The ADL Structure for Stroke Patients and Femoral Neck Fracture Patients using the Rasch Analysis: Based on the Functional Independence Measure (FIM)

Nobuhiko IWAI, PT, PhD
*Kobegakuin University, Faculty of Rehabilitation

Yoichiro AOYAGI, MD, PhD
Department of Rehabilitation Medicine I, School of Medicine, Fujita Health University

**Purpose:** The purpose of this study is to clarify the process of regaining the activities of daily living (ADL) of stroke patients and femoral neck fracture patients.

**Method:** From the data registered in the rehabilitation patient database produced by the Japanese Association of Rehabilitation Medicine, 1,820 cases of stroke and 247 cases of femoral neck fracture were extracted and studied. With the Rasch analysis, difficulty and fit index were obtained for each of 13 items related to movement in the functional independence measure (FIM).

**Result:** In the case of stroke, there existed the ADL group with intermediate difficulty. In the case of femoral neck fracture, the difficulty of changing dressing-upper body was lower than that in the case of stroke, but the order of ADL difficulty was not so different between the two cases.

**Conclusion:** Based on analysis of this database the study found that there are differences in the ADL structures between the stroke patients and the patients with femoral neck fracture. The difference occurs from the different functional disorder levels: the stroke patients have the unilateral paralysis of upper and lower extremities, while the patients with femoral neck fracture have injury of a single extremity. It is considered that understanding the ADL structures of both diseases provides useful knowledge for the advancement of the ADL assessment and physical therapy.