ABSTRACT

Background: The association between cognitive behavior assessment and activities of daily living in stroke patients one-month post-stroke is an important area of research. It involves understanding how cognitive abilities, such as memory, attention, and executive functions, influence a patient's ability to perform everyday tasks independently. Studies in this field typically explore how deficits in cognitive function impact activities like self-care, mobility, and communication, which are crucial for a person's independence and quality of life after a stroke.

Objective: The objective of the study was to determine the association between cognitive behavior and daily living in stroke patients.

Methodology: A total of 97 patients, with post stroke, one months or older cases of post stroke patients were taken from different government and semi government hospitals. Age group of 21 to 80 years was included. A cross sectional survey was conducted through convenient sampling. Association was measured form Behavior assessment scale and functional independence scale. The result was analyzed using SPSS v.23. The statistical tool used was descriptive analysis, percentages and frequencies.

Results: The study included the 97 individuals. The mean age is 54.92 years, with a range of 21 to 80 years. Stroke types include hemorrhagic, ischemic, and transient ischemic attacks. The mean Cognitive Behavioral Assessment (CBA) score is 42.5567, with a range of 14 to 70. The Functional Independence Measure (FIM) score is 67.4536, with a range of 18 to 126 indicating moderate independence levels. A strong positive correlation between CBA and FIM scores is observed, with higher CBA scores associated with higher FIM scores.

Conclusion: The study found a strong positive correlation between cognitive behavior and daily living in stroke patients 1-month post-stroke. Higher cognitive function is linked to greater independence in daily activities. Addressing cognitive deficits could improve functional outcomes and quality of life for stroke survivors.

Keywords: *Activities of daily living, Cognitive impairment, Independence, Rehabilitation, Stroke.*

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INTRODUCTION

Stroke, a leading cause of disability globally, exacts a profound toll on individuals and healthcare systems, necessitating comprehensive exploration into the multifaceted dimensions of post-stroke recovery. (1) As a complex neurological event, stroke manifests in diverse physical, emotional, and cognitive consequences, challenging individuals to navigate the intricate path toward rehabilitation and regaining independence. (2) Of particular interest within this realm is the nuanced association between cognitive behavior assessment and activities of daily living (ADL) – a symbiotic relationship that plays a pivotal role in shaping the trajectory of stroke recovery.

The aftermath of a stroke is marked by a constellation of cognitive challenges, ranging from memory deficits and attentional impairments to disruptions in language and executive functions. (3) These cognitive domains collectively contribute to an individual's ability to engage in the routine tasks that constitute daily life. Activities of daily living, encompassing self-care tasks such as dressing, bathing, and eating, form the fabric of independence and are indicative of an individual's functional autonomy. The intersection between cognitive functioning and ADL performance post-stroke emerges as a critical juncture for comprehensive investigation, holding promise for targeted interventions that address the intricate interplay of these two domains. (4)

The temporal landscape of the first month following a stroke is particularly noteworthy. (5) This initial phase is characterized by rapid changes in both physical and cognitive domains, underscoring the need for timely and comprehensive assessments. (6) The intricate dance between cognitive recovery and ADL performance unfolds during this critical window, presenting an opportune moment to decipher the early markers and predictors of post-stroke functional outcomes. (7) By focusing on this pivotal timeframe, we aim to unravel the dynamic relationships between cognitive behavior assessment and ADL performance, providing insights that may guide clinicians in tailoring interventions to the unique needs of individuals during this transformative period. (8)

Within the landscape of stroke recovery, cognitive functions serve as the orchestrators of daily life, directing the intricate symphony of activities that define functional independence. (9) Impairments in memory, attention, and executive functions, often prevalent post-stroke, can disrupt the seamless execution of ADLs, presenting challenges that extend beyond the physical realm. (10) It is within this intricate web of cognitive and functional interdependencies that our thesis finds its focus, seeking to dissect the specific cognitive components that wield significant influence over ADL outcomes in the early aftermath of a stroke. (11)

