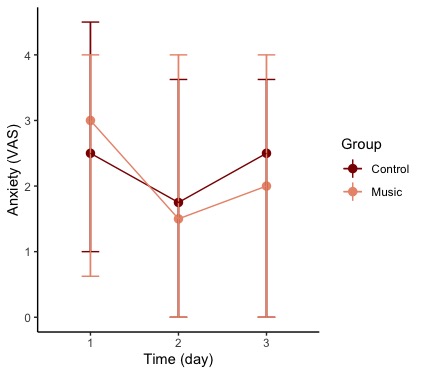
Additional file 1 CONSORT 2010 checklist of information to include when reporting a randomised trial

|  |  |  |  |
| --- | --- | --- | --- |
| Section/Topic | Item No | Checklist item | Reported on page No |
| Title and abstract | | | |
|  | 1a | Identification as a randomized trial in the title | 1 |
| 1b | Structured summary of trial design, methods, results, and conclusions (for specific guidance see CONSORT for abstracts) | 2/3 |
| Introduction | | | |
| Background and objectives | 2a | Scientific background and explanation of rationale | 4 |
| 2b | Specific objectives or hypotheses | 5 |
| Methods | | | |
| Trial design | 3a | Description of trial design (such as parallel, factorial) including allocation ratio | 6 |
| 3b | Important changes to methods after trial commencement (such as eligibility criteria), with reasons | NA |
| Participants | 4a | Eligibility criteria for participants | 6 |
| 4b | Settings and locations where the data were collected | 6 |
| Interventions | 5 | The interventions for each group with sufficient details to allow replication, including how and when they were actually administered | 7 |
| Outcomes | 6a | Completely defined pre-specified primary and secondary outcome measures, including how and when they were assessed | 8 |
| 6b | Any changes to trial outcomes after the trial commenced, with reasons | NA |
| Sample size | 7a | How sample size was determined | 9 |
| 7b | When applicable, explanation of any interim analyses and stopping guidelines | NA |
| Randomisation: |  |  |  |
| Sequence generation | 8a | Method used to generate the random allocation sequence | 7 |
| 8b | Type of randomisation; details of any restriction (such as blocking and block size) | 7 |
| Allocation concealment mechanism | 9 | Mechanism used to implement the random allocation sequence (such as sequentially numbered containers), describing any steps taken to conceal the sequence until interventions were assigned | 7 |
| Implementation | 10 | Who generated the random allocation sequence, who enrolled participants, and who assigned participants to interventions | 7 |
| Blinding | 11a | If done, who was blinded after assignment to interventions (for example, participants, care providers, those assessing outcomes) and how | 7 |
| 11b | If relevant, description of the similarity of interventions | NA |
| Statistical methods | 12a | Statistical methods used to compare groups for primary and secondary outcomes | 9 |
| 12b | Methods for additional analyses, such as subgroup analyses and adjusted analyses | 9 |
| Results | | | |
| Participant flow (a diagram is strongly recommended) | 13a | For each group, the numbers of participants who were randomly assigned, received intended treatment, and were analysed for the primary outcome | 10 |
