Author's response to reviews

Title: Clinical symptoms and performance on the continuous performance test in children with attention deficit hyperactivity disorder between subtypes: a natural follow-up study for 6 months

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Author's response to reviews: see over
Re: Wang et al: Clinical Symptoms and Performance on the Continuous Performance Test in Children with Attention Deficit Hyperactivity Disorder between Subtypes: a Natural Follow-up Study for 6 Months

Dear Dr. Norton,

We greatly appreciate these valuable comments from three reviewers’ on our previous manuscript “Clinical Symptoms and Performance on the Continuous Performance Test in Children with Attention Deficit Hyperactivity Disorder between Subtypes: a Natural Follow-up Study for 6 Months” (MS: 1814985388418219). We have revised the manuscript substantially, and would like to re-submit it for your consideration for publication in the BMC Psychiatry.

Attached are our responses to the issues raised by two reviewers, along with the revised manuscript. We look forward to hearing from you soon.

Best regards,

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Responses to comments from Reviewer #1

Thank you for your comments.

Specific comments:
It seems that the authors confuse group by visit interaction with group by performance on the CPT. As baseline performance was included in the analysis, the crucial finding for showing differential effect of MPH on performance should be an interaction between group and visits. Such an interaction was found only for CPT measures and not for clinical symptoms. At least from a clinical point it is important to conclude that aggression does not predict the responsiveness to MPH.

RE: Thank you for your precious comment. There were only interactions between visits and subtypes in CPT performance (factor 1 and factor 2). We also use Student’s t-test to examine the changes in CPT performances from the baseline to the endpoint. As a result, there are significant differences for theses changes between aggressive subtypes. Thus, we have re-phrased some part of the manuscript to avoid the misleading.

Abstract (page 3, line 1-4)
“The non-aggressive ADHD patients might have a higher potential for improving in CPT performance than aggressive ones. However, it warrant further investigation whether the different classifications of ADHD patients could be valid for predicting the improvements in ADHD patients’ clinical symptoms and neurocognitive performance.”

Methods (page 9, line 21-25 to page 10, line 1-2)
“The hypothesis that there is a differential change over 6 months would be supported by significant subtype × visit interactions on dependent measures. The factors which showed a significant interaction between subtypes and visits were taken into further analyzed. The changes from the baseline to the endpoint of these factors were computed, and the Student’s t-test was applied for examine the significant differences of these changes between subtypes.”

Results (page 12, line 3-10)
“For CPT distraction, there was no significant difference between subtypes, but there was significant interaction between subtypes and visits (F = 3.05, p = 0.031). The changes from V1 to V4 in non-aggressive patients were significantly greater than
aggressive patients ($t = 2.27, p = 0.028$). Similarly for CPT impulsivity, there was no significant difference between subtypes, but there was also significant interaction between subtypes and visits ($F = 3.53, p = 0.017$). The changes from V1 to V4 in non-aggressive patients were significantly greater than aggressive patients ($t = 2.39, p = 0.021$).”

Discussion (page 12, line 21-25)
“There were no interactions between DSM-IV subtypes and visits in these 4 dimensions of clinical symptoms and cognitive performance among ADHD patients. Nevertheless, the interactions between sub-grouping by CBCL aggressive scale and visits were significant in the CPT performance.”

Conclusions (page 16, line 13-17)
“The non-aggressive ADHD patients might have a higher potential for improving in CPT performance than aggressive ones. However, it warrant further investigation whether the different classifications of ADHD patients could be valid for predicting the improvements in ADHD patients’ clinical symptoms and neurocognitive performance.”

The sentences of “There were interactions of aggression subtypes with CPT measures….” were replaced by “There were interactions between aggression subtypes and visits for CPT measures…..” through the whole manuscript (in Abstract, Results, Discussion, Figure 1 & 2 legends).