



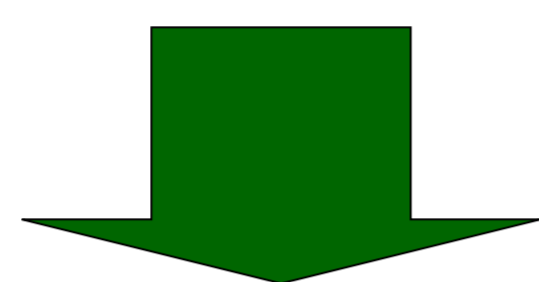
The Gender- and Age-related Distinction of Three Different Tandem Gait Tests in Community Dwelling Elderly

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BACKGROUND and PURPOSE

Tandem gait test

- is a dynamic balance assessment
- has no report about reliability and validity



The purpose of this study is to evaluate the predictive validity of tandem gait tests by assessing the gender- and age-related distinctions of tandem gait tests in community-dwelling people.



METHOD

Participants

493 community-dwelling people (367 female and 126 male, mean age 62.6y)

Tandem gait tests

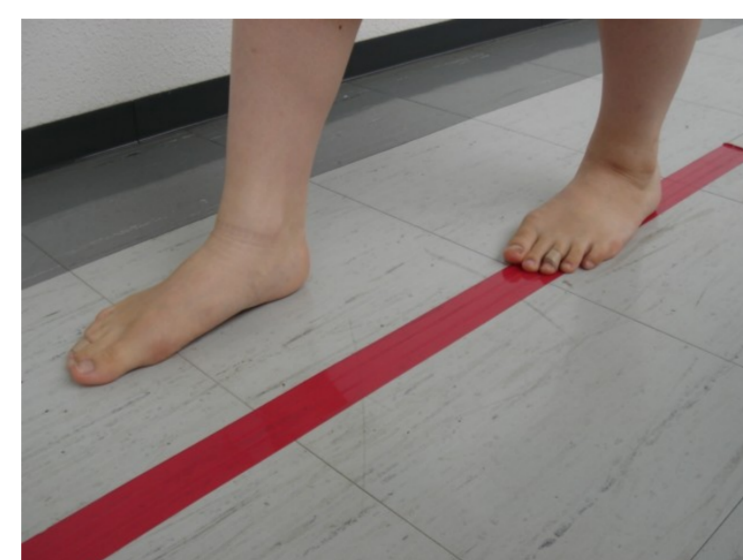
Tandem gait time (TGT)

the expended timing of 5m tandem gait, walk heel to toe on a line of 50 mm width red tape

Tandem gait index -1 (TGI-1)

$TGT + (2 \times \text{mis-step}(s)^*)$

*: mis-step(s) of TGI-1 stepping off the line



Tandem gait index -2 (TGI-2)

