

Exploration of Factors Influencing Functional Capacity of Stroke Survivors

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Abstract: A stroke is a lifechanging event for stroke victims and their caregivers. Family members must care for stroke victims at home after they receive emergency care in the hospital. Prognosis of a stroke patient depends on many factors.

➤ **Objectives:**

This study aimed at exploring the factors influencing functional capacity of stroke survivors as perceived by relevant stakeholders.

➤ **Methods:**

Research design was exploratory qualitative study using grounded theory approach. The sample was chosen by purposive sampling. The study participants were drawn from relevant stakeholders namely the stroke survivors, primary caregivers, health care professionals, community health team members and general population. Theoretical sampling was followed in the selection of subjects. Data collection was done by in-depth interview and Focus group Discussion. In order to ensure the quality of collected data, 1–2 in-depth interviews were conducted per day, depending on the availability of participants. Transcription of data, data coding and analysis were done simultaneously with data collection. Thematic analysis performed using hybrid coding approach. Direct codes used to highlight the themes identified.

➤ **Results:**

Qualitative analysis shows the following factors were influencing the functional capacity of stroke survivors; 1.sociopersonal factors 2.House hold level factors 3. Disease related factors 4.Emotional Factors 5. Societal Factors and 6. Rehabilitation.

➤ **Conclusion:**

The findings may be a motivation to prepare community intervention programme to minimize caregivers' burden and facilitate good health and well-being of both stroke survivors and their caregivers.

Keywords: Exploration; Factors; Functional Capacity; Stroke Survivor; Care Giver)

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I. INTRODUCTION

Stroke has been defined by WHO as the rapid onset of focal neurological deficit lasting more than 24 hours with no apparent cause other than disruption of blood supply to the brain. It is the leading cause of physical disability. Disabilities resulting from stroke place heavy social, psychological and financial demands both on the patients and the caregiver as well¹. Stroke is a complex disease and its management requires the efforts and skills of all members of the multidisciplinary team. The efficacy of stroke therapy depends on early intervention and well-coordinated emergency care. Nurses are often responsible for the coordination of care throughout the continuum. They

play an important role in the early assessment and initiation of stroke care, management, rehabilitation and education².

Early rehabilitation allows stroke patients to recover more quickly and perhaps to a higher level of function. Patients should be trained to maximize their function based on their current abilities³.

Stroke incidence and mortality rate are increasing along with modernization and advancing longevity. Worldwide 15 million people suffer with stroke each year. Two thirds of all stroke deaths and 60% of all stroke occur in low and middle income countries. Men have a slightly higher incidence of stroke than women, but women have higher mortality rates. There is a high incidence of

hemorrhagic stroke in Asian people. Strokes occur at any age but are more common in the elderly⁴.

➤ *Aim*

Explore the factors influencing the functional capacity of stroke survivors.

➤ *Objective of the Study*

- To explore the factors influencing functional capacity of stroke survivors as perceived by relevant stakeholders.

➤ *Definition of Concepts*

- Stroke survivors - Patients up to the age of 65 years with confirmatory diagnosis of stroke.
- Functional capacity - It refers to the capability of performing tasks and activities that people find necessary or desirable in their lives.
- Factors – Direct and indirect stimuli which influences the wellbeing of stroke survivors.

II. MATERIALS & METHODS

The research approach used was qualitative methodology.

➤ *Research Design*

Exploratory qualitative study using general inductive approach

➤ *Setting*

- PMR department, Government Medical College, Thiruvananthapuram
- Selected villages in Thiruvananthapuram District.

➤ *Participants*

The study participants have drawn from relevant stakeholders namely the stroke survivors, primary caregivers, health care professionals, community health team members and community health workers from selected community.

• *Inclusion criteria*

- ✓ Stroke patients who are stable and below 65 years of age
- ✓ Primary Care giver of patient with confirmed diagnosis of stroke
- ✓ Health care professionals involved in stroke rehabilitation
- ✓ Community rehabilitation team members

• *Exclusion Criteria*

- ✓ Unwillingness

➤ *Sample Size & Sampling Procedure*

Theoretical sampling was followed in the selection of subjects. Initial sample of 3-5 participants from each category, most likely to provide rich information about the experiences of the phenomena under study, was purposively drawn. These interviews were coded and based on the insights and themes generated additional samples were

drawn using purposive sampling. Sample size depends upon data saturation.

➤ *Data Collection*

Data collection methods include In-depth interviews (IDIs) and Focus Group Discussions (FGDs).

- Categories of stake holders for IDIs - stroke survivors, primary caregivers and health care professionals.
- Categories of stake holders for FGDs - community health team members and community health workers

➤ *Study Instruments*

Interview schedules with open ended questions used for collecting data through IDIs. Separate schedules used for different categories of stakeholders. Open ended questions helps to express their feelings and barriers of health promotion.

