Author's response to reviews

Title: Acceptance of sexual minorities, discrimination, social capital and health and well-being: a cross-European study among members of same-sex and opposite-sex couples.

Authors:

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Author's response to reviews: see over
Dear editor,

Thank you for considering this manuscript and all the feedback provided by the reviewers. The feedback was very constructive. All authors really appreciated all this feedback and the time the reviewers took to look at the manuscript

Point-to-point response to the feedback is provided in red:

1. **Reviewer's report**

**Title:** Acceptance of sexual minorities and the mediating role of social capital on health and well-being among members of same-sex and opposite-sex couples: a cross-European study.

**Version:** 2  **Date:** 7 January 2015  **Reviewer:** Tiffany Jones  **Reviewer's report:** Minor Essential Revisions

1. Is the question posed by the authors well defined?

In the main, yes. I guess the issue would be that it is not defined as question but as an aim in a broad sense (101-104). The aim does not quite account for the parameters of the study (countries/genders and so on... perhaps if this is adequately mentioned in the methods that is less of an issue but personally I may not leave it so late). Teasing out beneath the aim some precise questions on the exact relationships examined in the data would improve presentation of question/s overall... you asked questions, you just don’t put them in here. Try wording this as “The research questions of the study included: What is the nature of the relationship between x and y?, and How does this compare with z etc.?”. Use the questions you asked of the data, but worded in a general way which could make sense to a third party with no knowledge of your study.

The explicit research question is added in the introduction: “The specific research questions of the study included: Does levels of health and well-being differ between individuals in same-sex and opposite-sex couples? Is LGB acceptance at country level associated with health and well-being, and can social capital be a link in such an association?”

2. Are the methods appropriate and well described?

In the main, yes. But we need more information on how the original study was conducted, a bit more of a summary on how that data came to be, what it includes and so on.

Specifications about in areas the ESS survey measures and what social themes it covers are included in the method section.

3. Are the data sound?

Yes, but there needs to be better interpretation accounting for context.

Extra explanation on European context has been added in the introduction, further highlighted in the result and discussion sections, focusing on differences between European countries.
4. Do the figures appear to be genuine, i.e. without evidence of manipulation?

In my view and experience yes, but I would be keen for an additional quantitative expert/s to be consulted. The tables for example also fit APA guidelines etc. The last 2 figures seem to be a tad spurious and confusing though – I am not sure they add much and the arrows are a bit all over the place.

5. Does the manuscript adhere to the relevant standards for reporting and data deposition?

Yes, in the main.

6. Are the discussion and conclusions well balanced and adequately supported by the data?

In the Introduction I sometimes wanted more details on which countries precisely some statements referred to. Readers will also need a thorough account of European (e.g. EU and so on) and country-specific context and policy/legislation in relation to issues of same sex couples as relevant to the piece, and also economic contexts as relevant to the piece. Therefore, the discussion and conclusion are quite impacted by the lack of contextual information provided in the introduction, the data seems far less meaningful than it could be (given more of a treatment) especially to people outside Europe but even to those within it. You have to use contextually specific information to make greater sense of your data, in relation to findings and implications but also then in terms of limitations of findings and conclusions. This would also help clarify specific streams of study for further research ideas.

Besides referring to an earlier commentary and illustration on European differences in acceptance, a few sentences on contextual information were added: “For example, equal marriage rights for sexual minorities have recently been a topic of heated political debate in the UK and France [14,15]. In Russia, an “anti-propaganda” law has been adopted to ban public information regarding homosexuality, and many non-governmental organizations has stated that this law violates human rights, e.g. the freedom of expression, assembly, and privacy [16]. However, in other countries such as Belgium, the Netherlands, Spain, and most Scandinavian countries, equal marriage rights have been legally in place since many years.”

7. Are limitations of the work clearly stated?

The authors need to be a bit clearer on the limitations of the data source itself, and how it was initially collected, to help us understand the limitations present and then need to address and outline those additionally built into their own study. The lack of context is also a problem here too, in the sense that we don’t know what is “special” about these circumstances politically and economically and therefore the data compared to other countries/continents for example. It can’t be ignored or skimmed over.

The limitations of the ESS with it focus on sociology and political science are now more explicitly stated in the discussion part. Extra explanation on European context has been added in the introduction, further highlighted in the result and discussion sections, focusing on differences between European countries.

8. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?

In the main, but I would have liked some more information about studies published from the data...
itself before they came to it. Also there needs to be some more information on links already established between discrimination and wellbeing for example, and other social structures and wellbeing for LGB people (e.g. Hillier et al 2010 provides some good work on health and wellbeing outcomes for same sex attracted youth, my own Springer book Jones 2015 policy and gay, lesbian, bisexual... Etc. shows links between health and wellbeing for LGB people and social and education policies).

Unfortunately we were not able to access both of these publications.

9. Do the title and abstract accurately convey what has been found?

The title of this paper (currently lines 1, 2 and 3) is long and confusing. It needs to be pared down to an appropriate length to enhance sense-making and attract readers (perhaps in academia and its various fields, but also beyond it). Remember that your reader does not read the title with the knowledge of your field and project that you bring to writing that title (as its authors). The way to solve this issue is to consider: how would you both (conversationally) explain this project to a naïve stranger in 10 words or less? Perhaps even do so, bring someone else into the room and try it. Use that brief line as your title. Other key words that are not being used in the title but you find relevant for someone searching for this piece can then simply be put into the “key words” list.

Changed the title into "Acceptance of sexual minorities, discrimination, social capital and health and well-being: a cross-European study among members of same-sex and opposite-sex couples."

The abstract on the other hand is a bit clearer. Although I note that perhaps there are moments where it looks like you had prepared the study in the hopes of some alternate result (so maybe re-read this and check if you can’t make it a tad more congruent in terms of background summary and findings, be precise) but the findings themselves are actually quite interesting in summary here.

The abstract is changed to make it more comprehensive in terms of terminology and focus.

Just watch in the summary of conclusions (lines 32-34) you don’t go overboard and make such definitive statements... I know it can be difficult given abstract word counts, but don’t cut those necessary mediating words here. After all, this is a small sample, the findings have implications but are not conclusive, the data suggest relationships but certainly not causes for example. I’d recommend you revise that sense of there being causation, and replace it with the "suggestion of a relationship between" or similar in the spirit of a more appropriately scientific reserve about your data and its limitations.

Included the suggested mediating words. The conclusion part is, hence, rephrased into "The findings of this study suggest a negative association between exposure of discrimination based on sexual orientation and both health and well-being of individuals living in same-sex couples. This study, further, indicates that both members of same-sex couples and opposite-sex couples might benefit from living in societies with high level of LGB acceptance, in terms of better health and well-being."

Also, the methods (line 23 onwards) are described using passive grammar, rephrase in active grammar.

Changed passive grammar in method section of the abstract into active grammar.

In terms of Key Words, I don’t know that Subjective Wellbeing (line 36) will get many online/library searches... why not wellbeing? Keep it broader to allow for readers who may be interested.
10. Is the writing acceptable?

Generally the writing style is acceptable, especially where precise and where active grammar is used. There are some incidences of passive grammar to be addressed. For examples of the best writing in the piece see the Introduction (from 18+), the short sentences and references were generally well done. Keeping that more uniform throughout would be good at times.

The grammar is changed into the active forms and sentences were made shorter throughout the manuscript.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

None/ N/a.

2. Reviewer's report

**Title:** Acceptance of sexual minorities and the mediating role of social capital on health and well-being among members of same-sex and opposite-sex couples: a cross-European study.

**Version:** 2  **Date:** 24 January 2015

**Reviewer:** David Plummer

**Reviewer's report:**

This is an interesting paper on an important topic. I recommend acceptance once the following issues are addressed.

The database on which the paper is based appears to be reliable and of high quality.

The analysis drills down to country level and this raises questions about the sample size when doing such fine grained analysis. I would also like confirmation that the technical details of the statistical measures used have been applied appropriately. Statistical review is recommended. The statistical reviewer might also like to comment on ways to simplify and condense the data presentation / tables.

