stage of the care pathway can result in preventable complications and increased burden of disease or death. Disability amongst stroke clients is due to delays in treatment, which causes more complications that could have been prevented[10,11]. However, accessing health care upon a stroke onset and consulting relevant health practitioners such as OTs within a hospital is dependent upon a number of factors such as pre-hospital factors and hospitalisation factors. In a rural setting, pre-hospital factors may include difficult terrains, long distances to healthcare facilities, poor transportation and communications, and cultural beliefs on disease and disability causation which influence the health seeking behaviours[12,13,14,15]. At a hospital level, factors such as poor referral systems result in failure or delayed access to rehabilitation services like OT[5,16].Therefore, it is necessary for OTs to broaden their understanding of factors influencing the health seeking pathway of stroke clients in a rural setting to contribute in optimising early OT intervention. Thus, this study sought to explore the factors influencing health seeking pathways of stroke clients in a rural setting within the KwaZulu-Natal (KZN) Province, SA. The objectives of the study included, firstly, to describe health seeking pathways of stroke clients in a rural setting. Secondly, to identify factors that influenced delays in seeking timely interventions after the onset of stroke. Thirdly, to investigate factors that influenced the health seeking behaviour for stroke clients. It is essential for OTs to understand the health-seeking pathways and factors influencing it, so that strategies can be utilised to optimise early OT intervention for stroke clients.

LITERATURE REVIEW

Stroke remains the cause of death globally where serious and long-term or permanent disabilities are caused[1] [2]. It can also be identified as a burden of disease as stroke clients experience residual impairments that can negatively impact on their occupation. The time from the stroke onset to the hospital presentation is a critical factor considering eligibility for thrombolytic therapy[1]. However, access to specialist care is often delayed and, in some instances, may not happen at all[4,5,6]. There are various factors associated with delays to seeking health care such as the lack of knowledge, economic status, rural health and cultural beliefs[7]. Health seeking pathways refer to a sequence of consultation at specific health service contact points from a point when the problem is recognised and the point when an individual receives help[8]. In SA, factors influencing a delay in consultation after a stroke onset have not been well documented.

Rehabilitation, ideally provided by a multidisciplinary team, plays an essential role in minimising the impact of impairments on the occupations of persons with disabilities[9]. Physiotherapists (PT) and OTs are mostly the rehabilitation workers servicing rural areas in South Africa[9]. OT enables stroke clients to relearn everyday activities to lead a full and independent life. OTs assess difficulties of a stroke client, adopts activities (personal care, social or leisure) and help the client to practice them to improve their abilities. The OT further teaches strategies and techniques to overcome difficulties, provide psychosocial support, provide assistive devices, equipment and visit clients' homes to advise on any useful changes for the client to return to work[2]. Although the benefits and critical role of rehabilitation of stroke clients have been noted, stroke clients do not always arrive at rehabilitation centres in time and some do not attend rehabilitation at all[4,5,6]. Limited understanding of health seeking behaviour and health-seeking pathways for stroke clients continues to contribute to delays in early interventions, which results in unnecessary complications, and increase the burden of disease and of care for stroke clients. To the knowledge of the authors, in SA, there are no documented studies on health seeking pathways for stroke clients in a rural KZN province, which necessitates this study in such a setting.

THEORETICAL FRAMEWORK

The SEM was used in this study. The SEM was first introduced as a conceptual model for understanding human development by Urie Bronfenbrenner in the 1970s and later formalised as a theory in the 1980s[10]. In the SEM theory, the individual is nested within a system of consecutive interpersonal, organisational, community and public policy environmental layers which influence behaviour patterns[11,12], pertinent for this study. Refer to figure 1.

(Insert figure 1 about here)

The Individual level

The individual level is the innermost level which represents characteristics that may influence an individual's behaviour. These include knowledge, attitude, behaviour, developmental history, stigma and others. In this study, the SEM was used to understand how the stroke clients' knowledge, attitude and beliefs influenced their health seeking behaviour at an individual level with reference to Objective 3 of the study.

The Interpersonal level

The interpersonal level looks at informal and formal social networks and social support systems that can influence an individual's behaviour. These include family, friends/peers, co-workers, religious networks, customs and traditions. The interpersonal level was used to guide the description of socio-cultural influence on a stroke client's health seeking patterns in relation to Objective 3 of the study.