Part A - Socio demographic data of participants

It includes;

- Age
- Gender
- Domicile
- Duration of stroke
- Presence of co-morbidities
- Relationship with primary care giver
- ADL status of stroke survivor : fully dependent/partially dependent/ independent
- Duration of hospital stay during stroke onset
- Initial treatment received for stroke

Part B - Structured Open ended questions to explore the factors influencing functional capacity of stroke survivors. The main concepts are;

- What do you like and not like about caring of stroke patient in hospital?
- What do you consider the most challenging aspect of stroke rehabilitation?
- Which are the factors influencing functional wellbeing of stroke survivors?
- What plans do you have to achieve maximum functional ability of stroke survivor?
- What is the role of family care giver in the wellbeing of stroke survivor?
- What are the changes that you would like to make in the stroke survivor?
- What are the resources and financial support available for stroke rehabilitation?
- Is it possible to perform physical activities after stroke recovery? How?
- What do you consider when deciding on a patient's potential to benefit from rehabilitation?
- What is the prognosis you identify usually within a stroke survivor?
- How do you rate your ability to handle this situation on a 1-10scale? What shall you do to improve your score by one points?

In order to ensure the quality of collected data, 1–2 in-depth interviews were conducted per day, depending on the availability of participants.

III. FOCUS GROUP DISCUSSION.

- Participants with the range of 6-10 per discussion

- Selected by purposive sampling
- Participants from different background was selected
- Encouraged interaction between participants
- FRAMES (Future oriented, resource activating, Miracle, Exceptions and Scaling questions) questions were used to generate ideas

Table 1 FGD Guide for Nurses/Community Health Workers

| | | |
|--|---------------------|------------|
| Date : | Moderator Name: | Location : |
| Focus Group Number: | No of Participants: | Duration: |
| Introduction | | |
| <ul style="list-style-type: none"> • Written informed consent obtained from all participants including permission to record the session • A transcriber was appointed to manually note down the summary of significant points discussed during FGD | | |
| Basic rules to the participants | | |
| <ul style="list-style-type: none"> • Everyone should talk one point at a time, so that everyone’s opinion is heard clearly and completely <ul style="list-style-type: none"> • It is not at all necessary that every question should be answered by each person • Please feel free to commend all your points without interrupting the group • Please be sure that there are no right and wrong answers. What is needed is your active participation. Your personal opinion is very important | | |
| Introduction to FGD Participants | | |
| <ul style="list-style-type: none"> • Preliminary planning • Introducing topic for discussion • Introducing each other namely moderator, scribe, audio taker and group members | | |
| I. Open ended questions for interview schedule through FGD | | |
| <ol style="list-style-type: none"> 1. What do you consider the most challenging aspect of stroke rehabilitation? 2. Which are the factors influencing functional wellbeing of stroke survivors? 3. What plans do you have to achieve maximum functional ability of stroke survivor? 4. What are the desired changes that you would like to make in the stroke survivor? 5. What are the government/hospital/community/LSG resources available for rehabilitation? 6. What do you consider when deciding on a patient’s potential to benefit from rehabilitation? <ol style="list-style-type: none"> 7. What are functional changes can be achieved with stroke rehabilitation? 8. What are the strengths /skills, which can be restored? 9. Who are the important persons who can help? 10. What are the financial/pension schemes available for a stroke survivor? 11. How do you rate your ability to handle this situation on a 1-10scale? What shall you do to improve your score by one point up? 12. Do you know any success stories of stroke survivors? <ul style="list-style-type: none"> ❖ Anything else/Suggestions to improve wellbeing of stroke survivor and their care giver <p>.....</p> | | |
| II. Probe questions (Direct) | | |
| <ol style="list-style-type: none"> 1. Can you explain little more? 2. Can you elaborate? 3. What does that mean to you? 4. How did you manage it? 5. What stress do you have? | | |
| III-Probe questions (Indirect) | | |
| <ol style="list-style-type: none"> 6. Is it? 7. Humm 8. Nodding the head <ul style="list-style-type: none"> • Summarization • Thanking participants for their valuable contribution • Closing the session | | |

➤ *Data Collection Technique*

Data were collected through face to face interview and discussion after getting informed consent from the participants. All interviews and FGDs were done by the researcher and recorded using a digital voice recorder to ensure that the interview content is accurately captured, with prior permission from participants.

➤ *Data Analysis*

Transcription of data, data coding and analysis was simultaneously done with data collection. Thematic analysis was performed using a hybrid coding approach. Direct codes used where ever necessary to highlight the themes identified.

IV. RESULTS

Based on the objective the findings were categorized under six major themes.