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As we embark on this journey of exploration, it becomes imperative to acknowledge the unique challenges faced by stroke survivors and the inherent complexity of their recovery. (12) Beyond the immediate physical repercussions, the cognitive sequelae of stroke contribute substantially to the overall burden experienced by individuals, shaping their ability to reclaim a sense of normalcy in their daily lives. This thesis, grounded in the recognition of these challenges, endeavors to contribute to the growing body of knowledge surrounding stroke recovery by elucidating the intricate relationships between cognitive behavior assessment and ADL performance in the crucial first month post-stroke.

In the subsequent chapters of this thesis, we will assess a comprehensive review of the existing literature, seeking to build a robust foundation for our exploration. We will scrutinize studies examining the cognitive profiles of stroke survivors, exploring the implications of various cognitive deficits on ADL performance. (13) Additionally, we will explore the methodologies employed in cognitive behavior assessments, ensuring a deep understanding of the tools that form the basis of our investigation. By synthesizing this information, we aim to carve a clear path toward a more profound comprehension of the interplay between cognitive functions and ADL outcomes in the aftermath of a stroke. (14)

As we navigate through the intricacies of this research, it is our hope that the insights gleaned will transcend the realms of academia, finding practical applications in the development of tailored rehabilitation strategies. (15) By unraveling the deep relationships between cognitive behavior assessment and ADL performance, we aspire to contribute to the refinement of clinical practices, fostering a more personalized and effective approach to stroke rehabilitation. Through this exploration, we endeavor to empower healthcare professionals with the knowledge needed to navigate the complex landscape of stroke recovery, ultimately enhancing the prospects for improved long-term outcomes and the restoration of a meaningful quality of life for individuals grappling with the aftermath of stroke. (16)

The rationale for this study is grounded in the critical need to understand the intricate relationship between cognitive behavior and functional independence in the aftermath of a stroke. Stroke is a leading cause of disability worldwide, and its impact extends beyond physical impairments to include significant cognitive and behavioral challenges. These cognitive deficits can severely limit a patient’s ability to perform activities of daily living (ADLs), which are essential for independent living and quality of life.

Therefore, this study focuses on the first month post-stroke, as early assessment can provide early indicators of long-term outcomes. The findings could influence clinical practices and

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policies regarding stroke rehabilitation, advocating for a holistic approach to stroke recovery. The ultimate goal is to improve independence and quality of life for stroke survivors.

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LITERATURE REVIEW

Preston et al. (2021) investigated the variables influencing walking outcomes in non-ambulatory stroke patients discovered that independent walking at three months was predicted by younger age, an intact corticospinal tract, good leg strength, no cognitive impairment, no neglect, good sitting, and independence in daily activities. At six months, independent walking was predicted by younger age, continence, and comfortable sitting; at twelve months, there was inadequate information. In findings, the risk of bias was low, and it was substantial. The study found that in patients who are not ambulatory at the beginning of their stroke recovery, these characteristics predict independent walking after three months. (17)

Kimura et al. found variables associated with functional recovery in Japanese convalescent stroke patients. At the time of admission, laboratory, physical, and cognitive function data, as well as demographic information, were gathered. The study employed stepwise multivariate logistic analysis to determine the critical components that contributed to each group's functional recovery. Memory impairment, spatial neglect, and stroke type were significant predictors in the group of people aged 40–64. The only significant condition in the 65–74 age range was memory impairment. Low albumin levels, severe motor impairment, and cognitive disorders were substantially associated with poor functional recovery in the ≥75 years old group. The results revealed that the three age groups' patterns in the variables associated with functional recovery following a stroke were varied. (18)

