Int. J. Curr. Res. Med. Sci. (2025). 11(11): 13-19

International Journal of Current Research in Medical Sciences

ISSN: 3107-3743 (Print), ISSN: 2454-5716 (Online)
(A Peer Reviewed, Indexed and Open Access Journal)
www.ijcrims.com

Original Research Article

Volume 11, Issue 11 -2025

DOI: http://dx.doi.org/10.22192/ijcrms.2025.11.11.002

Delirium in Stroke Care: Awareness and Management among Physiotherapists in Selected Health Facilities in Enugu and Ebonyi States, South-East Nigeria

Amaeze, A. A.[1]; Egbumike, J. C.[1]; Ohanyerem , Gloria Ijeoma[1]; Amaeze, F.N[2].;Agoha, R. C.[3]; Ezema, C.I.[1] and Obeagu Emmanuel Ifeanyi[4]

1Department of Physiotherapy, Evangel University, Akaeze, Ebonyi State, Nigeria.
2Department of Public Health, Evangel University, Akaeze, Ebonyi State, Nigeria.
3College of Nursing Science, National Orthopedic Hospital, Enugu, Nigeria.
4Department of Biomedical and Laboratory Science, Africa University, Mutare, Zimbabwe
*Corresponding author: Emmanuel Ifeanyi Obeagu,Department of Biomedical and Laboratory Science, Africa University, Mutare, Zimbabwe, Email: emmanuleobeagu@yahoo.com

Abstract

Delirium is a common but often under-recognized complication in stroke patients, associated with increased morbidity, prolonged hospitalization, and poorer rehabilitation outcomes. Physiotherapists play a central role in stroke care, yet their awareness and management of delirium remain poorly understood, particularly in low-resource settings such as South-East Nigeria.This study explored the awareness, knowledge, and management practices of delirium among physiotherapists in selected health facilities in Enugu and Ebonyi States.A qualitative descriptive design was employed, involving ten licensed physiotherapists aged 35–45 years, with ranks ranging from principal physiotherapist to director of physiotherapy. Data were collected through semi-structured interviews and analyzed thematically to identify key patterns related to training, knowledge, clinical practice, and interprofessional collaboration in delirium care.Findings revealed that participants had limited formal training in stroke rehabilitation and delirium management, with knowledge largely derived from workshops and clinical exposure. Awareness of delirium was present but superficial, with many participants confusing it with dementia or general cognitive decline. Participants identified potential causes including neurological injury, medications, alcohol, and comorbidities, yet reported minimal involvement in formal delirium management. Physiotherapy interventions were considered indirect contributors to delirium recovery, primarily through exercise and supportive care, while management was perceived to be the responsibility of psychiatrists and psychologists. A multidisciplinary approach was emphasized as essential for effective care.Physiotherapists in Enugu and Ebonyi States demonstrate limited awareness and engagement in

delirium care for stroke patients. Structured professional training, standardized screening protocols, and clearer role delineation within multidisciplinary teams are needed to optimize early recognition, management, and rehabilitation outcomes.

Keywords: Delirium, Stroke, Physiotherapy, Awareness, South-East Nigeria, Rehabilitation.

Introduction

Stroke is a leading cause of mortality and long-term disability worldwide, with a significant burden on healthcare systems, patients, and their families. According to the World Health Organization, approximately 15 million people suffer a stroke annually, and nearly 5 million are left permanently disabled. In Nigeria, stroke prevalence is rising, particularly in urban areas, due to the increasing burden of hypertension, diabetes, and lifestyle-related risk factors. Post-stroke complications, both physical and cognitive, can significantly affect rehabilitation outcomes and quality of life [1].One of the most under-recognized yet critical complications in stroke care is delirium. Delirium is an acute, fluctuating disturbance of attention, awareness, and cognition, often triggered by underlying medical or neurological conditions, infections, or medication effects. In stroke patients, delirium prevalence ranges from 10% to 48%, depending on the severity of stroke, patient age, and comorbidities. Delirium is associated with increased length of hospital stay, higher morbidity, prolonged rehabilitation, institutionalization, and even mortality. Importantly, delirium may also impede the effectiveness of physiotherapy and other rehabilitative interventions by reducing patients' engagement, attention, and functional recovery potential [2].

