

**Official Title: Effects of a Mobile Application RA Joint Protection and Activity**

**Self-management Program**

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**Statistical analysis plan**

Data were analyzed using the statistical software package SPSS 22 (IBM SPSS, Armonk, NY: IBM Corp), and .05 significant level was set. We tested the intervention effect by using GEE models. A robust standard error was calculated for consistent parameter estimates and an exchangeable working correlation matrix was used to account for the outcome dependency within individual participants (Liang & Zeger, 1986). Each GEE model included main effects of group (intervention *vs.* control), time (month *vs.* baseline) and two-way interaction effects (group x time). The group difference in the change from baseline to 2-months, or 3-months between two groups was verified when the two-way interaction effect(s) (group x time) was statistically significant.