Author's response to reviews

Title: Improving cognition in schizophrenia: Which is the more commonly used type of training, practice or strategy learning? A descriptive review.

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Author's response to reviews: see over
We would like to thank both reviewers for their constructive contributions once again. We believe that the manuscript has been greatly improved thanks to their suggestions. We added clearer distinctions between our choice of categorization between "sociocognition" and "neurocognition", according to the reviewers comments. We further rewrote the result and discussion section, mostly concerning sociocognition, according to those added details.

Reviewer: Saperstein

Major Compulsory Revisions
1. The authors offer multiple perspectives from which to consider the aims, targets, and methods of cognitive remediation including the use of drill + practice, drill/practice + strategy coaching, specific or general cognitive targets that are neurocognitive and/or social cognitive in nature, and the inclusion of specific cognitive and/or functional outcomes. The authors succeed in providing a comprehensive listing of contemporary cognitive intervention studies; the reader looking for a descriptive review will find this information useful. Although the authors provide accurate definitions of neuro and social cognitive targets, critical readers may disagree with some of the authors' classification of cited research studies. For example, the authors are urged to reconsider Section 3.2 Sociocognitive Deficits. In this section, the series of studies by Bell and colleagues are discussed but it is not clear why neurocognitive enhancement therapy is discussed here. NET is explicitly described as targeting attention, memory, and executive functioning. Social cognition is not addressed in NET. If the authors intend to include NET in the discussion of sociocognitive targets, clarification will be needed. Similarly, in Table 2, McGurk and Mueser's Thinking Skills for Work program is classified as targeting sociocognitive deficits. The targets of this intervention do not seem consistent with the definitions of sociocognitive interventions provided (ie targeting theory of mind, affect perception etc). Thinking skills for work targets neurocognition (attention, memory, speed, executive functions) using computer-based exercises. Compensatory strategy training is provided to help patients cope with neurocognitive deficits at work. Given the targets of interventions like NET and Thinking Skills for Work, I disagree with the authors' classification.

1. Indeed, this comment on our sociocognitive section was most instructive. It allowed us to completely review our sociocognitive categorization, both in the result section and the discussion section. From the aforementioned suggestions, we reclassified all the studies by Bell (moving them from Table 2 to Table 1), McGurk (moving them from Table 2 to Table 1), Wykes (moving them from Table 3 to Table 1) and Penades (moving them from Table 3 to Table 1), as well as several others (see tracking changes in respective sections). We further rewrote our discussion section according the these improved classifications. Moreover, we added the important distinction to our method section, that social functioning is not only part of sociocognition but rather, a general target of improvement of all studies whether they were aiming to improve sociocognition or neurocognition. It is our hope that these changes will improve the logic of our classification and make it more consistent.

2. Authors are strongly urged to proofread for grammatical errors and writing style. I include this comment in the compulsory revisions section because there are sentences and paragraphs in which the authors' meaning is lost. A sample sentence is in section 3.1, first sentence in the second paragraph. Please also see the final paragraph in section 3.2, and the first sentence in the final paragraph of the manuscript.
2. Yes, there was indeed a major problem with the flow of our text, no doubt due to the major changes that were made throughout the various reviews. As such, we have sent our manuscript to an editor in order to improve on the grammar and writing style of the entire article.

**Minor essential revisions**

1. Please check for consistency in within text citations. **It is not necessary to use authors' full names in within text citations.**

1. Yes, the modifications to the references have been made to include numeric references, as is required by BMC Psychiatry.
Reviewer: Choi

1. Minor Essential Revisions

There are several instances of inconsistent formatting throughout the citations in the text and the reference section. For example, M. Fisher vs Melissa Fisher or M. Bell vs M.D. Bell.

1. Thank you for bringing this important detail to our attention. Indeed, it seems that our references were not consistent throughout the article. Furthermore, as per the BMC Psychiatry website, we were to include our references in number format. As such, we have made the appropriate modifications.