## PEER REVIEW HISTORY



## ARTICLE DETAILS

| | |
|---|---|
| **TITLE (PROVISIONAL)** | Relationship between employee engagement scores and service quality ratings: analysis of the National Health Service staff survey across 97 acute NHS Trusts in England and concurrent Care Quality Commission outcomes (2012–2016) |
| **AUTHORS** | Wake, Mark; Green, William |

## VERSION 1 - REVIEW

| | |
|---|---|
| **REVIEWER** | Patrick C. Flood<br>Dublin City University |
| **REVIEW RETURNED** | 10-Dec-2018 |

| | |
|---|---|
| **GENERAL COMMENTS** | I would like to see a number of issues addressed:<br>1. How adequate are the proxy predictor variables compared to the intended measure eg employee engagement<br>2. Some hypotheses eg H1 should state the direction of the effect expected in relation to factors such as organisation size<br>3. The common method variance problem acknowledged by the reviewers needs some statistics to reassure that this problem has been addressed and solved. |

| | |
|---|---|
| **REVIEWER** | malcom Patterson<br>Management School University of Sheffield |
| **REVIEW RETURNED** | 19-Dec-2018 |

| | |
|---|---|
| **GENERAL COMMENTS** | The study examines the relationship between Care Quality Commission quality ratings and employee engagement measured by the National Health Service staff surveys. The study also examines associations between engagement and organizational factors such as bed numbers and financial revenue. The cross-sectional design prevents statements about causality. The paper presents some interesting findings , is clearly written and structured.<br><br>The manuscript would benefit from some revisions which I detail below.<br><br>1. The justification provided for the first hypothesis, that employee engagement will be related to various organizational factors, is very limited. The authors hint at the theoretical underpinning for the hypothesis in the form of demands and resources model but need to provide a fuller explanation to convince the reader. More clarity is also needed on the novelty of this hypothesis. Have these |

| | |
|---|---|
| | associations been tested before? We are told that the hypothesis follows on from the work of West et al. and West and Dawson but it is not clear how. Did the cited authors test the same associations or something similar? Please provide more clarity. Hypothesis 1 should be more specific by also stating the direction of the hypothesized relationships rather than just proposing that there will be an association between the variables.<br>2. In the lead up to hypothesis 2 (overall employee engagement scores predict CQC ratings) staff engagement is described as being linked to CQC ratings. Again clarity on whether hypothesis 2 has been tested before would be welcome or is the first time this association has been tested. A clear statement on its novelty would emphasise the study's contribution.<br>3. In the Introduction's subsection 'Employee engagement dimensions' the subscales of the NSS are described, followed by a discussion of the definition of employee definition and its dimensions. It would be better to first discuss the concept of engagement and its dimension, based on the work of Schaufele etc, prevalent in the academic literature, and then go on to describe how it has been operationalized in the NSS. How the two are different, why and implications. For example, as I comment on later, is 'advocacy' as measured in the NSS really a component of employee engagement?<br>4. Hypothesis 3 does not strike me as a hypothesis statement. Shouldn't it be theoretically informed? Would it not be better worded as a research question? E.g., which subdimensions in the NHS survey instrument are the core dimensions of engagement for NHS employees. Hypothesis 3 as it stands states how this will be tested.<br>5. Your analysis reveals that advocacy scores explain most of the variance in engagement scores and subsequently propose just using advocacy scores in future surveys. This comes back to the issue of what are we actually measuring. Given, in my opinion, the somewhat tenuous links between advocacy and the definition of engagement prevalent in the academic literature (dedication, absorption, vigour) then if we are just to use an advocacy score why call it employee engagement? Let's just call it advocacy or something similar. Maybe we are so invested in the concept of engagement that this would be difficult but it would be a more accurate reflection of what we are measuring?<br>I think this issue makes it difficult to compare across studies. For example, in justifying hypothesis 2 studies are cited showing associations between engagement and individual and organizational performance outcomes. However these studies are using different measures of engagement with different subdimensions to that used in the NSS.<br>6. Linked to the above is the finding that, in support of Hypothesis 2, that advocacy, one of the three engagement subdimensions, is the most strongly associated with CQC ratings. As you acknowledge the analysis is cross-sectional so limiting statements about causality. But I think it needs to be emphasized that reverse causality is a strong probability considering that advocacy assesses employees' views on the priority given to care. So one can well image CQC ratings predicting advocacy. Presumably staff know about the standing of their hospital in terms of ratings and therefore this will inform their responses on the advocacy subdimension of engagement. In fact could we argue that advocacy is closer to a rating of quality of care (like the CQC ratings) than it is to assessing employee engagement and so the there is a serious confounding effect here. I think you need to |

| | |
|---|---|
| | address these issues/debates in your discussion and the implications for the contribution of your study. In light of this, causal language when discussing the results should be avoided e.g., the 'Conclusion' states that "this study provides further empirical evidence of the positive effect that employee engagement has on the perceived performance of healthcare organizations".<br>I hope these comments are helpful |

## VERSION 1 – AUTHOR RESPONSE

Reviewer 1:

1. We have included details of variable validity and reliability

2. Noted and included in revision

3. Predictor and outcome variables were taken from different source, time and context which should reduce this bias. We have included some additional statistical analysis and reference for common method variance.

