* Figure 1: Study flowchart (CONSORT format)

Figure 2: The effect of CE+risperidone on the mean amount of each parameters of positive and negative symptoms of patients based on PANSS questionnaire in different weeks compared to the pre-intervention status of patients

Figure 3: The effect of placebo+risperidone on the mean amount of each parameters of positive and negative symptoms of patients based on PANSS questionnaire in different weeks compared to the pre-intervention status of patients

Figure 4: The effect of CE+risperidone on the mean amount of each parameters of cognitive status of patients based on SCoRS questionnaire in different weeks compared to the pre-intervention status of patients

Figure 5: The effect of placebo+risperidone on the mean amount of each parameters of cognitive status of patients based on SCoRS questionnaire in different weeks compared to the pre-intervention status of patients

Table 1: Comparison of effects of CE+risperdone and placebo+risperdone on the mean±SD of each parameters of positive and negative symptoms of patients based on PANSS questionnaire in different weeks on the positive and negative symptoms of patients

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| After 8 weeks | | | After 4 weeks | | | After 2 weeks | | | Before Intervention | | | Clinical Symptoms |
| P | Placebo | CE | P | Placebo | CE | P | Placebo | CE | P | Placebo | CE |
| **006.** | 1±3 | 9. 0±93. 1 | **.04** | 1±86. 2 | 9. 0±2. 2 | 16. | 2. 1±4. 3 | 8. 0±93. 2 | 35. | 4. 1±26. 3 | 3. 1±93. 3 | P1 Delusions |
| **009.** | 6. 0±53. 2 | 6. 0±4. 1 | 12. | 6. 0±73. 2 | 9. 0±2 | 12. | 5. 1±1. 3 | 9. 0±06. 2 | 39. | 5. 1±4. 3 | 9. 0±73. 2 | P2 Conceptual disorganisation |
| **008.** | 9. 0±2. 3 | 9. 0±13. 2 | 06. | 1±3 | 9. 0±53. 2 | 08. | 7. 1±93. 3 | 4. 1±6. 2 | 3. | 6. 1±6. 3 | 2±26. 3 | P3 Hallucinatory behaviour |
| 07. | 6. 0±06. 2 | 4. 0±2. 1 | 15. | 6. 0±2. 2 | 5. 0±53. 1 | 27. | 9. 0±2 | 7. 0±46. 1 | 87. | 9. 0±26. 2 | 1±46. 2 | P4 Excitement |
| **02.** | 6. 0±4. 2 | 6. 0±26. 1 | 26. | 7. 0±46. 2 | 8. 0±93. 1 | 54. | 4. 1±73. 2 | 1±86. 1 | 83. | 5. 1±8. 2 | 3. 1±93. 2 | P5 Grandiosity |
| 07. | 8. 0±86. 2 | 7. 0±86. 1 | 08. | 8. 0±8. 2 | 7. 0±4. 2 | 1. | 6. 1±86. 2 | 7. 0±6. 2 | 63. | 4. 1±3 | 4. 1±26. 3 | P6 Suspiciousness/persecution |
| 17. | 8. 0±73. 2 | 6. 0±46. 1 | 45. | 8. 0±73. 2 | 6. 0±06. 2 | 58. | 3. 1±86. 1 | 6. 0±4. 1 | 82. | 3. 1±26. 2 | 1. 1±26. 2 | P7 Hostility |
| **005.** | 9. 0±66. 2 | 7. 0±66. 1 | 43. | 1±73. 2 | 8. 0±06. 2 | 24. | 6. 0±86. 1 | 1. 1±86. 1 | 05. | 1. 1±46. 2 | 8. 1±8. 2 | N1 Blunted affect |
| 28. | 8. 0±06. 3 | 1. 1±13. 2 | 23. | 1±06. 3 | 1. 1±6. 2 | 26. | 4. 1±86. 2 | 3. 1±33. 2 | 78. | 4. 1±86. 2 | 7. 1±93. 2 | N2 Emotional withdrawal |
| **004.** | 1±53. 2 | 8. 0±73. 1 | 24. | 9. 0±46. 2 | 8. 0±93. 1 | 49. | 2. 1±73. 2 | 2. 1±2. 2 | 5. | 73. 2±2. 1 | 6. 1±86. 2 | N3 Poor rapport |
| **008.** | 7. 0±26. 3 | 1±2. 2 | 05. | 8. 0±06. 3 | 9. 0±6. 2 | 73. | 4. 1±06. 3 | 3. 1±73. 2 | 48. | 4. 1±4. 3 | 6. 1±8. 2 | N4 Passive/apathetic social withdrawal |
