**Author’s response to reviews**

**Title:** Understanding Resilience of Female Adolescents towards Teenage Pregnancy: A Crosssectional Survey in Dar es Salaam, Tanzania

**Authors:**

Constanze Pfeiffer (constanze.pfeiffer@unibas.ch)

Collins Ahorlu (collins.ahorlu@gmail.com)

Sandra Alba (S.Alba@kit.nl)

Brigit Obrist (brigit.obrist@unibas.ch)

**Version:** 1  **Date:** 28 Oct 2016

**Author’s response to reviews:**

Reviewer #1: This article provides an important lens from which to explore the issue of teenage pregnancy and reproductive resilience. Contrary to the typical problematic/negative vantage point that is applied, the authors make a strong case for research and programming priorities using a strength-based approach (including highlighting the potential of pregnancy as a protective factor).

The language is in line with that of positive youth development/developmental assets for adolescents, which are both growing areas with promise for ASRH and the authors could make more connections there while discussing capacities and capital.

Other strong points include the article's balance of simple language with strong data, which makes it easy to follow but technically robust. The authors' involvement of youth involvement in data collection and their recognition of the benefit of qualitative data and mixed-methods approaches in this kind of work also enrich the paper.

--> We thank the reviewer for his/her encouraging words.

To further strengthen the paper, I recommend the following minor edits, if possible:
1. Clarify/provide more detail as to why 50% was chosen as the cutoff for the competence score.

--> We agree with this point and added additional information. For the purpose of this analysis the score of ≤50 % was determined as ‘low competence in mobilizing resources to avoid or deal with pregnancy’ and the score of 51–100 % as ‘high competence in mobilizing resources to avoid/deal with pregnancy’. A 50 % cut-off point was used in order to learn about the broad spectrum of competencies among respondents.

2. Provide detail on the development of the score e.g. was reliability testing done etc.

--> We thank the reviewer for this suggestion. Each competence-question answered with “yes” (i.e. having actively mobilized resources, continued education) contributed ‘1’, questions answered with “no” (i.e. having not actively mobilized resources, did not continue with education) contributed “0” to the score. Among the pregnant girls and/or young mothers each respondent could score the minimum of 0 (all questions answered with “no”) and the maximum of 10 (100 %). Reliability testing was not performed.

3. Line 394 "young mother" should read young mothers

--> We revised the respective words.

Finally, for future research, the authors may want to consider realist evaluation as an interesting way to get at the question of "who benefits from which interventions and who falls through the cracks" (lines 412-413).
Reviewer #2: Interesting idea to link the reproductive resilience framework to the issues of adolescent girls "teen pregnancy" issues. Using Bourdieu's conceptual framework on "Capitol" -- social, economic, cultural, and symbolic capital" is also novel and a welcome approach to the topic. Original idea to link reproductive resilience framework to issues of adolescent girls/ "teenage pregnancy". The article would benefit from English language and grammar editing. No need to keep using the term "teenage pregnancy". Once it is stated that the article is about pregnancy among 15-19 year old females (teenagers), there is no need to refer to this as "teenage pregnancy". "Teenage pregnancy" is a loaded term that lacks definition.

Interesting idea to use Bourdieu's conceptual framework around "Capitol" -- social, economic, cultural, and symbolic capital", and apply that to this topic. It is a welcome approach, and provides a more nuanced understanding of the strategies that girls could/might employ, and allows for a more positive approach to the issue.

--> We are grateful for these positive words.

Many of the references are old (more than a decade old). The references around resiliency are strong, but those related to adolescent health and development, and SRH specifically are quite outdated. The authors need to update the references, including The Journal of Adolescent Health and more recent editions of Lancet. The authors do not appear to be familiar with DHS or other such data sources around sources of data on TFR, contraceptive access and knowledge, etc. There is a large literature on this.

--> Building on this very important comment we replaced old references with more recent ones including publications in The Lancet and the Journal of Adolescent Health.