Physiotherapists are pivotal members of the multidisciplinary stroke care team. Their close interaction with patients during rehabilitation sessions positions them to observe early signs of cognitive and behavioral changes indicative of delirium. Recognizing delirium early enables timely intervention, including environmental modifications, orientation strategies, early mobilization, and referral for medical management, all of which can significantly improve patient outcomes. Despite this, evidence suggests that awareness and knowledge of delirium among physiotherapists in many low- and middle-income countries, including Nigeria, remain limited. This gap may result in delayed recognition, inadequate management, and poorer recovery trajectories for stroke survivors [3].Targeted training, standardized screening protocols, and multidisciplinary approaches are key strategies for bridging knowledge gaps and enhancing patient outcomes. However, studies exploring these aspects in Nigeria, particularly in South-East regions such as Enugu and Ebonyi States, are scarce [4].This study aims to assess the awareness, recognition, and management practices of delirium among physiotherapists in selected health facilities in Enugu and Ebonyi States, South-East Nigeria. By elucidating existing knowledge gaps and practices, this research seeks to inform policy, professional training, and clinical protocols to optimize post-stroke rehabilitation and improve patient-centered outcomes.

Methodology

Research Design

This study is a Qualitative study design.

Location of the Study

Participants (physiotherapists) were engaged at selected Health institutions in Ebonyi State and Enugu state.

Population of the Study

The target population in this study were

- Physiotherapists who are involved in the treatment (Assessment and Management) of older stroke survivors living with Delirium.

Sampling technique

The researcher employed the use of purposive sampling technique.

SELECTED CRITERIA

Inclusion criteria: Physiotherapists working in the selected health facilities in Enugu and Ebonyi States who consent to the interview.
Exclusion criteria: Non - Physiotherapists

Sample Size

The sample size for this study was expected to be 10 participants. 11 participants were recruited to make up for possible attrition after the recruitment of participants.

Instrument for Data Collection

A self-developed interview guide was used to determine the level of awareness of delirium and physiotherapy management of delirium in randomly selected physiotherapists in the study population. The researcher organized an interview session with some physiotherapists who have been working in those selected health facilities to determine their awareness and personal experiences with managing delirium using physiotherapy interventions.

Method of Data Collection

The research was conducted with a primary data collection procedure. The primary source of data for this research were responses collected from the respondents using the interview guide.

Following receipt of ethical approval and permission from the stroke clinic or the hospital administration, Physiotherapists were interviewed.

This approach allowed the researcher to be sensitive to the subtle narratives of thought and feeling.

Method of Data Analysis

The data collected using the questionnaire was analyzed using Context Analysis

Results and Discussion

Table 1: Characteristics Of The Participants

Characteristics Of The Participants								
S/N	Pseudonyms	Age Range	Rank	Specialty	Hospital	No of Years in practice	Highest Academic Level	Frequency of involvement in stroke care
1.	Toch	35-40	Chief	Neurology	ESUTH	≥10	MSC	Often
2.	Bert	40-45	Deputy Director & Head of Department	Geriatrics and Mental health	ESUTH	>16	PHD	Very often
3.	Earn	40-45	Chief	Neurology	ESUTH	>22	PHD	Not often
4.	Phil	40-45	Chief	Neurology	ESUTH	>13	PHD	Very Often
5.	Suny	35-40	Principal Physiotherapist	Neurology	ESUTH	14	MSC	Not Often
6.	Bosco	35-40	Principal Physiotherapist	Neurology	ESUTH	>10	MSC	Often

