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Perceived Barriers and Facilitators of Return to Driving Among a Sample of Nigerian Stroke Survivors - A Qualitative Study

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Abstract. Stroke affects driving ability and as such impedes mobility, independence, freedom and quality of life. Return to driving after stroke serves as an integral part for community reintegration and improved quality of life. Driving is considered critical for continued independence, employment and recreation among stroke survivors. There was therefore the need to better understand the perceived facilitators and barriers to driving among stroke survivors with pre-stroke driving history. This study seeks to better understand the perceived facilitators of and barriers to return to driving after stroke so as to enable proper outcome in patient management and policy formulation. This is a qualitative phenomenological approach using in-depth focus group discussion (FGD) was employed. Six stroke survivors (5 males; 1 female) aged 58.0 ± 7.9 years participated in the FGD. Half (50%) of the participants had returned to driving. Seven themes were generated for the barriers as well as facilitators of return to driving after stroke. Findings from this study suggests that majority of the facilitators of return to driving are intrinsic factors. Majority of stroke survivors wish that they could be able to stop being dependent on their caregivers for their activities of daily living (ADL) which could invariably lead to activity limitation and participation restriction. Attention should be paid on the pre-morbid driving status of stroke survivors so as to enhance the facilitators of return to driving and minimize the barriers to return to driving after stroke.

Keywords: Return to driving · Stroke · Barriers · Facilitators

1 Introduction

Stroke affects driving ability [1], and as such impedes mobility, independence and freedom [2]. However, driving is a complex and dynamic task which requires a conscious

activity level in novel situations and unconscious activity level in familiar situations [3]. People with stroke have reduced visual field, reduced visual scanning, attention deficit, decreased information processing speed, physical disabilities and impaired visuospatial skills which may influence their driving ability [4]. To effectively drive an automobile, a number of neurologic systems must be intact. These includes cognitive, vision and motor functions, intact coordination and good attention span [2]. Functional impairment in any of these domains can potentially lead to unsafe driving [2]. Neurological deficit or paroxysmal condition does not automatically exclude driving as fitness for driving is determined by the degree of deficit, frequency and type of event.

Inability to drive can result in a number of adverse consequences in mood, life satisfaction, identity [5], and social isolation [6]. Driving is an important contributor to quality of life after stroke. Finestone et al. [7] reported that driving is significantly associated with community integration after adjusting for health status in stroke patients. Several factors have been associated with the likelihood of returning to driving. These include younger age at stroke onset, lower level of disability, fewer cognitive deficits, being provided with advice and assessment related to driving as well as length of time after stroke [8–10]. Rate of return to driving after stroke ranged from 19% [11], to 30% [8], six months after admission to inpatient rehabilitation, up to 50% five years post rehabilitation [10]. Nonetheless, about 35% of stroke survivors will require driving-related rehabilitation before they can resume safe driving [1]. There is therefore the need to better understand the perceived facilitators of post stroke survivors who return to driving and the barriers preventing those who have not returned. This is to better understand the facilitators of and barriers to return to driving after stroke so as to enable proper outcome in patient management and policy formulation.

2 Method

2.1 Study Design

A qualitative phenomenological approach using in-depth focus group discussion (FGD) was employed to explore the facilitators of and barriers to return to driving among community dwelling stroke survivors with premorbid driving history.

2.2 Participants

Six stroke survivors with premorbid driving history of ≥ 2 years and with first incident stroke were purposively recruited. These were individuals with moderate disability but able to walk without assistance (≤ 3 on Modified Rankin Scale), not aphasic and with no cognitive impairment ($\geq 24/30$ on Mini Mental State Examination) or visual impairments (visual field or visual acuity). Stroke survivors with co-morbidities that can independently limit/impair mobility and/or quality of life (QoL) (e.g. psychiatric disorder, diabetes, AIDS, severe osteoarthritis) were also excluded from the study. The other members of the group were the researcher, moderator and a transcriptionist.

2.3 Data Collection Procedures

A focus guide was developed based on the study objective, literature and with the researcher's experience. Participants, who met the inclusion criteria and gave informed consent, were invited for a focus group discussion (FGD). The focus group was guided by a moderator, who is knowledgeable in FGD. The moderator used a focus guide consisting of semi-structured, open-ended questions to capture directly, the complexities of the participants' perception and probes were given where necessary. The participants were encouraged to talk freely and spontaneously. The researcher took field-notes along with the transcriptionist who was also present at the FGD. Furthermore, an audio tape recorder was used to record the discussion session. The discussion was carried out in English language. The FGD lasted three hours and data saturation was ensured.