Minor essential revisions

The English expression is a little awkward at points and could benefit from editing prior to publication, including the following:
line 59 use plural 'forms'

Changed accordingly

line 68 change 'are often' to 'have been'

Changed accordingly

line 73 change 'could' to 'can'

Changed accordingly

line 76 don't start sentence with unspecified 'It'

Specified the subject

line 77 need to specify 'it'

Specified the subject

line 79 the sentence starting with 'The cognitive' is unclear

Clarified the sentence by specifically describing that in sociology this is the other second component of social capital that is describing certain other aspects of social capital.

line 85 'According to the theory of social capital' needs referencing

Corrected it into a clear hypothesis rather than a statement that needs clear referencing

line 94 'less plausibly serving as a social safety nets' needs correcting

Corrected

line 95 replace 'ethnical' with 'ethnic'

Replaced accordingly

line 96 change to 'affecting health directly'

Changed accordingly

line 97 change 'concept' to 'influence'

Changed accordingly

line 97 delete 'its'

Erased accordingly

line 108 change 'has been' to 'was'
Changed accordingly

   lines 112-113 awkward repetition of similar words. Change 'various' to 'a range'; change 'variability' to 'variation'; change 'varied' to 'ranged'

Changed accordingly

line 125 delete 'completely and change to 'handled anonymously and is openly available'

Erased accordingly

line 117 change 'year' to 'years'

Changed accordingly

line 135 insert a comma after 'education'

Inserted accordingly

line 136 delete 'the' from 'the opposite sex'

Deleted accordingly

line 141 delete 'different' from 'two different groups'

Deleted accordingly

line 163 insert 'factors' after 'structural'

Inserted accordingly

line 164 change 'in total' to 'a total of'

Changed accordingly

line 170 delete 'was'

Erased accordingly

line 187 delete 'derived from that and'

Erased accordingly

the results reported from lines 252 to the discussion should be cross-referenced to the tables

References to the tables were added

line 277 insert 'an' to read 'at an individual'

Inserted accordingly
3. Reviewer's report

**Title:** Acceptance of sexual minorities and the mediating role of social capital on health and well-being among members of same-sex and opposite-sex couples: a cross-European study.

**Version:** 2  **Date:** 22 January 2015  **Reviewer:** John de Wit

**Reviewer's report:**

As the authors note, health disparities between same-sex attracted and opposite-sex attracted citizens are increasingly attracting attention from public health and social science researchers, as well as from policy makers. This study draws upon a Europe-wide survey to examine if national differences in acceptance of same-sex attracted individuals is related to the health and well-being of same-sex attracted people, relative to opposite sex attracted people, and whether any such association between acceptance and wellbeing is mediated by social capital. While interesting in its aim, I have several major conceptual and analytical concerns that temper my enthusiasm for the paper in its present form. I have limited my comments to what are termed major compulsory revisions.

I find the description of the conceptual approach of the study in the introduction somewhat confusing. It's not entirely clear what the role is of the minority stress model, as adapted by Meyer for sexual minorities. The main issue seems to be that social acceptance is related to health and wellbeing and Meyer proposes an explanation for that by specifying mediating mechanisms. These do not feature in the data collection and analyses. Most importantly, the relation between the minority stress explanation and the social capital explanation as authors see this remains unclear. Are these considered complements or alternatives?

The two theories are seen as complimentary. In the introduction those two are now better linked and their connection better explained.

Furthermore, the description of the notion of social capital is not entirely clear; the definition of the concept as a whole as well as that of the structural and cognitive components requires some work to ensure the reader understands the position of the authors. Under limitations I would also expect a discussion of the validity of the measures of social capital included in the study, in particular in view of the diverse uses of the concept and its rather fuzzy conceptualisation. There is also an issue with the location of the ‘source’ of social capital. In the explanation linking social capital to outcomes, social capital seems entirely located in the dominant social group, which could feasibly result in a deficit for same-sex attracted citizens. However, social capital may also be derived from social relations and networks in a more specific, same-sex attracted community, as has been long argued and investigated. (Authors note a more specific locating of social capital in the discussion, but don’t go all the way in their reasoning.) To the extent that same-sex-attracted people have strong ties
within their community, the deficit in social capital hypothesis as presented is incomplete.

Note that the reasoning linking social capital and outcomes can be simplified.

The description of social capital is simplified and clarified based on the feedback provided. The reasoning on lack of within-group social capital and bonding mechanisms in the LGB group is further highlighted and described in the introduction and the discussion.

The authors suggest that, in light of wide differences between countries, the Europe-wide social attitudes survey is particularly suited for the exploration of the consequences of structural discrimination on health. To that end, they convert individual-level assessments of social capital and LGB acceptance into country-level mean scores that then are included as higher-level covariates, alongside with individual-level covariates, including social capital. Importantly, however, critical details regarding the data analysis approach are currently missing and information provided is confusing (Are path analysis undertaken by means of regression analysis, as suggested on page 6? Currently structural equation modelling would be expected for path analysis, and that these were undertaken is suggested by the goodness of fit indicators provided).

