

PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form ([see an example](#)) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below. Some articles will have been accepted based in part or entirely on reviews undertaken for other BMJ Group journals. These will be reproduced where possible.

ARTICLE DETAILS

TITLE (PROVISIONAL)	The acceptance of hearing disability among adults experiencing hearing difficulties
AUTHORS	C. Manchaiah, Vinaya K.; Molander, Peter; Ronnberg, Jerker; Andersson, Gerhard; Lunner, Thomas

VERSION 1 - REVIEW

REVIEWER	Dr Jamie Mackrill WMG, University of Warwick, UK
REVIEW RETURNED	18-Oct-2013

GENERAL COMMENTS	<p>Overall this is an interesting article and piece of work. The authors describe the development of a hearing disability questionnaire and through PCA analysis reveal how this produces a two factor model of hearing activity engagement and acceptance. The authors suggest this has potential for use within the clinical setting.</p> <ul style="list-style-type: none">• Abstract. I think the factor names should be stated in the abstract.• I think the article should have a further proof read as some of the sentences can be quite long for the reader. These should be shortened to aid comprehension for the reader. I have detailed some alterations in my specific comments.• I also think that within the limitations section the sample size should be acknowledged. Considering the recruitment process I was surprised by the small number of respondents (n=90). The authors might wish to comment on validating the model using a larger sample.• Notes on Discussion: I wonder if the perceived impact on a person's quality of life might impact their acceptance to hearing difficulties. <ul style="list-style-type: none">• P3 Line 39 Reword to – “Due to online recruitment, the study sample may not be representative...”• Page 6 Line 52: Typographical error Reword to “study was on psychological terms”.• Page 7 Line 28: also completed few questionnaires via internet. This needs rewordings to “completed four questionnaire presented through an online format”• P8 Line 23 state “has good internal consistency, Cronbach's alpha...”• P8 Line 36/37 please give the reliability figures you are referring to.• P9 Data Analysis: please specify what parameters the assumption of normality was used for testing. Please reword second sentence to improve clarity: “Descriptive statistics were used to examine demographic factions with the assumptions of normality tested before carrying out PCA”. Please report if the data was normally distributed within the results
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	<p>section.</p> <ul style="list-style-type: none"> • P9 Line 53. Remove the word previously. • P9 Line 52 states participants consulted a “hearing healthcare professional”. However, table states that participants have consulted a “healthcare professional”, not specifically a hearing healthcare professional. Please clarify if the healthcare professional was a specialist in hearing. If not this should be reworded to “healthcare professional”. If this was a specialist in hearing please rephrase the original term to “healthcare professional specializing in hearing”. I think the term hearing healthcare professional could be more accurately phrased if possible. It seems a little unspecific considering the publication type. • P10. Line 14/15. No Eigenvalues given. Please give the Kaiser rule of eigenvalues >. ? • P10 Line 32. Please give a KMO reference value to show that these KMO figure are adequate. • Page 12 Discussion sentence 3: please remove “some of the” from the end of the sentence. • Page 14 second paragraph 1st sentence. Please reword the last part of the sentence to: “...had consulted a hearing healthcare professional on at least one occasion”. See above point regarding the hearing healthcare professional comment. • P14 Line 10. Please replace the word analogue with the work analogy. • P14 Line 41. Please clarify if these are hearing healthcare professionals. See above point. • P15 Limitations of study. I think a note on the sample size should be made. Although 90 is adequate in reference to the KMO figures, I wonder if this is still a comparatively small sample. A large sample may help justify the underlying constructs further. PCA generally relies on large samples to gain reliability. • Page 16 Line 12: remove the word further. • Table 2 – It would be good to have the question items written in the table so the reader knows which scales achieved which loadings. • Table 3 – Please state the name of each Factor e.g. Factor 1 – activity and engagement • Table 4 - The columns HHQ, HADS and URICA-R could be removed as they do not form part of the discussion in relation to the HDAQ results. • Table 4 heading – the significance key should be reworded as (*: significant correlation with $p < 0.01$). I think the current wording is wrong.
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REVIEWER	Joseph J Montano Weill Cornell Medical College New York, New York USA
REVIEW RETURNED	24-Oct-2013

GENERAL COMMENTS	<p>This paper addresses an unmet need in the rehabilitative literature. The authors have identified an important area for research and have set a foundation for future research.</p> <p>While I found the paper of great interest and look forward to reading future outcomes, I feel unqualified to evaluate the statistical component of this study and therefore must defer any recommendation for publication. Should other peer reviewers evaluate the statistical information and believe it to be appropriate for the design and analysis of the study, I would feel it is a worthy</p>
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	<p>publication.</p> <p>page 4line 19 persons page 4 line 21 comma after PHI page 4line 32 rewrod necessary page 4line 50 delelte final a page 5 lines 30 to 41 unclear of intent page 6 line 52 dekete on page 7 line 48 add a page 9 lines 3 concern about modification of the scale was this scale already modified in the Laplante study and was it found to still be valid and reliable after modification?</p>
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VERSION 1 – AUTHOR RESPONSE

