

PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	Good practice or positive action? Using Q methodology to identify competing views on improving gender equality in academic medicine
AUTHORS	Bryant, Louise; Burkinshaw, Paula; House, Allan; West, Robert; Ward, Vicky

VERSION 1 - REVIEW

REVIEWER	Rhiannon B. Parker University of Wollongong, Australia
REVIEW RETURNED	19-Apr-2017

GENERAL COMMENTS	<ol style="list-style-type: none">1. The Abstract is not as cogent as the rest of the paper. I suggest a revision, including addressing the following issues: You have stated in the paper that there are two objectives ("[i] identify different staff viewpoints on the prioritisation of a range of gender equality interventions in the workplace and [ii] identify barriers and facilitators to implementing these interventions") but the second is not stated in Objectives. For Setting, exactly which medical school was used?2. METHODS: A straightforward definition of Q methodology was lacking. I suggest that an introduction to this should start with a defining it as a method that identifies and examines patterns in people's subjective point of view. From there the rest of the materials and methods section makes more sense.3. Under Developing the Q set, how were 154 candidate items reduced to 50. More information than 'a iterative selective review process' is needed.4. All tables are missing. Table 1 and 3 are referenced but not Table 2.5. Under Participant Sample, please fix where it says "Error! Reference source not found.."6. Under Participant Sample, the gender and age of participants have been stated but what were the pay grades and roles and how many people from each were represented in this study? A table of this information would be helpful. Information on the population from which they were drawn would also be useful in order to show the degree to which the sample is representative.7. ANALYSIS: It is stated that established strategies were used to "identify the maximum number of interpretable and distinct viewpoints to take forward for interpretation". What were these strategies? Was a scree plot used? Was parallel analysis used? This needs to be identified.8. It's unclear what the latent class analysis is for. It's stated that it was used to "identify whether any discernible pattern in statement placement was associated with participant characteristics", yet this was clearly already done with the factor analysis. On page 13, it seems the latent class analysis was done because significant differences by gender were not observed in the factor analysis. A
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	<p>better justification for the LCA is needed.</p> <p>9. RESULTS: In the results, clearer identification of what results speak to which objective is needed. Indeed, in regards to the second objective, it would be helpful to provide more, or at least clearer, information on why participants held these viewpoints (via "written statements about the reasons for their choices"). In general, it was unclear how this study identified "barriers and facilitators to implementing these interventions". This should be clarified throughout.</p> <p>10. DISCUSSION: The statement "are likely to manifest bias towards men in appointment or promotion panels"(p.14) is unclear. Suggest specifying the type of bias.</p> <p>11. The discussion of the 'framework' was unclear - I assume because it was defined in Table 1 which was missing.</p>
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REVIEWER	Pavel Ovseiko University of Oxford, UK
REVIEW RETURNED	24-Apr-2017

GENERAL COMMENTS	<p>This is an extremely important and timely contribution to the field of research on gender equality in academic medicine. It is also methodologically rigorous and innovative. To the best of my knowledge Q methodology has not been employed in the given field yet. The manuscript is rigorously written and a pleasure to read. The authors use the Standards for reporting qualitative research: a synthesis of recommendations (SRQR) rather than the recommended Consolidated criteria for reporting qualitative research (COREQ) checklist, but the SRQR and COREQ checklists use similar criteria and so in my opinion the article adheres to the COREQ standards. Provided references are updated during the production process due to a missing reference on p.6, I recommend that the manuscript is accepted as it is. On a personal note, I would like to thank the authors for this extremely important contribution to the field and draw their attention to a recently published article on a related topic that might be of interest to them: https://health-policy-systems.biomedcentral.com/articles/10.1186/s12961-017-0177-9</p>
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VERSION 1 – AUTHOR RESPONSE

Reviewer 1

1 The Abstract is not as cogent as the rest of the paper. I suggest a revision, including addressing the following issues: You have stated in the paper that there are two objectives ("[i] identify different staff viewpoints on the prioritisation of a range of gender equality interventions in the workplace and [ii] identify barriers and facilitators to implementing these interventions") but the second is not stated in Objectives. For Setting, exactly which medical school was used?

Thank you for these suggestions to improve the Abstract. We have made alterations as suggested – see page 2. We have added the name of our medical school, which was omitted originally for review purposes.