More and better analyses and presentation of the descriptive data of the population is needed (Table 2) by cross-tabs. The younger girls (15-16) are also the ones that are likely "never pregnant" and also not in a relationship (single). This needs to be easier for the reader to interpret.33.9% of pregnant girls/and or young mothers are married (so which came first the
pregnancy and then he marriage, or other way around)? Need to know that. Can this be described?

--> We thank the reviewer for raising this point and thus described the descriptive data in more detail. The younger girls are more likely to be never pregnant and not in a relationships. Most of the girls who were married were pregnant before marriage. Teenagers with less education were more likely to start childbearing than better-educated girls.

Data analysis and treatment: Authors should disaggregate data by three distinct categories of girls: 1) never pregnant girls, 2) pregnant girls, 3) young mothers. Do not lump the pregnant girls with young mothers. There are quite different populations in terms of needs, motivation, resources, and status in society.

--> We fully agree with this recommendation and also suggest that future research should consider these three different groups. In our case, however, the number of pregnant girls was relatively small and would not have allowed for meaningful analysis.

Competency scale -- the notion of the competency scale and the domains is fine. The actual questions related to that (provided on page 25 in the paper) are ok but likely inadequate. The art and science of question-asking among this population is critical for robust data and interpretation; not sure who well versed the authors are in that aspect of methodology.

--> In order to address this helpful observation we added aditional information about the actual questions used for the competency scale: The questions were carefully discussed within the research team comprising of Tanzanian, Ghanaian and Swiss social scientists and statisticians as well as Tanzanian adolescent data collectors. Hereby particular attention was paid to the local context including suitability of terms and local concepts of teenage pregnancy. In addition, questions were pre-tested and discussed with Tanzanian adolescents and revised thoroughly. Through this iterative feed-back process involving also the target group, adolescents, we believe that the questions allow for robust data.

Sampling -- need to have better understanding of the sampling frame. We want to have a sense of the total universe of girls age 15-19 in the selected clusters. The paper indicates that all HH
with adolescents age 15-19 were visited, and based on willingness to participate in study, they were included. So, how many HH had 15-19 years old females, how many were asked to be in the study? how many said no?, and when did the research team stop going to HH? Need more clarity on how representative the 750 girls are. Are they 10%? 50% of all girls age 15-19 in the selected clusters? Was it easier or more difficult to get married girls in your sample? How were they recruited as they were likely not in their natal home?

Stronger and more clarity around sampling, the questions asked, disaggregation by category of girls would greatly enhance the quality of this paper.

--> Building on these suggestions, we added more information regarding sampling. Within each cluster all households with adolescents aged 15-19 years were visited and all were, based on their willingness to participate, included in the study. Thus the research team stopped going to households only after all clusters were covered completely. In each cluster on average 63 adolescents were sampled. It was not difficult to cover married girls through this approach as most of them either stayed with their family or the family of their partners. At the end of fieldwork, only six girls refused participation, mainly because their caretakers did not give their consent.

Editing for English grammar would be helpful.

We completely revised the manuscript.

Distinguishing between 3 categories of girls would be useful: 1) "never pregnant girls, 2) pregnant girl, 3) young mothers. They are unique populations.

--> We fully agree with this recommendation and also suggest that future research should consider these three different groups. In our case, however, the number of pregnant girls was relatively small and would not have allowed for meaningful analysis

Need to understand the sampling frame a bit better. How representative are the 750 girls in this study?
The selection of 750 girls builds on a sound sample size calculations. To attain the required sample size for the study, taking into account the adolescent population and teenage pregnancy rate in Dar es Salaam, 12 clusters four in each of the three municipalities in Dar es Salaam were randomly selected (kindly refer to the proposed changes in the manuscript).

Agree that more in-depth qualitative research around the capital conceptual framework would be warranted.

We fully agree with the reviewer.