Early Mobilisation of Patients with Acute Stroke: A survey of knowledge, attitude and practice health care professionals in south-west, Nigeria

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Summary

BACKGROUND

Early mobilisation of acute stroke survivors has been associated with fewer deaths and better clinical outcomes. Yet, there are conflicting reports about the knowledge, attitude and practice of early mobilisation among clinicians. We investigated the knowledge, attitude and practice of early mobilization among health care professionals in South-West, Nigeria.

MATERIALS AND METHODS

All the 159 health care professionals comprised 68(42.8%) nurses, 45(28.3%) physicians and 46(28.9%) physiotherapists involved in acute stroke care were surveyed using a content-validated questionnaire. Pearson's Product Moment correlation and ANOVA were used to analyse data at $p < 0.05$.

RESULTS

Most (*n=147; 92.5%*) of the participants agreed that early mobilization reduces complications of immobility. Majority of the HCPs were knowledgeable and had positive attitude towards early mobilisation (*n=139; 87.4%)*. Attitude differed significantly across different healthcare professions ($p=0.02$). Most health care professionals (*n=149; 93.7%*) reported practicing early mobilization of acute stroke patients. There was a significant relationship between years of work experience and each of knowledge and attitude ($p<0.05$).

CONCLUSIONS

Although, many health care professionals expressed concerns about the risks of early mobilization, including possibility of death, they reported practicing early mobilisation. It may be necessary to conduct a risk-benefit analysis of early mobilisation and provide appropriate practice guidelines to promote implementation. This could further enhance the health care professionals' confidence in practicing early mobilisation and improve stroke care.

Keywords: *Early Mobilisation, Stroke, Acute Care, Health Care Professionals*

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Introduction

Complications of immobility account for more than half of deaths in the first 30 days after first incidence of ischaemic strokes [1]. They also constitute the second largest cause of death next to death due to initial direct neurological damage in patients with nonlesional intracerebral haemorrhage [2]. Mobilising patients out of bed and encouraging early resumption of self-care activities could reduce these complications, minimise adverse events in stroke patients and improve expected clinical outcome [1,3,4]. Getting patients up and out of bed within 24 to 48 hours of stroke onset is considered Early Mobilisation [5,6]. It comprises out-of-bed sitting, standing, and walking and has been suggested to contribute to the positive effects of stroke unit care [7].

Early Mobilisation has important psychological effects on patient's motivation, well-being and quality of life [8]. It has been associated with reduced likelihood of depression and anxiety [9]. Early initiation of movement promotes brain recovery [10,11]. According to Auriel and Bornstein [8], stroke patients who were mobilised early had better outcomes and quality of life compared with stroke patients who received standard (usual) care. Despite that, early mobilisation of acute stroke patients is recommended by international clinical practice guidelines. Majority of patients hospitalised for acute stroke are often mostly sedentary [12].

It has been postulated that the adoption or practice of an intervention by professionals is shaped by their knowledge, values, skills and available resources among others [13]. Hence, the effectiveness of early mobilisation of acute stroke patients, depend on the knowledge and attitude of the core members of the stroke multidisciplinary rehabilitation team towards the guidelines supporting early mobilisation [14], as well as health care providers' profession [15].

Kim *et al* [2] reported that most physicians were reluctant about early mobilisation of patients with intra-cerebral haemorrhage because of risk of re-bleed. Recent evidence however, suggests that delay in initiation of acute rehabilitation after intra-cerebral haemorrhage has a lasting effect on the development of post-stroke complications [16]. Despite that physiotherapists demonstrated sufficient knowledge and experience as facilitators of early mobilisation, they reported insufficient time as a barrier to practicing early mobilisation [17].

Only 40.0% out of 202 healthcare professionals who participated in the study by Sjöholm *et al* [18] favored early mobilisation of patients**.** The majority of studies on early mobilisation of acute stroke patients were conducted in countries with specialised stroke care units and existing guidelines on early mobilisation of acute stroke. There is scarcity of studies on knowledge, attitude and practice of early mobilisation of patients with acute stroke among health care professionals in Nigeria, a low resource country with no specialised stroke units, where evidence has shown that the mean time from admission to first physiotherapy assessment of patients with stroke was 3.0±3.2 days [19]. The aim of this study was to examine the knowledge, attitude and practice of early mobilisation of patients with acute stroke among

health care professionals in teaching hospitals in South-West, Nigeria.