2.4 Data Retrieval and Analysis

The audio taped information from the discussion was transcribed verbatim by a transcriptionist. The transcriptions were then read and compared to audio tape recordings and field notes several times to verify accuracy [1]. Themes from the FGD were generated using grounded theory analysis.

3 Results

Six stroke survivors (5 males; 1 female) aged 58.0 ± 7.9 years participated in the FGD. Half (50%) of the participants had returned to driving while the remaining half was yet to return. Seven themes were generated for the barriers as well as facilitators of return to driving after stroke. Severity of stroke was reportedly both a facilitator of and a barrier to return to driving after stroke. Desire to be independent and determination were leading facilitators while fear and environmental factors constitutes barriers to return to driving after stroke as shown in Table 1.

3.1 Perception of Participants to Return to Driving After Stroke

Narratives of respondents suggest common themes with respect to returning to driving after a stroke event. Though some participants were of the opinion that attempting to drive is helpful in overcoming fear of driving; others opined that it depends on factors such as degree of affectation and impairment:

"...it will depend on the degree of stroke and the impairment that has taken place...it depends on the length or gravity of the stroke"

(P1; Male, 52years, age at stroke - 50years, yet to return to driving).

"Like myself now, on a certain day I wanted to go home...then I found out that the leg cannot press the pedal. And the motor cannot enter gear..."

'...But largely is a matter of determination. You are determined because you have this can-do-spirit within you. You are determined to do it; otherwise there are a thousand and one reasons why somebody may not attempt"

(P2; Male, 63years, age at stroke – 59years, returned to driving)

Some participants perceived return to driving after stroke as initially strange and frustrating due to residual functional impairments.

“... the first time, starting driving will be strange to you ...because your hand is not straight as before. The first time, I hit my fence with the car but I didn't give up. OK.... Second day I tried it again ...I see that it's different.”

(P4; Male, 55years, age at stroke – 55years, returned to driving)

“...Self-determination.... The 1st day I did it. They accompanied me to the church. The 2nd time, they also accompanied me, in the event there will be 'katakata' on the way ... but because of that strong determination within me that I should be able to do it...”

(P2; Male, 63years, age at stroke 59years, returned to driving)

3.2 Facilitators of Return to Driving After Stroke

According to the participants, factors that facilitate resumption of driving could be intrinsic or extrinsic. Intrinsic factors are factors related to the stroke survivors such as: the desire to be independent, perception of life, perception of driving, self-determination, severity of stroke and social isolation. Social expectations were identified as an extrinsic factor. Narratives that illustrate the intended meanings are as stated:

3.3 Desire to be Independent

One of the recurring facilitators of return to driving was the desire/urge to be independent so as to be able to function and carry out their activities without dependence on others. This is reflected in the statement of the participants quoted below:

“...what prompted me is that one day, I had an appointment in the hospital. I have to call... (The person who was to drive me) said he had an appointment....I said to myself how am I going to get to the hospital. I think is better I start driving this car so that I cannot be depending on anybody...I think is the urge or desire to be independent. I don't want to be dependent... It's not a normal life. I think it will be normal for one to go back and resume what he was doing before and that was giving you joy, comfort and normal pleasures of life.”

(P4; Male, 55years, age at stroke 49years, returned to driving)

“...there's a time I wanted to go to work. I called one of my friends; he said he had no time. When I look at myself, I said how long will I depend on people like this... at least I can still drive now. ...urge to be independent”

(P6; Male, 55 years, age at stroke 55 years, returned to driving)

“...Like myself I can't sit down doing nothing. Even when I was admitted when I was on bed I told my doctor because if they don't discharge me I ran out of the bed because I'm not the type that will depend on...”

(P2; Male, 63years, age at stroke - 59years, returned to driving)

3.4 Perception of Life

Participants believed that an individual's perception of life events play a role in return to driving. He believed being a proactive and outgoing person can facilitate return to driving:

"...is the kind of person one is. Like myself I can't sit down doing nothing. I'm not the type that will...up until now and I don't see myself as a stroke man because they call it challenges because a challenge is not something permanent. I believe by exercising myself that challenge will wear off from me. So I always have in mind I can do it. I don't ever have 'NO' in my programmes in my life. So that is what prompted me to."

(P4; Male, 55years, age at stroke 49years, returned to driving)

Another individual believed that the way he defined his condition was a factor that contributed to his ability to return to driving.