$TGT + (2 \times \text{mis-step}(s)^{**})$

** : mis-step(s) of TGI-2 both stepping off and taking steps with the heel and toe visibly separated



Data Analysis

TGT : 1 way ANOVA and Sheffe as Post-hoc test, paired T-test

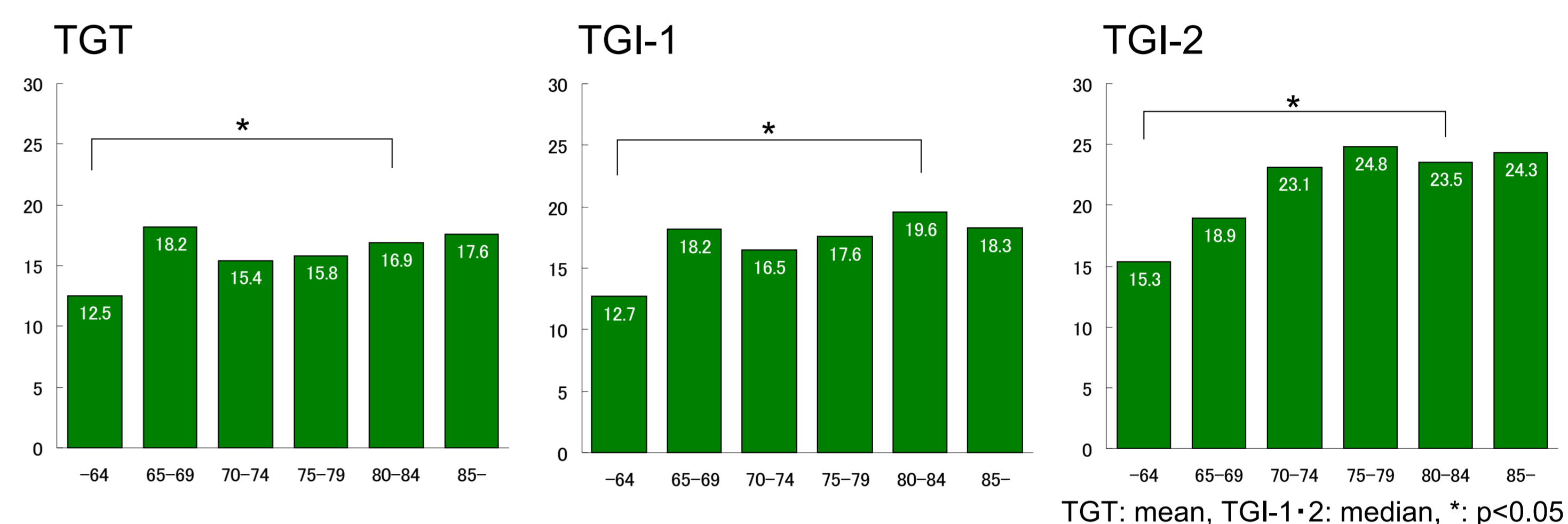
TGI-1, -2 : Kruskal-Wallis test, Mann-Whitney U-test

