JRPR 178 Review 1

Review of
"Limb asymmetry characteristics amongst men's and women's NCAA Divisi on II Soccer Athletes"

General Feedback: This is an interesting paper on a topic that is important for improving sport performance and understanding sex differences in soccer performance. I would recommend REVISE and RESUBMIT. I have some general comments that should be addressed throughout the paper prior to publication:

1. The author(s) alternate between sex differences and gender differences. Technically, these are sex differences because they are biological. Keeping a consistent term "sex differences" should clarify.
2. Some of the language over-inflates the importance of findings—particularly near the end of the paper (discussion and conclusion). Specifically, sometimes the authors state that there is a difference, when it is not statistically significant. Maybe call this "practically significant?" (or possibly practically significant?)
3. In the abstract, 2nd to last sentence, you state that "male participants possessed larger magnitude of both inter and intra limb imbalance as compared to females, but I don't think these differences were statistically significant. If that is the case, I don't think it's fair to state that only "males may benefit from focused training aimed at reducing interlimb asymmetries." I believe that both would benefit. Re-examine how this information is presented and when mentioning that there is a difference in values, make sure it is "statistically" or "practically" significant.
4. In the intro, in addition to stating the purpose of the study, the author(s) should add the research questions. That makes it much easier to tie the statistics to the research questions.
5. The discussion needs to be re-written. It starts out with the 3 most important finding, then it jumps around with various concepts. I'd like to see each finding addressed with WHY you found what you found, and WHAT the prior research says about your findings—relative to PERFORMANCE and INJURY RISK (inc'd or dec'd). At the end of the first paragraph, a statement is made that "it appears the male participants exhibited higher levels of interlimb and intralimb asymmetry." The problem is that this finding was NOT significant statistically (although perhaps practically). Finally, LIMITATIONS should be added to the discussion—with an intro sentence, and more than 1 limitation AND a paragraph on FUTURE RESEARCH should be added.
6. While there is a conclusion, it should be captured with a subheading, and it should reflect back to the paper

Specific Feedback:

P 3, bottom of 2nd paragraph: the statement is made that "…yet understanding the mechanisms that lead to this discrepancy still remain unclear." It is important to also mention that the mechanisms are likely multifactorial—which makes it difficult to study. In addition, the statement is made that "recent research suggests H:Q ratio may not be an independent risk factor or ACL injury further confusing researchers and practitioners." I'd like to see a few more things mentioned in this paragraph about other things that are predictive.

p. 5, participants section: #2 mentions "primarily outfielders;" I'm not sure what those positions are—those who play the field and not goalkeepers?

p. 5, study protocol: I have several comments about the study protocol. There is a lot of information missing. The Seca mBCA—is that a Bioelectric Impedence Device? If so, state that. Should also mention how hydration was emphasized prior to testing as dehydration can significantly impact the results. Were the testers trained? Were they the same for all testing? How did you ensure reliability and validity? Do you have a citation for the various aspects of your testing methods/protocol?

p. 7, table 1: Did you run statistical tests to determine if there were sex differences in age, height, weight, body comp, soccer experience? If not, those should be added as having statistically significant differences at the start may influence results.

p. 9, figure 2: To me, it seems clinically relevant that the H:Q ratio ranged from 0.50 to 0.57; that seems to be in the danger zone and should be mentioned and discussed in the results/discussion section.