The Organisational level

The organisational level consists of organisations or institutions that ensure that operations are conducted through prescribed rules and regulations. In this study, the appropriate health facility stroke treatment protocols and related procedures were reviewed to understand how these facilitated appropriate access to stroke rehabilitation by stroke clients with reference to Objective 2 of the study.

The Community level

The community level focuses on the relationships between the organisations, institutions and informal networks within defined boundaries. These include village associations, community

leaders, businesses and transportation sectors. The community level includes the initiatives taken by the public with regards to health awareness programmes, health facility and healthcare provider linkages within the public healthcare system to ensure stroke clients receive rehabilitation from all relevant healthcare providers. The community level was utilised to explore available community infrastructure, referral systems and health programmes which facilitated effective stroke rehabilitation within the study site to address Objective 1 of the study

The Public Policy level

The public policy level comprises local, state, national and global laws and policies regarding the allocations of resources and access to healthcare services, restrictive policies or the lack of policies. The relevant health legislative framework was reviewed to establish if these supported appropriate resource allocation and access to stroke health services with reference to Objective 3 of the study.

METHOD

Aim

The study aimed to explore the factors influencing health seeking pathways of stroke clients in a rural setting within the KZN Province, SA.

Study setting

The study was conducted in a rural district called Ceza in the KZN province of SA. It is a rural area remotely located from most basic utilities with poor infrastructure and most of its population being poor with high unemployment rates.

Study Method

An explorative qualitative study design was utilised to fulfil the aims of this study. The explorative design is suitable for studies where there is limited knowledge about the area being investigated[13]. This method allowed the researcher to gain more detailed and rich data in the form of comprehensive written descriptions or visual evidence. In addition, the method allowed deeper exploration of the context and social meaning and how it impacts on individuals[13].

Population and Sampling Procedure

A total of 16 participants were selected for the study using purposive sampling procedure. Purposive sampling involves the selection of key variables which are likely to have an impact on participants' views[14]. The sample size for this study was guided by saturation guidelines as applied in qualitative research. In qualitative research, the point of saturation refers to the interview stage where researchers are not receiving any new information from the participants. A practical estimated sample size for a point of saturation is 15 participants[15]. In this study, a sample size of 16 participants was selected to make up for any possible attrition during the study.

Data collection procedure

An area of interest was identified, and the literature review was completed. The methodology framework was then created**.** An IsiZulu translated information document was read and explained to the participants. The demographic questionnaire and participant consent form was completed and signed by the participants prior to commencing with the interviews. Data was collected using 45-minute-long, one on one semi-structured interviews.

Data Analysis

All audio recordings were transcribed independently by the authors to ensure confidentiality. The authors then directly translated the transcripts from IsiZulu into English. A total of 16 transcripts were available for analysis. First, data was transcribed using verbatim quotes to demonstrate the findings[16,17.] Data was then analysed using thematic analysis. The authors read and re-read the data to identify the first level of coding. The codes were then reduced into categories and notes were written regarding themes and subthemes. The SEM was used to further interpret findings.

Trustworthiness

In this study, data was examined to ensure that the research findings are robust, rich, comprehensive and well-developed. All data was further analysed by the authors to determine and improve the trustworthiness of the findings. Credibility was ensured through sharing data and interpretations with the participants to clarify what their intensions were and to correct any errors. Researcher reflexivity throughout the study was used to ensure dependability.

Transferability was achieved through the authors documentation and justification of the methodological approach, and the critical processes and procedures that helped to construct and create meaning associated with the study. Bracketing and triangulation was used to reduce bias and ensure conformability.

Ethical Clearance and Considerations

Ethical approval was obtained from an accredited Research Ethic Committee, the Humanities and Social Sciences Research Ethics Committee of the University of KwaZulu-Natal **(HSS/0690/018M).** A consent letter in the participants preferred language, apprising about expectations and their rights in the study was signed by the participants, confirming their willingness to participate in the study. The authors ensured that no emotional and/or social harm to the participants occurred through cultural sensitivity and the respect of participants opinions. Open and honest communication with the participants was always ensured to maintain transparency. The participants were allocated pseudonyms to ensure anonymity.