| 13b | For each group, losses and exclusions after randomisation, together with reasons | 10 |
| Recruitment | 14a | Dates defining the periods of recruitment and follow-up | 10 |
| 14b | Why the trial ended or was stopped | 10 |
| Baseline data | 15 | A table showing baseline demographic and clinical characteristics for each group | Table 1 |
| Numbers analysed | 16 | For each group, number of participants (denominator) included in each analysis and whether the analysis was by original assigned groups | 10 |
| Outcomes and estimation | 17a | For each primary and secondary outcome, results for each group, and the estimated effect size and its precision (such as 95% confidence interval) | 10/11 |
| 17b | For binary outcomes, presentation of both absolute and relative effect sizes is recommended | 10/11 |
| Ancillary analyses | 18 | Results of any other analyses performed, including subgroup analyses and adjusted analyses, distinguishing pre-specified from exploratory | 10/11 |
| Harms | 19 | All important harms or unintended effects in each group (for specific guidance see CONSORT for harms) | NA |
| Discussion | | | |
| Limitations | 20 | Trial limitations, addressing sources of potential bias, imprecision, and, if relevant, multiplicity of analyses | 14 |
| Generalisability | 21 | Generalisability (external validity, applicability) of the trial findings | 14/15 |
| Interpretation | 22 | Interpretation consistent with results, balancing benefits and harms, and considering other relevant evidence | 12-15 |
| Other information | | |  |
| Registration | 23 | Registration number and name of trial registry | 3 |
| Protocol | 24 | Where the full trial protocol can be accessed, if available | Reference 24 |
| Funding | 25 | Sources of funding and other support (such as supply of drugs), role of funders | Reference 24 |

**Additional file 2 Linear regression statistics anxiety time-by-group interaction**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Parameter | Estimate | Std. Error | *df* | *t* | Significance | 95% confidence interval | |
| **Lower limit** | **Upper limit** |
| Intercept | 3.31 | 2.29 | 85.83 | 1.44 | 0.15 | -1.07 | 7.71 |
| Group | 2.47 | 2.86 | 87.85 | 0.86 | 0.39 | -3.01 | 7.93 |
| Study day | -0.16 | 0.20 | 160.88 | -0.77 | 0.44 | -0.56 | 0.24 |
| Age | -0.01 | 0.03 | 79.87 | -0.21 | 0.84 | -0.07 | 0.06 |
| Sex | 0.43 | 0.66 | 83.32 | 0.66 | 0.51 | -0.82 | 0.06 |

**Additional file 3 Anxiety time-by-group interaction**



**Additional file 4 Secondary outcomes**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Outcome | N | Overall  Median/mean (SD/IQR) | N | Control  Median/mean (SD/IQR) | N | Intervention  Median/mean (SD/IQR) | P value |
| STAI-6 day 1 | 89 | 44.4 (10.6) | 43 | 44.8 (10.6) | 46 | 44.0 (10.7) | 0.71 |
