

**Virtual reality-based rehabilitation in the treatment of sarcopenia among  
residents in rural caring facilities  
[Statistical Analysis Plan]**

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### ***Sample size estimation***

To determine the sample size, the G\*Power software (version 3.1.9.2, for Windows) was used. The alpha level and the power were set as 0.05 and 0.8. The effect size was set at high effect (0.8) and the minimal estimated sample size was 15 subjects.

### ***Statistical Analysis***

We used SPSS for Windows version 19.0 (Released 2010. Armonk, NY: IBM Corp) for all analyses. Continuous data were expressed as mean  $\pm$  SD and categorical variables were presented as absolute numbers or percentages. Normality and homoscedasticity were checked prior to each analysis. For comparisons data between participants in nursing home and daycare center, the chi-square test, independent t-test, and Mann–Whitney U test were used to test for differences in the distribution between categorized, normally distributed, and non-normally distributed variables, respectively. A change in outcome measures among baseline, 1, 2, and 3-month postVR-REH were assessed using repeated measure one-way analysis of variance (ANOVA) and a Bonferroni post-hoc test. A P value  $\leq .05$  was considered statistically significant.