FINDINGS

Introduction

This study involved 16 participants whose age ranged from 18 to 80 years. Both males and females were included in the study with the male: female ratio of 9:7. Most of the participants had encountered one stroke attack except for three participants who encountered two or more attacks. The most common comorbidity was hypertension and a few participants reported Diabetes mellitus, Rheumatoid Arthritis (RA) and Human Immune-deficiency Virus (HIV). Table I presents a summary of the demographic profile of the participants.

(Insert Table I about here)

The findings are presented in line with the objectives of the study. The first part describes the findings on the health seeking pathways of the participants to address the first objective. The second part presents the duration and related health seeking delay factors, between the onset of stroke and encounter with the system of care for the stroke participants, which is in line with the second objective. The final part presents factors, which influenced the participants' choice of health service providers, which address the third objective of the study.

Health Seeking Pathways for Stroke Participants

Many of the participants (11 out of 16) preferred the Traditional Health Practitioners (THP) as their first encounter with the health system after a stroke onset. The second most preferred first encounter with the health system was the Hospital (2 participants). The least preferred first encounter with the health system was the General Practitioner (GP) (1 participant), the Clinic (1 participant) and a Private Hospital (1 participant). Twelve participants were admitted into a public hospital and one participant was admitted into a Private Hospital. Out of the 12 participants admitted at a Public Hospital, 11 were referred to a PT, one to a Speech-Language Pathologist (SLP). Furthermore, five of these participants were referred to Tertiary Hospitals for further management due to the lack of appropriate services and resources at the hospital. The one participant who was admitted into a Private Hospital was further referred to a Private PT. The same client self-referred to a Private OT after hearing about OT services. Although there were OT services available within the Public Hospital, none of the admitted participants were referred to the Public Hospital OT. See Figure 2.

(Insert figure 2 about here)

Health Seeking Delays for Stroke Participants

Overall, the time taken by the participants to seek help between onset of a stroke and their first encounter with the health system ranged from one and a half hour to one month. One participant never sought help from any healthcare practitioner but self-medicated using traditional methods. See Table II.

(Insert Table II about here)

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Five sub-themes emerged from the health seeking delays theme namely, lack of knowledge on strokes, lack of support and burden of care, inability to afford health services and transport, lack of transport and a delay in the accurate diagnosis of stroke. See Figure 3.

(Insert figure 3 about here)

Lack of Knowledge on Strokes

Certain participants and carers of participants with a stroke did not have westernized knowledge of the causes of stroke, the phases that stroke can be divided into, and the symptoms

of stroke. Due to the lack of this knowledge, certain carers did not know what to make of the presentations and the actions they should take when seeking care for the stroke participants.

"Mhlampe akusheshanga ukuthi thina asibanga nalo ulwazi lokuthi ngoba eshawe i-stroke kufuneka simphuthumise ka dokotela" (Maybe we were not quick enough to realise that he had a stroke and therefore, we needed to take him to see the doctor) (Mr Mbedu's family member, Interview 9)

"I don't know [what causes a stroke or the phases of stroke]" (Mr Duma, Interview 5; Mr Mbedu, Interview 9; Gogo Chili, Interview 10; Mr Boy Boy, Interview 12)

"Mina angazi sidalwa yini…bathi usuke ucabanga uma besho, angazi ke ukuthi usuke ucabangani ke" (I don't know what causes a stroke.... they say it's because of thinking too much and I'm not sure what those thoughts may be in relation to) (Gogo Zulu, Interview 11)

Inability to afford Healthcare Services and Transport

Participants stated that certain health care nodes such as the clinic and PT appointments were terminated due to increased costs in travel and the payments required for the health care service. Participants also expressed their lack of patience with treatments but opted to terminate continued care since they were not seeing improvements in their condition after a stroke.

"We went to a physiotherapist and we paid. That's where they stretched him. We eventually stopped because we had to pay for the car to take him there." (Mr Lambo's family member, Interview 3).

"Yes, I think I took him for three months and I gave up because I was not seeing any differences and I thought I was wasting bus fare money" (Mr Jola's family member, Interview 1)

Lack of Support and Burden of care

Carers of stroke participants indicated that delays to seeking health care stemmed from having multiple responsibilities to take care of prior to attending to the stroke participant.