Materials and Methods

This multi-centre cross-sectional study was conducted among physicians, physiotherapists and nurses who were actively engaged in the management of patients with acute stroke for a minimum of six months prior to this study were identified and recruited from six selected teaching hospitals in South-West, Nigeria. These hospitals were selected because they are the first generation of teaching hospitals in South-West, Nigeria. Data collection was from May to August, 2016.

Measurements

Knowledge, attitude and practice of early mobilisation among the health care professionals were assessed using a structured questionnaire. The items of the questionnaire were devised from a review of literature on early mobilisation of acute stroke patients. The content validity of the questionnaire was conducted by a panel of experts who evaluated each item in the questionnaire for relevance and clarity of wordings.

The questionnaire comprised 4 sections. Section A prompted information on the socio-demographic characteristics and work history of the participants. Section B comprised 14 items assessing the participants' knowledge about early mobilisation of patients with acute stroke. Response options to the items in this section were 'Yes', 'No' or 'I don't know'. Each correct response was assigned a score of 1 while incorrect and 'I don't know' responses were collapsed to one and assigned a score of 0. The maximum obtainable score was 14. Scores were transformed into percentages and classified as: very good (≥ 70%); good (≥ 61 ≤ 69); fair (≥ 51 ≤ 59) and poor knowledge (≤ 50). Section C had 10 items assessing the attitude of participants towards early mobilisation for patients with acute stroke.

Response options for the items were 'agree', 'uncertain', and 'disagree'. Each appropriate response signifying positive attitude was assigned a score of 2 while every response indicating negative attitude earned a '0'. Obtainable range of score is 0-20. Section D consisted of five items assessing practice of early mobilisation for patients with acute stroke. Participants were expected to answer 'Yes', 'No' or 'Unsure' to the items on practice.

Ethical approval was obtained from the appropriate institutional Ethics Committee. Detailed explanation of the procedure and relevance of the study was given to all eligible participants at the study centre. A consent form including information on voluntariness of participation and stating participants' right to withdraw participation, accompanied the questionnaires. Copies of the questionnaires were hand distributed to health care professionals who were consented by one of the researchers. Questionnaires were self-administered and retrieved by hand immediately or at a later date as deemed convenient by participants.

Data Availability

The data associated with the paper are not publicly available but are available from the corresponding author upon a reasonable request.

Data Analyses

Retrieved questionnaires were coded. Data obtained were cleaned, entered and analysed using the IBM SPSS version 20.0. None of the questionnaires retrieved had more than 10% missing values. The variable with the highest missing values was age which was omitted by 20(12.6%) participants. All questionnaires were included in the analysis.

Descriptive statistics of mean, standard deviation, percentages and frequency were used to summarise data. ANOVA was used to compare knowledge and attitude scores across healthcare professions. Turkey's Post Hoc test was further used to find the difference in knowledge and attitude scores across healthcare professions. Pearson's Product Moment correlation was used to determine the relationship between years of work experience with stroke patients and each of knowledge and attitude scores. Level of significance was set at $p < 0.05$.

Results

172 questionnaires were distributed to eligible health care professionals engaged in acute stroke care across six teaching hospitals in South-West, Nigeria. However, only 159 duly completed questionnaires were retrieved for data analysis giving a response rate of 92.4%. Thirteen questionnaires not completed within the data collection period due to reported lack of time on participants' part were not retrieved.

Almost three-fifths (*n = 95; 59.7%*) of the participants were females. Participants were aged 35.4±8.0 years and comprised 68(42.8%) nurses. The mean year of work experience was 9.7±6.7years while the mean years of work experience with stroke was 7.0±5.2years (this information is presented in Table 1 at the appendix). 103(64.8%) of the surveyed health care professionals reported being aware of the existence of guidelines supporting early mobilisation of acute stroke patients. Awareness of such guidelines was highest among nurses (*n = 50; 48.5%*).

