PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (**http://bmjopen.bmj.com/site/about/resources/checklist.pdf**) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

ARTICLE DETAILS

TITLE (PROVISIONAL)	The effect of 'lifestyle stigma' on public support for NHS-provisioned pre-exposure prophylaxis (PrEP) and preventative interventions for HPV and type 2 diabetes: A nationwide UK survey
AUTHORS	Hildebrandt, Timothy; Bode, Leticia; Ng, Jessica

VERSION 1 – REVIEW

REVIEWER	Kiffer Card University of Victoria, Canada
REVIEW RETURNED	18-Mar-2019

GENERAL COMMENTS	The authors show that loaded/leading questions have an effect on how indiviiduals respond to questions about the acceptability of preventing HPV and diabetes, but not HIV. Starting in the abstract, the authors suggest that the null finding on PrEP may be related to it's insensitivitity to lifestyle stigma. It may in fact be that the negative attitudes towards funding PrEP are already "baked in" as the association between HIV and lifestyle stigma is already very strong. This is supported by the significance of findings related to HPV -- given that people are likely less familiar with HPV. I also note that the control mean is more similar to the treatment means of the other two cases. Taken together this highlights for me the liklihood that the study design is potentially confounded by perceptions of not only the potential treatment and lifestyle-related causes but also of the root disease. The second paragraph of the discussion focuses on the representativeness of panel data and is not supported by the findings of the present study. The authors should move this to a limitations section if they are concerned that their sampling method has created an unrepresentative result. In the fourth paragraph of the discussion the authors focus on the sympathy effect for HIV. This is not supported by the results. Support for PrEP was low compared to support for less 'deadly' diseases such as HPV. The authors compare the perceptions across the three diseases (i.e., "We found that type 2 diabetes received the lowest support...") without providing a significance test. If the authors are going to make cross-group comparisons they should conduct the approppriate test to support these qualitative assessments.

	The conclusion includes several unsupported claims regarding the threat of "responsibilisation," (no evaluation of such trends or its impact on public support), "broad public support" (findings not representative)
	The introduction is quite long. I'd reccommend the authors tighten up their argument and focus on a more concise narrative for the article.
	In the results I would avoid qualitative assessments of the results (i.e., "has a good distribution"). I'd just report the results and save needed commentary for the discussion section.

| **REVIEWER** | Natalie Riediger
University of Manitoba, Canada |
| **REVIEW RETURNED** | 20-Mar-2019 |

| **GENERAL COMMENTS** | The authors present an analysis of public opinions in Britain regarding lifestyle stigma of three different diseases. The research questions, particularly the comparisons, are really interesting and the randomized design is a strength. I have a few suggestions that I hope will strengthen the paper.
1) In regards to writing style, I found many very long sentences throughout that could be revised to make the writing more easily digestible.
2) Page 7, paragraph 2: Attributing the recent Ontario election result to the sex ed curriculum is a stretch. It was an issue but not a main election issue and it continues to be an issue post-election because of the reversion to the old curriculum. I would revise this.
3) My main critique of the paper is in regards to the analysis, which is scant. I would like to see more analysis to compare characteristics of those within the groups presented with a personal responsibility narrative. Which characteristics were associated with lower acceptability? And do they differ for each question? This may be beyond the scope of this paper but something to consider.
4) Please describe the survey sampling strategy in greater detail. Most readers won't be familiar with Prolific.
5) Table 1: 'n' not 'N'. Also, it seems this should be 3 t-tests not 3 ANOVAs?
6) The discussion was strong. However, there needs to be a limitations section. |

VERSION 1 – AUTHOR RESPONSE

Reviewer 1

'Starting in the abstract, the authors suggest that the null finding on PrEP may be related to it's insensitivitity to lifestyle stigma. It may in fact be that the negative attitudes towards funding PrEP are already "baked in" as the association between HIV and lifestyle stigma is already very strong. This is supported by the significance of findings related to HPV -- given that people are likely less familiar with HPV. I also note that the control mean is more similar to the treatment means of the other two cases. Taken together this highlights for me the likelihood that the study design is potentially

confounded by perceptions of not only the potential treatment and lifestyle-related causes but also of the root disease'.

- The reviewer makes a very good point. Indeed, it seems likely that people associate HIV with sex to such a degree that they are thinking about sexual behaviors whether we remind participants about them or not. As such, we have included this as part of our explanation in the discussion for why we might not see differences in framing for HIV, where we do see such differences for HPV – even though both are sexually transmitted infections.

'The second paragraph of the discussion focuses on the representativeness of panel data and is not supported by the findings of the present study. The authors should move this to a limitations section if they are concerned that their sampling method has created an unrepresentative result.'

- We appreciate this suggestion. In response to a similar point also made by reviewer 2, we have created a new limitations section and moved this paragraph – and additional discussion – to that section.

'In the fourth paragraph of the discussion the authors focus on the sympathy effect for HIV. This is not supported by the results. Support for PrEP was low compared to support for less 'deadly' diseases such as HPV.'

- We agree that our discussion here lacked some important clarity. Our argument here is not about why PrEP support is high (the reviewer correctly notes it is lower than for prevention of other diseases), but why support is unaffected by lifestyle framing. As such, we have rephrased this section to make this point clearer.
- In addition, we now draw more explicitly on stigma literature to support this possible explanation. In particular, we cite research showing that people attach less importance to stigma in relation to HIV because it is perceived to be life-threatening and thus warranting of pity or sympathy rather than hostility; this bases our explanation for why lifestyle stigma does not affect PrEP support wherein we suggest that sympathy or pity may also be at play in our own findings.
- Finally, we have also added an additional possible explanation for the null effects with regard to HIV and PrEP.

