Cognitive Rehabilitation Using Immersive Virtual Reality in Stroke Patients

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Statistical Analysis Plan

Statistical data analysis will be performed with IBM® SPSS® Statistics 22.0 for iOS package. Demographic and clinical data will be presented by the number of cases and percentage in each group. According to the sample size, which likely will be smaller than 50 per group, non-parametric tests will be used. Normality of distributions will be checked using the Kolmogorov-Smirnov and Shapiro-Wilk tests (which is more appropriate for small sample size), also ranges of Skewness and Kurtosis will be checked. In order to compare demographic and clinical data, the Kruskal-Wallis and Chi-square tests will be used. For the comparison of two independent groups the nonparametric Mann-Whitney test was used, and to compare the scores within a group, the nonparametric Wilcoxon test will be carried out. For the comparison of three independent groups the nonparametric Kruskal-Wallis and Chi-square tests will be used tests will be used, and to compare the scores within a group, the nonparametric Friedman's test will be carried out. The difference will be considered statistically significant when $p < 0.05$. In order to calculate the effect size, Hedges' g will be used, which is suitable for calculating the effect size between small samples (<20) and also suitable for calculating the effect size between the groups when the number of participants in the groups is different. The magnitude of the effect size will be interpreted as small, medium and large when its value will be 0.2, 0.5 and greater than 0.8 respectively.