

Prevalence of Cognitive Impairment and Functional Status among the Stroke Survivors in Bangladesh

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Background: Stroke is an enormous public health problems worldwide provoking burden of disability. Beside physical impairments and functional limitations, cognitive impairments are the common form of disability in stroke survivors. The aim of this study is to identify the prevalence and level of cognitive impairment along with functional status of the stroke survivors and their association.

Materials & Methods: A descriptive cross-sectional study design was used. By using purposive sampling technique 150 subjects were selected for the study based on inclusion criteria. Data were collected using widely used BAMSE & FIM scales. Data were analyzed through descriptive statistics of SPSS. Chi-square test were done to find out the associations between variables.

Results: The mean age of stroke survivors was 53.98 (SD \pm 13.027) years ranging from 23 to 87 years and male-female ratio is 1.8:1. Almost half (48.7%) of the respondents were living in rural area. Among the 150 respondents 62.0% had ischemic and 38.0% had hemorrhagic stroke. Current study results also revealed more than half (52.6%) of the participants had right sided hemiparesis and Chi-square (χ^2) test proved that there were highly significant association between affected body part hemiparesis (affected side of the brain) and cognitive impairment after stroke ($\chi^2= 0.000$ df =2, $p = <0.05$). Multiple responses of stroke related risk factors showed that HTN 68.6%, DM 46.7%, IHD 23.5%, betel leaf- paan 30.7% and smoking 27% cases. Results revealed that the prevalence of cognitive impairments among the participants were 40%, among them 30.67% had severe and 9.33% demonstrated mild cognitive impairments based on their BAMSE score. Study also demonstrates that the mean of FIM was 69.91 SD \pm 28.575 which indicates that the participants of the study in average minimal contact assistance was required (patient can perform 75% or more of task). It was also found that only 30% were independent were as 29% were completely dependent and remaining 41% were modified dependent. There was highly significant association were found between cognitive impairment and functional status after stroke ($\chi^2= 0.000$ df =2, $p = <0.05$). Similarly four domains of FIM are highly associated with level of cognitive impairment.

Conclusion: The prevalence rate of cognitive impairment among the stroke survivors in rehabilitation setting of Bangladesh is high and the obligation is to need sound cognitive ability for functional participation. This research has given a baseline data to trigger individual stroke survivors and their family, professionals and policy makers to consider. Being aware of cognitive impairment in stroke patients might be useful for predicting the functional prognosis and future planning.

Key Words: Stroke survivors, Cognition, Participation, Rehabilitation

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