The authors compare the perceptions across the three diseases (i.e., "We found that type 2 diabetes received the lowest support...") without providing a significance test. If the authors are going to make cross-group comparisons they should conduct the appropriate test to support these qualitative assessments.

- This is a great point and a regrettable omission on our part. We have added a test of significance between types of support in the first paragraph of results. In addition, we removed discussion of qualitative differences between levels of support.

The conclusion includes several unsupported claims regarding the threat of "responsibilisation," (no evaluation of such trends or its impact on public support), "broad public support" (findings not representative)

- Thank you for flagging this. We now use more precise language to reflect what we measured, which was lifestyle stigma and not responsibilisation. We have also more carefully hedged our discussion of responsibilisation so that it is framed in the paper as the empirical and theoretical context in which our study took place and to which our findings are relevant—but have ensured that we do not conflate responsibilisation with what we measured or found. We have also amended language around public support.

The introduction is quite long. I'd recommend the authors tighten up their argument and focus on a more concise narrative for the article.

- We agree that a more concise narrative will strengthen the article. As such, we have shortened the introduction in particular, and tightened language throughout.

In the results I would avoid qualitative assessments of the results (i.e., "has a good distribution"). I'd just report the results and save needed commentary for the discussion section.
- Thank you for flagging this vague, qualitative language. We have removed it from descriptions of the distribution, and now phrase it more objectively in terms of how close it comes to the target population (adults in the United Kingdom). We have also moved this paragraph to the discussion of the sample, since it does not actually include "results."

Reviewer 2

'In regards to writing style, I found many very long sentences throughout that could be revised to make the writing more easily digestible.'
- We agree that there are many long sentences that could be shortened. Our revised article has tighter, pithier language that should allow for easier reading.

Page 7, paragraph 2: Attributing the recent Ontario election result to the sex ed curriculum is a stretch. It was an issue but not a main election issue and it continues to be an issue post-election because of the reversion to the old curriculum. I would revise this.
- A valid point indeed. We have removed this reference.

My main critique of the paper is in regards to the analysis, which is scant. I would like to see more analysis to compare characteristics of those within the groups presented with a personal responsibility narrative. Which characteristics were associated with lower acceptability? And do they differ for each question? This may be beyond the scope of this paper but something to consider.
- We agree that the analysis is very targeted – we had some clear expectations and we test only those expectations, without going into the broader issues of support related to public funding for each of the diseases, etc. We do think that this is generally outside the scope of the paper, which focuses on the framing of these issues, rather than on support for them more generally. However, we did engage in a brief analysis to make sure there were not major sub-population differences in support we were missing. Specifically, we looked to see if support for funding each disease was different for men versus women, different for whites versus nonwhites, and different for those who supported "Brexit" (the UK leaving the EU) versus those who did not. We found no major differences, as can be seen in the table below. The one exception is that women are more supportive of funding the HPV vaccine than are men. We think this is likely due to their perception that HPV is more likely to impact them. Also, notably, the variance explained by these models is quite low (see R^2 reported in the Table). Because this investigation is outside of the focus of the paper, and reveals little about predictors of public support for disease prevention, we have not included these analyses in the manuscript.

Reviewer Table 1: Predicting support for HIV, HPV, and Diabetes

	HIV	HPV	Diabetes
Gender (1=Female)	0.05 (0.15)	0.23 (0.10)*	-0.08 (0.09)
Race (1=White)	0.20 (0.25)	0.11 (0.15)	-0.21 (0.13)
Brexit (1=Leave)	-0.27 (0.16)	-0.19 (0.11)	-0.03 (0.09)
R2	0.02	0.02	0.01

Unstandardized Betas reported with standard errors in parentheses.
* = $p < .05$

Please describe the survey sampling strategy in greater detail. Most readers won't be familiar with Prolific.

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- The methods section now includes additional information about how participants are recruited and sampled through Prolific.

Table 1: 'n' not 'N'. Also, it seems this should be 3 t-tests not 3 ANOVAs?
- Thank you for catching both of these typos. They have each been corrected.

The discussion was strong. However, there needs to be a limitations section.
- We have added a limitations section between the discussion and conclusion sections.

Again, many thanks for these reviews. We are pleased with how much they have improved the paper. We look forward to hearing from you.

VERSION 2 – REVIEW

REVIEWER	Kiffer G. Card Canadian Institute of Substance Use Research
REVIEW RETURNED	03-Jun-2019

GENERAL COMMENTS	I believe the authors have addressed my original concerns and am satisfied with the analysis and interpretations. The only original comment that does not appear to be addressed was reviewer 2's comment about wanting a more complex analysis. However, I think the analysis satisfies the intent of the paper sufficiently without getting lost in the weeds. I do look forward to future papers on this topic from this study and hope that the authors will continue their research in this area.

REVIEWER	Natalie Riediger University of Manitoba, Canada
REVIEW RETURNED	10-Jun-2019

GENERAL COMMENTS	The authors addressed my original concerns. One minor comment: Pg 13, line 8: replace N with n