Findings from this study revealed a mean knowledge score of 10.20 ± 2.04 (modal score = 11.0). Physicians had the highest mean knowledge score 10.69±2.11 closely followed by physiotherapists with a mean score of 10.15±1.84. The majority of nurses (49.2%) and physicians (40.5%) considered early mobilisation to be mobilisation within 48-72 hours of stroke onset while just above a third (*n=17; 37.0%*) of physiotherapists considered early mobilisation to be mobilisation within 24-48hours of stroke onset.

Although, less than a third (*n=50; 31.4%*) of the total participants defined early mobilisation as 'out of bed activities within 24-48 hours of stroke onset', most demonstrated good knowledge of the benefits of early mobilisation in reducing complications of immobility (*n=147;92.5%*), preventing respiratory complications (*n=149;93.7%*) and improving quality of life (*n=151;95.0%*) (Table 2).

Item-by-item comparison indicated that more physicians (97.8%) than physiotherapists (93.5%) and nurses (88.2%) were knowledgeable about the benefit of early mobilisation in reducing complications of immobility (Table 2). More physicians (55.6%) than physiotherapists (28.3%) and nurses (27.9%) also believed early mobilisation could result in the death of patients with acute stroke. Knowledge scores were however, not significantly different across healthcare professions (p=0.14).

The mean attitude score of the participants was 16.2±3.2 indicating positive attitude towards early mobilisation of acute stroke patients. Physiotherapists and physicians had comparable attitude scores while nurses had the least positive attitude score (15.4±3.5). There was a significant difference in attitude scores across the three healthcare professions (Table 3).

Tukey's Post hoc analysis revealed a significant difference in attitude scores between nurses and physiotherapists (p=0.03). Most of the health care professionals (*n=126; 79.2%*) reported encouraging early mobilisation of acute

stroke patients. Less than a fifth *(n=28; 17.6%)* believed early mobilisation makes no difference in stroke outcome.

There was a significant correlation between knowledge scores and years of work experience with stroke (p=0.02) (Table 4). Similarly, attitude score was significantly correlated with years of work experience with stroke patients. 129(81.1%) reported practicing early assessment of patients with stroke in their facility. Most *(n=148; 93.1%)* however, believed stroke care could be improved in their facility. More physicians *(n-45; 100.0%)* than physiotherapists *(n=43; 93.5%)* and nurses *(n=69; 89.7.5%)* ensured patients with stroke are mobilised as soon as possible. Most of the health care professionals *(n=144; 90.6%)* ensured patients with stroke were mobilized before they were discharged to go home.

Discussion

Early Mobilisation of patients with acute stroke is recommended by clinical practice guidelines as a method to reduce the burden and complications associated with stroke. To the best of our knowledge, there is paucity of information on the knowledge, attitude and practice of early mobilisation of patients with acute stroke among health care professionals in Nigeria. However, the reported benefits and risks associated with early mobilisation make it imperative to examine the knowledge, attitude and practice of health care professionals involved in acute stroke care with a view to identifying potential barriers and facilitators of this practice.

Almost half of the nurses and the majority of physicians in this study considered 48-72 hours early enough for mobilising acute stroke patients while the majority of physiotherapists reported early mobilisation as mobilisation within 24-48hours of stroke onset. This is contrary to findings from an early study where nurses and physicians chose an earlier time frame (12-24 hours) compared to physiotherapist who chose a later time frame (>24hours) [14]. Differences in the time frame have been reported in literature [18,20,21]. Our findings may be a reflection of changes in clinical opinion of health care professionals' and differences in practice environments such as with this by Arias and Smith [14], or of practitioners' clinical experience with stroke patients. For instance, Kim *et al* [2] reported that most physicians were reluctant to mobilise patients with haemorrhagic stroke early because of risk of re-bleeding. In our environment, the directive on when to mobilise acute stroke patients are given by the stroke physician. Therefore, reluctance of physicians about early mobilisation could affect the opinion of other health care professionals, especially nurses who work closely with physicians. Physiotherapists, though, are autonomous practitioners who by their training could assess patients to determine fit-for-movement and this could inform their choice of an earlier time frame for early mobilisation in this study.