2 METHODS: A straightforward definition of Q methodology was lacking. I suggest that an introduction to this should start with a defining it as a method that identifies and examines patterns in people's subjective point of view. From there the rest of the materials and methods section makes more sense.

We have rewritten the first section of the methods to provide a clearer definition of Q methodology (pg 5).

3 Under Developing the Q set, how were 154 candidate items reduced to 50. More information than 'a iterative selective review process' is needed.

More information about the process has been included (pg 6).

4 All tables are missing. Table 1 and 3 are referenced but not Table 2.

Tables are now embedded in the main text

5 Under Participant Sample, please fix where it says "Error! Reference source not found."

This was reference to a missing Table and has now been corrected.

6 1) Under Participant Sample, the gender and age of participants have been stated but what were the pay grades and roles and how many people from each were represented in this study? A table of this information would be helpful. Information on the population from which they were drawn would also be useful in order to show the degree to which the sample is representative

Table 2 now provides information on the sample. The sample are typical in that they were purposively sampled from across the School with the aim of achieving approximately equal numbers across gender within paygrade. A decision was made to sample more participants at Grade 10 as it was important to access diversity of viewpoint at the level where decision making power in terms of Athena SWAN interventions reside. This is an appropriate Q sampling strategy. We have made this clearer on page 8.

7 ANALYSIS: It is stated that established strategies were used to "identify the maximum number of interpretable and distinct viewpoints to take forward for interpretation". What were these strategies? Was a scree plot used? Was parallel analysis used? This needs to be identified.

More information about the strategy used to select the number of factors is described (Kaiser-Guttman criteria and scree test – see page 11).

8 It's unclear what the latent class analysis is for. It's stated that it was used to "identify whether any discernible pattern in statement placement was associated with participant characteristics", yet this was clearly already done with the factor analysis. On page 13, it seems the latent class analysis was done because significant differences by gender were not observed in the factor analysis. A better justification for the LCA is needed.

Q method uses inverted factor analysis and does not include an analysis of items by any participant characteristic. As differing views by gender and academic role were of particular interest to this research we selected LCA to identify if any differences in terms of specific interventions by these characteristics were apparent. We appreciate the previous wording was misleading: LCA was not employed because no gender differences were identified in the factor analysis, as those kinds of conclusions can rarely be drawn from Q data. The reviewer has raised an important point that this was not made clear in the paper and so we have made changes on pages 3, 12 and 17.

9 RESULTS: In the results, clearer identification of what results speak to which objective is needed. Indeed, in regards to the second objective, it would be helpful to provide more, or at least clearer, information on why participants held these viewpoints (via "written statements about the reasons for their choices"). In general, it was unclear how this study identified "barriers and facilitators to

implementing these interventions". This should be clarified throughout.

This study aimed to i) identify the range of viewpoints held by academics on how to address gender inequality and ii) identify attitudinal barriers to implementing these interventions. Links between the Results and Objectives have been made more explicit and addressed in the Discussion also: see pages 2, 12, 17, 19 - 22

10 DISCUSSION: The statement "are likely to manifest bias towards men in appointment or promotion panels"(p.14) is unclear. Suggest specifying the type of bias.

We have clarified the findings from the paper to give a clearer idea of the type of study and bias identified see page 20.

11 The discussion of the 'framework' was unclear - I assume because it was defined in Table 1 which was missing

Table 1 provides the intervention framework, which supports the discussion.

Reviewer: 2

1 a missing reference on p.6,

This was reference to a Table and has now been corrected.

2 Recently published article on a related topic that might be of interest to them (Ovseiko, Pavel V., et al. "Advancing gender equality through the Athena SWAN Charter for Women in Science: an exploratory study of women's and men's perceptions." Health research policy and systems 15.1 (2017): 12)

Thank you for drawing our attention to this article, which supports many of our own findings. We have cited the paper in the Discussion section in relation to the resentment some staff may feel toward positive action and the need to evaluate Athena SWAN in terms of long-term impact (pgs 20 & 22).

VERSION 2 – REVIEW

REVIEWER	Rhiannon B. Parker University of Wollongong, Australia
REVIEW RETURNED	30-May-2017

GENERAL COMMENTS	The authors have addressed my comments to my satisfaction.
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REVIEWER	Pavel Ovseiko University of Oxford, UK
REVIEW RETURNED	01-Jun-2017

GENERAL COMMENTS	The authors have fully addressed my comments and suggestions, and so I recommend that this article is accepted for publication as it is without further delays.
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