Author's response to reviews

Title: Health-related quality of life in migrant preschool children

Authors:

Jardena Puder (Jardena.Puder@chuv.ch)
Ana Margarida Pinto (AMPinto@live.com.uk)
Antoine Bonvin (Antoine.Bonvin@unil.ch)
Patrick Bodenmann (Patrick.Bodenmann@chuv.ch)
Simone Munsch (Simone.Munsch@unifr.ch)
Susi Kriemler (Susi.Kriemler@unibas.ch)
Pedro Marques-Vidal (Pedro-Manuel.Marques-Vidal@chuv.ch)

Version: 2 Date: 23 March 2013

Author's response to reviews: see over
Answers to reviewer 1 (Marta Gonçalves)

Major Compulsory Revisions

1. p.8 instead of “migrant regions” and “migrant countries of origin”
   We replaced “migrant regions” by “migrant countries of origin”.

2. Reformat the measures part so that the reading is clearer to the reader.
   The measures paragraph in the Methods section has been rewritten to: “Data on sociocultural characteristics, lifestyle behaviors and HRQOL were collected by questionnaire. Questionnaires were available in German or French. In the case parents had difficulties in understanding German or French, teachers and translators were available for assistance. Only 5 parents asked for assistance.”

3. Rewrite discussion in a more integrative way and without subtitles. Avoid using the same sentence twice as “Hence, it will be of interest to follow these children to assess how these differences in HRQOL will evolve.” (p.14) and “It will also be interesting to follow these children to assess how these differences in HRQOL will evolve.” (p.15). When you say “Social and healthcare workers should be able to identify the needs of migrant families and assist them in order to improve the children HRQOL.”, specify what you mean concretely, give examples. Avoid letting “These problems could develop later in life as a consequence of adverse conditions in their current daily living. Hence, it will be of interest to follow these children to assess how these differences in HRQOL will evolve.” without making immediate reference to the intervention need.

   The discussion has been rewritten according to the recommendations. Please see manuscript with track changes.

Discretionary Revisions

1. Add “preschooler children” to the title, instead of “young”.
   The title has been changed

2. Maybe the following paper is of interest for you:
   http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2880387/
   We thank the reviewer for making us notice this paper. It has been included in the introduction (reference 14)

Minor Essential Revisions
3. p.13 “In both studies, children...have...” instead of “has”

The text was corrected to “children with migrant parents had lower...” to comply with the overall tense of the paragraph
Answers to reviewer 2 Jens Dreyhaupt

The manuscript addresses an important topic. Adequate statistical methods were used. It is interesting and well written and I have only minor points.

Minor essential revisions

1. In Table 1 the total number of girls (76+65+117=258) is not consistent with the Abstract and the Results section.

   The true number of girls in the Ballabeina study is 258. This has been corrected.

2. In the Abstract (part methods) numbers of 252 girls and 232 boys are mentioned but are not consistent with Figure 1 and the Results section.

   The true number of girls in the Ballabeina study is 258. This has been corrected.

3. Part ‘Potential confounders’ in the Results section: it would helpful to add one or two sentences how to read Table 3 (i.e. for explaining that a non-significant result in Table 3 means that the confounder is a mediator). Furthermore in this section: in my understanding the statement “The association of migration with physical health was mediated by parental educational level, paternal occupation and screen time.” should be “The association of migration with physical health was mediated by parental educational level and screen time.” because paternal occupation was significant in physical health in the Ballabeina study. Paternal occupation should be mentioned in the next sentence “The association of migration with total HRQOL scores was mediated by parental educational level, paternal occupation, children’s BMI and screen time.” because paternal occupation was NS for Total Score in the Ballabeina study. In the following sentence it is stated that “Social functioning and psychosocial health were not mediated by any of those confounders.” Is this correct? In psychosocial health all confounders showed NS results and only for social functioning the results for all confounders were significant.

We agree with the reviewer that the text is unclear. We added the following statement in the statistical methods and in the footnote of table 3: “In the case the association between the PedsQL™ 4.0 score and parental migrant status is modified by the confounder (for example a significant association that becomes non-significant after adjusting for the potential confounder), the confounder is considered as mediating the association.” We also decided to copy-paste the last column of table 2 into
table 3, so the reader can better check the effect of adjustment on the association between migrant status and quality of life. The text in the results has been changed to “The association of migration with physical health was mediated by parental educational level and screen time. The association of migration with total HRQOL scores was mediated by parental educational level, paternal occupation, children’s BMI and screen time in the Ballabeina study, but not in the Youp’la Bouge study. Social functioning was mediated by playing outside in the Youp’la Bouge study only. Psychosocial health was not mediated by any of those confounders.”

4. Part ‘Potential confounders’ in the Results section: I did not understood the following statement about the Youp’là bouge study: “In Youp’là bouge, none of the investigated confounders mediated the association of parental migrant status with the children’s HRQOL except for physical activity.” because Table 3 shows also NS results for all confounders for emotional functioning.

The association between migrant status and emotions functioning was non-significant, and further adjustment for potential confounders did not change the results. This sentence was added in the text.