According to Li, J. and Zhang et al., impaired consciousness (IC) at the outset of a stroke is a common clinical problem in patients with large hemisphere infarctions (LHI), although it is unclear how prevalent this condition is and what risk factors contribute to it. research found that at the time of stroke start, 93 (36.3%) people had IC. A greater incidence of stroke-related sequelae, including brain edema and pneumonia, was linked to IC at the time of stroke start. The IC group saw greater rates of adverse outcome, 3-month mortality, and in-hospital death. Nevertheless, IC at stroke start was not a reliable indicator of in-hospital death, 3-month mortality, or an unfavorable outcome in LHI patients after controlling for age, baseline NIHSS score, and other variables. The findings imply that IC is linked to atrial fibrillation and early stroke severity. (19)

Older persons frequently experience stroke and cognitive impairment, which frequently worsens their incapacity to do essential and fundamental daily living tasks. The degree of ADL difficulties was shown to be higher when stroke and cognitive impairment were combined in a research including 3331 older persons who lived in the community. But although the cognitive

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impairment group found it difficult to use the phone, take public transit, and handle money, the stroke group found it more difficult to dress. Every group displayed an ADL hierarchy. ADL skill training should emphasized strengthening motor functioning capacity to lessen the loss of ADLs and secondary prevention of dementia, in addition to cognitive and physical therapies. (20)

Maki et al., (2023) conducted a study. The independence in each activity of daily living (ADL) was found to be 0-4.8%, 26.8-45.0%, 84.3-91.0%, and 97.2-100% for all ADLs in the most severe to severe, moderate, mild, and normal groups, respectively, in a research looking at cognitive function in ADLs. There were notable variations in the groups' Functional Independence Measure (FIM) motor scores based on the degree of CBA. Higher odds ratios for dressing the upper body, managing one's bladder, transferring to a bed, chair or wheelchair, using the loo and walking were linked to a mild or normal CBA. Greater than mild (23 points) CBA severity was linked to independence in ADLs necessary for release home. (21)

Kim et al., (2018) investigated on the relationship between patients' quality of life (QOL) and activities of daily living after a chronic stroke. Three questionnaires were used to collect data from 68 patients. The functional independence measure (FIM) and the QOL total score exhibited a strong association, according to the results. The greatest effects were found to be in mobility and social cognition, which accounted for almost 67% of the variation in QOL. Patients suffering from chronic stroke were shown to have a substantial link between their daily activities and their overall quality of life (QOL) score, with locomotion and social cognition showing a significant impact. (22)

Aydin et al. (2017) sought to identify social rehabilitation's shortcomings and enhance its efficacy while raising awareness of the program among academic institutions and municipal governments. Patients from the stroke outpatient clinic were participating in physical therapy. Information on nutritional status was gathered through in-person interviews, and base functional independence measure (FIM) scores were contrasted. The findings revealed significant changes in the three-month follow-up scores, motor and cognitive scores, and total baseline scores, but no significant difference in the motor scores at three months. Significant variances among the two groups were found through a month-to-month study of changes in FIM values. The findings support earlier research showing enhanced functional and cognitive ability in stroke patients undergoing rehabilitation. (23)

The effect of impairment and disability perception on stroke survivors' health-related quality of life (HRQoL) was investigated by Oyewole et al. in 2020. The Short Form-36 was used in the study to evaluate 102 stroke survivors. The findings revealed that 52% of participants had a

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positive impression of their condition, whereas 76.5% of respondents experienced severe disabilities, accounting for a minimum of 42 points. The greatest impact was on physical health, with severe impairment having a detrimental effect on HRQoL. With the exception of the category "role limitation due to the emotional problem," disability perception had no discernible impact. While disability-severity moderated the impacts on physical health, only severe impairment reduced the effects of disability on HRQoL. The study comes to the conclusion that stroke survivors have a substantial impairment that lowers HRQoL, with the effect being moderated by the degree of the disability. (24)

