Reviewer's report

Title: Tai Chi versus Aerobic Exercise for Fibromyalgia: Design of a Novel Comparative Effectiveness Randomized Trial

Version: 1 Date: 16 December 2014

Reviewer: Kelli Allen

Reviewer's report:

This is a well-written manuscript describing a clinical trial comparing the effectiveness of tai chi and aerobic exercise for individuals with fibromyalgia. The research question is nicely set up in the introduction, and the methods are sufficiently detailed. I have the following recommendations for minor essential revisions:

1. Background, end of 3rd paragraph, I'm not sure "evidently" is the right word in the last sentence. Perhaps "consequently?"

2. In the introduction it is stated that the factorial arrangement includes the instructor. In the methods the use of multiple instructors is described, but it is not totally clear how this will be treated as a factor in terms of randomization assignment, etc.

3. In the study overview, there is not a need to list the secondary outcomes, since these are included later. Similarly, in the measures section, it is not necessary to list the general secondary outcomes (beginning of the section) before providing a detailed description of each of these outcomes.

4. In the Enrollment... section, it is first stated that participants are enrolled in groups of 36 or more, then it says 40-50 are pre-screened together. Although these statements are not in direct conflict, this could be explained more clearly. For example, if more than 36 are enrolled per cycle, how does this fit in with filling the number of groups that start together (vs. having "extra" people who have no group)?

5. Recommend omitting the statement, "These procedures are precisely described in the manual of operations."

Level of interest: An article of importance in its field

Quality of written English: Acceptable

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

Declaration of competing interests:

I declare that I have no competing interests