**Supplementary File 9 Sensitivity analysis for missing data, applied to the primary endpoint**

Under a missing at random assumption, as made in the primary analysis, the available data are assumed to be representative of the missing observations. In this sensitivity analysis, we assumed that participants with incomplete data had outcomes that were different from those with observed data.

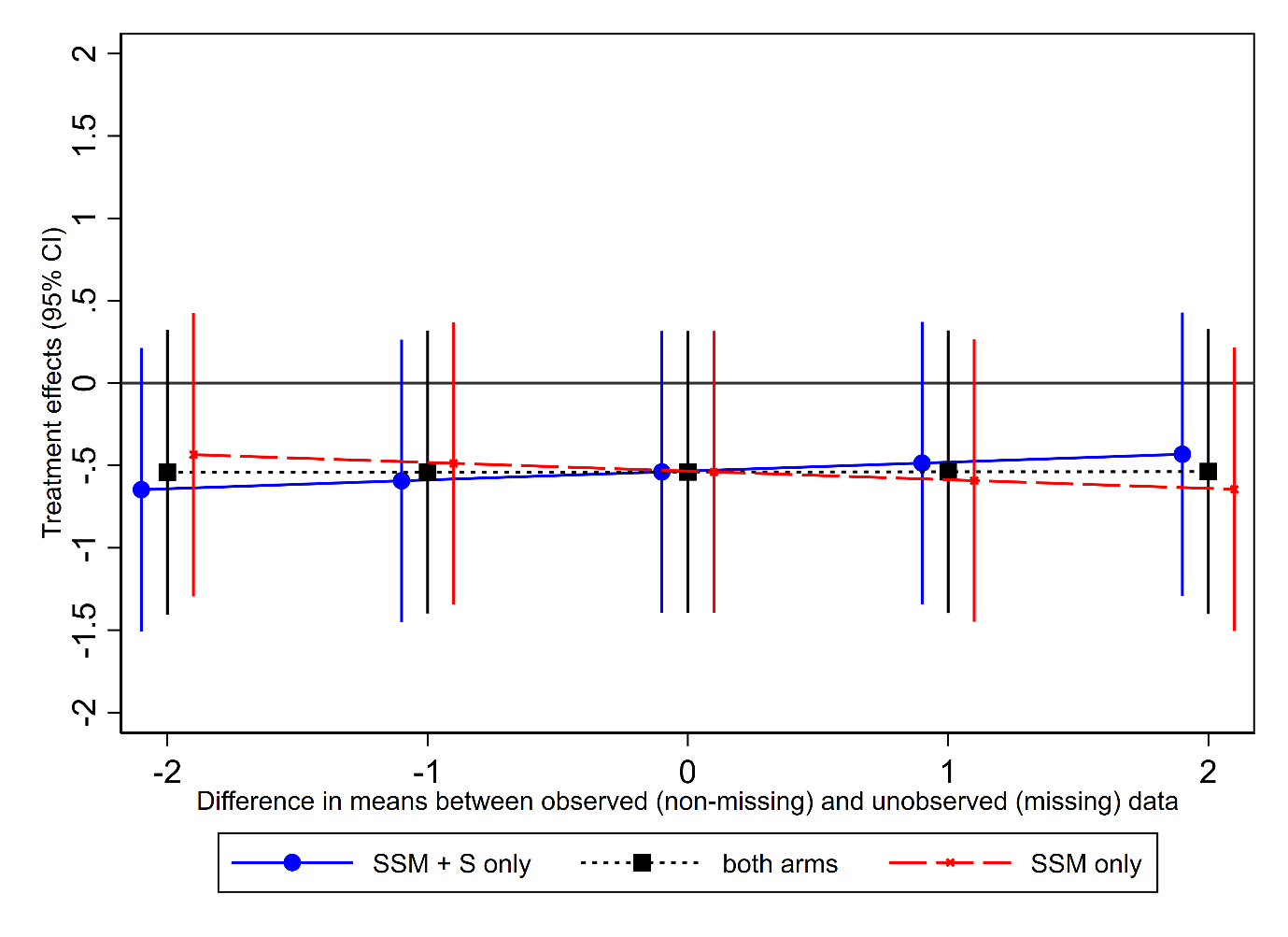
Here, we assumed that participants with missing outcome data were up to 2 points better or worse than those with observed data. Results from this sensitivity analysis were presented for pairwise comparisons, and considered the 8 week follow-up only.

The graphs SF7.1-SF7.3 below show how the treatment effects vary under the different missing not at random assumptions. On the y-axis, the point estimates and corresponding 95% CIs are shown. The x-axis presents the different missing not at random scenarios. At the centre of the x-axis (at 0), the results present a scenario where those with missing data to have, on average, outcomes that are no different from those with observed data. Other values on the x-axis represent scenarios where those with incomplete outcome data are assumed to have outcome scores that are, on average, 1 or 2 points higher or lower than for those with observed data. The differently coloured markers show scenarios whereby the sensitivity assumptions are applied to only one or both trial arms included in the comparison (pattern mixture model).