"...somebody like myself I've once said it. I don't ever look at myself as if I am a liability. And I think that one helped to work within the spasm. The moment I saw myself that I don't have any stroke I do perform very well on steering. Sir I don't have any challenge. I'm not even got a single..."

(P6; Male, 55 years, age at stroke 55 years, returned to driving)

3.5 Perception About Driving

One of the participants who is yet to return to driving but hopes to, believed perception of specific activities including driving as hobbies have the capacity to drive its resumption.

"...I don't enjoy myself by not driving because I'm used to driving as my hobby before the incident. So driving is my hobby...when I'm not driving, I'm not Ok. I must tell you that."

(P3; Male, 52years, age at stroke 51years, yet to return to driving)

This position was further supported by another participant:

"...I see driving as a hobby. It's just like somebody who plays football"

(P2; Male, 63years, age at stroke - 59years, returned to driving)

3.6 Determination

Another perceived facilitator of return to driving after stroke as posited by some of the participants was courage and determination:

"...Courage and self-determination"

(P2; Male, 63years, age at stroke – 59years, returned to driving)

Indulging one's self in various forms of activities of daily living could further reduce participation restriction thus boosting the enthusiasm, courage and determination required to return to driving after stroke. The is as stated below.

...self-determination matters. And if you determine you going to do it, you are going to do it. ...there's improvement of every part of my body. ...but you start early in very small form...like closing my window and drawing curtain. Start it very little and then gradually you develop'

(P1; male, 65years, age at stroke - 64years, yet to return to driving)

'...with all that's been discussed I was determined to go back to the vehicle'

(P3; Male, 52years, age at stroke - 51years, yet to return to driving)

3.7 Social Isolation

Absence or reduced social interaction after a stroke could lead to boredom and loneliness. This situation prompted two of the participants to attempt resuming activities such as driving in a bid to assuage being lonely.

'... solitude, you are alone in the house.. At a stage the boredom will weigh you down and you will want to get out, take some fresh air. You know especially if you have always been the outgoing type. You have never being the indoor type'

(P3; Male, 52years, age at stroke - 51years, yet to return to driving)

'...I'm somebody who cannot sit down for one hour. So sit down looking at everywhere. I had to stand up and walk round the house. One day I said I will go to work. When I get to the department, my HOD said who said you should come to work? I said I am tired of home. I don't tire of home. Nobody to play with. Children go to school...'

(P2; Male, 63years, age at stroke - 59years, returned to driving)

3.8 Severity of Stroke

According to some discussants, extent of the damage by the stroke and not just the length of driving prior to stroke serve as a contributory factor to returning to driving. He believes that individuals with less impairment will be able to return to driving as compared to their counterparts with a more severe impairment. The quotes below highlights the view of these participant.

'...that will be...that do not apply to everybody because it will depend on the degree of stroke and the impairment that has taken place.'

(P2; Male, 63years, age at stroke - 59years, returned to driving)

'...the length of the damage of the sickness'

(P3; Male, 52years, age at stroke - 51years, yet to return to driving)

3.9 Social Expectations

Work demands and the need to live up to expectation can drive return to driving after stroke. According to the participants men who are bread winners in their respective families and need to contribute to the financial upkeep of the families:

'...you have people depending on you. You have to foot bills and even despite our conditions you have to manage to write some cheques that must be cashed...The urge to contribute financially towards the sustenance of a family may urge you to resume duty'

(P2; Male, 63years, age at stroke - 59years, returned to driving)

The type of job one does and the need to reassure the management on the competency and capability of performing your duties without the impairment being a limitation. This, some participants said played a role in their return to driving.

'...I earlier said that the kind of work one is doing'

(P4; Male, 55years, age at stroke 49years, returned to driving)

'... the nature of the job one is doing'

(P2; Male, 63years, age at stroke - 59years, returned to driving)

3.10 Barriers to Return to Driving After Stroke

Intrinsic and extrinsic factors were identified as barriers to return to driving after stroke. The intrinsic factors identified were perceived fear, severity of stroke, temperament and driving competence prior to stroke as possible barriers to return to driving. They also opined that external factors such as environment (poor road network), unfriendly attitude of other road users, and lack of social support.

3.11 Fear

Fear of accident and possible death was highlighted as one of the discouraging factors. This was as stated in the quotes below by the participants.

'...because when I want to think of driving, my fear is that what if I won't be able to turn to one road and hit another vehicle. They will damage me. That will make me die before my time.'

