# Influence of a multidimensional music-based exercise program on selected cognitive and motor skills in dementia patients - A Pilot-Study. 

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## Author contributions

All authors contributed to the study conception and design. Material preparation, data collection and analysis were performed by [Prinz A.] and [Schumacher A.]. The first draft of the manuscript was written by [Prinz A.] and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.

Table 1
Results of the additional subtests of the Cerad-NP-Plus test battery.

| Test procedure | Intervention groupn=32 |  |  | Control group $\mathrm{n}=17$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Pre-Test Median (25th/75th percentile) | Post-Test Median (25th/75th percentile) | Wilcoxon- <br> Test (Z- <br> Value; pValue) | Pre-Test Median (25th/75th percentile) | Post-Test Median (25th/75th percentile) | Wilcoxon- <br> Test (Z- <br> Value; pValue) |
| Cognition |  |  |  |  |  |  |
| Bosten- <br> Naming (max. number) | $\begin{gathered} 9.00 \\ (6.00 / 11.75) \end{gathered}$ | $\begin{gathered} 9.00 \\ (7.00 / 12.00) \end{gathered}$ | $\begin{gathered} Z=-2.928 \\ p=.003 \end{gathered}$ | $\begin{gathered} 10.00 \\ (5.00 / 13.50) \end{gathered}$ | $\begin{gathered} 10.00 \\ (5.00 / 12.50) \end{gathered}$ | $\begin{gathered} \mathrm{Z}=-1.496 \\ \mathrm{p}=.135 \end{gathered}$ |
| Constructive practice copy (total points) | $\begin{gathered} 7.00 \\ (4.25 / 7.00) \end{gathered}$ | $\begin{gathered} 7.00 \\ (5.00 / 7.00) \end{gathered}$ | $\begin{gathered} \mathrm{Z}=-0.605 \\ \mathrm{p}=.545 \end{gathered}$ | $\begin{gathered} 6.00 \\ (2.50 / 7.00) \end{gathered}$ | $\begin{gathered} 7.00 \\ (3.50 / 8.00) \end{gathered}$ | $\begin{gathered} Z=-2.448 \\ p=.014 \end{gathered}$ |
| Constructive practice recall (total points) | $\begin{gathered} 0.00 \\ (0.00 / 0.00) \end{gathered}$ | $\begin{gathered} 0.00 \\ (0.00 / 0.00) \end{gathered}$ | $\begin{gathered} \mathrm{Z}=-1.000 \\ \mathrm{p}=.317 \end{gathered}$ | $\begin{gathered} 0.00 \\ (0.00 / 4.50) \end{gathered}$ | $\begin{gathered} 0.00 \\ (0.00 / 4.00) \end{gathered}$ | $\begin{gathered} \mathrm{Z}=-1.473 \\ \mathrm{p}=.141 \end{gathered}$ |
| Word list Recognition recall (\%) | $\begin{gathered} 52.50 \\ (50.00 / 85.00) \end{gathered}$ | $\begin{gathered} 67.50 \\ (50.00 / 83.75) \end{gathered}$ | $\begin{gathered} \mathrm{Z}=-1.467 \\ \mathrm{p}=.142 \end{gathered}$ | $\begin{gathered} 70.00 \\ (50.00 / 100.00) \end{gathered}$ | $\begin{gathered} 75.00 \\ (50.00 / 85.00) \end{gathered}$ | $\begin{gathered} Z=-0.973 \\ p=.331 \end{gathered}$ |
| Trail-Making-Test-B (s) | $\begin{gathered} 291.00 \\ (257.00 / 373.25) \end{gathered}$ | $\begin{gathered} 309.00 \\ (261.00 / 418.00) \end{gathered}$ | $\begin{gathered} \mathrm{Z}=-1.530 \\ \mathrm{p}=.126 \end{gathered}$ | $\begin{gathered} 292.00 \\ (142.00 / 333.25) \end{gathered}$ | $\begin{gathered} 325.00 \\ (162.25 / 374.00) \end{gathered}$ | $\begin{gathered} \mathrm{Z}=-1.826 \\ \mathrm{p}=.068 \end{gathered}$ |

