Reviewer’s report

Title: Community Health Education Improves Child Health Care in Rural Western China

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Reviewer: Charlotte Wright

Reviewer’s report:

This is an interesting and potentially very important paper describing a comparison between children in areas receiving a new MCH intervention, with those in other areas without. A large survey sample has been used, with robust cluster sampling approaches and a wide range of outcomes have been considered. Of course an inherent limitation is the lack of randomisation, raising the real possibility that observed differences may not be due to the intervention at all.

The authors acknowledge these limitations and have done their best to adjust for other differences between the sites - but of course they can only adjust for those differences they have been able to measure. A less acknowledged weakness is that so many different outcomes have been considered - 11 - with no prestated primary outcome, which also raises the concern that these are simply chance findings. The authors also need to make clear whether other outcomes were also considered but not included. These are all issues that can be laid out in the discussion section for readers to weigh up themselves.

However, the main limitation of the paper is that we are told so little about the intervention itself, how it differs from services in the control areas and in particular what resources it requires. It seems reasonable to suggest that this method shows potential, but other countries will not be able to pick it up without much more practical information.

Comments in detail

Abstract: this includes far too little hard information. It should specify the methodology used, the number of counties in each arm and the number of children studied. The abstract results should also mention the non significant differences and the definition of stunting used

Introduction

Generally this spends too many words stating the importance of the topic and almost no words describing what is known about interventions and what this study is adding. It would also benefit from explicit hypotheses that could then be linked through to the primary and secondary outcomes (see below)

line 29 omit 'The ' before '..physical growth'
line 32 Saying 'some studies' implies that other have not found this association - 'many' might be better or just omit it.

55-56 give a date in the text for this new policy?

Methods

Line 67 - give a date here for when the programme was implemented.

Line 70 - add 'Chinese' to 'national survey'.

Line 73 The correct wording is 'quasi experimental design' - or it may in fact a natural experiment - it depends why the intervention was implemented in these 9 counties only. This needs to be clarified

Line 85 Here we need to be told much more about the intervention itself. Who delivered it and what resources were they given to do this? How did it differ from services in the other counties? How much extra expenditure did it require and where did this come from?

Line 122 I really don't understand the variable "attendance…for cold symptoms in two week". Later in the results it appear that around 95% of children were positive for this. Does this mean that nearly all children attend a clinic with a cold every 2 weeks? I am also not clear why that is a positive thing. Surely this is not good use of resources when there is no treatment for the common cold?

There are many measures listed and it is not clear which are the primary outcomes (the growth data?) which are secondary and which are being measured in order to be able to control for confounding.

Results

Line 180 This sentence is quite confusing - might be best to also give median values in each era.

Discussion

This section needs to further address the general issues raised above

They also need to consider whether some of the differences seen might reflect people giving answers that they know are socially acceptable - because the intervention emphasises them. They must acknowledge that they don't know what the mothers actually do. This is the strength of the growth outcomes since they are real and objective.

Line 284 change to "our finding was that …..the control group be was…"
Table 1
This could do with some tidying up, suggest putting the score for each item in a separate column, so that the scores line up

Table 2 Please give exact p values
Why was the average age so different between the arms in 2005?

Table 3 Please give exact p values and confidence intervals for the differences
I am not sure what purpose the figure is serving – it mainly seems to illustrate how much both areas have improved. The discussion needs to consider how such a large change had come about so quickly in both areas.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

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