Author's response to reviews

Title: Modelling strategic interventions in a population with a total fertility rate of 8.3: a cross-sectional study of Idjwi Island, DRC

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

Again, we are grateful for the feedback and consideration of our manuscript for publication in *BMC Public Health*. We have addressed the reviewers’ additional comments below:

Referee 2:

1. **Discretionary Revisions:** p.10 you reference interviews being conducted in 'summers', yet study carried out in DRC. Do not use seasons for internationally relevant publications.

   We revised this sentence to read, “In June through August of 2010, 2011 and 2012, we performed interviews and focus groups…”.

Referee 3:

2. **Discretionary Revision:** The value of the TFR is presented as background but is actually a result from your survey. In the absence of information about data quality, and the extremely large value, I would encourage caution in accepting the number 8.3 at face value. The TFR in this population would certainly be very high. Your interpretations and conclusions do not depend on it being as high as 8.3. I would regard 8.3 as almost certainly an over-estimate.

   We opted to not change the current language related to TFR because the quality of these data were comparable to MEASUREDHS (a main source of TFR estimates in developing countries), and a TFR=8.3 is within reason for this population. We ensured that the quality of birth history data in the Idjwi Demographic and Household Survey was comparable to that of DHSs by carefully following DHS protocols, though we do suspect some under reporting of births that ended in early child death (which would make 8.3 an under-estimate of TFR). Historically, eastern DRC has had high TFR. “Persistence of High Fertility in Tropical Africa: The Case of Democratic Republic of Congo” published by Anatole Romaniuk in 2011 summarizes TFR trends in DRC by province starting in 1955.¹ These estimates are based on very large household surveys conducted by Belgian and Congolese demographers. South Kivu province, where Idjwi is located, had a TFR of 8.5 in 1955, and conditions – including access to family planning services – have not changed much on Idjwi since then. The raw distribution of number of biological children per woman (not adjusted for age of mother) supports a TFR>8; women we interviewed commonly had 10 or more children. This was the main reason for questioning our original calculation of TFR=6.1. We recognize that a TFR>8 is very uncommon today, but we are confident in our calculations and in the quality of the data.

Warmly,

Dana Thomson, MSc, on behalf of the authors of “Modelling strategic interventions in a population with a total fertility rate of 8.3: a cross-sectional study of Idjwi Island, DRC”.