7.	Aso	40-45	Director of Physiotherapy	Neurology	FETHA	15	PHD	Very Often
8.	Cos	40-45	Chief	Orthopedics	ESUTH	12	PHD	Not often
9.	Chidi	40-45	Chief	Women's Health	ESUTH	≥10	MSC	Not Often
10.	Chuks	40-45	Head of Department	Neurology	FETHA	20	PHD	Often

Socio-Demographic Characteristics of Participants

The study recruited ten physiotherapists from selected health facilities in Enugu and Ebonyi States, South-East Nigeria. The participants comprised eight males and two females, aged between 35 and 45 years, with varying professional ranks: five chief physiotherapists, two heads of department, two principal physiotherapists, and one director of physiotherapy. All participants were licensed physiotherapists, actively working and residing in the study states, with substantial experience in stroke care ranging from 10 to over 22 years (Table 1). Most participants held advanced academic qualifications (MSc or PhD), reflecting a high level of professional training.These socio-demographic characteristics suggest that participants were highly experienced practitioners with leadership roles in their facilities, positioning them to provide informed perspectives on the awareness and management of delirium in stroke care.

Theme 1: Lack of Specialized Training in Stroke and Delirium Care

The findings indicate that most participants had not undergone formal specialized training in stroke rehabilitation or delirium care. While attendance at workshops and seminars provided some exposure, participants described this knowledge as insufficient. For instance, Paul noted, *"I've not done any special training in the management of stroke… I've gone to workshops… that bordered on neuro cases including spinal cord injuries and stroke cases."* Similarly, Earn emphasized that knowledge from weekly seminars was limited to general stroke management.This aligns with previous studies in low- and middle-income countries, which show that physiotherapists often have limited formal education on cognitive and neuropsychiatric complications such as delirium, leading to gaps in early detection and intervention. The lack of targeted training highlights the need for structured professional development programs focused on delirium in stroke care [4].

Theme 2: Knowledge of Delirium

Familiarity and Conceptual Understanding

Participants demonstrated some familiarity with the term "delirium" but lacked detailed knowledge of its characteristics. Dimma described delirium as a disturbance of consciousness and orientation: *"I just know it's a level of…consciousness of a patient to environment, place, or time… he's not flowing with you in a particular context."* Similarly, Cos noted: *"I think it's from the higher centers, the brain, and sometimes even drugs can cause a patient to have delirium."*While awareness of the term existed, participants often acknowledged that delirium is infrequently discussed in daily clinical practice, particularly in the context of stroke. Bosco, Eze, and Sun confirmed this limited exposure, emphasizing that delirium is recognized in medicine but not routinely managed or prioritized in stroke rehabilitation [5].

Vulnerable Populations

Participants generally agreed that delirium is more common in older adults and stroke patients, especially inpatients with severe or hemorrhagic strokes. Paul and Bosco emphasized that delirium is often observed in hospitalized patients, while

Toch highlighted its prevalence among geriatric and stroke patients. These observations are consistent with literature identifying advanced age and acute neurological injury as key risk factors for delirium [6].

Clinical Presentation, Causes, and Affected Anatomy

Participants reported that delirium primarily affects cognition, speech, behavior, and attention. Toch described patients as showing disorientation and cognitive instability following stroke, while Chidi noted signs of uncooperativeness and communication gaps. Identified causes included medications, neurological conditions, alcohol, vitamin deficiencies (B1, B12), and brain injuries. Bosco emphasized that comorbid conditions such as stroke, traumatic brain injury, and dementia predispose patients to delirium. Anatomically, participants linked delirium to abnormalities in brain regions controlling cognition, memory, and attention, consistent with neurobiological understanding of delirium as a disruption of cortical and subcortical networks [6].

Sudden Onset and Distinction from Dementia

Respondents noted that delirium manifests suddenly compared to the gradual cognitive decline observed in dementia. Aso remarked: *"Yes, it's usually sudden decline in the mental state… why you can differentiate it with dementia… dementia is a long-term struggle, but delirium can just come."* Despite this distinction, participants acknowledged frequent confusion between delirium and dementia in clinical practice, highlighting diagnostic challenges.