"I could not take him to the hospital…That's because I was also taking care of my husband." (Gogo Musa's family member, Interview 7)

"Actually, I was delayed because I was not there, the child took him" (Mr Jola's family member, Interview 1)

Lack of Transport

Some participants stated that they had to wait overnight for transport so the stroke participant could seek healthcare due to the unavailability of transport within their residing area. Observations by the author also indicated some areas were isolated and inaccessible due to their geographical location and the topography of the Ceza rural settlement. They further indicated that they faced difficulties when an ambulance had been requested, as it was usually unavailable and took a long time to arrive.

"I was taken to the hospital in the morning because my husband could not get transport at night… Due to lack of transport, we were delayed." (Mrs Sishi's family member, Interview, 6)

"An ambulance comes after a delay though. Whether it's from Ceza or Enkonjeni it's the same: sometimes you get lucky when you call and it's in the area." (Mr Sithu's family member, Interview 2).

Delays in accurate diagnosis of a stroke

Miss Thandeka shared that her delays in seeking health care occurred as a result of the hospital failing to diagnose her with a stroke, irrespective of arriving immediately upon stroke onset. The participant had to stay overnight at the Tertiary hospital as she battled to get transport to take her back to her base hospital.

"Kwa delay e……. hospital bethi abamboni ukuthi uphethwe yini, ngaleso sikhathi leso yayopha ingozi leyo…"(There was a delay at the hospital whereby they could not diagnose her of a stroke. At that time, she had further bleeding in her brain) (Miss Thandeka's family member, Interview, 13)

Health Seeking Behaviour for Stroke Participants

Four sub-themes emerged from the health seeking behaviour theme namely, myths about allopathic treatment for stroke, belief in traditional medicine treatment, unsatisfactory health services and lack of knowledge about stroke rehabilitation services. See Figure 4.

(Insert figure 4 about here)

Myths about allopathic treatment for stroke

Certain participants had the belief that if one started at the hospital for stroke treatment, the stroke would never be reversed. This contributed to the delays in seeking and accessing primary public health care. The findings further indicated that decisions to seek health care from a particular health care node were influenced by the participant's culture and beliefs. Because of these cultural beliefs, the majority of participant's first pathway to seeking health care was at the traditional healers.

"They say if you go to the hospital first and they give you an injection you won't be cured ever… You do not heal at all. You must see a traditional health practitioner first. And then go to the hospital… I would be bed ridden. So whatever muthi [tradional medicine] was given to me, I used it. I can't even tell you which one helped" (Mr Sithu, Interview 2)

"I had a belief that when you had a stroke you use Zulu medicine first" (Mr Lambo's family member, Interview 3)

"Traditional Healers can (cure a stroke)" (Mr Duma, Interview 5)

Participations reported to have feared possible condition outcomes if they sought health care at a public health care facility immediately upon a stroke onset and not at the THPs.

"Because I heard that you can't be cured once you get an injection." (Mr Bhunu, Interview 8)

"Kwathiwa ke angeke ngisakwazi ukukhuluma sidalwa. uma ngiqala esibhedlela, futhi ngeke ngisheshe ngilapheka" (They said I will not be able to permanently talk if I begin at the hospital. They further said I will not be able to get immediate treatment) (Gogo Chili, Interview 10)

Belief in Traditional Medicine Treatment

Participants expressed a strong belief in consulting a THP. Participants who were either unconscious or could not remember the events after the stroke onset indicated that they would have taken the same health seeking pathway decision to consult at a traditional healer first as their families had chosen for them.

"I would have started with Traditional medicine, then would have gone to the hospital." (Mr Bhunu, Interview 8)

"Yes, that's what I would have done [started at the traditional health practitioner] myself" (Mr Duma, Interview 5)

Unsatisfactory Health Services

While some participants decided to choose the THP as their first encounter in the health care system, there was some dissatisfaction about the service received from these practitioners

"They (THP) failed… Eish, these people do not know anything." (Mr Jola's family member, Interview 1)

"anginelisekanga ngoba angikaze ngisizakale, ukube ngasizakala ngabe ngikhuluma ngichamsele nje" (I was not satisfied with the service I received as I did not feel better after consulting with the THP) (Gogo Chili, Interview 10)

Similarly, participants who chose the hospital were also not satisfied by services received. They saw no change after receiving care and the hospital staff asked the participants to carry out some stroke interventions on their own.