Most of the participants in this study were knowledgeable about the benefits of early mobilization. This is similar to the reports from a recent study on early mobilisation of ICU patients [22]. These authors found that clinicians were fairly knowledgeable about the benefits of early mobilisation. There was no significant difference in knowledge across the healthcare professions, although physicians demonstrated higher knowledge scores than physiotherapists and nurses in this study. In a similar study among ICU clinicians, Akinremi *et al* [22] found a higher level of knowledge of early mobilisation among physiotherapists compared with ICU physicians and nurses. Our finding of higher knowledge among physicians is therefore

noteworthy because although physiotherapists are by training supposed to be movement experts, they rely on physicians' referral to mobilise patients. It is possible that their knowledge could be based more on what they experience in practice rather than by their professional training.

About a third of the participants in this study reported that early mobilisation could result in death of patients and as such were not comfortable with it. This is similar to the findings of Skarin *et al* [23] These authors reported that sixty percent of their participants expressed concerns about early mobilisation in the first 24hours of stroke onset. Despite the reported benefits, [21,24] there had also been concerns about its safety and implementation. It has also been reported that there was no strong evidence supporting these benefits in patients with haemorrhagic stroke [5]. This finding suggests a need for more RCTs on the risks versus benefits of early mobilisation of patients with acute stroke

The majority of participants had positive attitudes towards early mobilisation of acute stroke patients and claimed to have encouraged the practise in their facilities. It is thought-provoking that health care professionals were willing to practise early mobilisation despite expressed concerns and lack of strong evidence to support its safety. They are expected to make decisions on whether or not to implement an intervention based on information available to them [18]. This finding confirms earlier submissions that other factors such as professional trainings and prior experience with patients play a key role in clinical practice relative to available evidence-based information.

Years of work experience with stroke patients was significantly correlated with knowledge and attitude of the participants. This suggests that health care professionals with more experience in stroke care are more knowledgeable and have a more positive attitude towards early mobilisation of acute stroke patients. The danger of basing clinical practice on experience is its subjective nature. As much as the role of experience in the development of clinical expertise cannot be denied, there is a need to integrate experience with scientific evidence for the best clinical outcome.

More nurses than physicians and physiotherapists reported practicing early mobilisation. This could be because nurses spent more time with patients [25] and some of this time could have been spent in activities involving mobilisation of patients.

Limitations

This study was the first to assess the health care professionals' knowledge, attitude and practice of early mobilisation of patients with acute stroke in Nigeria. The study centres were of equal status and within the same geographical zone and results seemed generalisable across teaching hospitals in South-West, Nigeria. The findings may however, not reflect the knowledge, attitude and practice of health care professionals in hospitals not affiliated to Universities.

We acknowledge that there could also be social desirability bias among respondents since most completed the questionnaires in the presence of colleagues. It may be better to combine the self-report with a direct observation of practice in future studies.

Conclusion

Health care professionals across teaching hospitals in South-West, Nigeria are knowledgeable about the benefits of early mobilisation of acute stroke patients. Majority have positive attitude and support early mobilization. There are however, concerns about patients' safety including risk of death which

may hinder practice. This could have potential negative implications for the standard of acute stroke care and patients' outcome. For early mobilization to be truly beneficial and fully implemented, expressed safety concerns should be addressed through provision of clear, evidence-based, practical and easy-to-follow guidelines on early mobilisation for healthcare professionals involved in acute stroke care in Nigeria.