| STAI-6 day 2 | 83 | 42.5 (11.5) | 39 | 43.1 (11.7) | 44 | 42.0 (11.5) | 0.67 |
| STAI-6 day 3 | 71 | 42.3 (11.3) | 35 | 42.8 (10.5) | 36 | 41.8 (12.2) | 0.73 |
| Sleep day 1 | 82 | 5.0 (3.0-6.0) | 38 | 5.0 (4.0-6.0) | 44 | 4.5 (3.0-5.0) | 0.03 |
| Sleep day 2 | 74 | 4.0 (3.0-5.9) | 34 | 5.0 (3.5-6.0) | 40 | 4.0 (3.0-5.0) | 0.054 |
| Sleep day 3 | 51 | 5.0 (3.3-6.0) | 26 | 5.8 (4.1-6.0) | 25 | 5.0 (3.0-6.0) | 0.13 |
| Pain day 1 | 80 | 0.0 (0.0-0.7) | 35 | 0.0 (0.0-0.7) | 45 | 0.0 (0.0-1.0) | 0.50 |
| Pain day 2 | 77 | 0.0 (0.0-1.0) | 37 | 0.0 (0.0-1.0) | 40 | 0.0 (0.0-1.0) | 0.68 |
| Pain day 3 | 75 | 0.0 (0.0-1.0) | 35 | 0.0 (0.0-0.7) | 40 | 0.0 (0.0-1.6) | 0.21 |
| Pain day 4 | 74 | 0.0 (0.0-1.0) | 34 | 0.0 (0.0-1.0) | 40 | 0.0 (0.0-1.3) | 0.71 |
| Pain day 5 | 66 | 0.2 (0.0-1.0) | 30 | 0.0 (0.0-1.0) | 36 | 0.3 (0.0-1.0) | 0.28 |
| Pain day 6 | 64 | 0.0 (0.0-1.0) | 30 | 0.0 (0.0-1.0) | 34 | 0.0 (0.0-1.0) | 0.57 |
| Pain day 7 | 59 | 0.0 (0.0-0.7) | 27 | 0.0 (0.0-0.5) | 32 | 0.0 (0.0-1.0) | 0.59 |
| ICDSC day 1 | 90 | 1.2 (0.1-2.7) | 42 | 1.2 (0.4-2.5) | 48 | 1.2 (0.0-2.8) | 0.94 |
| Delirium day 1, % | 15 | 16.0 | 7 | 15.9 | 8 | 16.0 | 0.64 |
| ICDSC day 2 | 88 | 1.5 (0.5-2.7) | 41 | 1.5 (0.7-2.7) | 47 | 1.5 (0.5-2.5) | 1.00 |
| Delirium day 2, % | 23 | 24.5 | 11 | 25.0 | 12 | 24.0 | 0.55 |
| ICDSC day 3 | 82 | 1.4 (0.0-2.7) | 37 | 1.3 (0.3-3.0) | 45 | 1.5 (0.0-2.0) | 0.63 |
| Delirium day 3, % | 19 | 20.2 | 9 | 20.5 | 10 | 20.0 | 0.31 |
| ICDSC day 4 | 65 | 1.0 (0.3-2.3) | 31 | 1.0 (0.5-2.7) | 34 | 1.0 (0.0-2.0) | 0.67 |
| Delirium day 4, % | 21 | 22.3 | 10 | 22.7 | 11 | 22.0 | 0.98 |
| ICDSC day 5 | 59 | 1.0 (0.3-2.0) | 29 | 1.0 (0.3-2.7) | 30 | 1.0 (0.1-2.0) | 0.35 |
| Delirium day 5, % | 21 | 22.3 | 12 | 27.3 | 9 | 18.0 | 0.56 |
| ICDSC day 6 | 55 | 1.0 (0.0-2.5) | 29 | 1.0 (0.0-2.5) | 26 | 1.0 (0.4-2.3) | 0.51 |
| Delirium day 6, % | 22 | 23.4 | 10 | 22.7 | 12 | 24.0 | 0.97 |
| ICDSC day 7 | 47 | 1.0 (0.0-2.0) | 21 | 1.0 (0.0-2.0) | 26 | 1.0 (0.1-2.0) | 0.69 |
| Delirium day 7, % | 20 | 21.3 | 10 | 22.7 | 10 | 20.0 | 0.91 |
| HR at baseline\* | 94 | 89.9 (17.4) | 44 | 91.9 (16.2) | 50 | 88.0 (19.2) | 0.29 |
| HR day 1 | 94 | 92.7 (12.0) | 44 | 92.4 (11.2) | 50 | 92.9 (12.8) | 0.86 |
| HR day 2 | 91 | 96.0 (90.5-100.0) | 42 | 96.3 (88.5-103.4) | 49 | 96.0 (91.0-99.0) | 0.64 |
| HR day 3 | 85 | 95.8 (14.0) | 39 | 97.3 (14.6) | 46 | 94.5 (13.5) | 0.42 |
| HR day 4 | 86 | 92.9 (16.0) | 41 | 97.0 (18.8) | 45 | 89.2 (12.1) | 0.03 |
| HR day 5 | 81 | 91.6 (16.1) | 39 | 92.9 (17.2) | 42 | 90.3 (15.1) | 0.47 |
| HR day 6 | 79 | 91.0 (14.1) | 38 | 93.1 (14.2) | 41 | 88.9 (13.8) | 0.19 |
| HR day 7 | 75 | 89.9 (15.7) | 34 | 93.0 (17.5) | 41 | 87.4 (13.7) | 0.13 |