"At the hospital nothing was getting better since he did not even have a wheelchair. I even got help from another client to carry him" (Mr Sithu's family member, Interview 2)

"And they would always inject me before I go home, they would always take me to the passage where they inject me before I go home" (Mr Lambo, Interview 3)

"No, whenever I went, they would tell me when to come back. The last time I went, they did not say though….. I did not get any pills from the hospital" (Mr Bhunu, Interview 8)

"Indlela angiphendula ngayo…wangicasula impela ethi angihambe ngiyothoba." (The way that she answered me was very rude. She instructed me to place a heat pack only) (Mr Roy, Interview 14)

Lack of Knowledge about Stroke Rehabilitation Services

Participants were not aware of what OT is and what services are offered within this profession. Participants were, however, also unsure of what PT was and the difference between PT and OT.

"No… we have never heard of that [OT]…No… we just saw one type of physiotherapist" (Mrs Sishi's family member, Interview 6)

"I don't even know what that [OT] is…. We went to a PT and we paid. That's where they stretched him" (Mr Lambo's family member, Interview 3)

DISCUSSION

The aim of this study was to investigate the health-seeking pathways of stroke clients in a rural setting. The three major themes namely, health seeking pathways for stroke participants in a rural setting, health seeking delay factors for stroke participants and health seeking behaviour factors are discussed in relation to the current literature, theoretical framework and objectives of this study.

Health Seeking Pathways for Stroke Participants in a Rural Setting.

As highlighted in the introduction, health help seeking pathways provide information on the sequence of consultations by health service users at specific health system contact points from recognition of the need to get help to the point when the individual receives help[17]. The SEM community layer focuses on the relationships between the organisations, institutions and informal networks within defined boundaries. In this study, the findings indicated that the most preferred first encounter within the health system was the THP. The health seeking patterns which emerged from this study reflected limited referrals to the rehabilitation practitioners like the OT. Although some were referred to PT but there were no referrals from PT to OT as illustrated in Figure 2.

Health Seeking Delay Factors for Stroke Participants

The lack of transport and unaffordable travel expenses were identified as contributors to pre-hospital delays in accessing healthcare and continuity of care. The lack of transport and travelling expenses were also exacerbated by the geographical location of some households and the topography of the Ceza area. This is supported by a study by Mandelzweig et al[18] which identified the demographic and clinical variables such as hospital and clinical accessibility as some of the risks for delay in seeking help. A study by Mshana et al.[19] showed that the cost of services, knowledge limitations on illness and wellbeing and cultural prescriptions affected the health seeking practices of communities in Tanzania's health system. This study further indicated that stroke clients delayed up to one month before seeking health care in a health care system.

The lack of knowledge regarding stroke and the health care system negatively influenced the health seeking behaviour for the participants. Participants had limited knowledge of stroke in relation to prevention, symptoms and care from the allopathic medicine perspective. Several studies have identified gaps in stroke knowledge about risk factors, severe warning signs and known responses to signs[20,21]. The burden of care overload which emanated from the multiple responsibilities of carers and failure in the early diagnosis of stroke due to inaccurate diagnoses emerged as one of the critical drivers of health seeking delays for stroke interventions. According to the SEM, the individual knowledge and attitude represented the innermost characteristics of the Individual Level which influenced the participants' underlying cause for delay in seeking help. On the other hand, none affording of services and the late diagnosis of a stroke constituted health system shortcomings, which contributed to delays in seeking help at the Organizational Level of the Model.

Stroke Participants Health Seeking Behaviour Factors

Conceptually, help seeking behaviour refers to the process of actively seeking help from others to get help on health problems experienced. Health seeking behaviour is determined by various physical, socio-economic, cultural and political contexts[22]. The findings in this study showed that cultural practices and beliefs influenced the health seeking pathways navigated by the participants. Some participants held a false belief that allopathic interventions resulted in irreversible symptoms of a stroke. The majority of participants believed that stroke was a result of witchcraft. The underlying reason for seeking help from a THP first was to remove the spell

cast on them before seeking any other help. This perception corresponds with the findings from Legg and Penn[23] which showed that stroke clients believed that stroke was a result of spiritual causes and misfortune which caused them to acquire aphasia. Similarly, a Tanzanian study by Mshana et al[24] revealed stroke sufferers preferred to consult THPs because they believed that stroke mandated from supernatural causes like demons and witchcraft. Another study by Gillen[25] further revealed that the quality of rehabilitation provided by therapists was compromised by the omission of certain services because they were against the cultural beliefs[8].