| **015.** | 8. 0±73. 2 | 8. 0±66. 1 | **.01** | 7. 0±8. 2 | 8. 0±2. 2 | 09. | 2. 1±8. 2 | 1±86. 1 | 7. | 3. 1±86. 2 | 8. 1±2. 3 | N5 Difficulty in abstract thinking |
| 08. | 8. 0±13. 3 | 7. 0±93. 1 | 06. | 7. 0±26. 3 | 8. 0±2. 2 | 62. | 5. 1±4. 3 | 3. 1±53. 2 | 59. | 6. 1±26. 3 | 2±2. 3 | N6 Lack of spontaneity &flow of conversation |
| 056. | 8. 0±3 | 6. 0±2 | 4. | 8. 0±66. 2 | 6. 0±4. 2 | 48. | 5. 1±73. 2 | 3. 1±13. 2 | 45. | 7. 1±2. 3 | 2±3 | N7 Stereotyped thinking |
| **006.** | 8. 0±73. 2 | 7. 0±73. 1 | 2. | 9. 0±6. 2 | 9. 0±06. 2 | 13. | 1. 1±06. 2 | 2. 1±6. 1 | 7. | 6. 0±2 | 1±06. 2 | G1 Somatic concern |
| **003.** | 8. 0±73. 2 | 6. 0±8. 1 | **20.** | 7. 0±8. 2 | 6. 0±26. 2 | 08. | 1±4. 2 | 7. 0±53. 1 | 74. | 1±2. 2 | 1±26. 2 | G2 Anxiety |
| **005.** | 7. 0±3 | 7. 0±2. 2 | 2. | 7. 0±3 | 8. 0±73. 2 | 12. | 8. 0±8. 1 | 6. 0±26. 1 | 86. | 7. 0±2 | 8. 0±86. 1 | G3 Guilt feelings |
| 09. | 7. 0±2. 2 | 4. 0±26. 1 | 16. | 7. 0±2. 2 | 6. 0±6. 1 | 23. | 8. 0±86. 1 | 6. 0±4. 1 | 62. | 8. 0±2. 2 | 1. 1±26. 2 | G4 Tension |
| **03.** | 1±46. 2 | 6. 0±53. 1 | 45. | 7. 0±46. 2 | 7. 0±8. 1 | 35. | 6. 1±2. 3 | 3. 1±2. 2 | 14. | 8. 1±46. 3 | 2±66. 3 | G5 Mannerisms & posturing |
| 25. | 8. 0±93. 2 | 1±13. 2 | 1. | 6. 0±86. 2 | 9. 0±66. 2 | 22. | 1±06. 2 | 6. 0±4. 1 | 14. | 8. 0±26. 2 | 4. 1±13. 2 | G6 Depression |
| 17. | 1. 13±4. 53 | 11±8. 34 | 57. | 13±1. 54 | 3. 12±6. 43 | 49. | 2. 1±46. 2 | 4. 1±13. 2 | 91. | 4. 1±93. 2 | 6. 1±93. 2 | G7 Motor retardation |
| 1. | 2. 2±6. 5 | 2. 2±3 | 45. | 1. 2±8. 5 | 1. 2±4 | 54. | 6. 1±8. 2 | 9. 0±93. 1 | 46. | 5. 1±53. 3 | 7. 1±93. 2 | G8 Uncooperativeness |
| 07. | 9. 0±4 | 9. 0±5 | 1. | 7. 0±13. 4 | 1±73. 4 | **.02** | 6. 1±3 | 7. 0±06. 2 | 25. | 6. 1±2. 3 | 7. 1±1. 3 | G9 Unusual thought content |
| 09. | 1±46. 2 | 6. 0±53. 1 | 4. | 7. 0±46. 2 | 7. 0±8. 1 | 35. | 4. 1±8. 2 | 8. 0±93. 1 | 17. | 9. 1±86. 2 | 4. 1±46. 2 | G10 Disorientation |
| **015.** | 8. 0±93. 2 | 1±13. 2 | 09. | 6. 0±86. 2 | 9. 0±66. 2 | 29. | 4. 1±8. 3 | 2. 1±53. 2 | 54. | 6. 1±06. 4 | 3. 1±53. 3 | G11 Poor attention |
| **045.** | 1. 13±4. 53 | 11±8. 34 | 28. | 13±1. 54 | 3. 12±6. 43 | 26. | 2. 1±13. 3 | 8. 0±13. 2 | 18. | 4. 1±2. 3 | 2. 1±06. 3 | G12 Lack of judgment & insight |
| **028.** | 2. 2±6. 5 | 2. 2±3 | 16. | 1. 2±8. 5 | 1. 2±4 | 16. | 3. 1±06. 2 | 8. 0±4. 1 | 18. | 1±86. 1 | 1±2 | G13 Disturbance of volition |
| **008.** | 9. 0±4 | 9. 0±5 | 25. | 7. 0±13. 4 | 1±73. 4 | 25. | 1±2 | 6. 0±46. 1 | 83. | 1±26. 2 | 1. 1±33. 2 | G14 Poor impulse control |
| **01.** | 1±46. 2 | 6. 0±53. 1 | 13. | 7. 0±46. 2 | 7. 0±8. 1 | 21. | 1. 1±9. 2 | 8. 0±33. 2 | 28. | 2. 1±66. 2 | 3. 1±3 | G15 Preoccupation |
| 34. | 8. 0±93. 2 | 1±13. 2 | 38. | 6. 0±86. 2 | 9. 0±66. 2 | 43. | 2. 1±86. 2 | 3. 1±6. 2 | 61. | 5. 1±06. 3 | 4. 1±3 | G16 Active social avoidance |
| 56. | 1. 13±4. 53 | 11±8. 34 | 3. | 13±1. 54 | 3. 12±6. 43 | 3. | 26±8. 80 | 17±1. 62 | 64. | . 23±3. 85 | 25±1. 83 | Total |