Theme 3: Poor Knowledge of Delirium Among Physiotherapists

Participants' narratives revealed limited understanding of delirium's causes and management. Cos admitted, *"Um… it's from the high centers, the brain, and sometimes even drugs… I haven't done specific research."* Regarding management, Toch and Cos reported minimal involvement beyond general rehabilitation: *"Exercise is good for everybody, so I know physiotherapists can help, but I don't know the specific exercises for delirium."*The lack of knowledge and clarity on physiotherapy roles in delirium management limits opportunities for early intervention and comprehensive care [7].

Theme 4: Management of Delirium

Non-Pharmacological Interventions

Participants largely perceived delirium as outside the core scope of physiotherapy, focusing primarily on physical rehabilitation. Several respondents, including Sun and Chidi, noted that delirium should be managed by psychologists or psychiatrists, with physiotherapy contributing indirectly. Bert highlighted the importance of caregiver involvement and environmental adjustments in supporting delirium recovery, emphasizing reorientation and supportive care.Despite limited formal involvement, participants acknowledged that physiotherapy could contribute indirectly through exercises such as aerobic training, treadmill walking, and breathing exercises, which may enhance neurocognitive recovery. Bosco explained that effective physiotherapy interventions could positively influence patients' overall mental state, supporting the notion of holistic care [8].

Multidisciplinary Approach

Participants emphasized the necessity of interprofessional collaboration, recognizing that delirium management requires coordinated input from neurologists, psychiatrists, nurses, psychologists, and physiotherapists. Paul stated: *"I believe that it is a condition that should not only be managed by a physiotherapist or even a physician alone; it should be a multidisciplinary approach."*

Pharmacological Interventions

While participants were aware that medications are used in delirium management, they largely deferred to psychiatrists for pharmacological treatment. Paul and Cos confirmed that drug therapy is commonly administered under psychiatric supervision.

Integration with Existing Literature

The findings of this study echo prior research indicating that physiotherapists are underutilized in delirium detection and management. Participants' tentative language—frequently using terms like "confusion" interchangeably with delirium—reflects a broader challenge in clinical recognition. Screening tools such as the 4AT are recommended for use by any healthcare professional, including physiotherapists, as a first step in delirium diagnosis. The absence of such screening practices among participants highlights a critical knowledge and practice gap that could compromise patient outcomes.Early identification of delirium is particularly important for stroke patients, as prompt recognition and intervention may improve recovery trajectories, especially in older adults. The study underscores the need for structured training, standardized screening, and clearer role delineation for physiotherapists within multidisciplinary stroke care teams, ensuring that patients with delirium receive timely and comprehensive rehabilitation [9-10].

Conclusion

This study highlights that physiotherapists in selected health facilities in Enugu and Ebonyi States possess limited knowledge and awareness of delirium in stroke patients. Their understanding of the condition is largely informal, with many participants confusing delirium with dementia or general cognitive decline, and most reported no formal involvement in its management. While physiotherapy interventions such as exercise and supportive care may indirectly contribute to delirium recovery, structured training, standardized screening tools, and clear role delineation within multidisciplinary teams are essential to optimize patient outcomes. Strengthening physiotherapists' competence in recognizing and managing delirium can enhance early intervention, improve rehabilitation effectiveness, and ultimately contribute to better functional recovery and quality of life for stroke survivors in South-East Nigeria.

