



CAREGIVERS' PERCEPTION OF ENABLERS AND BARRIERS TO HOME EXERCISE PROGRAMME (HEP) ADHERENCE AMONG NIGERIAN STROKE SURVIVORS: A QUALITATIVE STUDY

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Abstract

Background and objective: Stroke survivors often rely on caregivers to perform their Home Exercise Programme (HEP); however, little is known about enablers and barriers to HEP adherence from caregivers' perspective. This study aims to explore the caregivers' perspectives on the enablers and barriers to HEP adherence among stroke survivors.

Methods: Fourteen caregivers of stroke survivors receiving physiotherapy at a Nigerian university teaching hospital were interviewed for the purpose of a qualitative study. An in-depth interview was used to explore respondents' perspectives on enablers and barriers to HEP adherence. The gathered data was transcribed verbatim and analyzed.

Results: The caregivers were mostly women (8/14) and close family members of the stroke survivors. In their opinion the main HEP adherence enablers were motivation and expectation, positive outcome and experience, availability of social support, timing, and religious beliefs. Overall health and wellness, caregiver's schedule, negative emotions, and fear of falling were the dominant perceived barriers to HEP adherence.

Conclusion: Home exercise programme adherence by stroke survivors is determined by a number of factors, including caregiver-related ones. It is necessary to pay close attention to all undercurrents of HEP adherence related to stroke survivors and their caregivers.

Key words: stroke, caregivers, home exercise programme, enablers, barriers

Introduction

Stroke is the second leading cause of mortality globally with a yearly mortality rate of about 5.5 million [1]. Rehabilitation helps stroke survivors achieve and maintain maximum possible functional independence [2]. While the goal of stroke rehabilitation is to discharge patients at an optimal level of function, it is not usually attained due to many factors [3] necessitating the application of Home Exercise Programmes (HEPs).

HEPs, which are integral components of physiotherapy [4], are well-structured and prescribed exercise programme that patients are required to perform at home [5]. Adherence to HEPs has been shown to improve stroke

survivors' functional performance and quality of life [6]. Stroke survivors often decline functionally after completing their in-hospital rehabilitation and they face multiple challenges including increased odds of falls, emotional affectations, and dependency in activities of daily living, if HEPs are not incorporated [6].

Adherence, which is the extent to which a person's behavior corresponds with agreed recommendations from a healthcare provider [7], is a challenging issue with regard to HEPs among stroke survivors [8, 9]. Caregivers' involvement in stroke care is one of the ways of ensuring/improving HEP adherence. Caregivers not only assist stroke survivors with

their activities of daily living but also with the progress of their rehabilitation [3, 10]. Caregivers' involvement in the rehabilitation process has been reported to increase the feeling of empowerment and improve outcomes in individuals with stroke [11]. Few studies have focused on enablers and barriers to caregivers' involvement in improving stroke survivors' adherence to HEPs [3]. Ordinarily, enablers and barriers to HEP adherence among stroke survivors have a contextual undercurrent which may be better understood by investigating the caregivers' perspectives. The study analyzes opinions of caregivers in respect to the concept of HEP adherence among stroke survivors. The aim of this study was to explore caregivers' perspectives on the enablers and barriers to HEP adherence among Nigerian stroke survivors.

Material and methods

Caregivers of stroke survivors attending a physiotherapy clinic at the Osun State University Teaching Hospital (UNIOSUNTH) in Osogbo, Nigeria took part in the study. A caregiver is an individual, identified and accepted by a stroke survivor's family as being responsible for the care of a stroke survivor, who may be a family member or a trained carer, e.g. a nurse [3]. The eligible caregivers in this study were those who had provided care for a stroke survivor over a period of no less than 3 months. In addition, each stroke survivor being cared for had to have a Modified Barthel Index (MBI) score of between 0 – 60. Caregivers, whose stroke survivors had other co-morbidities, e.g. Parkinson's disease, were excluded.

A sample size of 12 to 20 was proposed for this study as a suitable sample required to yield data in health research [12, 13]. Data saturation was reached with 14 respondents. Ethical clearance was obtained from the Ethical Review Committee of the Osun State University Teaching Hospital (UNIOSUNTH) in Osogbo, Nigeria (Ref: LTH/EC/2021/03/509).

The purpose of the study was explained to each respondent and the informed consent was secured from the caregivers and the stroke survivors. Permission was also obtained to tape record the interviews.