Ellepola et al. studied the association between acute stroke survivors' quality of life, daily physical activity (PADL), and related parameters. 134 stroke survivors participated in the study, and QoL and PADL were measured using the Barthel Index (BI) and the Short Form-36 (SF-36). The majority of SF36 domains were found to be below the average level of 50, with the majority falling into the category of being either entirely or severely reliant. Aphasia, disability, dysarthria, type of stroke, dyslipidemia, smoking, alcohol intake, place of residence, and income were among the variables linked to quality of life. Dysarthria, stroke, and facial and limb disabilities were among the factors linked to PADL. (25)

Fatema and Zareen, et al. studied the relationship between activities of daily living (ADLs) and HRQoL 90 days after an acute stroke. To gauge the functional independence of stroke patients, the study employed the Barthel Index (BI). After ninety days, the BI total and domain scores significantly improved, according to the results. Following up, 59 patients had a high quality of life (QoL) score of 48 on the Stroke Specific Quality of Life Scale-12 (SS-QoL-12). Even with total functional independence, the psychosocial subscale of HRQoL was shown to be most impacted. The study proposes more investigation into the variables influencing stroke survivors' psychological quality of life. (26)

Abdullah et al. (2019) investigated the connection between stroke survivors' functional activities and post-stroke cognitive impairment (PSCI). The Mini-Mental State Examination and Barthel Index measures were employed in the investigation. With the exception of the bowel control component, the results indicated a positive and substantial connection between PSCI and total functional activity. The link between PSCI and mobility was found to be the highest, whilst the correlation between PSCI and bowel control was the lowest. The other components likewise have strong correlation coefficients. The study came to the conclusion that improving functional activity might also lower PSCI, and that lowering PSCI could have a good effect on the functional activity of stroke survivors. Hence, it is important for physiotherapists to evaluate

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cognitive impairment in stroke patients and implement therapy approaches that improve their functional result. (27)

According to Jeffares et al. (2022), older persons' use of healthcare is influenced by stroke, cognitive function, and post-stroke cognitive impairment. Secondary data analysis of 8,175 community-dwelling adults—including those with stroke diagnoses—was conducted as part of the research. Increases in GP visits and outpatient care use were found to be independently correlated with stroke, even after controlling for clinical and demographic variables. On the other hand, GP visits were more common among patients with low cognitive function than among those with normal cognitive function. The study found that while low cognitive function was linked to more frequent GP visits, stroke was related with increased usage of GP and outpatient services. (28)

Hye et al.'s (2023) study investigated on the variables affecting stroke patients' ability to do activities of daily living. At a nearby rehabilitation facility, information was gathered from 123 stroke victims. The relationships between ADL, muscular strength, walking ability, cognitive function, upper extremity function, and balance function were examined in the study. To find the variables affecting the change in ADL throughout the course of the three-month rehabilitation period, multiple logistic analysis was done. Strong positive relationships in gait ability and balance function with ADL were demonstrated by the results. Alterations in upper limb, cognitive, and balance capabilities impacted ADL alterations. Stroke patients who had improved their cognitive and balance abilities along with their upper extremity function greatly increased their independence in ADLs. (29)

Prakoso et al. examined the relationship between daily life activities and cognitive abilities in stroke survivors. One typical post-stroke consequence that impacts both instrumental and basic daily living activities is cognitive impairment. The Mini Mental State Examination and the Lawton and Brody Scale were utilised in the study to evaluate IADL and cognitive abilities. The association that currently exists across each cognitive function and everyday life activities was examined using Spearman correlation. The findings indicated a substantial association with IADL but an insignificant correlation with bADL for cognitive skills. Verbal memory and orientation to time were the only two cognitive domains that showed a positive correlation with IADL. In a nutshell there is a relationship between IADL and cognitive abilities in stroke survivors. (30)

Some studies have explored cognitive and functional trajectories post-stroke, there is a literature gap in understanding the temporal specificity of cognitive improvements and their direct

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correlation with distinct ADLs within the first month. A deeper examination of how cognitive trajectories influence immediate functional outcomes is crucial for targeted interventions during this critical recovery period.