As illustrated by the SEM, the individual level represents the stroke client. The SEM further indicated that the stroke client's cultural beliefs influenced their health seeking pathways and thus led them to the use of THPs first. The families of stroke clients as well as Community Healthcare Workers (CHW) refer to the SEM's interpersonal level whereby deciding for the participant was dependant on the families' own cultural beliefs as well as the CHWs clinical beliefs regarding a stroke. This, therefore, led to influenced health seeking behaviour of the stroke client.

It has been well documented that dissatisfaction with the quality of care received in hospitals and in public health care services has led to discontinued care[21,26,25]. In this study, the participants avoided going to hospital partly due to the negative attitude of the staff, lack of support and compassion from the hospital staff.

Participants confused the role of an OT by frequently referring to an OT as a PT. Booth and Hewison[27] indicated that the role overlap between the roles of OT and PT has been the subject of debate for at least three decades. This overlap continues to disadvantage stroke clients in accessing appropriate services, which result in delayed interventions and unnecessary complications. The Community Level of the SEM, which focuses on the relationships between the organisations, institutions and informal networks, can be used within defined boundaries. The findings in this study showed that there were no appropriate communications and referral systems between THPs and CHWs and between THPs and the public health care system.

IMPLICATIONS AND LIMITATIONS OF THE STUDY

This study was conducted in a rural setting and findings cannot be transferred into semi-rural, informal settlements, semi-urban or urban settings; but the issues explored within the context of this study provided deeper insights into the intended phenomena for the study. A study on

more diverse above-mentioned settings would provide a broader picture on issues which influenced health seeking pathways and behaviour for stroke participants. Furthermore, findings indicated that some participants were confused between OT and PT, which implies that some participants might have been referred to an OT but noted it a PT. Studies are necessary to explore the stroke client's awareness of the OT role in comparison to the PT role.

CONCLUSIONS AND RECOMMENDATIONS

The health seeking pathways for stroke participants showed that the THP was the most preferred first encounter however contributed significantly to delays in seeking health care in a health system. Clinically, this has implications for the development of well-coordinated referral systems that would link the THP, public health system, the GP and relevant rehabilitation practitioners that would include the OT and the PT to enhance the early identification and interventions for stroke clients. It is recommended that OT working at a community level should strengthen partnerships with any health provider within the health seeking pathway of stroke clients so that referrals can be executed timeously thus would optimising early OT intervention. In addition, at a hospital level the OT should strengthen their partnership and referral procedure with the PT, SLP and Outpatient Department health practitioners.

The participants' health seeking delays were influenced by a combination of factors at individual, interpersonal, community and organizational levels of the SEM. These included the lack of knowledge and financial constraints at an individual level; lack of support and burden of care overload at an interpersonal level; lack of transport at community level and delays in accurate diagnosis of a stroke at organizational level. The participants' health seeking behaviour was equally influenced at various levels of the SEM which included knowledge, attitude and beliefs at individual and interpersonal levels and unsatisfactory health services at organizational and public policy levels. Both the participants' health seeking delays and health seeking behaviour equally reflected major health system shortcomings, which can be addressed at a policy level. Furthermore, it is recommended that health promotion and prevention programmes should be considered to address the factors influencing health seeking behaviour such as the beliefs when educating communities or individuals about strokes.