Data were gathered on the stroke survivors' socio-demographic characteristics (age, gender, relationship status, level of education, occupation, religion) and clinical characteristics (time since stroke onset, type of stroke, and laterality). The baseline data on the stroke survivors' level of independence was used to ensure that the caregivers recruited for the study were those who really cared for stroke survivors that actually needed caregivers' assistance to carry out the prescribed HEP. The stroke survivors' level of independence was assessed using a Modified Barthel Index (MBI), and stroke survivors with MBI scores higher than 60 were excluded. The maximum MBI score is 100 and the MBI range of 91-99 is considered slight dependency, 61-90 - moderate dependency, 21-60 - severe dependency, and 0-20 - total dependency [14, 15].

An in-depth interview was conducted by a research team of three physiotherapists with experience in neurological rehabilitation. A structured interview guide was adapted from a previous tool on enablers and barriers to HEP adherence by stroke survivors used by Scorrano et al. [3]. The guide was translated into Yoruba (the indigenous language spoken in the study area). The interviews were conducted in a dedicated room approved for the study at the Physiotherapy Department. Every interview session was conducted in the morning, and the audio track was recorded using a digital voice recorder (Hotsell999). The average time for each interview was 35-40 minutes.

Data analysis

Following qualitative content analysis protocols [12] the tape recordings were transcribed verbatim, reviewed for accuracy by the authors, and coded manually. Themes expressing similar concepts were generated from the codes. The key themes and phrases were analysed and quotes considered to be representative of themes were selected for illustrations. Descriptive statistics of frequency were used to summarize respondents' socio-demographic variables.

Results

The socio-demographic profiles of caregivers and stroke survivors are presented in

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Table 1. The survivors and caregivers were aged between 42-73 years and 27-70 years, respectively. Half of the stroke survivors (7/14) and most of the caregivers (9/14) were self-employed. All the caregivers were close family members of the stroke survivors. Most of the

survivors (8/14) had left sided hemiplegia, and their MBI scores ranged from 17 to 58. Out of the 14 caregivers interviewed in the study, the majority (8) were women, while 8 of the stroke survivors were men.

Table 1. Socio-demographic and clinical characteristics of stroke survivors and caregivers.

Stroke Survivor								Caregiver					
No	Age	Sex	Religion	Occupation	Education	SD	MBI	Age	Sex	Religion	Occupation	Education	Relationship
1	60	F	C	SE	Secondary	18	40	27	M	C	SE	Tertiary	Son
2	48	M	C	SE	Tertiary	4	49	46	F	C	SE	Tertiary	Wife
3	49	F	C	GE	Tertiary	4	56	52	M	C	GE	Tertiary	Husband
4	42	M	C	SE	Tertiary	23	32	38	F	C	SE	Tertiary	Wife
5	60	F	C	GE	Primary	36	45	70	M	C	R	Secondary	Husband
6	56	M	C	GE	Tertiary	19	17	47	F	C	GE	Tertiary	Wife
7	65	M	C	R	Tertiary	6	51	50	F	C	GE	Tertiary	Wife
8	52	M	C	GE	Tertiary	27	55	51	F	C	SE	Secondary	Wife
9	73	F	C	SE	Uneducated	3	56	41	F	C	SE	Tertiary	Daughter
10	55	M	I	GE	Tertiary	3	35	50	F	I	SE	Secondary	Wife
11	42	M	I	SE	Tertiary	3	33	32	F	I	SE	Tertiary	Wife
12	68	M	C	SE	Secondary	3	50	28	M	C	SE	Tertiary	Son
13	62	F	I	SE	Uneducated	5	56	66	M	I	SE	Secondary	Husband
14	57	F	I	GE	Tertiary	15	58	69	M	I	R	Tertiary	Husband
n						%							
Side affected													
Left				8				57.1					
Right				6				42.9					
Type of stroke													
Ischaemic				9				64.3					
Haemorrhagic				5				35.7					

Key: SD - stroke duration; MBI - modified Barthel activities of daily living index; M - male; F - female; C - Christianity; I - Islam; SE - self-employed; GE - government employed; R - retiree; n - number; % - percentage; a relationship to the stroke survivors.

Caregivers' perception of HEP adherence enablers in stroke survivors

Five categories of perceived enablers were identified following the interviews: motivation and expectation, positive outcome and experience, availability of social support, timing, and religious beliefs.