(P5; Female, 72years, age at stroke – 70years, yet to return to driving)

'...the fear of death can also hinder somebody... nobody wants to die'

(P2; Male, 63years, age at stroke – 59years, returned to driving)

3.12 Severity of Stroke

The degree of impairment to the various parts of the body by stroke can undoubtedly limit attempting to resume driving according to a participant:

'The severity of the stroke... Yes if the limbs have been so badly affected...that will be like someone committing suicide, if the person decides to go and drive. In fact they will want you to go and write your will'

(P5; Female, 72years, age at stroke – 70years, yet to return to driving)

Similarly, the extent to which a stroke survivor recovers and resumes use of affected limbs will greatly determine his/her decision to attempt driving.

'...the extent of recovery from stroke.... because somebody should be careful too. The extent of recovery will guide your decision to say let me try again since you don't want to embarrass yourself'

(P4; Male, 55years, age at stroke - 49years, returned to driving)

3.13 Competence with Driving Prior to Stroke

Driving is a skill. The level of competence of a driver prior to stroke can limit return to driving.

'Dexterity before the illness, could be a factor ...because you want to... some probably lack the ability to drive as such.'

(P2; Male, 63years, age at stroke – 59years, returned to driving)

3.14 Temperament

Changes in temperament and mood are possible sequelae of stroke. Inability to effectively manage changes in mood may be a deterrent from resuming driving. Being angry and emotionally unstable could make informal caregivers to dissuade a stroke survivor from attempting driving:

'... Since the stroke started I know I am angrier. ...I know drivers outside will curse you. They can do anything and I decided I will cool it down. I'm a prison officer before I had the stroke. ...If anybody curse me, if anybody say get out, you better go and have another driver...I will not answer them''

(P3; Male, 52years, age at stroke - 51years, yet to return to driving)

'...so the ego of a person, headiness sometimes (Yoruba statement). You see you want to resist control, headiness and sometimes your wife will just do like this (demonstrates). In fact the one who does this is patient enough. In most cases they will start weeping. By the time they start screaming, are you helping? No you are not helping.'

(P5; Female, 72years, age at stroke – 70years, yet to return to driving)

3.15 Environment

According to the stroke survivors, the environment is not enabling for return to driving with a disability. The poor road network, presence of obstruction such as bumps, potholes, cracks, uneven floors etc. on roads are critical to making a decision to resume driving. These environmental defects can greatly discourage/hinder driving.

“The condition of the roads could be a factor... For instance the type of environment where you live can hinder you sometimes. ...so you do not cause commotion within the neighbourhood. ...if the roads are not well laid and there is a ditch that is deep like a gorge... If the terrain is not conducive, you are likely to be hindered in a way”

(P4; Male, 55years, age at stroke - 49years, returned to driving)

3.16 Unfriendly Attitudes of Other Road Users

Certain attitudes displayed by other road users could limit attempting to drive after stroke. According to participant, poor driving habits of other road users can discourage return to driving after a stroke.

“...even those who have not suffered a stroke sometime ...lose concentration on the road. ...they cannot keep to one lane. Some people have not mastered the art of driving...And when you are on the road, you wonder who gave this one a license...when you see people driving bumper to bumper it is either inexperienced or whatever”

(P4; Male, 55years, age at stroke - 49years, returned to driving)

“... In Nigeria I have also observed that we don't have a very good road culture. When you see somebody who is driving slowly and has his hazards light on, do you know the way drivers will be cursing...go and die at home! ...Go and get a driver? It could be embarrassing.”

(P6; Male, 55 years, age at stroke 55 years, returned to driving)

3.17 Lack of Social Support

Lack of adequate and proper social support can hinder recovery of lost functions and that will in the long term hinder resumption of driving. This was suggested by P2 below.

‘...Do you know if you have an uncooperative wife? If your wife is the impatient type who cannot bring herself to the level of appreciating the current situation this rickety man is into now. So if you don't have good family support... Your children, your wife, your friends who should ordinarily take it easy with you that could aggravate your situation.’

(P2; Male, 63years, age at stroke – 59years, returned to driving)

The importance of social support was further emphasized by another participant as stated below.