Indeed, structural equation modeling was applied in this study with particular path regression weights. To avoid further confusion, the terminology is adapted.

Also, LGB acceptance was measured with an item that seems to tap into participants' personal acceptance and it is questionably to what extent this item is a valid indicator of social acceptance; there might be smaller between country-level differences in acceptance rates as reported by same-sex attracted participants (i.e., self-acceptance) than by opposite-sex attracted participants. Also, I understand that a country-level mean score of individual scores was included to assess country-level effects, which seems a rather crude and unusual way of undertaking multi-level analyses, for which dedicated analyses approaches are available. This may however be a reflection of missing information.

The calculation of country-level scores is clarified by adding “Country scores were constructed by using mean values from all ESS 2010 respondents before selecting individuals from same-sex couples and matching them to members from opposite-sex couples.” Data on self-acceptance was unfortunately not available.

It’s also not fully clear how mediation was assessed statistically and those details seem not to be presented. In particular, how did authors estimate the indirect effect? Table four is suggestive but not conclusive regarding the approach taken and further details are needed.

A section on the mediation methodology is added: “In order to do so, first, the correlations between the mediator, the dependent and independent variables were tested (α=0.05). Thereafter, separate effects of the mediator and independent variable on the dependent variable were tested through regression equation. Thereafter, the Sobel test was used to test the mediation model of the mediator, the dependent and independent variable. Hence, the mediator was added into the multilevel path analysis model."

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being
4. Reviewer’s report

Title: Acceptance of sexual minorities and the mediating role of social capital on health and well-being among members of same-sex and opposite-sex couples: a cross-European study.

Version: 2 Date: 27 January 2015 Reviewer: Bianca Fileborn Reviewer’s report:

Firstly, I would like to acknowledge that in this article the authors address a very important topic that should be published on. However, as my comments below indicate, I believe that the article requires significant revisions in order to be publishable.

I would also like to note that my background is as a qualitative researcher. This has limited my ability to comment on the quantitative data analysis undertaken by the authors, and both the authors and editors should keep this in mind, particularly in regards to ensuring the quality and rigor of the data analysis.

Major Compulsory Revisions

My major concern with this paper as it stands is that the claim made throughout that ‘no differences were found between individuals living in same-sex and opposite-sex couples’. I found this extremely confusing. Do the authors mean that there was no difference in the overall self-rated and subjective well-being between same-sex and opposite-sex attracted couples? Or that both same-sex and opposite-sex self-rated health and subjective well-being were mediated by social capital?

Essentially, it seems contradictory to suggest that there were no differences between same-sex and opposite sex couples, but to also claim that sexuality-based discrimination significantly impacted on negative self-rated health and subjective well-being. This needs to be clarified/resolved by the authors before the paper can be published.

We changed the statement in the abstract to “No differences in these relations were found between individuals living in same-sex and opposite-sex couples,” linking to the associations between acceptance and both health and well-being.

I was also surprised in the conclusion to see the statement that ‘sexuality based discrimination was more strongly related to health inequalities among all individuals rather than exclusively for those living in a same-sex couple’. Firstly, because I don’t fully understand how those belonging to a majority sexual group experience discrimination based on their sexual orientation. Secondly, because it wasn’t clear from reading the results section that sexuality-based discrimination impacted on opposite-sex attracted people, or that this was associated with reduced self-rated health and well-being.

The entire section was set up for an alternative argumentation, and is now rewritten entirely. This statement on sexuality-based discrimination was deleted.
In the paragraph starting at line 294, there are also what appear to be contradictory claims made regarding the influence of country-level LGB acceptance on health and well-being. The authors initially claim that country-level acceptance is positively and strongly associated with subjective well-being and health, but go on to state that it is not significantly linked to self-rated health and well-being. Again, this was very confusing and needs to be rectified. It also wasn’t clear that the authors’ comments around the bonding and bridging effects of social capital and LGB acceptance were supported by the data. I think this requires some further explanation in order to make this argument clearer to the reader.

This has been rectified.