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OBJECTIVE

To determine the association between cognitive behavior assessment and activities of daily living in one-month post stroke patient.

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MATERIAL & METHODS

Study Design:

The study design was cross-sectional study

Study Settings:

Data was collected from Mayo hospital, services hospital, Sheikh Zaid medical complex and General hospital Lahore.

Duration of study:

Study was completed within 4 months after the approval of synopsis.

Sampling technique:

Convenient sampling technique was used.

Sample size:

Sample size was calculated by using EPITOOLS calculator. According to the Prakoso *et al.* (30):

- P (estimated true proportion) = 0.5
- e (desired precision) = 0.1
- Z (confidence interval) = 1.96 for 95% CI
- n (sample size) = 97

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SAMPLE SELECTION CRITERIA

Inclusion Criteria:

- Age 21 to 80 years
- Patients with ischemic stroke and hospitalized for at least one month
- People who lose their activity of daily living
- Patients with cognitive impairments
- Patient who develops memory loss

Exclusion criteria:

- Patients with preexisting cerebral vascular or bilateral motor paralysis
- Patients who were transferred and readmitted to hospital
- Patients with barnstormed recovery stage
- Patients with subarachnoid and hemisphere of stroke
- Patient with peroneal nerve injury
- Onset of stroke is less than 3 months

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DATA COLLECTION PROCEDURE

A total of 97 participants that met the inclusion criteria were selected and interviewed to fill the Questionnaires to evaluate the condition of participants. The questionnaires were distributed as hand-outs in selected hospitals and physiotherapy departments. Data was collected in person through representatives appointed in selected hospitals. The eligible participants willingly signed consent form and the rights of participant were protected.

Outcome tools:

In this particular study, Functional independence measure Questionnaire (FIMQ) and Cognitive behavioral assessment form were used.

Functional independence measure Questionnaire (FIMQ):

The Functional Independence Measure (FIM) is a widely utilized questionnaire designed to assess an individual's level of functional independence and ability to perform essential activities of daily living (ADL). Developed as part of the Uniform Data System for Medical Rehabilitation (UDSMR), the FIM Questionnaire is a standardized tool that evaluates a range of functional domains, including self-care, mobility, and cognition. It comprises a set of items or questions, each scored on a scale that reflects the individual's level of independence or dependence in carrying out specific tasks. (21).

Cognitive Behavioral Observational Form:

A Cognitive Behavioral Assessment Form is a structured tool designed to systematically evaluate an individual's cognitive functioning and behavior. This assessment form is utilized by clinicians, psychologists, and mental health professionals to gather information about various cognitive processes, emotional well-being, and behavioral patterns. The form typically includes a series of questions or prompts that cover cognitive domains. (21)

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DATA ANALYSIS

The result was analyzed using SPSS software version 23. The Numerical data described in mean and standard deviation (SD). The statistical tool used was descriptive analysis, frequencies and percentages. Chi-square test and correlation analysis were used to check out the correlation between cognitive behavior assessment and ADLs. Paired sample t-test was also applied to

check the significance association between the variables of Functional Independence Measure and Cognitive Behavioral Assessment form.

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RESULTS

Table 1 Descriptive statistics of Gender

Gender	Frequency	Percent
Female	48	49.5
Male	49	50.5
Total	97	100.0

The table shows a nearly equal gender distribution in a sample population of 97 individuals, with 49.5% being female and 50.5% being male.

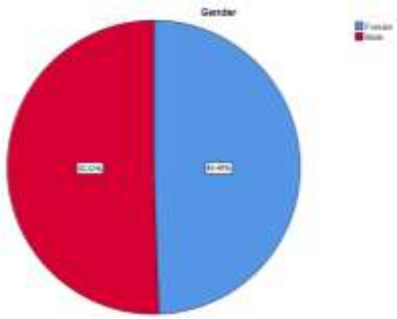

Figure I: Pie Chart of "Gender"

Figure shows a nearly equal gender distribution in the sample, with males slightly outnumbering females, indicating a balanced representation of both genders.