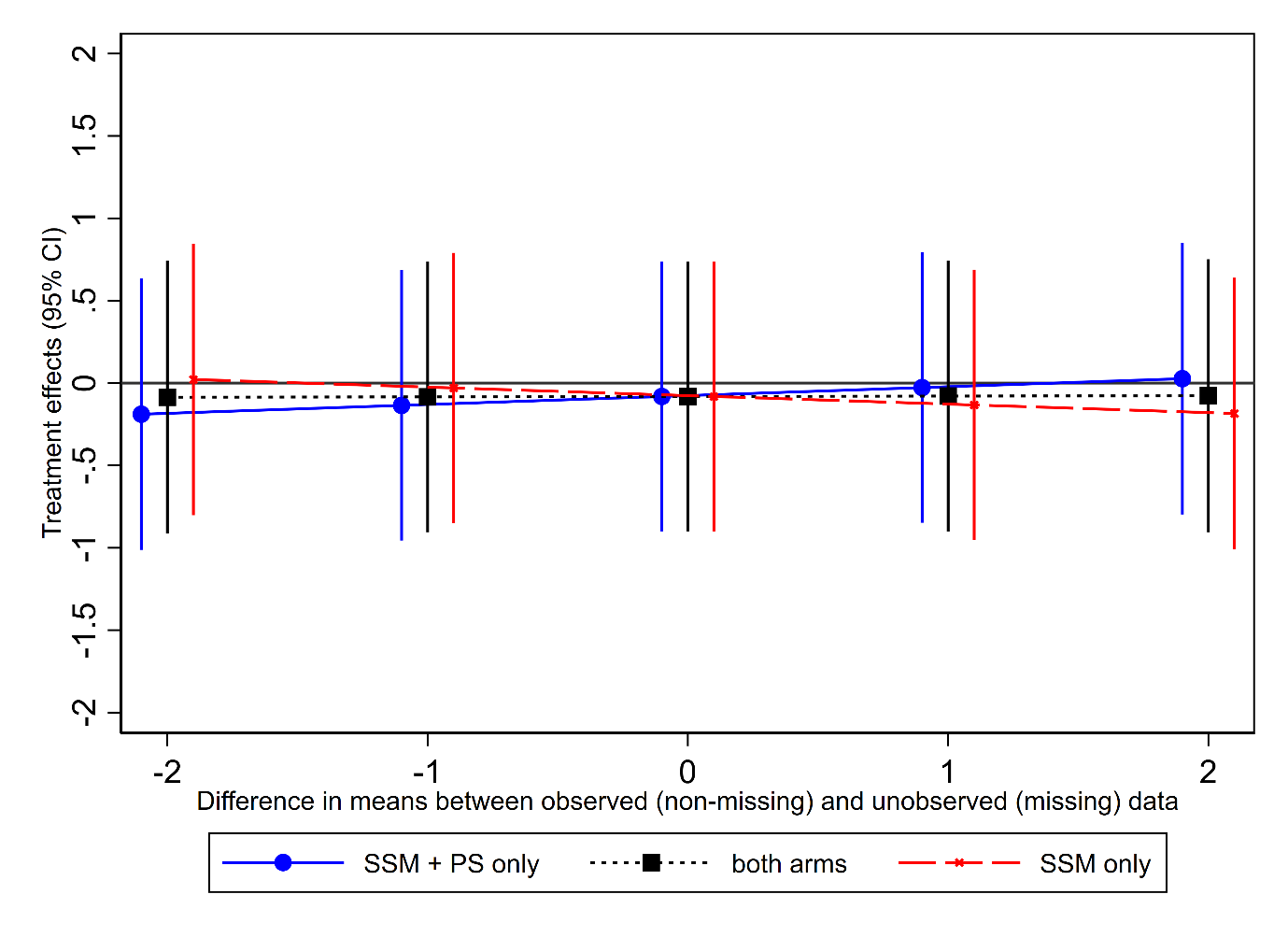
For example, the red marker on the far right site of the third graph considers the scenario in which participants with missing 8 week AUSCAN pain index data in the SSM + PS arm are assumed to have outcomes that are, on average, 2 points higher than for those with available data (i.e. they are assumed to report higher levels of pain). The treatment effect in this scenario decreases to -0.4 (from -0.5 at delta = 0). However, the confidence interval around this treatment effect still crosses the zero-line on the y-axis, indicating there is insufficient evidence to suggest that there is a benefit of SSM +S over SSM + PS in this sensitivity analysis scenario.

In fact, all confidence intervals in the plots cross 0, indicating that the trial conclusions do not change under any of the missing not at random scenarios.