The quality of writing and clarity of expression was also a significant issue in this paper. In order to be of a publishable standard the authors will need to undertake substantial revision and editing. There were a large number of typographical and grammatical errors in the transcript. There were also several sections that were verging on being incomprehensible, in particular lines 88-100, 263-267, 272-274, 354-355.

Grammar and spelling corrections were performed and the text was rewritten in a more comprehensible manner.

Minor Essential Revisions

The authors also need to clarify which particular sexual minority groups the research was concerned with. The acronym LGB was used throughout, indicating that the research was investigating lesbian, gay and bisexual minorities. Yet, it is also indicated elsewhere that bisexual individuals weren’t included in the research, e.g., line 102.

This has been corrected and clarified throughout the entire manuscript.

I was a little taken aback by the claim in lines 83-84 that social trust explains up to 58% of total variance in mortality rates. I wonder if explains is too strong a term here. Perhaps ‘correlates with’ or ‘is associated with’ variance in mortality rates would be more appropriate?

This claim comes almost literally from the publications by prof. Kawachi.


I also wondered if it was necessary or accurate to state that ‘no informed consent was given’ for undertaking this data analysis. Presumably participants would have given informed consent at the time of participating in the ESS survey, and should have been informed as to how the data would be used?

This is changed into: Anonymous data was retrieved from the ESS website and used for this study, for which non-study-specific informed consent was provided.”

There were also a number of limitations to the research that need to be better acknowledged. Firstly, the method used to identify same-sex attracted individuals in the survey seems likely to
have resulted in an under-reporting given that not all same-sex attracted individuals necessarily identify as being part of a group that is discriminated against (and I would assume this would vary greatly across the different countries included in the study).

This is now addressed in the first part of the limitation section.

Secondly, the use of single questions to measure self-rated happiness and well-being is unlikely to capture a detailed picture of these measures in comparison to using a standardized scale such as the Life Satisfaction Scale or the Depression, Anxiety, Stress Scale. I don’t suggest that the use of single questions is inappropriate or invalid, but it is nonetheless a relatively limited measure and this needs to be acknowledged.

This has been included in the study's limitations: “Although single measures on self-rated health showed to be a strong predictor of mortality,[30,31] specific stress-related scale could have been more sensitive in capturing subjective well-being in this study.”

Another weakness of the survey methodology is that it addressed social capital in a broad/general sense rather than exploring social capital at the community level. For example, there may be a significant difference in how connected lesbian and gay people feel to the broader community, versus how connected they feel to the lesbian and gay community. This limitation could also be more clearly acknowledged by the authors.

To the existing section on this limitation, a extra sentence was added concerning this particular aspect: “Especially for LGB individuals, this integration with their neighborhood communities, and not their LGB peers, may work differently for them in comparison with heterosexual individuals.”

The comment on the coming-out process causing 'mental problems' (line 324) needs to be rephrased. I appreciate the point the authors are trying to make here, however it needs to be worded more sensitively. Perhaps something like ‘associated with a range of mental health challenges’ would be more appropriate.

This is changed according to the suggestions.

Discretionary Revisions

The paper would benefit from greater recognition of intersecting forms of oppression, particularly in the introduction and discussion sections. E.g., experiences of health and well-being would be different based on gender, class, racial/cultural background. I understand that this paper is looking specifically at the relationships between sexual orientation, social capital and health disparity, but it does need to be more strongly acknowledged that a broad range of other factors also influence health and well-being.

Intersectional elements are added to the introduction and discussion.

In the discussion of the study limitations the authors could also consider highlighting that there is great variation within the lesbian and gay communities in terms of mental health and wellbeing, and that this hasn’t been considered in the study at hand. For example, recent research by Lyons and colleagues illustrates that the mental health of gay men varies depending on the particular sub-group they belong to. See: Lyons, A. & Hosking, W. (2014). Health disparities among common subcultural identities of young gay men: Physical, mental, and sexual health. Archives of Sexual Behavior. Epub-ahead-of-print. doi:10.1007/s10508-014-0315-1
The reference was added to the discussion: “Further, the selection methods do not reflect the variety in the LGB community [25,26] and do not capture the great variance in mental health of all subgroups [45].”

I consent to this report being made publicly available upon publication of the article.

**Level of interest:** An article of importance in its field  **Quality of written English:** Not suitable for publication unless extensively edited

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interests.

The updated manuscript is now uploaded to the system.

With kind regards,

Arjan van der Star