Table 2: Descriptive Statistics of Types of stroke

Types of stroke	Frequency	Percent
Hemorrhagic Stroke	34	35.1
Ischemic Stroke	35	36.1
Transient Ischemic Attack	28	28.9

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Total	97	100.0

The table shows the frequency and percentage of stroke types in 97 cases. Hemorrhagic strokes account for 35.1%, ischemic strokes for 36.1%, and transient ischemic attacks (TIAs) for 28.9%.

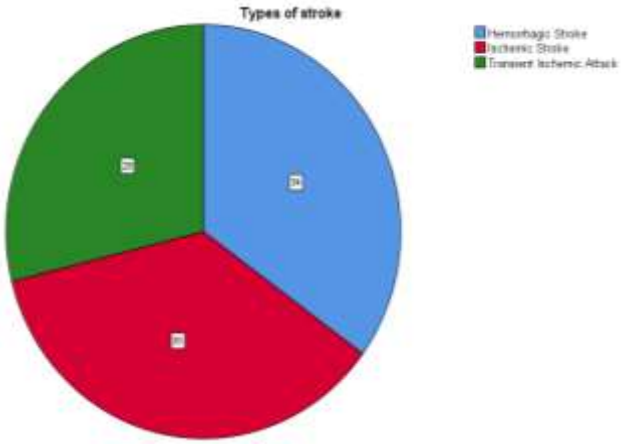

Figure II: Pie Chart of "Types of Stroke"

The figure shows a slightly higher frequency of ischemic strokes than hemorrhagic strokes and TIAs.

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Table 3: Descriptive Statistics of Age

Age of Participants	
Mean	54.92
Std. Deviation	15.849

Minimum	21
Maximum	80

The table shows participants' ages, with an average of 54.92 years with standard deviation (15.849), indicating they are in their mid-50s. The minimum age is 21 years, while the maximum age is 80 years.

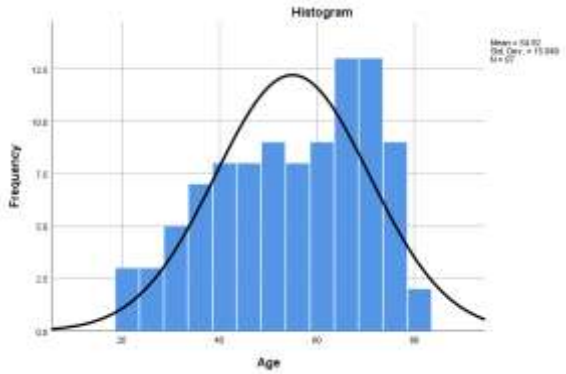

Figure III: Histogram of "Age"

This figure displayed the age ranges from 21 to 80 years, with a mean age of 54.92.

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Table 4: Descriptive Statistics of Cognitive Behavioral Assessment Scoring

Cognitive Behavioral Assessment scoring	
Mean	42.5567
Std. Deviation	9.69640
Minimum score	14
Maximum score	70

Table 4 presents the descriptive statistics for Cognitive Behavioral Assessment (CBA) scoring. The CBA score, derived from 14 questions, each rated on a scale from 1 to 5, has a possible range from 14 to 70. The mean score is 42.5567 (SD = 9.69640). The minimum score observed is 14, and the maximum score is 70. Each question on the assessment gauges the level of difficulty experienced by the respondent, where a score of 5 represents no difficulty (Normal), 4 indicates mild difficulty, 3 denotes moderate difficulty, 2 corresponds to severe difficulty, and 1 signifies very severe difficulty. These statistics provide a comprehensive summary of the overall performance and variability of respondents' cognitive behavioral functioning as measured by the assessment.

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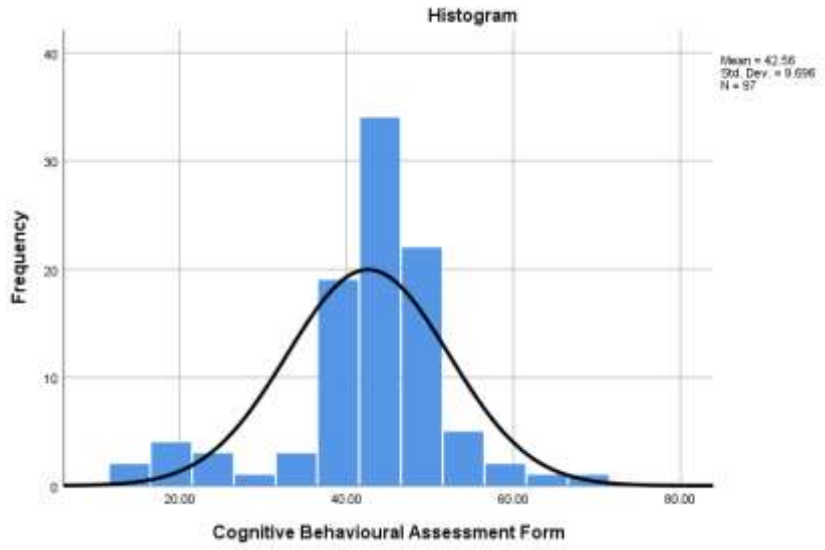

Figure IV: Histogram of "Cognitive Behavioral Assessment scoring"

Figure shows Cognitive Behavioral Assessment (CBA) scoring statistics, with a mean score of 42.5567 and a range of 14-70, indicating a moderate impairment of cognitive functions in stroke survivors.

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Table 5: Descriptive Statistics of Functional Independent Measure (FIM) scoring

Functional Independent Measure (FIM) scoring	
Mean	67.4536
Std. Deviation	26.14583
Minimum score	18
Maximum score	126

The Functional Independence Measure (FIM) is a scoring system that measures a patient's independence in daily activities. The FIM score ranges from 18 to 126, with higher scores indicating greater independence. The 18 items are scored on a scale from 1 to 7, with a score of 7 indicating complete independence and a score of 1 indicating total assistance. The average score in the data set is 67.4536, indicating considerable variability in independence levels among patients. Therefore, the majority of patients tend to have FIM scores around the 67.4536 mark, reflecting a moderate level of independence.

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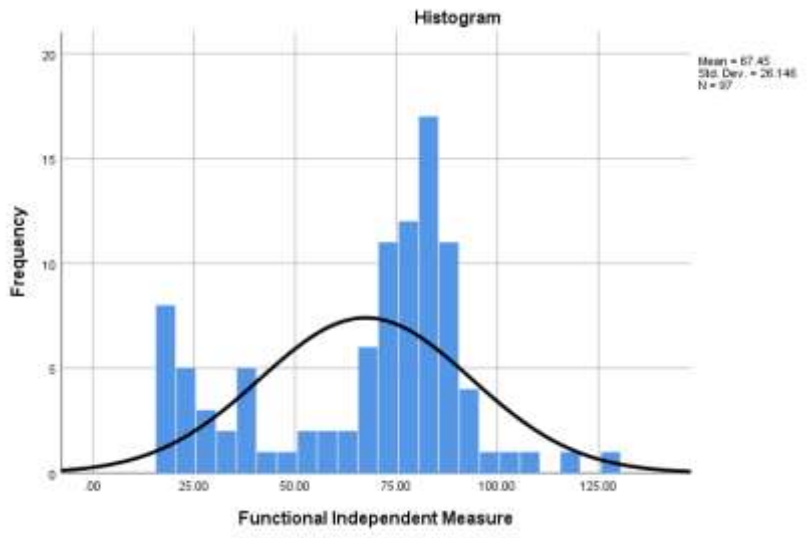

Figure V: Histogram of "Functional Independent Measure (FIM) scoring"

Figure displays that the average score of 67.4536 indicates significant variability in patient independence, ranging from total dependence to complete independence.