A. Motivation and expectation

In this category the caregivers reported that stroke survivors were self-motivated to perform HEPs expecting to return to former activities. Also, family and friends were involved in motivating them to adhere to their HEP so that they can get better. The following quotes illustrate the motivation and expectation enablers.

He wants to get better as soon as possible so that he can go back to his normal activities of daily living (CG 7)

He believes that he'd get better if he's faithful to doing the exercises (CG 8)

People do advise him that the more he does the exercises, the more he gets better (CG 12)

Another factor is that she always feels like she should get better and start walking and everything returns back to normal (CG 5)

B. Positive outcome and experience

This category highlights the survivors' and their caregivers' experience in their interactions with physiotherapists as well as the observed effects of exercise on stroke survivors' conditions.

Her condition was worse before to the extent of not being able to use the toilet independently, but she's much better now (CG 14)

I think she feels light and she sees improvements after doing it [exercise], though it's not a huge difference at once because this condition is different from headache or body pain (CG 5)

One of the things that do encourage him is that since we started coming here, people have been testifying to it that he's getting better so he is faithful to the exercises at home (CG 12)

The cooperation of the physiotherapy department, their love and affection ... really assist us (CG 3)

C. Availability of social support

The support and encouragement by the family members, friends, and visits in a religious setting were mentioned as enablers for HEP adherence among stroke survivors:

Well, whenever grandma is around, she's always happy, because they talk a lot and jest, she feels so happy and then does the exercises (CG 1)

When the children are with her, their presence encourages her (CG 9)

People in the community and the church rally around her, and sometimes their support baffles us, pastors visited us and gave us lots of gifts. They never left us, they keep assisting us; even in the hospital here; even Muslims in our compounds helped (CG 3)

D. Timing

Having a specific time of the day in which HEP was scheduled to be performed

enabled the stroke survivors to adhere to the programme. The quotes below indicate that it was easier for both the survivors and their caregivers to routinely perform the HEP when they stuck to a particular time.

Often he'd wake up in the morning and after prayer he'd say he wants to do the exercises before going to the sitting room ... (CG 2)

In the morning, after he's had his bath and taken his medications, he always starts doing his exercises and he uses about 20-30 minutes (CG 4)

He does it every morning after eating and every night before he goes to sleep (CG 11)

Usually between 11am to 12pm her daughter comes around, and she does the exercises during that period (CG 13)

She does some exercises every morning before leaving her bed, and she does some too after leaving her bed (CG 14)

E. Religious beliefs

The caregivers attest to the fact that stroke survivors have religious inclinations and believe in God. As such they demonstrate it in activities such as singing and praying:

The spiritual aspect is helping her. She believes that God can do all things, that with God all things are possible (CG 3)

He believes in Christ, and he prays to Christ for his condition. He believes God is going to raise him up from his sickness (CG 7)

Her faith is strong that she's going to get better soon. ...she believes in God and in the exercises she's doing (CG 9)

Whenever she sings a Christian song, her spirit gets lifted to do the exercises (CG 3)

Caregivers' perception of HEP adherence barriers in stroke survivors

The caregivers' responses were categorized into the following themes: general health and wellness, caregiver's schedule, negative emotions, and fear of falling.

A. General health and wellness.

Complaints of tiredness, pain, feeling unwell, and dizziness among others were adduced by the caregivers as reasons why stroke survivors failed to adhere to HEP. The following quotes reveal these notions:

He gets tired sometimes and he won't be able to do anything (CG 6)

When he gets sick or if his blood pressure is high he doesn't do the exercises at home (CG 8)

Sometimes, she complains of ache in the leg, she doesn't do the exercises during those times (CG 9)

I think the pain she feels whenever she does the exercise, discourages her (CG 13)

...if nothing is wrong with him, he'd do the exercises. There was a time he complained of feeling dizziness, his blood sugar was checked then and we realized that it was low (CG 2)

Sometimes he passes stool (faecal incontinence) and that annoys me a lot. It doesn't make him happy either, so it affects the exercise (CG 7)

B. Caregiver's schedule

The caregivers' busy schedule is a factor hindering HEP adherence as the caregivers are also family members who take care of children and do other household chores before going to work. Their responses are quoted below:

The thing I can refer to as a barrier for me is time, this is because I have to go to work... (CG 6)