Reviewer 2:

1. We have expanded and clarified the formulation of hypothesis 1

2. We have clarified the position of hypothesis 2 with respect to the related literature

3. Agreed and amended

4. Agreed and amended

5 and 6. Acknowledged. We have expanded the discussion/limitations sections around this valid point. We have also included elements of the ontology/epistemology. We have revisited the conclusion.

## VERSION 2 – REVIEW

| | |
|---|---|
| **REVIEWER** | Patrick Flood<br>DCU |
| **REVIEW RETURNED** | 18-Mar-2019 |

| | |
|---|---|
| **GENERAL COMMENTS** | The paper is much improved. H1 should be expressed as H1(a) H1(b) as theory does not underpin the direction of the sign proposed. The results- see discussion in conclusion also support this. See below:<br><br>Although the size of NHS acute Trusts is<br>related to engagement scores, the two indicators of organizational size have<br>opposite associations. Trusts with higher incomes (turnover) tended to have more<br>engaged employees but organizations with more beds are associated with lower<br>engagement. |

| | |
|---|---|
| **REVIEWER** | malcolm Patterson<br>Management School, University of Sheffield |
| **REVIEW RETURNED** | 26-Mar-2019 |

| | |
|---|---|
| **GENERAL COMMENTS** | Thanks for responding constructively to my comments. A few of concerns remain which I describe below.<br>I think it would have been more helpful if you had engaged with my comments, detailing your views on my comments and how you had responded to them, rather than just saying that the document had been amended etc. In that way we would have greater clarity about your perspective, areas that you agree/disagree with me and why. This may have prevented repetition in my comments for the revised manuscript. Of course this may be the typical response style for this journal (I tend to review for management/applied psychology journals rather than health/medical journal)<br>1. The justification for hypothesis 1 is still inadequate. You put forward a resources perspective on engagement, then state that structure has been linked to performance and finally hypothesise that engagement will be linked to structure. The linkages are not clear. Are you arguing that structure will be linked to resources that are important for engagement? The argument needs to be clearer.<br>2. Both hypothesis 1 and 2 contend that there "may" be associations between your variables. As hypotheses you should say "will" be associated, but this of course relies on convincing argumentation leading up to the hypotheses.<br>3. In the Introduction it would be helpful to say that the Utrecht Work Engagement Scale operationalises Schaufeli and Bakker's definition of engagement.<br>4.I think a more comprehensive response is needed to point 6 of my first review. Briefly:<br>Why should we consider advocacy as a measure of engagement, is it not closer to a measure of staff perceptions of quality of care? So is there not a confounding effect going on here when we find that advocacy has the strongest association with the CQC ratings, so that the correlation between this particular engagement dimension and CQC is inflated. While reverse correlation is acknowledged, more should be said about this risk. As I mentioned CQC ratings could well inform staffs' ratings of advocacy, especially items such as whether they would recommend the organisation as a place to receive treatment, (and, again why should we consider items such as this as 'engagement' rather than perceptions of quality of care?). These points should be discussed.<br>5. On a related point - the new title "Effect of engagement on service quality ratings" implies that causality is demonstrated. I would change "effect" to "relationship/association" or something similar.<br>6. Engagement is described as being treated as an organization-level variable. I presume this means that engagement scores were aggregated within each hospital and a mean score used - I don't think this explicitly stated. If not. I would say so. |

## VERSION 2 – AUTHOR RESPONSE

We are again grateful to the reviewers for their constructive suggestions which we feel have helped improve this article significantly.

Reviewer 1: H1 is now expressed as H1(a) and H1(b) - the authors agree with this point and it also helps with the discussion section. The significant predictors are better separated in this way.

Reviewer 2: Apologies for not expressing the revisions more clearly but these were certainly stimulated by our areas of agreement.

1. Yes the article does explore the relationship between organizational structure as a proxy for resources and develops this with the resource-based approach to work engagement in mind. Interestingly in NHS acute Trusts the organizational factors are relatively weak predictors of overall engagement and we postulate that the dynamic between personal resources and job resources is probably in play.

2. Accepted and amended

3. This is useful, thank you

4. This is an interesting debate and we have tried to contrast academic research (which has been focused on 'job engagement' and its antecedents) with emerging practitioner research, which often seeks to measure or predict engagement with the organization. Flowing from the latter, the advocacy scale in NSS may be a powerful indicator of the attitudes of an engaged or disengaged NHS workforce. Furthermore there is a strong cross correlation with the NSS measure of motivation which is perhaps closer to Schaufeli et al.

Our study is cross-sectional but during the study period the organization-level engagement scores reported by NHS England were pretty stable. We do acknowledge the risk around reverse correlation and it may be a useful area for future research (i.e. if CQC ratings predict significant changes in organization level engagement in the NHS). The authors are not aware of previous studies reporting the impact of hospital ratings on employee endorsement but we recognise that employee endorsement may reflect general workforce attitudes towards an organization. The link between endorsement and engagement is supported in some practitioner research but this will require further study.

5. We have changed the title to reflect this point.

6. Agreed and amended.