Reviewer’s report

Title: Leading for the long haul: a mixed-method evaluation of the sustainment leadership scale (SLS)

Version: 1 Date: 19 Aug 2017

Reviewer: Bryan Weiner

Reviewer’s report:

The authors have been responsive to the questions and concerns I raised in my earlier review. They have offered a definition of leadership, situated their study within the broader leadership literature, and clarified the level of leadership to which the measure applies. The authors also signaled how sustainment leadership "works" (i.e., what sorts of outcomes sustainment leadership would or could influence). Given the close connection between theory and measurement, the manuscript would make a more substantial contribution to the field if the construct of sustainment leadership were situated within a well-argued nomological network. However, the revised manuscript moves further in this direction than the original manuscript.

I appreciate the authors' efforts to address my concerns about the level of the construct. The authors state that they do not have enough teams (N=32) to support a multi-level confirmatory factor analysis. I'm not expert enough in multi-level confirmatory factor analysis to confirm that 32 teams is insufficient for such an analysis. However, I do know that that there are no hard and fast rules; we have rules of thumb that are helpful, but statistical power in multilevel confirmatory factor analysis, as in many other statistical techniques, depends on several factors, not just sample size. In circumstances such as these, I recommend consulting with a psychometrician with expertise in multilevel confirmatory to determine whether this approach to assessing structural validity is feasible with these data.

Regardless of whether multilevel confirmatory factor analysis is feasible with these data, the broader concern about the level of the construct remains. I strongly recommend that the authors state whether they view sustainment leadership as a property of the leader, a property (perception) of the followers, or a relational property between leaders and followers. This is crucial for defining what the construct of sustainment leadership is and, obviously, how the construct of sustainment leadership is measured. If we conceive of sustainment leadership as a property of the leader, then each leader has a sustainment leadership score. If we have multiple followers rating the leadership qualities of the leader, we would expect some level of agreement among the followers about the qualities of leadership the leader they follow demonstrates. Let's take Knowledgeable Leadership as an example. If half of the people following a leaders say she's knowledgeable and half say she is not knowledgeable, what does that tell us about the leader? We can't say she's a Knowledgeable Leader, nor can we say she's not a Knowledgeable Leader. How then can we characterize her Knowledgeable Leadership? As an exercise in arithmetic, we could compute a mean by averaging the followers' perceptions, but that mean is not a valid depiction of the leaders' Knowledgeable Leadership, nor is it even an accurate reflection (representation) of the views of the followers. We can't say she's a kinda-sorta, middle-of-the-
scale Knowledgeable Leader, nor can we say that her followers think she is a kinda-sorta, middle-of-the-scale Knowledgeable Leader. This is not an academic point. The authors note that the ICC(1) for the SLS is .05, meaning only 5% the variation in sustainment leadership scores occurs between leaders. The rest of the variation in sustainment leadership scores occurs among followers rating the same leaders. It would appear that followers following the same leaders view those leaders differently. While the awg(j) statistic for the sample as a whole is a respectable .73, the low ICC(1) value suggests that there are many teams where inter-rater agreement is not so high. The authors could check this by calculating awg(j) for each team.

An alternative to viewing sustainment leadership as a property of the leader is to view sustainment leadership as a property (perception) of the follower. In other words, sustainment leadership is in the eye of the beholder. We distinguish organizational climate (a property of the workplace) from psychological climate (a property of employees). A similar distinction could be made for leadership. This would put sustainment leadership in a different nomological network, one organized around the causes and consequences of individual perceptions of leadership. Since this is the level of measurement the authors employ in this study, I recommend the authors state explicitly that they view sustainment leadership as a perception of followers and note that followers following the same leader can have different perceptions of the leader's sustainment leadership. The authors have already noted in the revised manuscript that the factor structure they obtained holds at the individual (follower) level and that the factor structure (number of factors and factor loadings) could differ at the leader (supervisor) level. This is worth reinforcing so that readers do not leap to the conclusion that they can compute SLS scale scores for leaders using the structural validity information obtained at the individual level of measurement/analysis.

As an aside, leader-member exchange theory focuses on the relationship between leaders and followers and notes that leaders can have different relationships with followers. Here the level of the construct is the dyad, not the leader. So, the level of the construct (theory) and the level of measurement align. Even for theories of situational leadership—which argue that leaders have behavioral flexibility to lead in different ways in different situations—we would still expect followers in any given situation to rate the leader in similar ways (e.g., democratic leadership), even if followers in another situation rate the leader in a different way (e.g., autocratic leadership).

To summarize:

Please note that leadership can be conceived and measured in different ways (as noted above) and specify upfront the level of the sustainment leadership construct.

Please acknowledge the meaning (implications) of the low ICC(1) value, which reinforces the value of measuring sustainment leadership at the individual follower level.

Please add the caution that the structural properties of the SLS could differ at the leader level from those observed at the follower level.

Level of interest
Please indicate how interesting you found the manuscript:

An article whose findings are important to those with closely related research interests

**Quality of written English**

Please indicate the quality of language in the manuscript:

Acceptable

**Declaration of competing interests**

Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I declare that I have no competing interests

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal.