Author's response to reviews

Title: Parental attitudes towards male human papillomavirus vaccination: a pan-European cross-sectional survey

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Author's response to reviews: see over
Point-by-point response to review as per 29.07.2014.

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Parental attitudes towards male human papillomavirus vaccination: a pan-European cross-sectional survey
Gitte Lee Mortensen, Marjorie Adam and Laila Idtaleb

Editor's comments:

1. The results reported appear not in accord to the stated statistical methods: Any graphical representation or table of the results of the stated Factorial Correspondence analysis was reported. ("Then Factorial Correspondence analysis using SPAD software was then carried out on questions regarding main reasons for parents to accept, reject or have doubts about HPV vaccination of their sons to examine the key variables, drivers and barriers to male HPV vaccination.") No confidence interval but only punctual estimation of the proportion was showed. The last paragraph of Methods has been rephrased as follows: ‘Factorial Correspondence analysis using SPAD software was carried out on questions regarding main reasons for parents to accept, reject or have doubts about HPV vaccination of their sons to examine the key variables, drivers and barriers to male HPV vaccination. The contingency analysis of main reasons for parents to accept, reject or have doubts about HPV vaccination did not show any significant correspondence between variables with a coefficient correlation from -0.074 to 0.410 out of a maximum of 1.’

2. (they stated “Significant statistical differences were performed with a 95% confidence interval”).. They stated “..using contingency tables and chi-squared statistic tests, the statistical analysis aimed to enhance the correspondence between variables and assured that they referred to the same dimensions.? The phrase is not clear and should be rephrased.

These sentences in Methods (5th paragraph) has been rephrased as follows: Significant statistical differences were performed with a 95% confidence interval. Chi-square statistic tests were carried out to determine whether there were significant differences between the expected frequencies under assumption of independency among variables and the observed frequencies in one or more categories. In the following 6th paragraph, we have inserted the following: ‘To further explain main reasons for parents to accept, reject or have doubts about HPV vaccination, contingency analysis was then carried out to determine if some of the stated reasons referred with statistical significance to the same dimension depending on the coefficient correlation value.

3. In addition the results of the contingency tables show for each bivariate table more than one p-values(for country and sex table five for example). The chi-squared statistic test gives an only p-value which test the
overall independency in the distribution among the two variables, analyzing whether there is a significant
difference between the expected frequencies under assumption of independency among variables and the
observed frequencies in one or more categories.

Indeed, in order to make the tables easier to read, we only mentioned P value for the main positive
statistical differences between observed frequencies in one or more categories. Now, we added p value for
each positive statistical difference observed and the result it refers to.

4. In addition, the authors stated “450 respondents in each country was a statistically valid number of
participants to assure a representative sample of parents”. But how (do) they calculate this sample size, for
example which was the effect size, or alfa and beta errors stated to calculate this sample size?

We inserted the following sentences: ‘The sample size was calculated from the incidence rate of parents of
sons in the relevant age brackets in each country: on average 2.1% in Germany, 4.7% in France, 2.6% in Italy
and 2.7% in the UK. 450 respondents in each country was a statistically valid number of participants to
assure a representative sample of parents. Also, for purposes of comparison and to strengthen the collective
weight of the data, the sample size reflected the preceding study conducted in Denmark on this topic [20].

1. Reviewer’s report:
The manuscript is substantially improved and the comments from the first review
have been adequately addressed.

1. I have minor comments relating to Table 1, which could benefit from some
clarification/editing. Presumably the p values presented in the table relate to the
within country variations within each characteristic, though as presented it is a bit
unclear. For instance, for gender p value for France is listed in the female row,
Germany and UK in the row for males, and Germany has two values (?). Other
factors don't list a p value (e.g., daughter in household in Italy). Also, number of
refusals for Germany and Italy are missing.

We added p value for each positive statistical difference observed and the result it refers to. Results from
one country may be significantly different from several other countries (e.g. proportion of male in the UK vs.
Italy, Germany and France). We added the missing p value when needed. We also added the refusals for
Germany and Italy in Table 1.

2. Reviewer’s report
Major Compulsory Revision
Thank you for giving me the opportunity to review this manuscript again. The
manuscript has improved a lot. But there is still one major aspect the authors
have not sufficiently addressed.

1. This refers to no. 5 of my previous review.
The study participants were given short non-evidence based information on HPV vaccination that does not allow weighing benefits and harms. The authors added a single sentence to the discussion. However, this is an important aspect that needs further reflection of the quality of the given information with regard to the interpretation of results.

*We have inserted the following in our section about the study limitations:* ‘The aim with the introduction of the interviews was to provide participants with brief information of a similar nature to brief public information given in relation to female HPV vaccination. Methodologically, interview introductions should be brief, but this did necessarily imply a simplification lacking detailed descriptions of benefits and harms of male HPV vaccination. The verbal descriptor of HPV may have led to an over-estimation of the risk of infection and a positive bias towards vaccination.’ Also, we have moved the entire limitations section to the beginning of the Discussion.

2. **Reviewer’s report**

   Minor Essential Reviews

   1. Abstract: In methods section, correct the spelling for chi-square

   *Done*

   2. Results: Please put table numbers before starting an explanation of results in that particular table for eg. table 4 illustrates data on.....

   *We have inserted such references to the tables throughout the Results section*

3. Major Compulsory Revisions

   Methods:

   3a. Table 1: Please explain what does p-value indicate here, and put them into a separate row/column

   *We now added the p value for each positive significant difference on a separate row with the result it refers to.*

   3b. Table 2: put this as an annexure, no need to put it in main text
We have renamed Table 2: ‘Appendix 1’ and it may be inserted as an appendix to the manuscript rather than being placed in the main text

3c. Table 5: Also please explain why are there several p-values in each rows and what does each p-value indicate.

We added the p value for each positive significant difference on a separate row with the result it refers to.

We also made the following additional changes:

1. Additional minor changes (re-phrasings) appear from the ‘track changes’ function in the document

2. Due to recent developments, we have inserted the following phrase in the second paragraph of the Introduction: ‘Most recently, as stated by The European Centre for Disease Prevention and Control (ECDC), the new 2-dose schedule approved for HPV vaccines provides room for updated health economic assessment of HPV vaccine programmes, as the cost of vaccination per individual will be reduced [11, 12]. The subsequent references have been changed accordingly.

3. The second paragraph in Results (regarding Table 3) has been moved to now be the 7th paragraph in Results to join Table 3.