| MAP at baseline\* | 93 | 85.4 (12.8) | 44 | 85.3 (12.8) | 49 | 85.6 (13.1) | 0.91 |
| MAP day 1 | 94 | 85.5 (12.9) | 44 | 87.5 (12.2) | 50 | 83.7 (13.3) | 0.16 |
| MAP day 2 | 91 | 89.0 (78.3-97.3) | 42 | 88.5 (76.1-100.3) | 49 | 91.0 (80.0-97.0) | 0.83 |
| MAP day 3 | 84 | 88.4 (13.6) | 39 | 90.0 (14.4) | 45 | 86.9 (12.8) | 0.31 |
| MAP day 4 | 86 | 87.3 (11.5) | 41 | 87.0 (11.2) | 45 | 87.5 (12.0) | 0.86 |
| MAP day 5 | 81 | 84.9 (11.3) | 39 | 85.1 (12.5) | 42 | 84.7 (10.1) | 0.88 |
| MAP day 6 | 79 | 84.5 (74.8-90.3) | 38 | 87.3 (78.3-92.8) | 41 | 82.5 (74.5-89.0) | 0.19 |
| MAP day 7 | 75 | 85.9 (12.4) | 34 | 86.2 (13.3) | 41 | 85.6 (11.8) | 0.84 |
| RASS day 1 | 88 | 0 (-1 - 0) | 42 | 0 (0-0) | 46 | 0 (-1 - 0) | 0.13 |
| RASS day 2 | 85 | 0 (0-0) | 39 | 0 (0-0) | 46 | 0 (0-0) | 0.83 |
| RASS day 3 | 79 | 0 (0-0) | 37 | 0 (-1 - 0) | 42 | 0 (0-0) | 0.56 |
| RASS day 4 | 61 | 0 (0-0) | 29 | 0 (0-0) | 32 | 0 (-1 - 0) | 0.13 |
| RASS day 5 | 55 | 0 (-1 - 0) | 29 | 0 (-1 - 0) | 26 | 0 (0-0) | 0.52 |
| RASS day 6 | 45 | 0 (0-0) | 26 | 0 (0-0) | 19 | 0 (0-0) | 0.56 |
| RASS day 7 | 40 | 0 (0-0) | 23 | 0 (0-0) | 17 | 0 (0-0) | 0.64 |
| Hospital LOS after inclusion, days | 89 | 21.0 (14.0-32.0) | 40 | 21.0 (16.8-40.3) | 49 | 21.0 (12.0-30.0) | 0.14 |
| ICU LOS after inclusion, days | 92 | 9.5 (4.0-17.0) | 42 | 10.0 (6.0-17.8) | 50 | 8.0 (4.0-12.0) | 0.21 |
| MV duration total, hours | 94 | 198.9 (11.2-685.7) | 44 | 232.2 (29.4-757.7) | 50 | 178.4 (0.0-452.9) | 0.26 |
| Mortality within 30 days after inclusion, N, % | 17 | 18.1 | 4 | 9.1 | 13 | 26.0 | 0.06 |
| Complications, N, % | 19 | 20.2 | 6 | 13.6 | 13 | 26.0 | 0.22 |
| - Self-extubation, n, % | 5 | 23.8 | 2 | 40.0 | 3 | 60.0 | 0.78 |
| - Removal line/tube, n, % | 11 | 52.4 | 3 | 27.3 | 8 | 72.7 |
| - Othera, n, % | 5 | 23.8 | 1 | 20.0 | 4 | 80.0 |
| N; number of patients, n; number of events, SD; standard deviation, IQR; interquartile range, ICDSC; intensive care delirium screening checklist, HR; heart rate, MAP; mean arterial pressure, RASS; Richmond agitation-sedation scale, LOS; length of stay; ICU; intensive care unit, MV; mechanical ventilation  \*Baseline is defined as day 0, the day before the intervention started.  aOther; hallucinations (4 patients), panic (1 patient).  Based on the Shapiro-Wilk test of normality means (SD) or medians (IQR) were reported. | | | | | | | |

**Additional file 5 Medication requirement**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Overall | | Control | | | Intervention | | |  | |
| Drug, N/mean, %/SD | N | % | | N | % | | N | % | | Pa |
| Continuous sedatives at baselineb | 20 | 21.3 | | 10 | 22.7 | | 10 | 20.0 | | 0.75 |
| Continuous Sedatives day 1 | 20 | 21.3 | | 11 | 25.0 | | 9 | 18.0 | | 0.57 |
| Continuous Sedatives day 2 | 12 | 12.8 | | 7 | 15.9 | | 5 | 10.0 | | 0.58 |
| Continuous Sedatives day 3 | 11 | 11.7 | | 6 | 13.6 | | 5 | 10.0 | | 0.82 |
| Continuous Sedatives day 4 | 10 | 10.6 | | 4 | 9.1 | | 6 | 12.0 | | 0.90 |
| Continuous Sedatives day 5 | 11 | 11.7 | | 6 | 13.6 | | 5 | 10.0 | | 0.82 |
| Continuous Sedatives day 6 | 10 | 10.6 | | 5 | 11.4 | | 5 | 10.0 | | 1.00 |
| Continuous Sedatives day 7 | 10 | 10.6 | | 3 | 6.8 | | 7 | 14.0 | | 0.43 |
| Propofol at baseline | 257.6 (981.6) | | | 289.4 (1174.0) | | | 229.7 (785.5) | | | 0.95 |
| Propofol day 1 | 160.6 (663.8) | | | 189.4 (640.3) | | | 135.3 (689.4) | | | 0.81 |
| Propofol day 2 | 113.9 (666.1) | | | 89.7 (595.2) | | | 135.3 (728.1) | | | 0.65 |
| Propofol day 3 | 76.4 (498.7) | | | 57.3 (270.9) | | | 93.2 (638.0) | | | 0.91 |
| Propofol day 4 | 93.0 (638.0) | | | 0.0 (0.0) | | | 174.8 (870.6) | | | 0.10 |
| Propofol day 5 | 115.9 (658.4) | | | 50.6 (233.2) | | | 173.3 (876.2) | | | 0.59 |
| Propofol day 6 | 185.8 (919.4) | | | 95.1 (593.5) | | | 265.6 (1132.0) | | | 0.75 |
| Propofol day 7 | 178.7 (785.1) | | | 71.6 (474.9) | | | 272.9 (976.0) | | | 0.13 |
| Clonidine at baseline | 0.10 (0.33) | | | 0.09 (0.31) | | | 0.11 (0.35) | | | 0.88 |
| Clonidine day 1 | 0.09 (0.30) | | | 0.08 (0.26) | | | 0.10 (0.33) | | | 0.90 |
| Clonidine day 2 | 0.08 (0.28) | | | 0.07 (0.25) | | | 0.09 (0.30) | | | 0.91 |
| Clonidine day 3 | 0.06 (0.22) | | | 0.06 (0.24) | | | 0.06 (0.19) | | | 0.86 |
| Clonidine day 4 | 0.05 (0.20) | | | 0.07 (0.25) | | | 0.03 (0.14) | | | 0.53 |
| Clonidine day 5 | 0.04 (0.18) | | | 0.06 (0.23) | | | 0.02 (0.12) | | | 0.52 |
| Clonidine day 6 | 0.03 (0.14) | | | 0.04 (0.18) | | | 0.01 (0.09) | | | 0.26 |
| Clonidine day 7 | 0.01 (0.07) | | | 0.00 (0.03) | | | 0.02 (0.09) | | | 0.64 |
| Midazolam at baseline | NA | | | NA | | | NA | | | NA |
| Midazolam day 1 | 0.05 (0.52) | | | 0.11 (0.75) | | | 0.00 (0.00) | | | 0.30 |
| Midazolam day 2 | 0.05 (0.52) | | | 0.11 (0.75) | | | 0.00 (0.00) | | | 0.30 |
| Midazolam day 3 | NA | | | NA | | | NA | | | NA |
| Midazolam day 4 | 0.05 (0.52) | | | 0.00 (0.00) | | | 0.10 (0.71) | | | 0.36 |
| Midazolam day 5 | 0.03 (0.26) | | | 0.00 (0.00) | | | 0.05 (0.35) | | | 0.36 |
| Midazolam day 6 | 1.2 (10.5) | | | 0.00 (0.00) | | | 2.23 (14.36) | | | 0.19 |
| Midazolam day 7 | 0.63 (5.17) | | | 0.00 (0.00) | | | 1.18 (7.07) | | | 0.19 |
| Dexmedetomidine at baseline | 0.13 (1.29) | | | 0.28 (1.88) | | | 0.00 (0.00) | | | 0.30 |
| Dexmedetomidine day 1 | 0.09 (0.91) | | | 0.20 (1.33) | | | 0.00 (0.00) | | | 0.30 |
| Dexmedetomidine day 2 | 0.08 (0.74) | | | 0.16 (1.09) | | | 0.00 (0.00) | | | 0.30 |
| Dexmedetomidine day 3 | 0.12 (0.84) | | | 0.16 (1.09) | | | 0.08 (0.54) | | | 0.93 |
| Dexmedetomidine day 4 | 0.23 (1.69) | | | 0.16 (1.09) | | | 0.30 (2.09) | | | 0.95 |