Table 2: Comparison of effects of CE+risperdone and placebo+risperdone on the mean±SD of each parameters of cognitive status of patients based on SCoRS questionnaire in different weeks on the cognitive status of patients

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| After 8 weeks | | | After 4 weeks | | | After 2 weeks | | | Before Intervention | | | Cognitive Aspects |
| P value | Placebo | CE | P value | Placebo | CE | P value | Placebo | CE | P value | Placebo | CE |
| **04.** | 1±3 | 9. 0±93. 1 | 2. | 1±86. 2 | 9. 0±2. 2 | 42. | 1±93. 2 | 1. 1±33. 2 | 23. | 1. 1±8. 2 | 9. 0±73. 2 | Remember people |
| **001.** | 6. 0±53. 2 | 6. 0±4. 1 | 05. | 6. 0±73. 2 | 9. 0±2 | 08. | 6. 0±73. 2 | 9. 0±06. 2 | 38. | 1±46. 2 | 8. 0±4. 2 | Remember the places |
| **03.** | 9. 0±2. 3 | 9. 0±13. 2 | 48. | 1±3 | 9. 0±53. 2 | 6. | 1±13. 3 | 9. 0±73. 2 | 1 | 8. 0±93. 2 | 8. 0±93. 2 | Follow the TV program |
| **001.** | 6. 0±06. 2 | 4. 0±2. 1 | **02.** | 6. 0±2. 2 | 5. 0±53. 1 | 11. | 6. 0±2. 2 | 7. 0±66. 1 | 31. | 6. 0±46. 2 | 5. 0±2. 2 | Remember the location of objects |
| **000.** | 6. 0±4. 2 | 6. 0±26. 1 | 16. | 7. 0±46. 2 | 8. 0±93. 1 | 18. | 6. 0±6. 2 | 9. 0±13. 2 | 33. | 5. 0±86. 2 | 9. 0±6. 2 | Remember the routine |
| **02.** | 8. 0±86. 2 | 7. 0±86. 1 | 31. | 8. 0±8. 2 | 7. 0±4. 2 | 66. | 1±8. 2 | 8. 0±66. 2 | 53. | 5. 0±93. 4 | 8. 0±73. 2 | Learn how to use new gadgets |
| **003.** | 8. 0±73. 2 | 6. 0±46. 1 | 06. | 8. 0±73. 2 | 6. 0±06. 2 | 06. | 7. 0±8. 2 | 6. 0±13. 2 | 58. | 7. 0±53. 2 | 6. 0±2. 2 | Establish information and instructions |
| **04.** | 9. 0±66. 2 | 7. 0±66. 1 | 14. | 1±73. 2 | 8. 0±06. 2 | 28. | 9. 0±66. 2 | 8. 0±13. 2 | 7. | 8. 0±4. 2 | 9. 0±66. 2 | Remember your speech |
| 05. | 8. 0±06. 3 | 1. 1±13. 2 | 42. | 1±06. 3 | 1. 1±6. 2 | 64. | 1±13. 3 | 1. 1±73. 2 | 4. | 9. 0±46. 3 | 1±3 | Account and money book |
| 11. | 1±53. 2 | 8. 0±73. 1 | 22. | 9. 0±46. 2 | 8. 0±93. 1 | 37. | 9. 0±4. 2 | 8. 0±93. 1 | 96. | 8. 0±26. 2 | 9. 0±1. 2 | Correct conversation and speech |
