Reviewer's report

Title: A systematic review of the evidence that brain structure is related to muscle structure or function or that brain function is related to muscle structure in humans.

Version: 1 Date: 24 January 2014

Reviewer: Laura E Middleton

Reviewer's report:

You undertake a broad review of muscle function/structure and brain function/structure. While the topics are each individually interesting, together the result is a bit unwieldy and projects as a list of studies rather than a cohesive review. The topics may be better served in 2-3 papers rather than amassed into one.

Major Compulsory Revisions:

1. The results, discussion, and conclusion are largely repetitive with increasing levels of summary. Discussion could include the proposed mechanisms or explanations (e.g. common cause hypothesis as introduced earlier) among other points. This may also increase the interest in this paper dramatically.

Discretionary Revisions

2. The introduction seems relatively unrelated to the rest of the content of the paper. I suggest either altering the introduction so that others reasons to be interested in the brain/muscle relationship are mentioned OR at least touching back on the topic of the introduction later in the paper.

Level of interest: An article of limited interest

Quality of written English: Not suitable for publication unless extensively edited

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

NO.