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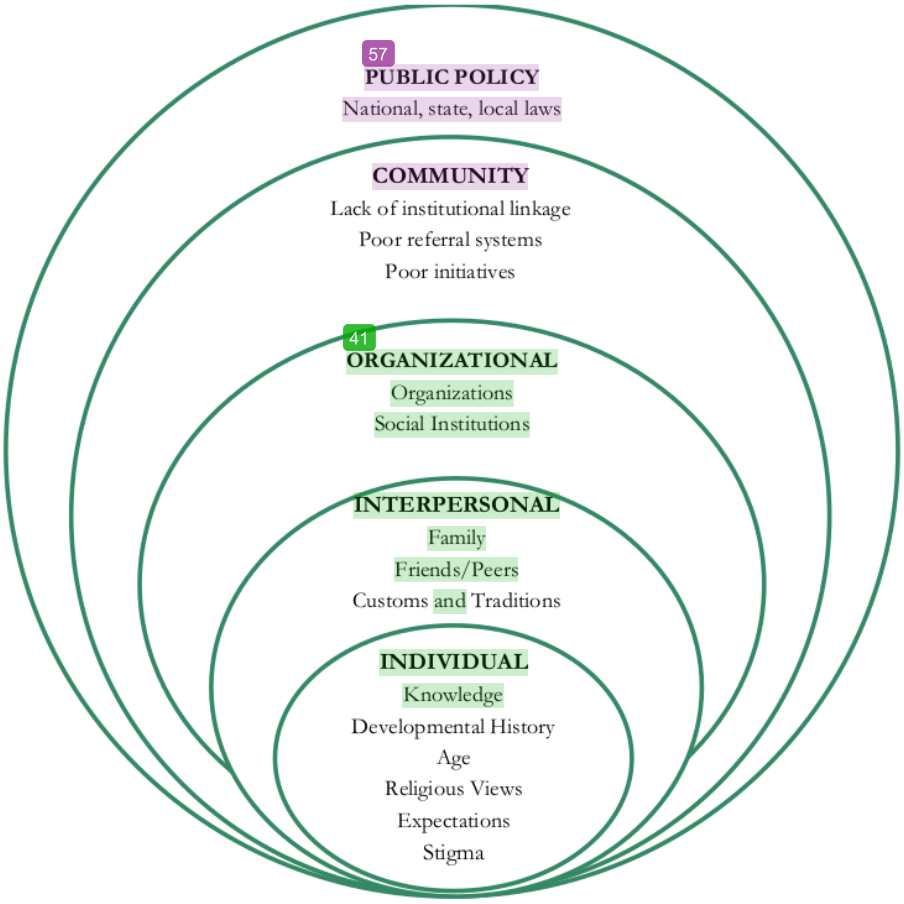

Figure 1: The Socio-ecological Model[11]

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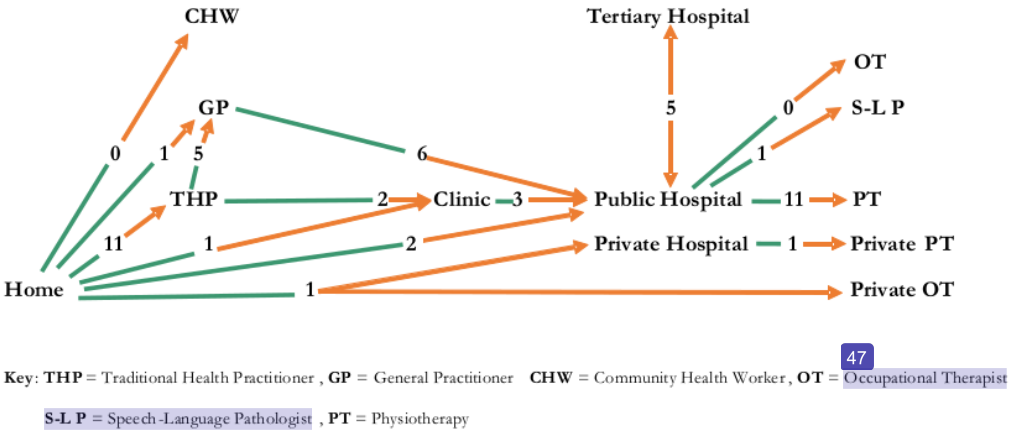
Table I: The Demographic Profile of the Participants