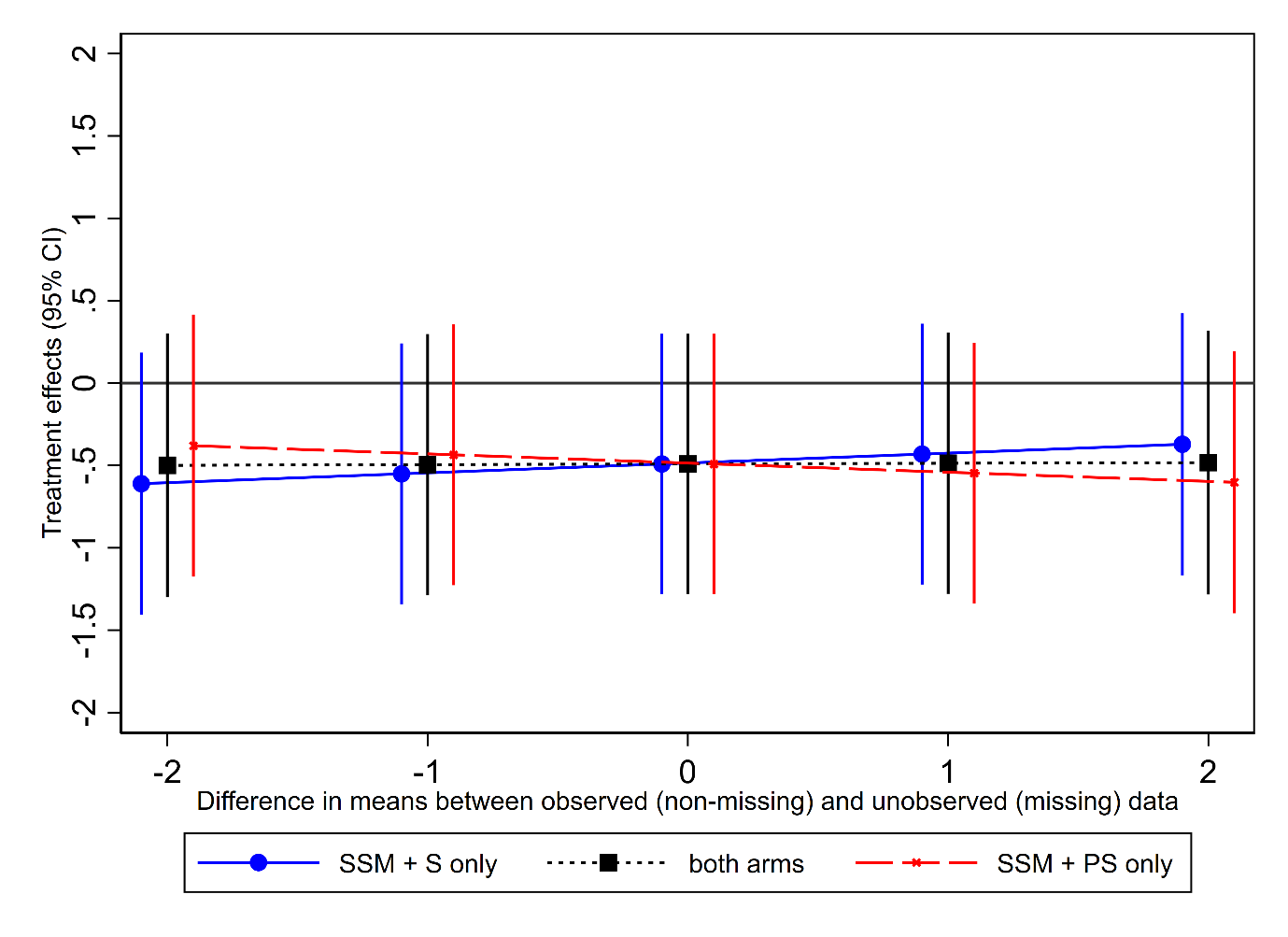
We decided to use deviations from the missing at random assumption of up to 2 points, which was used as the target effect size in the sample size calculation. We do not believe that larger average differences between those with available and missing data are likely, as the reason for losses to follow-up indicated a balance between participants withdrawing from the trial due to deteriorated health and other non-health related reasons.

****

**Figure SF 7.1. Sensitivity of SSM + S vs. SSM comparison of AUSCAN pain index to missing data not at random using a PMM (pattern mixture model) approach**

****

**Figure SF 7.2. Sensitivity of SSM + PS vs. SSM comparison of AUSCAN pain index to missing data not at random using a PMM (pattern mixture model) approach**



**Figure SF 7.3 Sensitivity of SSM + S vs. SSM + PS comparison of AUSCAN pain index to missing data not at random using a PMM (pattern mixture model) approach**