Reviewer's report

Title: Health Education for Microcredit Clients in Peru: A Randomized Controlled Trial

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Reviewer: Madhu Ghimire

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Review of the Paper, “Health Education for Microcredit Clients in Peru: A Randomized Controlled Trial”

1. The paper submitted by Drs Rita Hamad, Lia C. H. Fernald and Dean S. Karlan cites poverty, lack of female empowerment and lack of education as the major risk factors for childhood illnesses.

2. The study described in the paper aimed to test the hypothesis that participation in IMCI based health education sessions improves knowledge of child health issues and this, in turn, leads to enhanced growth and reduced illnesses among children. Investigators cite previous studies showing that empowerment of care givers of children with appropriate knowledge about child health related issues improves care practices resulting in overall improvement in child health status.

3. Investigators designed a study to test the above hypothesis by administering health education treatment sessions to one of the two randomised Microcredit loan receiving groups in a predominantly urban area in Peru. Integration of health education treatment with the existing microcredit programme in the study area provided the investigators with an opportunity for instituting the treatment.

4. By comparing the knowledge of the group that received 8 monthly half-hour sessions of health education treatment (treatment group) with that of the socio-demographically similar group that did not receive the treatment, the investigators show that the treatment group had more knowledge about the child health related issues than the group (control) that did not receive the treatment. There was no difference in the reported health status of the children and their anthropometric measurements between the two groups.

5. Data on the microcredit clients’ knowledge status and reported child health status were collected only at follow up (end of treatment period) and not before the treatment began. This is the main limiting factor in deriving conclusion on outcomes from the intervention(s) in this study. The Paper mentions that children’s haemoglobin levels and their anthropometric measurements were obtained at baseline but they too have not been presented in the Paper.

6. Outcome is essentially a measurement of the change from one point, say Point A, to the other, say Point B. In the study described here, I would consider pre-treatment phase (baseline) as Point A and follow-up phase as Point B. I would consider outcome as the difference between the observed data at points A
and B. Comparison of outcome variables (the knowledge status among microcredit clients and child health status including anthropometric parameters) in the control group with those from the treatment group would allow us to conclude if the treatment made any difference or not. Therefore the authors' conclusion that “a child health educational intervention based on IMCI strategy was not effective method to improve child health outcomes….” cannot be accepted in the manner presented in this Paper.

7. One must also not lose sight of the fact that intervention with Microcredit was applied to both groups. If the impact from Microcredit itself was high on the reported and measured child health status, it would leave the health education component little room for further improvement. Did the investigators measure the impact of the Microcredit programme on child health outcomes or poverty parameters in the control and intervention groups? This can only be done by measuring baseline data and comparing them with data obtained at the end of the intervention period. That really would be a relevant observation in this study. Enhanced domestic economy, on its own, can have a major impact on child health. This has been borne out by many past studies and experiences. There is a positive impact from it on health related knowledge too, presumably from enhanced access to audio-visual media. As pointed out above, if the positive impact from the microcredit itself were at the maximum possible level in the context of available health infrastructure of the study area, one would not expect to find added benefit from an additional intervention. In this sense too, I would consider this study methodically weak.

8. Another comment is on the modality of treatment. Efficacy of the treatment can be reliably measured only if its formulation, dose and duration have been standardised. Investigators have tried to standardise the dose and duration (8x1/2 hour sessions at monthly intervals) but its formulation, as described by the investigators, was not properly standardised. The treatment varied in consistency and the content.

9. If baseline data are available from both groups on child health status and the knowledge of child health related issues, it would be worthwhile to go back and look into these data. Comparing these with similar data from both groups collected at follow up (end of treatment) would allow calculation of the fraction of the impact on the outcome variables attributable to each intervention. Only then would we be able to conclude if health education sessions were effective or not in improving knowledge and child health outcomes among microcredit clients.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**
I declare that I have no competing interests.