PSEUDONYM	AGE	GENDER	MARITAL STATUS	NO. OF CVA ATTACKS	CO-MORBIDITY
Mr Jola	62	Male	Married	01	Hypertension
Mr Sithu	64	Male	Married	01	Hypertension
Mr Lambo	64	Male	Married	01	Hypertension
Gogo Sithembu	75	Female	Widowed	01	Hypertension & RA
Mr Duma	53	Male	Divorced	01	Hypertension
Mrs Sishi	38	Female	Married	01	Hypertension
Gogo Musa	64	Female	Widowed	01	Diabetes
Mr Bhunu	43	Male	Married	01	HIV
Mr Mbedu	47	Male	Married	01	None
Gogo Chili	52	Female	Married	02	Hypertension & Diabetes
Gogo Zulu	66	Female	Married	01	Hypertension
Mr Boy Boy	49	Male	Single	01	HIV
Miss Thandeka	26	Female	Single	01	None
Mr Roy	49	Male	Single	01	Hypertension & HIV
Mr Mthakathi	69	Male	Married	03	None
Gogo Mondise	80	Female	Widowed	02	Hypertension



Key: **THP** = Traditional Health Practitioner , **GP** = General Practitioner **CHW** = Community Health Worker, **OT** = Occupational Therapist **S-L P** = Speech-Language Pathologist , **PT** = Physiotherapy

Figure 2: Health Seeking Pathways for Stroke Participants *(n=16)*

Table II: Period between Stroke Onset and Encounter with the Health System

PERIOD BETWEEN ONSET & ENCOUNTER	1.5. HOUR	7 HOURS	24 HOURS	48 HOURS	30 DAYS	UNKNOWN
NUMBER OF PARTICIPANTS	1	1	4	3	4	2

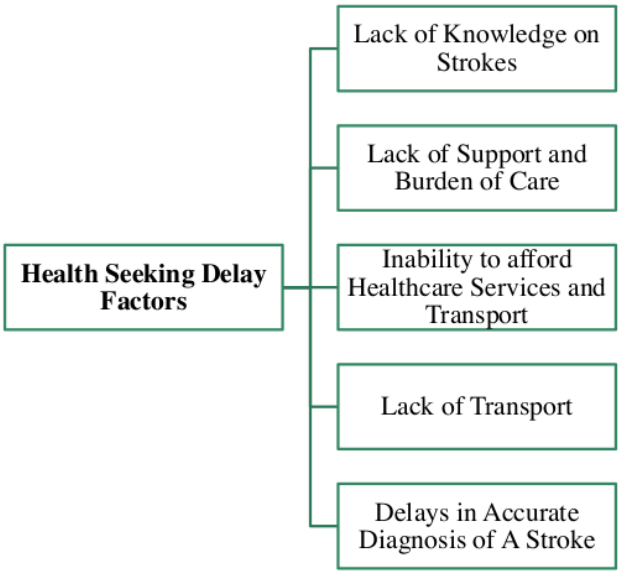


Figure 3: Health Seeking Delay Factors for Stroke Participants

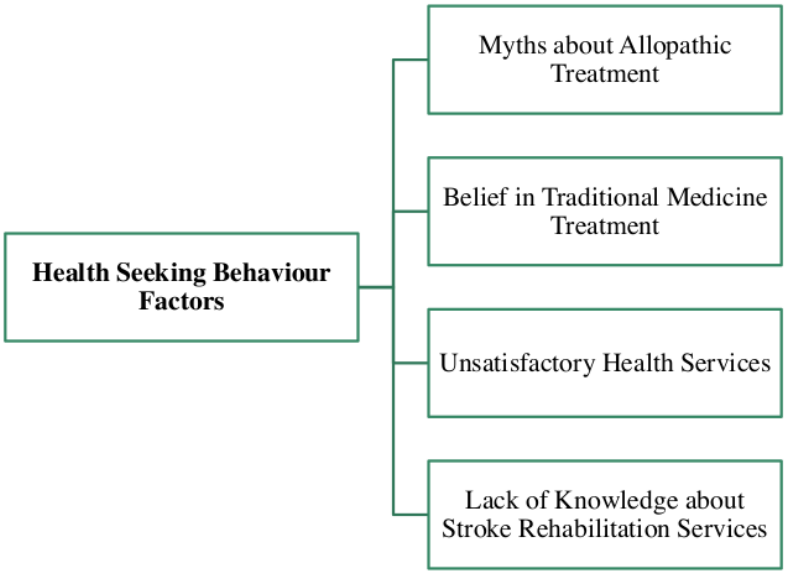


Figure 4: Health Seeking Behaviour Factors for Stroke Participants

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