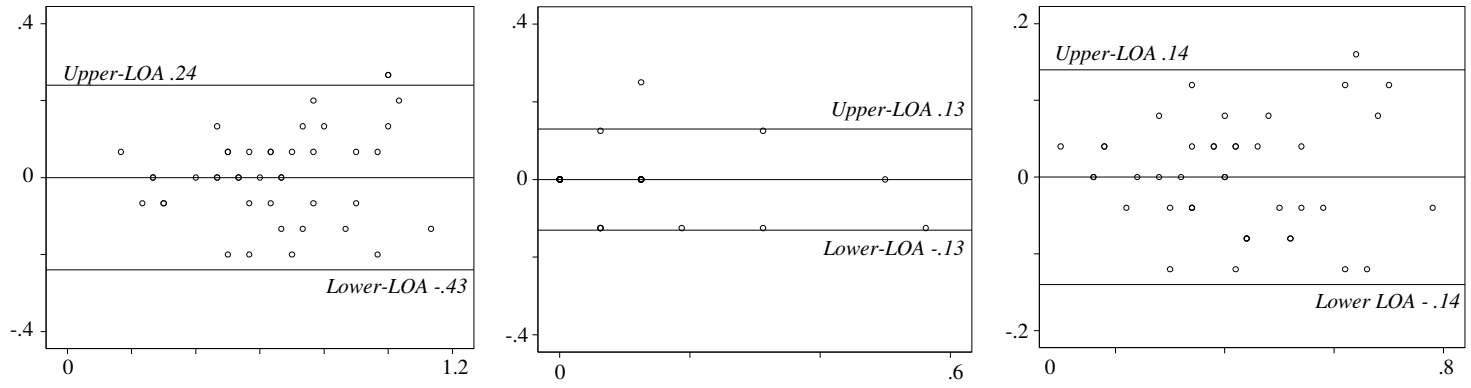
Web only appendix A: Text and figures that show the results of the analyses of the Limit of agreements.

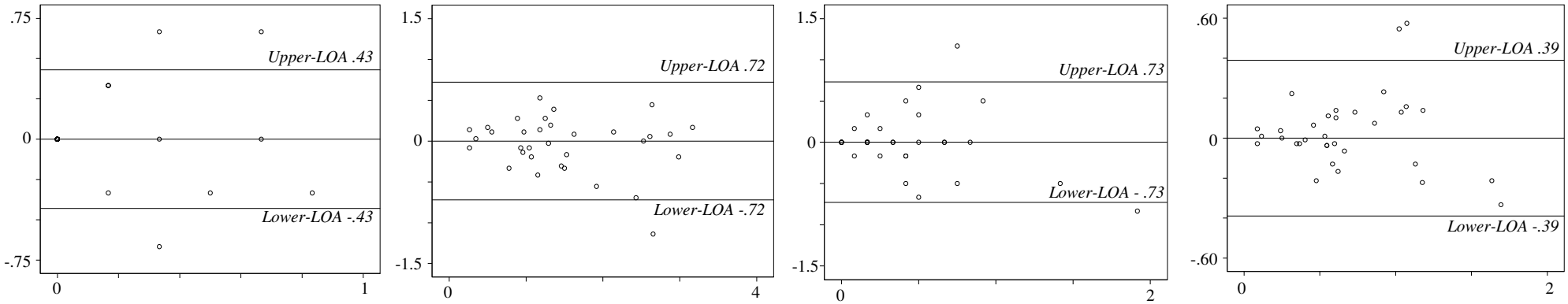
Web only appendix A presents the graphs of the Limits of Agreement. In this plot the average outcome of two contemporaneous observers (x-axis) is compared with the difference between these two observers (y-axis). The Limits of Agreement (LOA) were calculated using the method of Euser et al. [1]. This method was used because the observers are considered random in the present study. The results are graphically displayed by plotting the average outcome of the two observers (x-axis) against the difference between their scores (y-axis) in a 'Bland and Altman plot'. By randomly subtracting the score of observer A from observer B or vice versa, the mean difference was centered at zero.

The graphs show that the results stay well within the upper and lower limits of agreement. The number of contemporaneous observations during the baseline measurement in ED was insufficient to calculate a valid ICC, SEM and LOA. The number of verbal behaviors observed in the category Self was too low in the follow-up measurement of the ED study to make a meaningful plot of the LOA.



1a. Human interaction 1b. Environment 1c. EPOC

Figure 1[abc]. Limit of Agreement-plots for the overall EPOC score and the category scores in the ED in the follow-up measurement. The average outcome of the two observers (x-axis) is plotted against the difference between their scores centered at zero (y-axis). The Limits of Agreement ($0 \pm 1.96*\sqrt{2}*SEM$) are depicted in every figure. Too few contemporaneous observations were conducted during the baseline measurement to enable the LOA to be calculated. The category Self was under-observed in the follow-up measurement to make a meaningful plot.



2a. Self (Baseline ICU) 2b. Human interaction (Baseline ICU) 2c. Environment (Baseline ICU) 2d. EPOC (Baseline ICU)

2e. Self (Follow-up ICU) 2f. Human interaction (Follow-up ICU) 2g. Environment (Follow-up ICU) 2h. EPOC (Follow-up ICU)

Figure 2[abcdefgh]. Limit of Agreement-plots for the overall EPOC score and the category scores on the ICU in both measurements (baseline and follow-up). The average outcome of the two observers (x-axis) is plotted against the difference between their scores centered at zero (y-axis). The Limits Of Agreement ($0 \pm 1.96*\sqrt{2}*SEM$) are depicted in every figure.

Reference list

1. Euser AM, Dekker FW, Le Cessie S. A practical approach to Bland-Altman plots and variation coefficients for log transformed variables. J Clin Epidemiol. 2008;**61(10)**:978-982.