**Appendix A: Power Analysis**

To calculate the appropriate size of the sample, we performed power analyzes. In addition, we had to make some statistical choices: We chose a power of 0.80 (1 – β = 0,80). This means that we accept the usual chance of 20% to miss a truly present effect in this study. We chose a desired level of significance of 0.05 (α = 0,05), thus accepting a chance of 5% than the conclusion about a difference between both groups is false positive. We will use 2-sided test (as usual) because we are not sure about the direction of the effect. We expect a clinically relevant difference of + 0.2 (difference between score after study - before the study) on the sub-scales 'psychological' and 'environmental' and a difference of + 0.4 on the sub-scale social. A difference of 0.2 on the sub-scales of the WHOQOL index Bref indicates a small effect size and a difference of 0.4 indicates a moderate effect size (Bonomi, Patrick, Bushnell, & Martin, 2000). Finally, the expected standard deviation of the total score of the WHOQOL Index Bref (average of all sub-scales) in a normal sample is 0.65 (Webster, Nicholas, Velacott, Cridland, & Fawcett, 2010). (I have not found standard deviations on a sample of older adults but I guess the standard deviation will certainly not be greater in this particular sample). According to our calculations (see below), the appropriate number of subjects is 59.

N = ((Zα + Zβ)² \* (p₁ \* (1 - p₁) + p₂ \* (1 - p₂))) / (p₁ - p₂)²

α = 0,05

Zα = 1, 96

1 – β = 0,80

β = 1 – 0,80

Zβ = 0,84

p₁max = 0,4

p₂max = 0,65

N = ((1,96 + 0,84)² \* (0,4 \* (1 – 0,4) + 0,65 \* (1 – 0,65))) / (0,4 – 0,65)²

N = (7,84 \* (0,24 + 0,2275)) / 0,0625

N = 3,6652 / 0,0625

N = 58, 6432

References

* Webster, J., Nicholas, C., Velacott, C., Cridland, N., & Fawcett, L. (2010). Validation of the WHOQOL‐BREF among women following childbirth. Australian and New Zealand Journal of Obstetrics and Gynaecology, 50(2), 132-137.
* Bonomi, A. E., Patrick, D. L., Bushnell, D. M., & Martin, M. (2000). Validation of the United States' version of the World Health Organization Quality of Life (WHOQOL) instrument. Journal of clinical epidemiology, 53(1), 1-12.