RESULT

age-related distinction

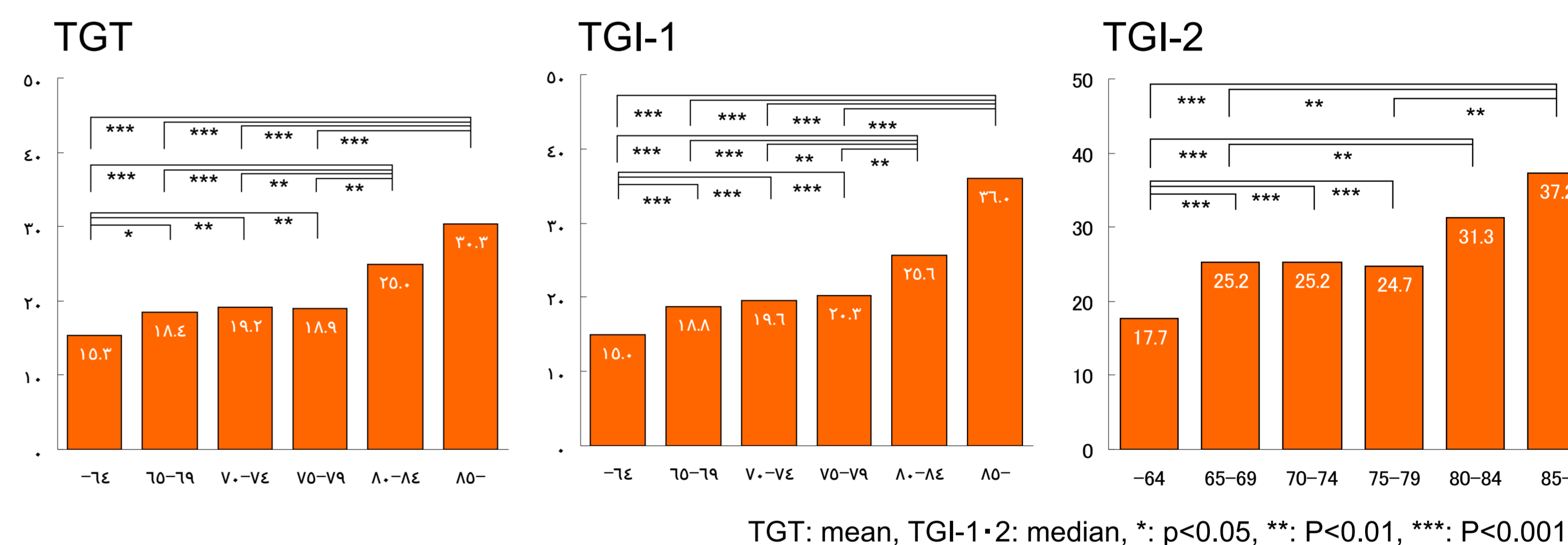
males

there were significant differences between under 65 years vs. 80-84 years in any of three scales.



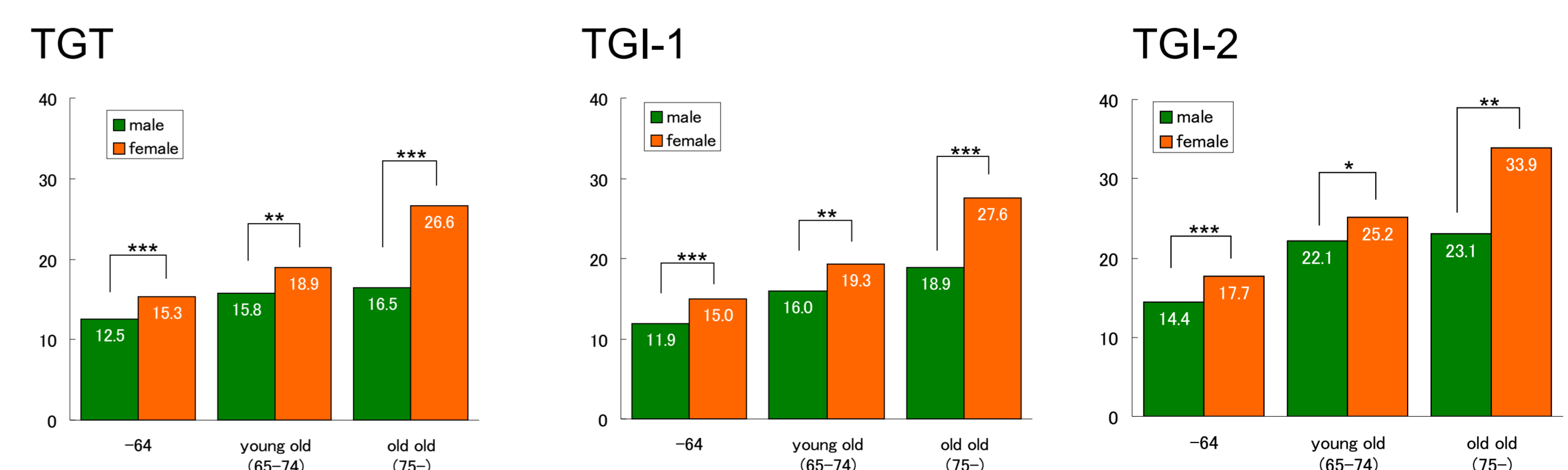
females

TGT and TGI-1 scores of the 80-84 years and over 85 years groups were significantly higher than that of the other groups.



gender-related distinction

males performed significantly greater times and scores in all age groups of all scales than females



Gender-related distinction was assessed among three age class because of sample size
TGT: mean, TGI-1·2: median, *: p<0.05, **: P<0.01, ***: P<0.001

DISCUSSION

The TGT and TGI-1 have gender- and age-related predictive validity in community -dwelling older adults.