Fig:1 Factors Influencing Functional Capacity of Stroke Survivors

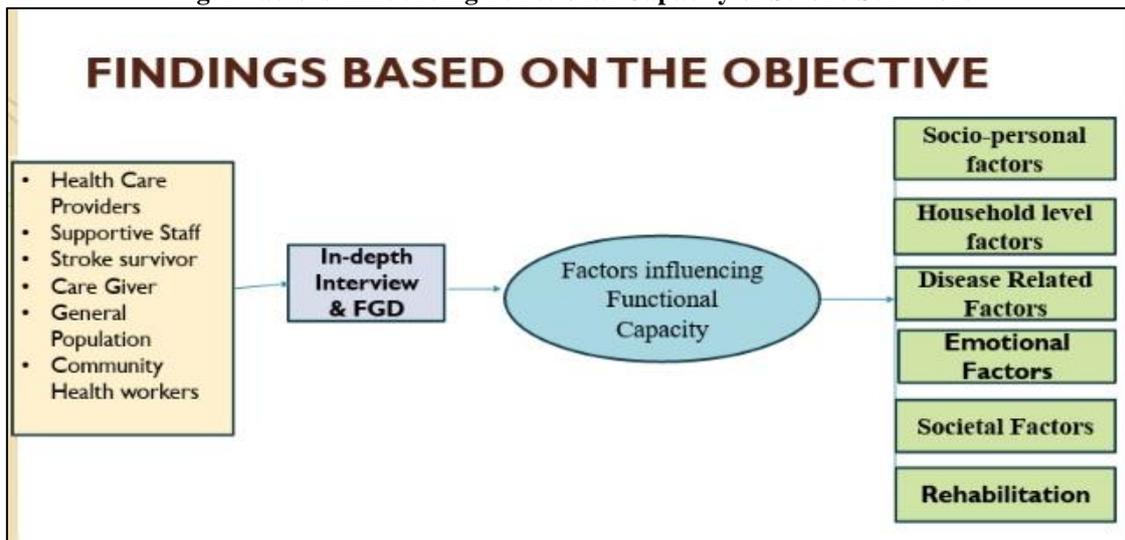


Table:2 Sub themes of Factors Influencing Functional Capacity of Stroke Survivors

| Sl. No | FACTORS | SUB THEME |
|--------|-------------------------|--|
| 1 | Socio-personal factors | 1. Age & Gender 2. Lifestyle behavior 3. Socio economic status 4. Breadwinner of the family(Stoke survivor/caregiver) 5. Substitute job/Source of income |
| 2 | Household level factors | 1. Presence of care giver 2. Care giver characteristics (Age, occupation, Health status, Relationship with stroke survivor) 3. Home care education/Stroke specific knowledge 4. Care by caregiver /Willingness and interest /Ignorance 5. Home environment |
| 3 | Disease Related Factors | 1. Area of brain damage 2. Type of stroke, Severity of illness & Presence of comorbidity 3. Duration of hospital stay 4. Time of initial treatment, Type of treatment & tolerance 5. Prognosis & Complications |

| | | |
|---|-------------------|---|
| 4 | Emotional Factors | <ol style="list-style-type: none"> 1. Motivation 2. Mood 3. Ability to stick with rehabilitation 4. Inherent insight 5. Acceptance 6. Psychological stability/depression 7. Understanding ability |
| 5 | Societal Factors | <ol style="list-style-type: none"> 1. Physical Accessibility issues (Distance of health services, Transport facilities) 2. Ramp safety in public 3. Support groups for survivors and caregivers 4. Societal participation/encouragement 5. Availability of Counseling services 6. Community team visit & awareness programmes |
| 6 | Rehabilitation | <ol style="list-style-type: none"> 1. Exercise 2. Therapies 3. Assistive devices 4. Follow up treatment & Continuity of care 5. Prevention of complications |

V. DISCUSSION

The present study was aimed to explore the factors influencing the functional capacity of stroke survivors as perceived by relevant stakeholders. In-depth interview and Focus Group Discussion were used as data collection techniques. Result of the study was identified under six themes. The findings were supported by a study was conducted by Josefa Santos et.al(2020) to determine the factors which are the greatest determinants of functional capacity and QoL a month after suffering a stroke. Sample consisted of 81 people who had previously suffered a stroke. The study population was recruited at the time of discharge from the Neurology Service and Stroke Unit through a consecutive sampling. Data were collected one month after participants experienced a stroke, and the main study variables were quality of life and functional independence. Result shows the type of dwelling, age, cognitive ability and functional capacity of the affected upper limb are the determining aspects in functional independence among the stroke survivors.

VI. CONCLUSION

The findings of the present study may be a motivation to prepare community intervention programme to minimize caregiver burden and facilitate good health and well-being of both stroke survivors and their caregivers.

Ethics approval : Ethics Committee of Government Medical College, Thiruvananthapuram,

Approved this study. All participants gave written informed consent before the data collection began.

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