The thing is ... myself and my sister are not usually home, only my younger brother and my dad are usually home and my dad is somehow busy..." (CG 1)

It is not easy... taking care of children and other responsibilities too, then adding exercise is another issue... (CG 4)

C. Negative emotions

Depression, negative mindset, anxiety, sadness, and bad mood were reported by both stroke survivors and caregivers as negatively affecting HEP adherence:

I think she needs to work on her mindset to make her realize that the only way she can get better is if she actually does these exercises (CG 1)

If I don't show happiness, it does affect him. Sometimes I just think about it that I'm too young for this kind of incidence to occur to my husband. This does hinder him to do the exercises because he'd be depressed too (CG 2)

If he's in a bad mood I just leave him alone and he doesn't do the exercises during such periods (CG 8)
There are times that I would rain insults on him because I believe he caused this stroke episode by

himself. I just get depressed and fight him, sometimes he cries (CG 6)

D. Fear of falls

The caregivers opined that the fear of falling by stroke survivors inhibit their adherence to HEP as illustrated by the responses below:

It's just the fear, he's always afraid to do the exercises. He is afraid of falling. (CG 10)

He's had an episode of fall before this (stroke)..... and that's why he's always afraid (CG 10)

The perceived enablers to HEP adherence among stroke survivors include motivation and expectation, positive outcome and experience, availability of social support, timing, and religious beliefs; while the perceived barriers are general health and wellness, caregiver's schedule, negative emotion, and fear of falling. These categories of perceived enablers and barriers are discussed below.

Discussion

The study was aimed to explore caregivers' perspectives on the enablers and barriers to HEP adherence among stroke survivors. The results show that motivation and expectation to get well was the primary HEP adherence enabler among the survivors. Motivation is an integral part of successful stroke rehabilitation [16, 17] and imperative to adherence to rehabilitation programmes [18]. High motivation was previously reported to be a direct indication of better adherence to exercise programmes and vice versa [19-21]. Scorrano et al. [3] also found that self-motivation and external motivation are the main enablers of adherence to HEP among stroke survivors. In the present study, motivation to adhere to HEP was premised on the drive or expectation to get better. Marklund et al. [22] previously reported that stroke survivors were motivated to engage in rehabilitation exercise if goals or expectations were set for them. Other researchers also confirm that rehabilitation of stroke survivors should be driven by the set goals [3, 23]. Personal and social factors are known determinants of motivation [17, 24], and the findings of the present study showed that the expectations that motivated the survivors to

adhere to their HEP were mainly by the stroke survivors themselves, their caregivers, and family members. A tool to assess patients' level of motivation to perform exercise is available [25], and it can help the rehabilitation professionals to quickly identify survivors with little or no motivation to perform HEPs and provide remedies.

The caregivers in the present study observed that positive outcomes in terms of improvement of survivors' condition after engaging in HEPs, and their experience while in contact with physiotherapy staff, enabled the survivors to adhere to their HEP. Improvement and positive changes in stroke survivors' condition are the main factors of developing desire to adhere to exercise [17, 26, 27] as stroke survivors are motivated to adhere or continue with rehabilitation programmes by measuring changes in their condition over time [27, 28]. The positive changes and improvement in the survivors' condition observed by the caregivers in this study cannot be said to solely result from HEP adherence by stroke survivors as some of them were still undergoing group rehabilitation in the physiotherapy clinic for at least once a week. However, evidence shows that stroke survivors with good HEP adherence tend to reach their rehabilitation goals better [6, 29]. It is adducible that these stroke survivors attained their rehabilitation goals because they received higher doses of therapy than those without or with poor adherence to a HEP. A higher level of therapy has been found to be associated with better post-stroke outcomes [30, 31].

The caregivers further opined that the good attitude and competence of the physiotherapy staff encouraged the stroke survivors to continue with the exercises at home. Patients' experience of healthcare provision, including patient satisfaction, is an important outcome measure for healthcare organizations and a mechanism to monitor quality advancement [32, 33]. Healthcare professionals and organization structures or communities are reported to be important factors that determine patients' adherence to treatment [34]. Studies have also shown that healthy patient-physiotherapist relationships, provision of support, good attitude and positive feedback by the physiotherapist

improve patients' adherence to exercise [35, 36] and this necessitates further research to assess potential contributions of healthcare professionals to HEP adherence.

