



# Identifying the relationship among mental status, functional independence and mobility level in Turkish institutionalized elderly: Gender differences

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## Abstract

The purpose of this study was to examine gender differences in older people living at a rest home in terms of functional independence, mental status and mobility level and to describe the relationship among the three outcome variables. One hundred and thirty-three elderly people (60 women, 73 men), aged 65 years and above were included in the study. The average age was  $75.3 \pm 6.7$  years (range, 65–90 years). Mental status was assessed using the Hodkinson Mental Test (HMT). Functional independence was measured using Functional Independence Measurement (FIM). Mobility level was evaluated using the Rivermead Mobility Index (RMI). Elderly women had lower scores regarding all the outcome variables when compared to older men. The older men had higher cognitive performance than women. In addition, women were at low level of mobility and depended upon the daily living activities ( $p < 0.05$ ). Both genders showed a significant negative correlation between mental status and functional independence or mobility level, while the correlation between functional independence and mobility level was significantly positive. The data showed that mental impairment decreases both functional status and mobility level of the institutionalized elderly people. Gender difference was found to be an important factor affecting the outcome variables of the study.  
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## 1. Introduction

Aging is not a disease or disability, even though significant number of the elderly suffer from disabilities. There are multiple chronic diseases that may be associated with aging. Although there is no one-to-one correlation between diseases and illness, or disease and disability, many elderly people are limited in the kind of usual activity or mobility. In fact, over 60% of adults with functional impairments due to chronic health problems are at the age of 65 and over (Freedman and Berk, 1988; Clark, 1993). Physically impaired older people tend to become socially isolated, which may result in exacerbation of medical problems, functional deficits and mental health problems, particularly depression (Murphy, 1983; Alexopoulos et al., 1993; Burns and Zaudig, 2002). There are several general principles regarding the aging effects on performance of various organ systems. In the elderly, dependency stems from physical, emotional, social or mental changes. Age-dependent changes are (1) decreased activity levels (hypokinesia); (2) loss of muscle strength and muscle mass; (3) decreased power and endurance; (4) decreased peripheral and cerebral blood flow and decreased oxygen delivery to muscles; (5) loss of range of motion; (6) decreased functional mobility; (7) increased need for assistive devices; (8) decreased speed and cadence; and (9) anxiety or depression (Freedman and Berk, 1988).

Functional activities and cognitive ability are highly skilled components, which have been developed and refined with many years of practice (Stuck, 1999; Kerem et al., 2001). Muscle strength, muscular endurance, balance, flexibility and coordination are very important to improve independency in daily living activities and to enhance the quality of life in elderly people (Lewis and Bottonley, 1994; Cavlak and Buker, 2004).

It was therefore decided to design the current study to describe the relationship among mental status, functional independence and mobility level. The main questions of the research were

- (a) Is there any significant relation among mental status, functional independence and mobility level in older people?
- (b) How does gender affect the relationship among mental status, functional independence and mobility level in older people?

## 2. Subjects and methods

### 2.1. Subjects

Subjects living in rest homes in Denizli, Afyon and İzmir, which are located in Aegean Region, Turkey, were invited to participate in the study. Only the subjects who were eligible for participation were included. For inclusion into the study, subjects had to be at the age of 65 or above, mobile and able to participate in the tests and have no medical conditions, which would interfere in the study. Although all participants had systemic problems, such as diabetes mellitus, heart disease, hypertension or renal disease etc., they were physically active and free from musculoskeletal injury at the testing.

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