The Relationship between Balance and Functional Independence in Stroke Patients

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Background and Aim: Stroke is one of the chronic diseases throughout the world and is one of the main causes of long-term disability. Balance problems with the prevalence of %87.5 are common symptoms among stroke patients. This impairment limits the physical capacity of the individual and the inability to perform activities of daily living in the home and in the community and reduces the functional independence of the individual. Therefore, one of the most important goals in rehabilitation is the improvement in balance because balance abilities are one of the important components of independence in activities of daily living, transfer, and fall, but ultimately, the return of functional independence is the most important goal of rehabilitation after a stroke. According to that functional independence is affected by several factors such as balance and that knowing the prerequisites for independence in the work can help the team to more accurately plan, reduce the cost of treatment and save time and cost the patient, so the aim of this study was to investigate the relationship between balance and functional independence in patients with stroke.

Materials and Methods: This is a cross-sectional case study. The statistical population of the study is the patients with stroke referred to Tehran health care and rehabilitation centers in 1396. The sample size was 32 with a formula, but with access to more samples, 83 patients with stroke were eventually sampled. Inclusion criteria include diagnosis of stroke from a neurologist, at least 6 months and a maximum of 36 months from the onset of illness, the ability to perform evaluation tests used in the research, the absence of vision and hearing problems based on the diagnosis of a physician and score More than 23 of the mini-mental state examination. exclusion criteria include lack of patient collaboration in research, transient ischemic attack in the past 6 months, aphasia, perceived abnormalities, the presence of other simultaneous neurological diseases, including Parkinson, epilepsy, seizure, etc. To measure the variables, mini-mental state examination, Berg balance scale, and functional independence measure were used. The collected data were analyzed using SPSS version 25.

Results: The results of this study showed that according to the results of Shapiro-Wilk and Kolmogorov-Smirnov tests, both balance and functional independence do not follow the normal distribution ($p < 0.05$). According to the Spearman correlation test, the correlation between balance and functional independence in stroke patients with a correlation coefficient of 0.83 and $p < 0.001$ indicates a strong correlation between these two variables.

Conclusion: The results of this study showed that there is a strong correlation between balance and functional independence in stroke patients and it indicates the importance of balance in independence in performing activities of daily living.