| Dexmedetomidine day 5 | 0.29 (2.23) | | | 0.16 (1.09) | | | 0.41 (2.89) | | | 0.95 |
| Dexmedetomidine day 6 | 0.35 (2.72) | | | 0.16 (1.09) | | | 0.51 (3.59) | | | 0.95 |
| Dexmedetomidine day 7 | 0.34 (2.62) | | | 0.16 (1.09) | | | 0.49 (3.46) | | | 0.95 |
| Opioids at baseline | 50 | 53.2 | | 28 | 63.6 | | 22 | 22.0 | | 0.06 |
| Opioids day 1 | 50 | 53.2 | | 29 | 65.9 | | 21 | 42.0 | | 0.02 |
| Opioids day 2 | 42 | 44.6 | | 24 | 54.5 | | 18 | 36.0 | | 0.07 |
| Opioids day 3 | 41 | 43.6 | | 22 | 50.0 | | 19 | 39.0 | | 0.24 |
| Opioids day 4 | 39 | 41.4 | | 21 | 47.7 | | 18 | 36.0 | | 0.25 |
| Opioids day 5 | 34 | 36.2 | | 19 | 43.2 | | 15 | 30.0 | | 0.18 |
| Opioids day 6 | 34 | 36.2 | | 18 | 40.9 | | 16 | 32.0 | | 0.37 |
| Opioids day 7 | 34 | 36.2 | | 17 | 38.6 | | 18 | 36.0 | | 0.79 |
| Fentanyl equivalentsc at baseline | 2.2 (4.4) | | | 2.7 (4.7) | | | 1.7 (4.2) | | | 0.04 |
| Fentanyl equivalents day 1 | 2.4 (5.3) | | | 3.1 (5.7) | | | 1.8 (5.0) | | | 0.70\* |
| Fentanyl equivalents day 2 | 1.9 (4.9) | | | 2.3 (4.7) | | | 1.5 (5.1) | | | 0.59\* |
| Fentanyl equivalents day 3 | 1.5 (4.3) | | | 1.8 (4.4) | | | 1.3 (4.3) | | | 0.42\* |
| Fentanyl equivalents day 4 | 1.5 (4.4) | | | 1.8 (4.5) | | | 1.3 (4.4) | | | 0.36\* |
| Fentanyl equivalents day 5 | 1.4 (4.1) | | | 1.6 (3.8) | | | 1.3 (4.3) | | | 0.40\* |
| Fentanyl equivalents day 6 | 1.2 (3.8) | | | 0.8 (2.3) | | | 1.5 (4.8) | | | 0.73\* |
| Fentanyl equivalents day 7 | 1.2 (4.1) | | | 0.7 (2.0) | | | 1.7 (5.3) | | | 0.70\* |
| Antipsychotics at baseline | 38 | 40.4 | | 14 | 31.8 | | 24 | 48.0 | | 0.11 |
| Antipsychotics day 1 | 44 | 46.8 | | 18 | 40.9 | | 26 | 52.0 | | 0.28 |
| Antipsychotics day 2 | 43 | 45.7 | | 19 | 43.2 | | 24 | 48.0 | | 0.53 |
| Antipsychotics day 3 | 46 | 48.9 | | 20 | 45.5 | | 26 | 52.0 | | 0.47 |
| Antipsychotics day 4 | 41 | 43.6 | | 18 | 40.9 | | 23 | 46.0 | | 0.80 |
| Antipsychotics day 5 | 42 | 44.6 | | 20 | 45.5 | | 22 | 44.0 | | 0.39 |
| Antipsychotics day 6 | 39 | 41.4 | | 19 | 43.2 | | 20 | 40.0 | | 0.12 |
| Antipsychotics day 7 | 36 | 38.3 | | 16 | 36.4 | | 20 | 40.0 | | 0.11 |
| Haloperidol at baseline | 1.56 (3.37) | | | 1.48 (3.23) | | | 1.63 (3.52) | | | 0.79 |
| Haloperidol day 1 | 1.65 (3.49) | | | 1.82 (3.54) | | | 1.50 (3.47) | | | 0.64 |
| Haloperidol day 2 | 1.91 (3.77) | | | 2.20 (3.96) | | | 1.65 (3.61) | | | 0.39 |
| Haloperidol day 3 | 1.98 (3.98) | | | 1.98 (3.74) | | | 1.99 (4.21) | | | 0.88 |
| Haloperidol day 4 | 1.82 (3.99) | | | 1.41 (3.29) | | | 2.19 (4.51) | | | 0.41 |
| Haloperidol day 5 | 2.01 (4.02) | | | 1.64 (2.97) | | | 2.45 (4.76) | | | 0.71 |
| Haloperidol day 6 | 1.80 (3.80) | | | 1.25 (2.31) | | | 2.28 (4.72) | | | 0.75 |
| Haloperidol day 7 | 1.37 (3.18) | | | 1.06 (2.27) | | | 1.65 (3.80) | | | 0.57 |
