Reviewer's report

Title: A Strategy to Increase Adoption of Locally-produced, Ceramic Cookstoves in Rural Kenyan Households

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Reviewer: Eva Rehfueess

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Major Compulsory Revisions

This manuscript addresses a highly relevant topic, i.e. how adoption of two key technologies (i.e. improved stoves, household water treatment) to reduce two major disease burdens in the developing world (i.e. childhood diarrhoea, childhood ALRI) can be encouraged through their joint promotion and other innovative approaches, such ETL training. The manuscript contains a very good description of setting, project, interventions and programmatic approach under Introduction and Methods.

The major issue with this manuscript is that lacks a clear statement of the research objectives or hypotheses to be tested – in the Abstract, Introduction and Methods. As a consequence, it is not clear what the point of the statistical analyses is, e.g. the reader is told that chi-square tests were used to identify statistically significant differences (under Methods) but is not told which kinds of differences the study is looking for. Similarly, drawing relevant conclusions from the descriptive results (under Results) is challenging. It appears that the paper is primarily concerned with (i) whether product integration can be effective in encouraging uptake, (ii) whether ETL increases adoption of products compared to “standard” approaches (whatever these are, a description is needed here) and (iii) whether there is differential uptake according to socio-economic status or geographic location. The paper could be substantially improved if it (i) stated hypotheses clearly, (ii) followed them through under Methods, Results and Discussion, and (iii) went beyond purely descriptive statistics to include some multivariate analyses (e.g. is differential uptake driven mostly by geographic location, different aspects of socio-economic status or being a prior user of WaterGuard?).

There are some really important points in this paper (e.g. mechanisms of product integration, seasonal timing of incentives, the importance of well-trained local vendors, product integration) and it would be a shame if these insights were not published.

Methods:

Convincing sampling strategy for baseline, no clear description of what a “convenience sample” means. Looking at the numbers, did the authors interview all households in the ten pilot villages in the original sample plus all households...
that adopted an upesi Jiko? If so, this is good and just needs to be more clearly described.

At times the distinction between the pilot phase (where the actual evaluation was undertaken comparing 5 pilot villages with ETL and 5 pilot villages without ETL) and expansion phase (which was essentially rolling out ETL to all 60 villages) is difficult to follow at times (e.g. under section Education through listening).

Under the description of the intervention, it would be useful to know more about the division of labour, i.e. who did the training (how much training? on what? were those trained certified? any subsequent quality control?), who produces the ceramic liner, who produces the remaining stove parts, who installs the stove, etc.

How were the original 34 SWAP vendors identified? Did they have to meet certain minimum characteristics?

Please add a description of when chlorine residuals were measured; surely this did not happen every time the household was visited?

Discussion

This could be much more in-depth (e.g. how do the findings link to Rogers Diffusion of Innovation theory or other related findings in the literature) but really depends on whether the authors can sharpen their objectives and analyses.

Minor Essential Revisions

Please correct spelling of Gesellschaft für Technische Zusammenarbeit.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

As previously communicated to BMC Public Health, during my former position at WHO (that I left in May 2009) I actually issued the call for proposals for integrated approaches and was among the team of people who decided to award one of the two grants to this group of researchers. I was also directly involved with contractual arrangements and providing general advice on monitoring. I left WHO during the early months of the implementation of this project and have not been involved with the work since.