Reviewer 1 Comments	Response
<p>Comment 1.1 Overall this is an interesting article and piece of work. The authors describe the development of a hearing disability questionnaire and through PCA analysis reveal how this produces a two factor model of hearing activity engagement and acceptance. The authors suggest this has potential for use within the clinical setting.</p> <p>Abstract: I think the factor names should be stated in the abstract</p>	<p>Many thanks for your helpful comments.</p> <p>We have included the factor names in abstract.</p>
<p>Comment 1.2 I think the article should have a further proof read as some of the sentences can be quite long for the reader. These should be shortened to aid comprehension for the reader. I have detailed some alterations in my specific comments.</p>	<p>We apologies for the careless mistakes. We have sent the article for proof reading with American Journal Experts and have made significant textual changes to improve the readability.</p>
<p>Comment 1.3 I also think that within the limitations section the sample size should be acknowledged. Considering the recruitment process I was surprised by the small number of respondents (n=90). The authors might wish to comment on validating the model using a larger sample.</p>	<p>This is a very important and valid point. We have included this information in the limitations section.</p>
<p>Comment 1.4 Notes on Discussion: I wonder if the perceived impact on a person’s quality of life might impact their acceptance to hearing difficulties.</p>	<p>We also hypothesize that otherfactors such as ‘cognitive functions’, ‘personality’, ‘quality of life’ and ‘psychological well-being’, although they were not included in the study. This is highlighted in the limitations section.</p>
<p>Comment 1.5</p> <ul style="list-style-type: none"> ▪ P3 Line 39 Reword to – “Due to online recruitment, the study sample may not be representative...” ▪ Page 6 Line 52: Typographical error Reword to “study was on psychological terms”. ▪ Page 7 Line 28: also completed few questionnaires via internet. This needs rewordings to “completed four questionnaire presented through an online format” ▪ P8 Line 23 state “has good internal consistency, Cronbach’s alpha...” 	<p>We have made the suggested textual changes and provided additional details.</p>

<ul style="list-style-type: none"> ▪ P8 Line 36/37 please give the reliability figures you are referring to. ▪ P9 Line 53. Remove the word previously. 	
<p>Comment 1.6 P9 Data Analysis: please specify what parameters the assumption of normality was used for testing. Please reword second sentence to improve clarity: “<i>Descriptive statistics were used to examine demographic factions with the assumptions of normality tested before carrying out PCA</i>”. Please report if the data was normally distributed within the results section.</p>	<p>We have reworded the text and provided additional information as suggested.</p>
<p>Comment 1.7 P9 Line 52 states participants consulted a “hearing healthcare professional”. However, table states that participants have consulted a “healthcare professional”, not specifically a hearing healthcare professional. Please clarify if the healthcare professional was a specialist in hearing. If not this should be reworded to ‘healthcare professional’. If this was a specialist in hearing please rephrase the original term to “healthcare professional specializing in hearing”. I think the term hearing healthcare professional could be more accurately phrased if possible. It seems a little unspecific considering the publication type.</p>	<p>We recognis ethis an important aspect. We have made textual changes to address this comment bothin paper and in tables.</p>
<p>Comment 1.8</p> <ul style="list-style-type: none"> ▪ P10. Line 14/15. No Eigenvalues given. Please give the Kaiser rule of eigenvalues >. ? ▪ P10 Line 32. Please give a KMO reference value to show that these KMO figure are adequate. 	<p>We have included the suggested figures in the revised version fo the manuscript.</p>
<p>Comment 1.9</p> <ul style="list-style-type: none"> ▪ Page 12 Discussion sentence 3: please remove “some of the” from the end of the sentence. ▪ Page 14 second paragraph 1st sentence. Please reword the last part of the sentence to: “...had consulted a hearing healthcare professional on at least one occasion”. See above point regarding the hearing healthcare professional comment. ▪ P14 Line 10. Please replace the word analogue with the work analogy. ▪ P14 Line 41. Please clarify if these are hearing healthcare professionals. See above point. ▪ Page 16 Line 12: remove the word further. 	<p>We have made the suggested textual changes in the revised version of the manuscript.</p>
<p>Comment 1.10</p> <ul style="list-style-type: none"> ▪ P15 Limitations of study. I think a note on the sample size should be made. Although 90 is adequate in reference to the KMO figures, I wonder if this is still a comparatively small sample. A large sample may help justify the underlying constructs further. PCA generally relies on large samples to gain reliability. 	<p>We recognise this as a limitation of the study and included in the limitations section. However, as the split sampel validation provide amilar results even with sampel size of 45, we believe the model suggeted in this study is what may be close to reality. Inded, validating this scale with larger sample size would be necessary.</p>
<p>Comment 1.11</p> <ul style="list-style-type: none"> ▪ Table 2 – It would be good to have the 	<p>Many thanks for very helpful suggestions. We</p>