| Quetiapine at baseline | 7.45 (15.48) | | | 6.53 (15.13) | | | 8.25 (15.89) | | | 0.53 |
| Quetiapine day 1 | 7.73 (14.32) | | | 7.67 (14.06) | | | 7.78 (14.69) | | | 0.86 |
| Quetiapine day 2 | 8.99 (15.49) | | | 8.97 (16.25) | | | 9.00 (14.85) | | | 0.76 |
| Quetiapine day 3 | 11.04 (19.04) | | | 11.65 (20.95) | | | 10.50 (17.38) | | | 0.90 |
| Quetiapine day 4 | 9.57 (20.61) | | | 13.07 (26.41) | | | 6.50 (13.18) | | | 0.27 |
| Quetiapine day 5 | 9.04 (17.72) | | | 10.80 (20.28) | | | 7.50 (15.15) | | | 0.47 |
| Quetiapine day 6 | 8.78 (17.85) | | | 10.80 (20.64) | | | 7.00 (14.97) | | | 0.46 |
| Quetiapine day 7 | 6.78 (14.85) | | | 7.95 (16.64) | | | 5.75 (13.17) | | | 0.78 |
| Olanzapine at baseline | 0.12 (1.03) | | | 0.00 (0.00) | | | 0.20 (1.41) | | | 0.36 |
| Olanzapine day 1 | 0.13 (0.77) | | | 0.00 (0.00) | | | 0.25 (1.04) | | | 0.10 |
| Olanzapine day 2 | 0.05 (0.36) | | | 0.00 (0.00) | | | 0.1 (0.49) | | | 0.19 |
| Olanzapine day 3 | 0.03 (0.26) | | | 0.00 (0.00) | | | 0.06 (0.36) | | | 0.19 |
| Olanzapine day 4 | 0.08 (0.57) | | | 0.00 (0.00) | | | 0.15 (0.78) | | | 0.19 |
| Olanzapine day 5 | 0.08 (0.57) | | | 0.00 (0.00) | | | 0.15 (0.78) | | | 0.19 |
| Olanzapine day 6 | 0.11 (0.63) | | | 0.06 (0.38) | | | 0.15 (0.78) | | | 0.64 |
| Olanzapine day 7 | 0.11 (0.63) | | | 0.06 (0.38) | | | 0.15 (0.78) | | | 0.64 |
| Intermittent sedatives at baseline | 30 | 31.9 | | 13 | 29.5 | | 17 | 34.0 | | 0.64 |
| Intermittent sedatives day 1 | 29 | 30.9 | | 12 | 27.3 | | 17 | 34.0 | | 0.48 |
| Intermittent sedatives day 2 | 35 | 37.2 | | 13 | 29.5 | | 22 | 44.0 | | 0.22 |
| Intermittent sedatives day 3 | 35 | 37.2 | | 15 | 34.1 | | 20 | 40.0 | | 0.47 |
| Intermittent sedatives day 4 | 29 | 30.9 | | 14 | 14.9 | | 15 | 30.0 | | 0.81 |
| Intermittent sedatives day 5 | 28 | 29.8 | | 13 | 29.5 | | 15 | 30.0 | | 0.44 |
| Intermittent sedatives day 6 | 28 | 29.8 | | 11 | 25.0 | | 17 | 34.0 | | 0.16 |
| Intermittent sedatives day 7 | 23 | 24.5 | | 10 | 22.7 | | 13 | 26.0 | | 0.11 |
| Lorazepam equivalents at baseline | 0.82 (1.77) | | | 0.82 (1.77) | | | 0.82 (1.78) | | | 0.93 |
| Lorazepam equivalents day 1 | 0.87 (1.73) | | | 0.67 (1.47) | | | 1.03 (1.93) | | | 0.36 |
| Lorazepam equivalents day 2 | 0.95 (1.67) | | | 0.87 (1.77) | | | 1.03 (1.59) | | | 0.27 |
| Lorazepam equivalents day 3 | 1.0 (1.78) | | | 0.94 (1.84) | | | 1.05 (1.75) | | | 0.48 |
| Lorazepam equivalents day 4 | 0.81 (1.59) | | | 0.88 (1.84) | | | 0.75 (1.36) | | | 0.98 |
| Lorazepam equivalents day 5 | 0.87 (1.84) | | | 0.89 (1.93) | | | 0.85 (1.78) | | | 0.98 |
| Lorazepam equivalents day 6 | 0.81 (1.61) | | | 0.75 (1.77) | | | 0.86 (1.48) | | | 0.38 |
| Lorazepam equivalents day 7 | 0.60 (1.29) | | | 0.55 (1.27) | | | 0.65 (1.32) | | | 0.68 |
