



**CONCEPTUAL APPLICATION OF INTERNATIONAL CLASSIFICATION OF FUNCTIONING, DISABILITY AND HEALTH (ICF) MODEL TO ADDRESS STROKE OUTCOME MEASURES**

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**ABSTRACT**

This paper is a discussion of the use of the International Classification of Functioning, Disability and Health (ICF) Model to guide the investigation of any intervention in improving outcome of stroke. The purpose of this article is to suggest ICF model in delivering care. In applying this model to stroke patients, this model is precise. Although in this model the separation of Activity and Participation domains is not always clear, especially where activities can be undertaken alone; this is also taken as evidence of societal participation. Those in the field of rehabilitation nursing should adapt this model to practice.

**KEYWORDS** : Disability, Motor Function, Quality of life

**INTRODUCTION**

Various conceptual models or theoretical frameworks are used by researchers to provide an structure for their studies, in testing of hypotheses. An appropriate framework is selected for guiding the entire research project.

**ICF Conceptual Model**

The World Health Organization developed the International Classification of Functioning, Disability and Health (ICF) Model. ICF is developed following revision of International Classification of Impairment, Disability and Handicaps (ICIDH). The focus of ICIDH was consequences of disease. ICF focus on components of health. ICF is etiology- neutral, i.e. disability is not differentiated by etiology. The focus has shifted from cause to impact of the environment on the person's functioning. A decrement in health causes some degree of disability. The experience of disability is universal. So identifying a client's level of function is a key expectation of adopting this model.

The ICF is a client-centered, biopsychosocial approach to health that looks into the biological, psychological and social factors that influences health. Rehabilitation providers consider both internal and external contextual factors and its influence on individual's daily activities and their participation in society. Hence ICF give guideposts for planning and evaluating rehabilitation services. Two major models of disability have been proposed under ICF. The medical model which views disability as a feature of person caused by disease, injury and it requires treatment. Social model of disability views disability as socially created problem due to unaccommodating physical/ social environment.

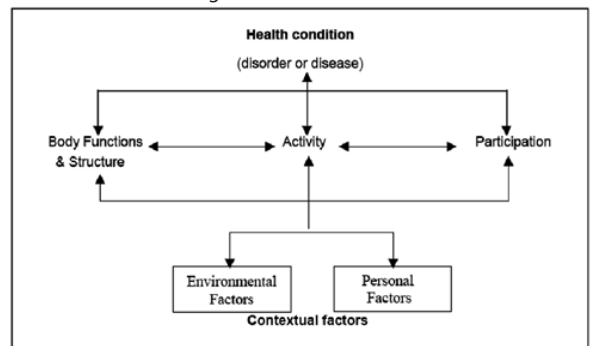
**Components of ICF**

Two components interact to influence functioning and disability:

1. *Functioning and disability. It include*
  - Body function and structure- describes actual anatomy and physiology/ psychology of human body
  - Activity and participation-describes persons functional status including communication, mobility, interpersonal interactions, learning, self care, applying knowledge etc
2. *Contextual Factors* (barriers or facilitators to Activity and Participation). It include
  - Personal Factors (internal)
  - Environmental Factors (external)

Personal Factors such as a person's assets and talents, caregiver, family or peer knowledge and support, culture or ethnicity, race, age, gender, coping styles, social background, education, profession, experiences, behavior patterns, character etc. affect the way the individual experiences disability. Environmental Factors s that are not within persons control such as social attitudes, laws, supports and relationships, products and technology, systems and policies, community capacity and opportunities, governmental agencies, work and cultural beliefs influence an individual's functioning and disability.

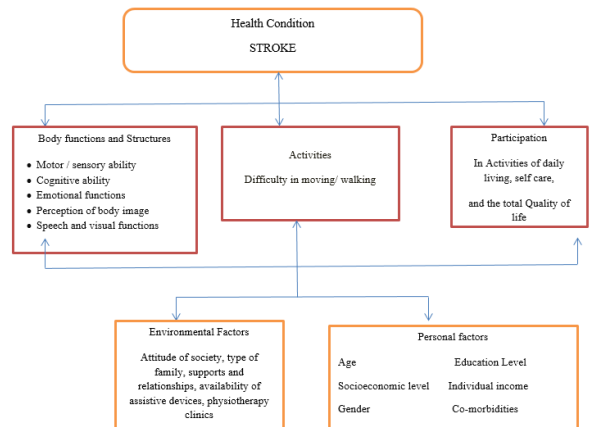
**FIGURE 1** The overall organization of the classification of ICF



**Application of ICF model for stroke outcome measures**

ICF is a tool for measuring personal health state and functioning in the society without looking for the cause of one's impairment. It is well suited to address the stroke outcome measures.

The schematic representation of the conceptual framework is given in figure 2.



**Fig 2:** Conceptual framework for any intervention on stroke outcome measures based on International Classification of Functioning, Disability and Health Model of Disablement.

Environmental factors comprises of type of family, family support system like availability of the spouse/ children to look after, interaction of patients with others in society, availability of walkers or other assistive devices and having physiotherapy at clinics. All these environmental factors improves stroke outcome.

Personal factors related to patient are their health status, presence of any co morbidities, educational status, working status, age, gender and socio economic status.

There are three levels to the disability spectrum experienced by all human beings:

1. Impairments at the individual's Body Function or Body Structure level which include changes in motor ability, cognitive ability, altered body image and unilateral neglect
2. Activity Limitations at the person level as Activity focuses on the person's individual functioning. This is the main area where health workers can intervene and train the patient for improved outcomes in terms of motor ability, cognitive ability, improve depression that arise due to activity restrictions, and thereby improving overall quality of life.
3. Participation Restrictions generally experienced by the person and others at a societal level as Participation focuses on the person's involvement in societal roles and so is likely to be performed with others. In addition to issues related to Body Structure and Body Function, rehabilitation providers consider a person's ability to undertake daily activities and their ability to participate as a whole member of their family or community, as a measure of their overall health. For example, a stroke survivor may be unable to drive, restricting his ability to shop, socialize and attend church. This may result in isolation and depression if care planning does not consider or address these overall needs.

The separation of Activity and Participation domains is not always clear, especially where activities can be undertaken alone and also can be evidence of societal participation.

The ICF model may be used to measure health and disability at individual, community and population levels. In clinical settings the ICF is used for functional status assessment, goal setting, treatment planning and monitoring, as well as outcome measurement as it is a client-centered approach, considering the personal, family, community, environmental and societal context of an individual.

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