In the present study the support from family members, friends, community and religious groups to the stroke survivors was reported as one of HEP adherence enablers. Caregivers reported that family members, in particular, were actively involved in the survivors' home rehabilitation. According to Cohen and Wills [37] social support involves emotional support, including empathy or caring, by family members, friends or persons of importance; provision of required information and advice; provision of instrumental (financial) support and visitation; and friendship and social interaction. These social support components were reported to have been provided by family and friends of the stroke survivors in the present study, enabling them to adhere to their HEPs. Mahmood et al. [38] in their qualitative study exploring determinants of adherence to home-based exercises among community-dwelling stroke survivors concluded that supportive family and society facilitated adherence to HEP, while another similar study reported that social and family support remained stable after the stroke [39]. The respondents in the aforementioned studies were, however, stroke survivors themselves and not their caregivers. However, the availability of social support in the present study was contrary to results by Scorrano et al. [3] obtained among caregivers of stroke survivors where lack of social and family support was mentioned as hindrance to HEP adherence. This difference may be explained by different social and cultural characteristics of cohorts in both studies, i.e. our study was conducted in Nigeria while the other study in South Africa. It had been reported that Nigerian stroke survivors continued to enjoy the support of their family members despite stroke [40]. Since social support can be perceived differently based on gender, race, ethnicity and culture [41], there is a need for further research on the effects of socio-economic and cultural practices on social support. Good social support is a factor that improves patients' adherence to various aspects of treatments including HEP

[42, 43]. It is therefore imperative for rehabilitation professionals and policy makers to develop interventions that can enhance social support for stroke survivors. This is crucial as human beings are social beings and this innate sociability plays an enormous role in any accomplishment [44].

The caregivers in this study reported that having allotted time for the HEP positively influences its adherence. The timing was fixed by the caregivers and stroke survivors. This finding corresponds to the results of a study in which caregivers stated that having a specific routine for a HEP was also an important enabler [3]. Patients have been observed to prefer and participate in exercises whose design accounts for their time preference [45]. Furthermore, researchers identified the importance of HEP scheduling or planning to enhance adherence [23, 46], and that inability to fix exercise into the daily routine is a major barrier to HEP adherence [29, 45]. Physiotherapists should therefore collaborate with stroke survivors and their caregivers to arrange a specific schedule in which a HEP will be performed, and ensure the necessary follow-up and feedback.

Positive religious beliefs and spirituality were also found to be an enabler of HEP adherence among stroke survivors in this study. This finding is similar to caregivers' perceptions in Scorrano et al. [3]. Positive predictors of subjective wellness are spirituality and religious beliefs [47] as they influence many psychosocial and health-related outcomes or indices [48, 49] including issues people consider important and worth pursuing in life [50-52]. The stroke survivors in this study actually consider HEPs important to them as they believe God will improve their condition through adhering to them. Moreover, adherence to therapy is enhanced when there is a positive attachment to God and a spiritual connection with others [53]. One of theoretical models used to explain the health-religion connection is that multidimensional religion practice leads to some psychological traits such as self-discipline and patience [54]. These traits may help individuals with religious beliefs adhere with prescribed therapy including HEPs. It has been suggested that rehabilitation professionals should learn the complex

interaction between faith and health and thereby develop strategies that would maximize adherence to therapy through patients' beliefs [55, 56].

In the present study stroke survivors' general wellbeing and some physical complaints such as pain, tiredness, dizziness, and not feeling well, were shown to be hindrances to HEP adherence. Several studies reported associations between pain, fatigue and other physical illness and HEP non-adherence [3, 29, 57, 58]. Pain was the most common physical symptom reported by caregivers as a barrier to HEP adherence in this study. Post-stroke musculoskeletal pain, especially during exercise, is said to be exacerbated by fatigue, overexertion, spasticity [29], sensory disturbance, limited range of motion, and motor impairment or lesion [59]. Rehabilitation professionals are encouraged to devise individualized methods that enhance adherence in stroke survivors with complaints of pain, fatigue, and other health issues. They can introduce a graded HEP that increases over time, based on the survivor's medical history and stroke severity, and employ cognitive behaviour models, including education about relaxation techniques and other coping strategies.