| For sedatives, opioids, antipsychotics, and benzodiazepines the number of patients that received these are reported, then these were specified by analyzing the dosages.  N; number of patients, SD; standard deviation, NA; not applicable.  \*Corrected for baseline difference in fentanyl equivalents.  aMeans and SD’s are reported but tested with Wilcoxon rank sum test.  bBaseline is defined as day 0, the day before the intervention started.  cCalculations of equivalents are described in the manuscript under statistical analysis.  Based on the Shapiro-Wilk test of normality means (SD) or medians (IQR) were reported. | | | | | | | | | | |

**Additional file 6 ICU Memory and experience**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | N | Overall | N | Control | N | Intervention | P |
| Memory | | | | | | | |
| Hospital admission | 38  9  17 | Clear  Vague  No memory at all | 20  3  9 | Clear  Vague  No memory at all | 18  6  8 | Clear  Vague  No memory at all | 0.56 |
| Hospital before ICU admission | 18  24  17  5 | Everything  Partly  Nothing  NA | 10  13  7  2 | Everything  Partly  Nothing  NA | 8  11  10  3 | Everything  Partly  Nothing  NA | 0.77 |
| ICU stay | 47  17 | Yes  No | 22  10 | Yes  No | 25  7 | Yes  No | 0.57 |
| Remembered items, n | 68 | 7.0 (4.0-12.0) | 32 | 7.0 (3.0-11.5 | 32 | 9.0 (6.8-13.0) | 0.11 |
| Transfer from ICU to nursing department | 46  10  5  2  1 | Clear  Vague  None  NA  missing | 21  7  1  2  1 | Clear  Vague  None  NA  missing | 25  3  4 | Clear  Vague  None | 0.20 |
| Forced memoriesa | 20  44 | Yes  No | 8  24 | Yes  No | 12  20 | Yes  No | 0.42 |
| Admission discussed with people, n | 68 | 2.0 (1.0-3.3) | 32 | 2.0 (1.0-3.0) | 32 | 2.0 (1.0-4.0) | 0.89 |
| Experience | | | | | | | |
| ICU satisfaction score, median (IQR) | 68 | 8.0 (7.0-9.25) | 32 | 8.0 (4.0-9.0) | 32 | 8.0 (7.0-10.0 | 0.14 |
| ICU satisfaction, Likert-scale | 19  32  4  2  0 | Very good  Good  Neutral (did not matter)  Bad  Very bad | 7  18  2  2  0 | Very good  Good  Neutral (did not matter)  Bad  Very bad | 12  14  2  0  0 | Very good  Good  Neutral (did not matter)  Bad  Very bad | 0.28 |
| Would listen to music next admission | 31 | NA | 21  9  1 | Yes  No  Does not know | NA | NA | NA |
| Experience music intervention | 25 | NA | NA | NA | 3  13  9 | Very good  Good  Neutral | NA |
| Listen to music again | 31 | NA | NA | NA | 25  6 | Yes  No | NA  NA |
| Type of musicb | 31 | NA | NA | NA | 9  7  5  27 | Pop  Dutch  Classic  Other | NA |
| N; number of patients, ICU; intensive care unit, IQR; interquartile range, NA; not applicable, n = number of items/people  aForced memories are defined as memories which the patients did not want to recall, but was not able to.  bType of music “Other”: soul, jazz, Arabic, religious, etc. | | | | | | | |