References

1. Feigin, V. L., Brainin, M., Norrving, B., Martins, S. O., Pandian, J., Lindsay, P., F Grupper, M., &Rautalin, I. (2025). World Stroke Organization: Global Stroke Fact Sheet 2025. *International journal of stroke : official journal of the International Stroke Society*, *20*(2), 132–144. https://doi.org/10.1177/17474930241308142
2. Wilson, J. E., Mart, M. F., Cunningham, C., Shehabi, Y., Girard, T. D., MacLullich, A. M. J., Slooter, A. J. C., & Ely, E. W. (2020). Delirium. *Nature reviews. Disease primers*, *6*(1), 90. https://doi.org/10.1038/s41572-020-00223-4
3. Clarke, D. J., & Forster, A. (2015). Improving post-stroke recovery: the role of the multidisciplinary health care team. *Journal of multidisciplinary healthcare*, *8*, 433–442. https://doi.org/10.2147/JMDH.S68764
4. Ugochukwu, E. J., Edom, J. C., Omotayo, F. O., Amaechi, A. A., Obetta, C. B., Anosike, C., Isah, A., &Ubaka, C. M. (2025). Bridging the gap: understanding the perspective of healthcare professional students towards precision medicine in a Nigerian tertiary institution (a cross-sectional study). *BMC medical education*, *25*(1), 63. https://doi.org/10.1186/s12909-025-06651-8
5. Alshurtan, K., Ali Alshammari, F., Alshammari, A. B., Alreheili, S. H., Aljassar, S., Alessa, J. A., Al Yateem, H. A., Almutairi, M., Altamimi, A. F., &Altisan, H. A. (2024). Delirium Knowledge, Risk Factors, and Attitude Among the General Public in Saudi Arabia: A Cross-Sectional Study. *Cureus*, *16*(4), e59263. https://doi.org/10.7759/cureus.59263
6. Martins, S., & Fernandes, L. (2012). Delirium in elderly people: a review. *Frontiers in neurology*, *3*, 101. https://doi.org/10.3389/fneur.2012.00101
7. Weidmann, A. E., Proppé, G. B., Matthíasdóttir, R., Tadić, I., Gunnarsson, P. S., &Jónsdóttir, F. (2025). Medication-induced causes of delirium in patients with and without dementia: a systematic review of published neurology guidelines. *International*

journal of clinical pharmacy, *47*(3), 606–623. https://doi.org/10.1007/s11096-024-01861-4

8. Gual, N., García-Salmones, M., Brítez, L., Crespo, N., Udina, C., Pérez, L. M., &Inzitari, M. (2020). The role of physical exercise and rehabilitation in delirium. *European geriatric medicine*, *11*(1), 83–93. https://doi.org/10.1007/s41999-020-00290-6
9. Kneihsl, M., Berger, N., Sumerauer, S., Asenbaum-Nan, S., Höger, F. S., Gattringer, T., Enzinger, C., Aigner, M., Ferrari, J., & Lang, W. (2024). Management of delirium in acute stroke patients: a position paper by the Austrian Stroke Society on prevention, diagnosis, and treatment. *Therapeutic advances in neurological disorders*, *17*, 17562864241258788. https://doi.org/10.1177/17562864241258788
10. Carin-Levy, G., Nicol, K., van Wijck, F., Mead, G., &McVittie, C. (2021). Identifying and Responding to Delirium in Acute Stroke: Clinical Team Members' Understandings. *Qualitative health research*, *31*(1), 137–147. https://doi.org/10.1177/1049732320959295

Access this Article in Online	
Quick Response Code	Website: www.ijcrims.com
	Subject: Health Sciences
DOI: 10.22192/ijcrms.2025.11.11.002	

How to cite this article:
Amaeze, A. A.; Egbumike, J. C.; Ohanyerem , Gloria Ijeoma; Amaeze, F.N.;Agoha, R. C.; Ezema, C.I. and Obeagu Emmanuel Ifeanyi. (2025). Delirium in Stroke Care: Awareness and Management among Physiotherapists in Selected Health Facilities in Enugu and Ebonyi States, South-East Nigeria. Int. J. Curr. Res. Med. Sci. 11(11): 13-19.
DOI: http://dx.doi.org/10.22192/ijcrms.2025.11.11.002