'...that day I was about to come to the hospital. I told my wife lets go. You want to drive? and I said yes, with God all things are possible. I have nothing to fear... And the woman said, it is not, can't you see what I told you? And I said I will take it cool. And I take it cool from Ashi to Ojunrin. Before I got to Ojunrin she said you better park now. Let us call another man. We came down and call our mechanic who came and drove us to the hospital. The other day I called and I know that distance is nothing. I believe and I trust I can drive and I will drive'

(P3; Male, 52years, age at stroke - 51years, yet to return to driving)

4 Discussion

The study findings will be discussed under two sections which are facilitators of and barriers to return to driving after stroke with reference to relevant literature and the context of the study setting.

4.1 Perceived Facilitators to Return to Driving After Stroke

Findings from this study show that majority of the facilitators of return to driving are intrinsic factors. That is to say, they are factors which directly manifest from within the individual and can be influenced by the individual. The desire to be independent was shown to be a facilitator to return to driving after stroke as majority of stroke survivors wish that they could be able to stop being dependent on their caregivers for their activities of daily living (ADL) which could invariably lead to activity limitation and participation restriction. Driving is essential for traveling to work, completing everyday tasks like grocery shopping and going to doctors' appointments [10]. Driving as a symbol of independence and freedom [8, 12] could spur a stroke survivor who deems it necessary to be functionally independent to return to driving after stroke.

Perception of life was identified as a facilitator to return to driving among stroke survivors. The way a stroke survivor perceives life could have a great influence on his psyche. Stroke survivors who are more of positivists and who remains resolute and confident in their abilities may tend to return to driving more than their counterparts who are depressed. Mcnamara et al. [12] reported a relationship between confidence and driving behaviours post-stroke. Their study showed that stroke survivors with higher confidence will tend to return to driving than their counterparts with low confidence level. However, stroke survivors who do not have a positive perception about life may have psychological distress which will further make them functionally dependent and hence, not being able to return to driving. Driving as a functional task requires a certain degree of motor function to execute motor. Motor function has been reported to be an important component and predictor of driving after stroke [8, 13, 14]. Stroke survivors with psychological distress may remain functionally dependent as studies have shown an inverse relationship between psychological distress and motor functional recovery [15].

A stroke survivor's perception about driving could facilitate return to driving. Stroke survivors that see driving as a hobby and necessity towards meeting up with everyday demand may tend to return to driving due to self-motivation than individuals who do not

Table 1. Summary of findings from focus group discussion with stroke survivors

Name	Retirement status	Factors that encourage resuming driving		Factors that discourage driving		Consent from HCP	Type of car
		Intrinsic	Extrinsic	Intrinsic	Extrinsic		
P1	No	Urge to be independent					
P2	Yes	Urge to be independent, Driving dexterity, ego, headiness, functional recovery, economic considerations	Bad road culture, poor attitude of other drivers, possible distractions – use of mobile phones	Severity of stroke, incapacitation, degree of recovery	Poor driving habits,	Though necessary but may discourage taking positive steps	Both
P3	No	Urge to be independent, Mood swings, determination	Support from social networks		Excessive concern from carers		
P4	Yes	Driving as a hobby, societal demands		Self motivation, self-perception			Manual
P5	No			Fear, loss of confidence			
P6	Yes	Desire to be independent, Driving as a hobby	Availability of social support, boredom/loneliness			May deprive one from engaging in pleasurable activities	Automatic

* Both = Automatic and Manual gear system

see driving as a means to an end. This may also be related to their passion for driving as passion has been shown to have a relationship with motivation which invariably leads to achievement [16]. The study of Fuster et al. [16] showed that harmonious passion predicts higher levels of exploration, socialization, and achievement, while obsessive passion predicts higher levels of dissociation, achievement, and socialization. Stroke survivors who are self-motivated and determined to return to driving due to their passion for driving may be able to achieve it as studies have shown (Geelen, R.J. and Soons, 1996; Maclean *et al.* 2000; Maclean et al. 2002; McKeivitt *et al.* 2004; Holliday *et al.* 2005; Olofsson et al. 2005; Kwakkel, 2006; White *et al.* 2012) that motivation plays an important role in rehabilitation outcome of stroke survivors [5, 17, 18]. Determination to return to driving is also a facilitator to return to driving after stroke. Stroke survivors who will prioritize driving and is determined to actualize it, may likely return to driving than those who does not.

Stroke survivors are usually faced with the challenge of being functionally dependent on their caregivers due to the activity limitation and participation restriction associated with stroke. Participation restriction predisposes the individuals to social isolation and social isolation contributes to mortality and morbidity in patients with stroke [19]. In a bid to avoid social isolation, a stroke survivor may return to driving so as to enable the individual participate actively in ADL hence enable proper community reintegration [13].