References

1. **Bernhardt J, Dewey HM, Thrift AG and Donnan GA**. Inactive and alone: physical activity within the first 14 days of acute stroke unit care. *Stroke* 2004; 35: 1005-1009.
2. **Kim KD, Chang CH, Choi BY and Jung YJ**. Mortality and real cause of death from the nonlesional intracerebral hemorrhage. *Journal of Korean Neurosurgical Society* 2014; 55(1): 1–4.
3. **Duncan PW, Zorowitz R, Bates B, et al.** Management of Adult Stroke Rehabilitation Care: a clinical practice guideline. Stroke 2005; 36: 100-143.
4. The AVERT Trial Collaboration Group. Efficacy and safety of very early mobilisation within 24 h of stroke onset (AVERT): A randomised controlled trial**.** *Lancet* 2015; 386: 46 - 55
5. **Bernhardt J, English C, Johnson L and Cumming T**. Early Mobilisation After Stroke: Early Adoption but Limited Evidence. *Stroke* 2015; 46: 1141-1146.
6. **Poletto SR, Rebello LC, Valença MJ, et al**. Early mobilization in ischemic stroke: a pilot randomized trial of safety and feasibility in a public hospital in Brazil. *Cerebrovascular Disease Extra* 2015; 5(1): 31–40.
7. **Govan L, Langhorne P, Weir CJ,** and Stroke Unit Trialists Collaboration. Does the prevention of complications explain the survival benefit of organized inpatient (stroke unit) care? Further analysis of a systematic review. *Stroke* 2007; 38: 2536 – 2540.
8. **Auriel E and Bornstein NM**. Early Mobilisation following Stroke. European Neurological Review 2013; 8(2): 141–143.
9. **Chippala P and Sharma R**. Effects of very early mobilisattion of symptoms of depression and anxiety following acute stroke: A randomized controlled trial. *Clinical and Diagnostic Research* 2020; 14(2): Y001-Y005
10. **Zeiler SR and Krakauer JW**. The interaction between training and plasticity in the post-stroke brain. *Current Opinion in Neurology* 2013; 26: 609–616.
11. **Egan KJ, Janssen H, Sena ES, Longley L,** Speare S and Howells DW. Exercise reduces infarct volume and facilitates neurobehavioral recovery: results from a systematic review and meta-analysis of exercise in experimental models of focal ischemia. *Neurorehabilitation and Neural Repair* 2014; 28: 800–812.
12. **Mattlage AE, Redlin SA, Rippee MA, Abraham MG, Rymer MM and Billinger SA.** Use of Accelerometers to Examine Sedentary Time on an Acute Stroke Unit. *Journal of Neurological Physical Therapy* 2015; 39(3): 166–171.
13. **Grol R and Wensing M.** What drives change? Barriers to and incentives for achieving evidence-based practice. *Medical Journal of Australia* 2004; 180(S6): S57-S60.
14. **Arias M and Smith LN**. Early Mobilisation of acute stroke patients. *Journal of Clinical Nursing* 2007; 16: 282–288
15. **Garzon-Serrano J, Ryan C, Waak K, et al**. Early mobilization in critically ill patients: patients' mobilization level depends on health care provider's profession. *PM R*. 2011; 3(4): 307-313.

16. **Capo-Lugo CE, Askew RL, Muldoon K, et al**. Longer Time Before Acute Rehabilitation Therapy Worsens Disability After Intracerebral Hemorrhage. *Archives of Physical Medicine and Rehabilitation* 2020; 101(5): 870-876.
17. **Otterman NM, Van der Wees PJ, Bernhardt J and Kwakkel G**. Physical Therapists' Guideline Adherence on Early Mobilisation and Intensity of Practice at Dutch Acute Stroke Units: A Country-Wide Survey. *Stroke* 2012; 43: 2395-2401.
18. **Sjöholm A, Skarin M, Linden T and Bernhardt J.** Does evidence really matter? Professionals' opinions on the practice of early mobilisation after stroke. *Journal of Multidisciplinary Healthcare* 2011; 4: 367–376.
19. **Olaleye OA and Lawal ZI.** Utilisation of Physiotherapy in the Continuum of stroke Care at a Tertiary Hospital in Ibadan, Nigeria. *African Health Sciences* 2017; 17(1): 79-87.
20. **Diserens K, Michel P, and Bogousslavsky** J. Early mobilisation after stroke: review of the literature. *Cerebrovascular Diseases* 2006; 22: 183–190.
21. **Bernhardt J, Dewey H, Thrift A, Collier J and Donnan G.** A very early rehabilitation trial for stroke (AVERT): phase II safety and feasibility. *Stroke* 2008; 39: 390–396.
22. **Akinremi AA, Ogwu S, Sanya AO, Sanusi AA and Osinaike B**. Early Mobilization in the ICU: A Multicenter Survey of Clinicians' Knowledge, Attitude and Practices in Resource-Limited Hospital Settings. *Annal of Medical and Health Sciences Research 2020*;10: 778-784.
23. **Skarin M, Bernhardt J, Sjöholm A, Nilsso n M and Linden T.** 'Better wear out sheets than shoes': a survey of 202 stroke professionals' early mobilisation practices and concerns. *Int J Stroke* 2011; 6(1): 10–15.
24. **Langhorne P, Bernhardt J and Kwakkel G.** Stroke Rehabilitation. *Lancet* 2011; 377: 1693-1702.
25. **25. Butler R, Monsalve M, Thomas GW, et al.** Estimating Time Physicians and Other Health Care Workers Spend with Patients in an Intensive Care Unit Using a Sensor Network. *American Journal of Medicine* 2018; 131: 972.e9-972.e15

