Supplementary Material

**Validity and reliability of the Cognitive Complaints in Bipolar Disorder Rating Assessment (COBRA) in Japanese patients with bipolar disorder**

**Appendix A.****English version of COBRA**

*Cognitive Complaints in Bipolar Disorder Rating Assessment (COBRA)*

*1. Do you have difficulty remembering peoples' names?*

*2. Do you have difficulty finding objects of daily use (keys, glasses, wristwatch…)?*

*3. Do you find it difficult to remember situations that were important to you?*

*4. Is it hard for you to place important events in time?*

*5. Do you find it hard to concentrate when reading a book or a newspaper?*

*6. Do you have problems recalling what you have read or have been told recently?*

*7. Do you have the feeling that you do not finish what you begin?*

*8. Does it take you longer than normal to complete your daily tasks?*

*9. Have you ever felt disoriented in the street?*

*10. When people remind you of a conversation or a comment you heard, do you get the impression that it is the first time you hear it?*

*11. Is it sometimes difficult for you to find the words to express your ideas?*

*12. Are you easily distracted?*

*13. Do you find it hard to do simple mental calculations?*

*14. Do you get the impression that you cannot follow a conversation?*

*15. Have you noticed that you find it difficult to learn new information?*

*16. Do you struggle to keep focused on a particular task for a long time?*

*0. Never*

*1. Sometimes*

*2. Often*

*3. Always*

**Appendix B. Japanese version of COBRA**

1. 人の名前を思い出すのが難しいですか？
2. 日常的に使用するもの（鍵、メガネ、時計等）の置き場所を思い出すのが難しいですか？
3. 自分にとって重要な状況について思い出すのが難しいですか？
4. 自分にとって重要な出来事がいつ起こったのかを思い出すのが難しいですか？
5. 本や新聞を集中して読むのが難しいですか？
6. 最近読んだものや言われたことを思い出すのが難しいですか？
7. やり始めたことを最後まで終えられないと感じることがありますか
8. 日課をこなすのに普段より時間がかかりますか？
9. 道に迷うことがありますか？
10. 以前聞いた会話や説明を思い出すよう言われたとき、初めて聞くような気がしますか？
11. 自分の考えを表現する際に言葉がみつからないことがありますか？
12. 注意が散漫になりやすいですか？
13. 簡単な暗算がなかなかできないことがありますか？
14. 会話についていけないと感じますか？
15. 新しいことを記憶するのが難しいと気付いたことがありますか？
16. 長時間特定の作業に集中するのが難しいですか？
17. 全くそうではない
18. 時々そうである
19. 頻繁にそうである
20. 常にそうである