The caregivers' schedule was reported to involve responsibilities other than caregiving or HEP supervision, which served as a major barrier to HEP adherence. Most of the caregivers in this study were fully employed. Their schedule was compounded due to the fact that all the caregivers in this study were close family members who also did some household chores. Informal caregiving as observed in this study is very common in developing nations, and studies had documented various challenges faced by caregivers [3, 60-62]. Informal caregivers such as family members, close relatives, friends, or neighbors who care for stroke survivors without any payment [63] are often burdened with responsibilities and become frustrated and overwhelmed especially during the acute stage of stroke onset [64]. Informal caregivers have to balance a dual responsibility of looking after a dependent stroke survivor as well as making adjustments in their lifestyle thus increasing the burden and

stress on themselves [60, 65, 66]. Gertrude et al. [67] noted that the main issues informal caregivers grapple with is the sudden assumption of new responsibilities, increased workload, and increased domestic duties leading to significant lifestyle changes. The informal caregivers' burden is said to be related to financial difficulties, emotional distress, high caregiving demands, and lack of rehabilitation support services [67]. It is therefore important for policy makers and clinicians to offer support to these informal caregivers and include them in their stroke care policies since their service is invaluable in stroke rehabilitation. Community rehabilitation support services should be provided in Nigeria including possible homecare services.

Negative emotions, including depression, anger, sadness, outbursts and anxiety displayed by stroke survivors and their caregivers were reported as barriers to HEP adherence among stroke survivors. The experiences of negative emotions by caregivers had been observed earlier [3, 64]. Caregivers' depressive and anxiety symptoms are known hindrances to positive outcomes of stroke rehabilitation [68, 69], while depression in stroke survivors adversely affects their functional activities, quality of life, and rehabilitation effects [70, 71]. The emotional wellbeing of stroke survivors, and especially of their caregivers, does not seem to receive adequate attention [72] despite its impact on rehabilitation and exercise adherence. The poor psychological health of stroke has been linked with low self-efficacy which, in turn, negatively affects the ability to act or being physically active including adhering to a HEP [3, 20]. If stroke survivors feel negative emotions themselves, caregivers are more prone to depression [73]. Stroke survivors' depressive symptoms are said to be worsened by depression in stroke caregivers [3]. Post-stroke depression occurs in approximately 33% of stroke survivors [74], while post-stroke anxiety in about 25% [75]. Similarly, prevalence of depression and anxiety is high among caregivers of stroke survivors [76, 77]. It had been previously suggested that clinicians should show more interest in the psychological health of caregivers and stroke survivors and

offer the necessary support to ensure optimal rehabilitation and enhance patients' recovery [68, 69, 77-79].

The caregivers in this study reported that fear of falling by the stroke survivors was a hindrance for the latter to adhere to HEPs. The fear of falling experienced by caregivers and stroke survivors has been found to have a negative effect on HEP adherence [3] since caregivers considered safety the main issue for stroke survivors taking part in exercise, especially in the acute stage [64]. Fear of falling, though associated with balance problems and fall risks after stroke, is a psychological condition. It involves excessive worrying that one will lose their balance leading to avoidance behaviour, inactivity, social isolation and further compounded disability in stroke survivors [80, 81]. The fear of falling is reported more frequently by stroke patients than their age-matched controls [82]. The prevalence of fear of falling is high among community dwelling stroke survivors [83], and higher among women (62-78%) than men (18-38%) [84-86]. The findings regarding the fear of falling by stroke survivors in this study are congruent with the study results by Larén et al. [87] who showed that poor postural control, female sex, and the use of a walking aid were linked with the fear of falling. The cohort of stroke survivors in this study had their MBI scores below 60 and therefore were dependent in their functional activity, with possibly poor postural control. Since for stroke survivors the fear of falling is an important determinant of participation in daily life and adherence to exercise, it must be also accounted for by rehabilitation teams in their pursuit of optimal rehabilitation outcomes. Such individualized interventions may include exercise and educational strategies. Cognitive behavior therapy, which is a psychotherapeutic intervention, has been also suggested and proven effective in modifying self-defeating beliefs that contribute to fear of falling avoidance behaviours among stroke survivors [80, 88].

The limitation of this qualitative study is that the respondents came only from one healthcare centre in Nigeria.

Conclusion

Home exercise programme adherence by stroke survivors is determined by a number of different factors, including caregiver-related

factors. There is a need to pay close attention to all undercurrents of HEP adherence related to both stroke survivors and their caregivers.

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