Severity of stroke was also identified as an intrinsic factor to return to driving after stroke. Stroke survivors with minimal impairment from stroke would tend to return to driving than their counterparts with a more severe impairment. Stroke affects the function of multiple parts of the neurologic system required for effective driving [4]. For effective driving, these parts of the neurologic system need to be intact. These includes cognitive, vision and motor functions, intact coordination and good attention span [2]. Therefore individuals with less affectation of this system (less impairment), will tend to return to driving after stroke than those with a more severe impairment.

Social expectation was identified in this study as an extrinsic facilitator of return to driving after stroke. Stroke survivors are most often within the middle aged range [20], who are still contributing to the upkeep of their families and also contributing to the growth of the national economy. These individuals are still within the active employment age and may want to return to work as working has been reported to have positive effect on the health of people with chronic conditions [21]. Some of the stroke survivors within this population own and drive a car and are dependent on their car for effective execution of their job description and earning of a living. The desire to meet up with their social expectations may have spurred them to return to driving after stroke.

4.2 Barriers to Return to Driving After Stroke

Barriers to return to driving after stroke identified from this study can be attributed to both intrinsic and extrinsic factors. Fear was a barrier to return to driving after stroke as participants insisted that the fear of death due to probable road traffic accident has made them not to have returned to driving. Stroke as the most feared cardiovascular event among healthy subjects and those with cardiovascular disease [22], is capable of affecting the psyche and instilling fear on the survivor. This may be attributed to the

risk of harm rate of individuals with cerebrovascular disease while driving [23]. Fear to return to driving could also emanate from the degree of impairment and functional independence level.

Severity of stroke as a barrier to return to driving in this study could be attributed to the fact that individuals with more severe impairment may not be able to return to driving as compared to their counterparts with less impairment. Stroke affects multiple faculties of the neurologic system required for driving and these includes cognitive, vision and motor functions, intact coordination and good attention span [2]. For effective driving, these parts of the neurologic system need to be intact. So, for stroke survivors with a severe impairment in these areas would find it difficult returning to driving.

Pre-stroke driving experience was identified as a barrier to return to driving given that the individuals were not yet competent with driving prior to the stroke incidence. Driving just like every other task has to be learned and competence in the execution of this task is driven by experience dependent neural plasticity [24], which has principles that has to be followed so as to ensure effective learning. Learning is a process that involves changes in genes, synapses, neurons, and neuronal networks within specific brain areas [24–26]. Brain damage results in many changes in neurons and non-neuronal brain cells that can alter these learning processes. Therefore individuals with poor competence with driving prior to stroke may easily have the neuronal network specific to driving altered due to stroke hence affecting their confidence level towards driving as there is a relationship between competence and confidence [27].

Temperament was identified as one of the extrinsic barriers to return to driving after stroke. Stroke survivors are predisposed to myriads of psychological disorders [28] Post-stroke depression is the most studied psychological factor associated with stroke and has been reported to be negatively associated with functional recovery [28]. Driving is a task that requires a certain degree of functional independence to perform. Therefore, stroke survivors who are depressed or emotionally labile would most likely have a poor motor function and may consequently pose a barrier to return to driving.

Environmental factors pose a barrier to return to driving after stroke. This may not be unrelated with the poor state of roads in our study location (Nigeria) [29]. The state of road may not be favourable for stroke survivors who may want to return to driving given to the poorly maintained road network, pot-holes, bumps, paucity of traffic light, signage and traffic personnel. These factors are usually critical while trying to make decision on returning to driving after stroke. Bad road networks will require constant application of the break system, gear selection, steering control etc. Stroke survivors who belief that they cannot bear the rigours associated with carrying out these demands may likely not return to driven due to the aforementioned environmental factors.

Unfriendly attitude of other road users as identified from this study may pose a barrier to return to driving after stroke. The poor compliance to traffic rules by other road users may be thought to further predispose the stroke survivor who intends to return to driving to danger of accident. The lack of social support from concerned individuals and institutions may further discourage a premorbid driving stroke survivor from returning to driving. These social support could include retraining of premorbid driving individuals who have suffered a stroke on return to driving, providing a special speed limit lane for

the physically challenged, providing adequate traffic signs and enforcing its compliance among others.

5 Conclusion

Attention should be paid on the driving status of stroke survivors with premorbid driving history so as to enhance the facilitators of return to driving and minimize the barriers to return to driving after stroke. This is to ensure improved quality of life, community and social reintegration among stroke survivors with premorbid driving history.

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