Appendix

Table 1: Socio-demographic and Clinical Characteristics of Participants

Variables	
Gender	
Male	64 (40.3%)
Female	95 (59.7%)
Profession	
Nurses	68 (42.8%)
Physicians	45 (28.3%)
Physiotherapists	46 (28.9%)
Mean Ages	
Nurses (58)	37.9±9.2years
Physicians (40)	33.0±6.0years
Physiotherapists (41)	34.1±7.1years
Total (139)	35.4±8.0years
Missing values (20)	
Years of work experience	
Nurses (66)	12.1±8.1years
Physicians (43)	7.7±4.3years
Physiotherapists (46)	8.1±5.2years
Total (155)	9.7±6.7years
Missing values (4)	
Years of work experience with stroke	
Nurses (66)	7.0±6.0years
Physicians (40)	6.1±4.0years
Physiotherapists (46)	7.6±5.0 years
Total (152)	7.0±5.2years
Missing values (7)	

Table 2: Proportion of Participants with Correct Answers to Items on Knowledge about Early Mobilization of Acute Stroke Patients (N=159)

Items Early mobilisation	**Nurses** **N (%)**	**Physicians** **N (%)**	**Physiotherapists** **N (%)**	**Total** **N (%)**
Is out of bed when patients' blood pressure is normalised	9 (13.2)	17 (37.8)	**7** (15.2)	33 (20.8)
Reduces complication due to immobility	60 (88.2)	44 (97.8)	43 (93.5)	147 (92.5)
Prevents respiratory complications	61 (89.7)	42 (93.3)	46 (100.0)	149 (93.7)
Reduces the risk of aspiration pneumonitis	56 (82.4)	41 (91.1)	37 (80.4)	134 (84.3)
Is not a key component of stroke rehabilitation	47 (69.1)	40 (88.9)	36 (78.3)	123 (77.4)
Reduces the number of patients with poststroke disabilities	62 (91.2)	41 (91.1)	39 (84.8)	142 (89.3)
Enhances patient's motivation	61 (89.7)	42 (93.3)	41 (89.1)	144 (90.6)
Improves quality of life of patient	64 (94.1)	43 (95.6)	44 (95.7)	151 (95.0)
Reduces burden on caregivers	57 (83.8)	41 (91.1)	43 (93.5)	141 (88.7)
Has no effect on stroke recovery	59 (86.8)	43 (95.6)	42 (91.3)	144 (90.6)
Is a simple and cost-effective intervention improving stroke outcome	62 (91.2)	42 (93.3)	35 (76.1)	139 (87.4)
Can be administered to all stroke patients	27 (39.7)	26 (57.8)	22 (47.8)	75 (47.2)
Is safe for only patients with repeat stroke	50 (73.5)	40 (88.9)	37 (80.4)	127 (79.9)
Can result in patient's death	49 (72.1)	20 (44.4)	33 (71.7)	102 (64.2)

Table 3: Differences in Knowledge and Attitude scores across HCPs

	Nurses	Physicians	Physiotherapists	f-value	P-value
Knowledge	9.91± 2.10	10.69±2.11	10.15± 1.84	2.003	0.14
Attitude	16.9±3.7	18.4±2.5	18.4± 3.30	4.024	0.02*

*****Significant at 0.05

Table 4: Relationship between Years of Work Experience with Stroke Patients and Knowledge and Attitude Scores

	Years of Work Experience with Stroke	
	r	**p**
Knowledge	0.196	0.02*
Attitude	0.189	0.02*

*Significant at 0.05