

**P60**

## **New Balancing Ability Test Method Using Digital Equipment**

Da Hwi Jung<sup>1\*</sup>, Lee Eun Lee<sup>1</sup>, Tae Sung Park<sup>2</sup>, Sang Hun Kim<sup>1,2</sup>, Myung Hun Jang<sup>1,2</sup>, Myung Jun Shin<sup>1,2†</sup>, Yong Beom Shin<sup>1,2</sup>

Pusan National University Hospital, Department of Rehabilitation Medicine<sup>1</sup>, Pusan National University Hospital, Biomedical Research Institute<sup>2</sup>

There have been many attempts to measure balance ability for a long time. However, most of the clinical tools are not digitized, and there are many discontinuous ordinal variables that make it difficult to analyze. Therefore, we will test a new balance ability test that can solve these problems simply and quickly.

### **Material and Method**

A total of 60 healthy people (men; 30) in their 20-30s were recruited to perform a balance test using a new test method and analyzed gender differences between men and women. The new test method was able to evaluate such things as standing still, standing with eyes closed, standing on a mat, standing with eyes closed, standing on a mat, and evaluating static and dynamic balance ability. Sequence 1 2 3 4 Method standing with eyes opened for 30 seconds standing with eyes closed for 30 seconds standing with eyes opened for 30 seconds using Balance Pad(19.7" × 16.1" × 2.4", AIREX®, Switzerland) standing with eyes closed for 30 seconds using Balance Pad(19.7" × 16.1" × 2.4", AIREX®, Switzerland)

### **Results**

In healthy men, regardless of whether they have mat or not, their balance ability is lower than that of women when they open their eyes. However, when the eyes were closed, the balance of women was observed to fall at a higher rate than men. 1 2 3 4 Men 9.81±4.10 13.06±4.77 9.64±3.15 22.14±7.17 Women 8.22±3.26 13.89±5.32 8.22±2.83 22.95±9.08

### **Conclusion**

In this experiment, we found that women were more affected by postural balance than men when the eyes were closed. It is also expected that it will be possible to use it in schools or welfare centers because it is helpful to evaluate the balance ability by being close to the eyes and digital measurement in a short time.

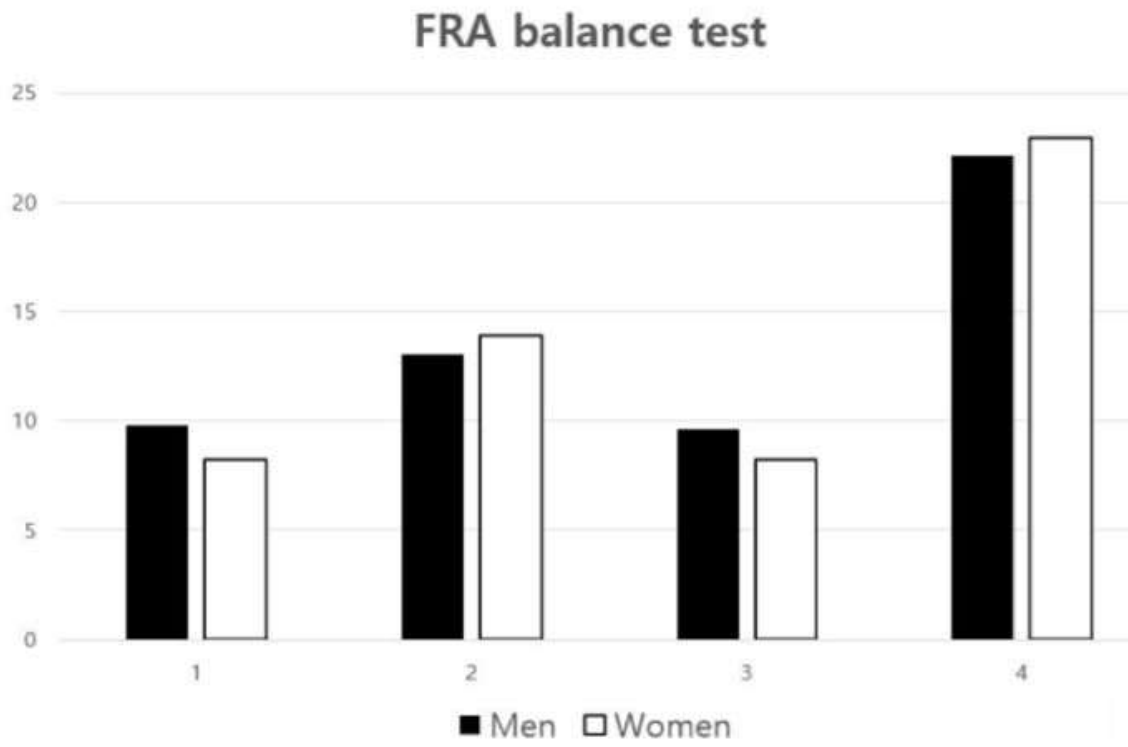


Fig1. Result of FRA balance test