<p>question items written in the table so the reader knows which scales achieved which loadings.</p> <ul style="list-style-type: none"> ▪ Table 3 – Please state the name of each Factor e.g. Factor 1 – activity and engagement ▪ Table 4 heading – the significance key should be reworded as (*: significant correlation with $p < 0.01$). I think the current wording is wrong. 	<p>have made the suggested textual changes to tables in the revised version of the manuscript.</p>
<p>Comment 1.12</p> <ul style="list-style-type: none"> ▪ Table 4 - The columns HHQ, HADS and URICA-R could be removed as they do not form part of the discussion in relation to the HDAQ results. 	<p>We have decided to keep this information in table 4 as we have some made some discussion in the discussion section. Kindly refer to discussion in page 14.</p> <p>Although they don't directly form discussion related to HDAQ, as they are not reported before we believe it would be important to include them in this paper.</p>

Reviewer 2 Comments	Response
<p>Comment 2.1</p> <p>This paper addresses an unmet need in the rehabilitative literature. The authors have identified an important area for research and have set a foundation for future research.</p> <p>While I found the paper of great interest and look forward to reading future outcomes, I feel unqualified to evaluate the statistical component of this study and therefore must defer any recommendation for publication. Should other peer reviewers evaluate the statistical information and believe it to be appropriate for the design and analysis of the study, I would feel it is a worthy publication.</p> <p>page 4 - line 19 persons page 4 - line 21 comma after PHI page 4 - line 32 reword necessary page 4 - line 50 delete final a page 5 - lines 30 to 41 unclear of intent page 6 - line 52 delete on page 7- line 48 add a</p>	<p>Many thanks for helpful comments.</p> <p>We have made the suggested textual changes.</p>
<p>Comment 2.2</p> <p>Page 9 - lines 3, concern about modification of the scale was this scale already modified in the Laplante study and was it found to still be valid and reliable after modification?</p>	<p>We can confirm that the modified version of URICA scale was used in the study by Laplante-Levesque et al (2013) and it was found to be valid and reliable. We have edited the text in our paper to make this clear.</p>

VERSION 2 – REVIEW

REVIEWER	Dr Jamie Mackrill WMG, University of Warwick
REVIEW RETURNED	22-Nov-2013

GENERAL COMMENTS	<p>The acceptance of hearing disability in adults experiencing hearing difficulties</p> <p>Overall this is an interesting article and piece of work. The authors describe the development of a hearing disability questionnaire and through PCA analysis reveal how this produces a two factor model of hearing activity engagement and acceptance. The authors suggest this has potential for use within the clinical setting. The comments that I raised in my previous review have been met. I still have a few minor comments regarding the article which I feel need to be addressed but otherwise I feel the article is ready for publication.</p> <ul style="list-style-type: none"> • Page 3 Line 37-3 - “In addition the online questionnaire might differ from pen and paper”. In what way might these differ? • Page 7 line 7 – “action hearing loss” the word Loss has a line through it. • Page 8 line 29 – the statistic .80 needs a symbol for meaning. Is it an r= or alpha=value? • Page 9 line 39 – please reword “The data were” to “The data was”. • Page 10 line 25 – I feel the KMO statistic needs a reference value so the reader knows if .86 is good or bad. • Page 14 line 36 – change “healthcare specialist” to “hearing specialist” to maintain consistency throughout article.
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VERSION 2 – AUTHOR RESPONSE

Reviewer Comments	Response
Overall this is an interesting article and piece of work. The authors describe the development of a hearing disability questionnaire and through PCA analysis reveal how this produces a two factor model of hearing activity engagement and acceptance. The authors suggest this has potential for use within the clinical setting. The comments that I raised in my previous review have been met. I still have a few minor comments regarding the article which I feel need to be addressed but otherwise I feel the article is ready for publication.	Many thanks for your helpful comments.
<ul style="list-style-type: none"> ▪ Page 7 line 7 – “action hearing loss” the word Loss has a line through it. 	That is how the action on hearing loss is named with line through the loss, hence we have not made any changes.
<ul style="list-style-type: none"> ▪ Page 3 Line 37-3 - “In addition the online questionnaire might differ from pen and paper”. In what way might these differ? ▪ Page 8 line 29 – the statistic .80 needs a symbol for meaning. Is it an r= or alpha=value? ▪ Page 9 line 39 – please reword “The data were” to “The data was”. ▪ Page 10 line 25 – I feel the KMO statistic 	We have made the suggested changes in the revised version of the manuscript.

<p>needs a reference value so the reader knows if .86 is good or bad.</p> <ul style="list-style-type: none">▪ Page 14 line 36 – change “healthcare specialist” to “hearing specialist” to maintain consistency throughout article.	
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