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Table 6: Chi-square test and correlation between FIM and Cognitive Behavioral Assessment

CHI-SQUARE TEST		
	Cognitive Behavioral Assessment Form	**Functional Independent Measure**
Chi-Square	59.361[a]	49.412[b]
df	28	53
P-value	.000	.001

CORRELATION OF COGNITIVE BEHAVIORAL ASSESSMENT FORM AND FUNCTIONAL INDEPENDENT MEASURE			
	Value	df	Significance p-value
Spearman Correlation	1606.410[a]	96	.014
Pearson's R	462.269	96	1.000
Asymptotic Standard Error	.223	1	.637
Total	97		

The table shows a significant relationship between Cognitive Behavioral Assessment (CBA) Form scores and Functional Independent Measure (FIM) scores. The Chi-square test shows a strong positive correlation between CBA and FIM scores, with Chi-square values of 59.361 and 49.412, respectively. However, the Spearman correlation coefficient indicates a moderately strong positive correlation of 1606.410 with a p-value of .014, suggesting that higher CBA scores are associated with higher FIM scores.

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Table 7: Paired Sample t-test of Variables

PAIRED SAMPLES TEST	Mean	Std. Deviation	Std. Error Mean	Correlation	df	p-Value
Eye-opening, awareness - Eating	1.649	1.786	.181	.039	96	.000
Response to stimuli - Grooming	1.670	1.724	.175	.059	96	.000
Ease of thinking fatigue - Dressing – Upper Body	1.938	1.619	.164	.009	96	.000
Emotion-Initiative - Expression	.515	2.037	.207	.071	96	.014
Ability to remember things in daily life - Memory	1.402	2.540	.258	.302	96	.000
Environmental adaptation - Social Interaction	.773	1.794	.182	.368	96	.000
Decision-making and problem-solving skills that take into account long-term impacts: - Problem Solving	.268	2.099	.213	.014	96	.212
Cognitive Behavioral Assessment Form - Functional Independent Measure	24.896	27.44407	2.78652	.048	96	.000

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The table presents results from a paired samples test examining cognitive functioning and daily activities in 96 participants, focusing on awareness, response to stimuli, ease of thinking, emotion-initiative, memory, environmental adaptation, decision-making skills, and functional independence. The correlation coefficient measures the strength and direction of the relationship between paired observations in each domain. The p-values indicate the significance of the observed differences, with lower p-values suggesting greater significance.

CONCLUSION

This study found a strong positive correlation between cognitive behavior and daily living in stroke patients one-month post-stroke. Higher cognitive function is linked to greater independence in daily activities. Addressing cognitive deficits could improve functional outcomes and quality of life for stroke survivors.

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LIMITATIONS

- The small sample size and geographic restriction of the study may limit the generalizability of the findings to larger groups of stroke victims.
- The association between cognitive deficits, cognitive rehabilitation therapies, and ADL performance are hindered by cross-sectional design.
- Selection bias may be introduced by convenience sampling, favoring people with less severe cognitive impairments or higher levels of functional independence.
- Use strategies for random sampling to reduce bias and improve sample representativeness.

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RECOMMENDATIONS

- Track individuals from acute phase to long-term recovery to understand enduring effects of cognitive rehabilitation interventions.
- Facilitate recruitment of larger, diverse cohorts across multiple healthcare institutions and regions.
- Promote consistency and comparability across studies, facilitating cross-study comparisons and meta-analyses.
- Tailor interventions to address specific cognitive deficits in stroke survivors.
- Promote social engagement, vocational rehabilitation, and community reintegration to enhance quality of life and promote sustained independence post-stroke.

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