| **02.** | 7. 0±26. 3 | 1±2. 2 | 59. | 8. 0±06. 3 | 9. 0±6. 2 | 13. | 9. 0±33. | 7. 0±86. 2 | 63. | 1. 1±13. 3 | 8. 0±2. 3 | Focus on reading the text |
| **02.** | 8. 0±73. 2 | 8. 0±66. 1 | 18. | 7. 0±8. 2 | 8. 0±2. 2 | 53. | 8. 0±86. 2 | 9. 0±4. 2 | 86. | 9. 0±33. 2 | 9. 0±6. 2 | Getting to know everyday things |
| **002.** | 8. 0±13. 3 | 7. 0±93. 1 | **01.** | 7. 0±26. 3 | 8. 0±2. 2 | **02.** | 6. 0±46. 3 | 9. 0±4. 2 | 9. | 7. 0±06. 3 | 6. 0±3 | Keep focus |
| **008.** | 8. 0±3 | 6. 0±2 | 2. | 8. 0±66. 2 | 6. 0±4. 2 | 19. | 8. 0±93. 2 | 6. 0±6. 2 | 49. | 5. 0±86. 2 | 8. 0±93. 2 | Learn new content |
| **03.** | 8. 0±73. 2 | 7. 0±73. 1 | 26. | 9. 0±6. 2 | 9. 0±06. 2 | 16. | 9. 0±73. 2 | 2. 1±33. 2 | **02.** | 2. 1±8. 2 | 9. 0±46. 2 | Talking with the right speed |
| **03.** | 8. 0±73. 2 | 6. 0±8. 1 | 1. | 7. 0±8. 2 | 6. 0±26. 2 | 06. | 8. 0±86. 2 | 5. 0±4. 2 | 98. | 9. 0±53. 2 | 9. 0±46. 2 | Doing things at the right speed |
| 06. | 7. 0±3 | 7. 0±2. 2 | 52. | 7. 0±3 | 8. 0±73. 2 | 25. | 7. 0±3 | 6. 0±8. 2 | 25. | 7. 0±73. 2 | 6. 0±2. 3 | Manage changes in the everyday life plan |
| **004.** | 7. 0±2. 2 | 4. 0±26. 1 | 07. | 7. 0±2. 2 | 6. 0±6. 1 | 18. | 9. 0±2. 2 | 6. 0±6. 1 | 47. | 8. 0±2 | 7. 0±13. 2 | Understanding the order of individuals |
| **04.** | 1±46. 2 | 6. 0±53. 1 | 12. | 7. 0±46. 2 | 7. 0±8. 1 | 16. | 8. 0±4. 2 | 7. 0±73. 1 | 5. | 7. 0±46. 2 | 9. 0±26. 2 | Detect people's feelings about issues |
| 07. | 8. 0±93. 2 | 1±13. 2 | 53. | 6. 0±86. 2 | 9. 0±66. 2 | 32. | 8. 0±93. 2 | 9. 0±66. 2 | 26. | 1. 1±66. 2 | 7. 0±86. 2 | Follow the conversations in the crowd |
| 33. | 1. 13±4. 53 | 11±8. 34 | 43. | 13±1. 54 | 3. 12±6. 43 | 4. | 7. 13±3. 55 | 6. 12±8. 46 | 58. | 11±4. 52 | 10±6. 52 | Total |
| 07. | 2. 2±6. 5 | 2. 2±3 | 22. | 1. 2±8. 5 | 1. 2±4 | 15. | 17. 2±6 | 2. 2±86. 4 | 74. | 9. 1±46. 5 | 9. 1±66. 5 | General assessment |
| 08. | 9. 0±4 | 9. 0±5 | 39. | 7. 0±13. 4 | 1±73. 4 | 06. | 3. 1±46. 3 | 8. 0±73. 4 | 23. | 1. 1±8. 2 | - | General change of individual problems |