



### **Measurement invariance and differential item functioning investigation of FVAT-S across gender and age groups in Turkish sample**

Sevinç, Levent; Suna, Hayri Eren (2015).  
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The main purpose of the study was to investigate the measurement invariance of FVAT-S (FVAT-Short Form) across gender and age groups. FVAT-S is an ability test, which is widely-used in employee election procedures in Turkey. The sample that was used consisted of 2464 applicants (1273 females and 1191 males). The measurement invariance test was performed with Multiple Group Confirmatory Factor Analysis (MG-CFA). To decide the invariance, the change in the Comparative Fit Index ( $\Delta CFI$ ) was considered and additionally RMSEA, SRMR, and TLI were reviewed. At the first stage, FVAT-S showed configural- and metric invariance across gender groups and then, partial scalar invariance was attained with the modifications. In terms of age groups (aged between 20-25 and 26-32), FVAT-S showed, and metric, and scalar invariance. Items which disrupting the scalar invariance across gender groups were tested against Differential Item Functioning. All items which decrease the invariance included gender-based DIF. These results showed that FVAT-S is a useful tool to compare age groups; however amounts of error may be changed between age groups. The DIF-included items in FVAT-S are needed to be reviewed to achieve full scalar invariance in gender groups.