**Appendix C.** **Spearman's correlation matrix COBRA and neuropsychological measures**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Correlation |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|   |  |  | COBRA | WCST－CA | WCST－PEM | CPTnumber of errors | CPTreaction time | WFT | STreaction time | STnumber of errors | TMT－A | TMT－B | AVLT immediate memory | AVLT recent memory |
| Spearman's rho | COBRA | Coefficient of correlation | 1 | -0.126 | 0.219 | 0.223 | 0.034 | -0.119 | 0.217 | -0.082 | .356\* | 0.205 | -0.118 | -0.065 |
|   |  | Significance probability (both sides) | . | 0.433 | 0.169 | 0.161 | 0.833 | 0.46 | 0.173 | 0.611 | 0.022 | 0.198 | 0.461 | 0.685 |
|   | WCST－CA | Coefficient of correlation | -0.126 | 1 | -.653\*\* | -0.297 | -0.105 | -0.135 | -0.155 | 0.223 | -0.105 | -0.16 | 0.277 | .338\* |
|   |  | Significance probability (both sides) | 0.433 | . | 0 | 0.06 | 0.515 | 0.402 | 0.332 | 0.162 | 0.514 | 0.318 | 0.08 | 0.03 |
|   | WCST－PEM | Coefficient of correlation | 0.219 | -.653\*\* | 1 | .342\* | 0.099 | 0.068 | 0.161 | -0.149 | 0.157 | 0.079 | -0.114 | -0.078 |
|   |  | Significance probability (both sides) | 0.169 | 0 | . | 0.028 | 0.538 | 0.672 | 0.315 | 0.354 | 0.328 | 0.623 | 0.479 | 0.626 |
|   | CPTnumber of errors | Coefficient of correlation | 0.223 | -0.297 | .342\* | 1 | -0.129 | 0.031 | 0.053 | -0.057 | 0.253 | 0.065 | -.334\* | -0.197 |
|   |  | Significance probability (both sides) | 0.161 | 0.06 | 0.028 | . | 0.421 | 0.849 | 0.742 | 0.722 | 0.111 | 0.684 | 0.033 | 0.218 |
|   | CPTreaction time | Coefficient of correlation | 0.034 | -0.105 | 0.099 | -0.129 | 1 | -0.227 | .453\*\* | .340\* | .560\*\* | .579\*\* | -0.186 | -0.184 |
|   |  | Significance probability (both sides) | 0.833 | 0.515 | 0.538 | 0.421 | . | 0.153 | 0.003 | 0.03 | 0 | 0 | 0.243 | 0.25 |
|   | WFT | Coefficient of correlation | -0.119 | -0.135 | 0.068 | 0.031 | -0.227 | 1 | -.509\*\* | -0.144 | -0.265 | -.389\* | 0.274 | 0.146 |
|   |  | Significance probability (both sides) | 0.46 | 0.402 | 0.672 | 0.849 | 0.153 | . | 0.001 | 0.371 | 0.094 | 0.012 | 0.083 | 0.363 |
|   | STreaction time | Coefficient of correlation | 0.217 | -0.155 | 0.161 | 0.053 | .453\*\* | -.509\*\* | 1 | .484\*\* | .520\*\* | .637\*\* | -.335\* | -.327\* |
|   |  | Significance probability (both sides) | 0.173 | 0.332 | 0.315 | 0.742 | 0.003 | 0.001 | . | 0.001 | 0 | 0 | 0.032 | 0.037 |
|   | STnumber of errors | Coefficient of correlation | -0.082 | 0.223 | -0.149 | -0.057 | .340\* | -0.144 | .484\*\* | 1 | 0.163 | .480\*\* | 0.054 | -0.004 |
|   |  | Significance probability (both sides) | 0.611 | 0.162 | 0.354 | 0.722 | 0.03 | 0.371 | 0.001 | . | 0.307 | 0.001 | 0.736 | 0.98 |
|   | TMT－A | Coefficient of correlation | .356\* | -0.105 | 0.157 | 0.253 | .560\*\* | -0.265 | .520\*\* | 0.163 | 1 | .688\*\* | -0.272 | -0.256 |
|   |  | Significance probability (both sides) | 0.022 | 0.514 | 0.328 | 0.111 | 0 | 0.094 | 0 | 0.307 | . | 0 | 0.086 | 0.107 |
|   | TMT－B | Coefficient of correlation | 0.205 | -0.16 | 0.079 | 0.065 | .579\*\* | -.389\* | .637\*\* | .480\*\* | .688\*\* | 1 | -.395\* | -.513\*\* |
|   |  | Significance probability (both sides) | 0.198 | 0.318 | 0.623 | 0.684 | 0 | 0.012 | 0 | 0.001 | 0 | . | 0.011 | 0.001 |
|   | AVLT immediate memory | Coefficient of correlation | -0.118 | 0.277 | -0.114 | -.334\* | -0.186 | 0.274 | -.335\* | 0.054 | -0.272 | -.395\* | 1 | .718\*\* |
|   |  | Significance probability (both sides) | 0.461 | 0.08 | 0.479 | 0.033 | 0.243 | 0.083 | 0.032 | 0.736 | 0.086 | 0.011 | . | 0 |
|   | AVLT recent memory | Coefficient of correlation | -0.065 | .338\* | -0.078 | -0.197 | -0.184 | 0.146 | -.327\* | -0.004 | -0.256 | -.513\*\* | .718\*\* | 1 |
|   |  | Significance probability (both sides) | 0.685 | 0.03 | 0.626 | 0.218 | 0.25 | 0.363 | 0.037 | 0.98 | 0.107 | 0.001 | 0 | . |

\*coefficient of correlation has a significance of 5% (both sides)

\*\*coefficient of correlation has a significance of 1% (both sides)