5. Part ‘Potential confounders’ in the Discussion section (second paragraph) is stated that “The dimensions most impacted by confounders were school functioning and physical health and ......”. Regarding the results in Table 3, in my understanding the statement should be “The dimensions most impacted by confounders were school functioning and psychosocial health and ......”. Furthermore, the first sentence of the third paragraph (“In both studies, children with migrant parents has lower levels of the physical, social and school dimension, while no differences were found regarding the emotional dimension.”) seems some inconsistent with Table 2 because in the Ballabeina study there was a difference in emotional functioning. It would helpful to add one or two sentences for explaining this.

In Ballabeina, no association was found between psychosocial health and migrant status, and further adjustment on confounders did not change the results. In Youp’là Bouge, the association between psychosocial health and migrant status was significant, and further adjustment on confounders did not change the results. This is now more easily seen in the new table 3. Conversely, the association between physical health and migrant status was
significant in Ballabeina but became non-significant after adjusting for parental educational level or screen time. Hence, we believe the statement “The dimensions most impacted by confounders were school functioning and physical health” more accurately reflects the results.

We agree that the first sentence of the third paragraph does not entirely reflect the results of table 2. We changed it to “In both studies, children with migrant parents had lower levels of the physical, social and school dimension. Children with migrant parents also showed lower levels of psychosocial health in the Youp’là Bouge study, with a similar, although non-significant, negative association in the Ballabeina study. Finally, children with migrant parents had higher levels of emotional functioning in the Ballabeina study, while no such association was found in the Youp’là Bouge study. This discordance between emotional functioning and the other components has not been…”

6. In the Supplementary table 1 are results for subgroups (≤=median of duration of stay and > median of duration of stay). What are the numbers with parenthesis, e.g. ‘Crude’: 1.25 (0.21)? How is the median defined because there are unequal numbers in both subgroups? Furthermore, the last sentence in Participants’ characteristics states (Results section) that the median length of stay in Youp’là bouge study was 12 for migrant fathers and 10 for mothers. In the explanation under the Supplementary table 1 is the median=14 years. This was some misleading for me.

We agree that the distribution of subjects around the median in Ballabeina is unequal. This is due to the fact that a considerable number of participants have a duration of stay which is equal to the median (17). The number of participants considering the first group as ≤ or < to the median are the following:

<table>
<thead>
<tr>
<th>As in supplement. table 1</th>
<th>Alternative splitting</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ Median</td>
<td>&gt; Median</td>
</tr>
<tr>
<td>188</td>
<td>157</td>
</tr>
</tbody>
</table>

We ran the analyses using the alternative splitting (< and ≥ to the median) and the results are in the next page:
<table>
<thead>
<tr>
<th>Ballabeina, N</th>
<th>&lt; Median</th>
<th>≥ Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional</td>
<td>74.7 ± 14.6</td>
<td>73.9 ± 15.7</td>
</tr>
<tr>
<td>Social</td>
<td>84.2 ± 15.4</td>
<td>85.1 ± 13.7</td>
</tr>
<tr>
<td>School</td>
<td>82.8 ± 15.9</td>
<td>85.3 ± 13.3</td>
</tr>
<tr>
<td>Physical</td>
<td>82.6 ± 15.1</td>
<td>84.9 ± 14.2</td>
</tr>
<tr>
<td>Psychosocial</td>
<td>80.6 ± 11.5</td>
<td>81.4 ± 11.6</td>
</tr>
<tr>
<td>Total</td>
<td>81.3 ± 11.4</td>
<td>82.6 ± 11.0</td>
</tr>
</tbody>
</table>

The conclusions do not change (no difference).

We agree that the results such as 1.25 (0.21) were misleading. They actually represented the test value and corresponding (p-value). We changed the text so now only the p-values are indicated, and inserted an explanatory sentence in the footnote. We also changed the column headings to facilitate reading.

Regarding the median values, the results are different because for supplementary table 1 we only considered the highest value when both parents were migrants. An example is given below:

<table>
<thead>
<tr>
<th>Mother</th>
<th>Father</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>4</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>7</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>10</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>12</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>15</td>
<td>7</td>
<td>15</td>
</tr>
<tr>
<td>20</td>
<td>8</td>
<td>20</td>
</tr>
<tr>
<td>Median</td>
<td>Median</td>
<td>Median</td>
</tr>
<tr>
<td>10</td>
<td>12</td>
<td>14</td>
</tr>
</tbody>
</table>

The median for the mothers is 10, for the fathers it is 12, but for the maximum value it is 14. We modified the footnote to “When both parents were migrants, only the highest value was considered; hence, the median values are higher than reported for each gender”.
7. In the last row of Supplementary table 2 an asterisk (***) is used but not explained ("Varni, gastrointestinal, 5-18y***").

We thank the reviewer for making us notice the typo. It should be "§§" as for the other disease clusters from the same publications. This has been corrected.
Answers to the Editor

1. Please include a Conclusion Section to your manuscript.
   A Conclusion section has been added. Please see the manuscript with track changes for the details.

2. Please update your ethics statement to include the name of the ethics committee that approved your study.
   We added the following text in the methodology: “Both studies were approved by the respective cantonal ethical committees (Vaud, St. Gallen and Basel for Ballabeina and Vaud, Neuchâtel and Jura for Youp’là bouge)”