Reviewer’s report

Title: Comparing antibiotic self-medication in two socio-economic groups in Guatemala City: a cross-sectional study

Version: 3 Date: 27 November 2014

Reviewer: Sylvie Fainzang

Reviewer’s report:

GUIDELINES

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1. Is the question posed by the authors well defined?
   Yes

2. Are the methods appropriate and well described?
   Yes

3. Are the data sound?
   Yes

4. Do the figures appear to be genuine, i.e. without evidence of manipulation?
   Yes

5. Does the manuscript adhere to the relevant standards for reporting and data deposition?
   Yes

6. Are the discussion and conclusions well balanced and adequately supported by the data?
   Yes (with a little reservation concerning what the authors say about people’s perception of risks; see below § 4).

7. Are limitations of the work clearly stated?
   Yes

8. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?
   Yes

9. Do the title and abstract accurately convey what has been found?
   Yes

10. Is the writing acceptable?
    Yes
Please make your review as constructive and detailed as possible in your comments so that authors have the opportunity to overcome any serious deficiencies that you find and please also divide your comments into the following categories:

Reviewer's report
Please number your comments and divide them into
- Major Compulsory Revisions
- Minor Essential Revisions
1. The authors assert that people have no awareness of risks associated with antibiotics while the answers collected ant the figures reported don't allow to make such an interpretation. They should make a statement involving a more cautious attitude with this issue.
2. Corrections on figures in Table 3
recommendation:
Publishable subject to some revisions.

Level of interest
- An article whose findings are important to those with closely related research interests

Quality of written English
- Acceptable

Quality of Figures
- Original image files are needed in order to check the figures
- Acceptable
Yet, the authors should check the figures in table 3.

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

Declaration of competing interests
'I declare that I have no competing interests'.

What next?
- Accept after minor essential revisions (which the authors can be trusted to make)
1. the authors should add some precisions about the regulatory framework (see comments)
2. The authors assert that people have no awareness of risks associated with antibiotics while the answers collected and the figures reported don’t allow to make such an interpretation. They should make a statement involving a more cautious attitude with this issue.

3. Corrections on figures in Table 3

Open peer review of the manuscript: Comparing antibiotic self-medication in two socioeconomic groups in Guatemala City: a cross-sectional study (Ramay, Lambour, Ceron)

The objective of the article is clear. In the context of Guatemala, a country in which self-medication with antibiotics is high and in which this overuse leads to antimicrobial resistance, the authors wish to understand people’s motives for self-medication and their ways of self-medicating, and to determine the differences between two groups of users with differing socioeconomic characteristics.

The justification of the study is convincing. The authors argue that, when looking at the results of various studies on self-medication in other countries, we see that there is no clear association between socioeconomic status and recourse to self-medication. Besides, they show that, though many studies agree that there is a need for education, we must know better who self-medicates, how and why they do, in order to precise what the content of this educational interventions must be.

The investigation shows that there is little difference in the prevalence of self-medication between those two groups, but that, on the other hand, there are differences in the ways they self-medicate. To conclude, the authors plead for the development of the educative role of the pharmacist and the changes in the regulations of antibiotics sales.

Comments

1. An important point of the context in which the study has been led is that people acquire easily antibiotics in pharmacies without prescription. Yet, in the article, there are two places where the law is mentioned but not with the same idea. It should be made clear what the law is exactly on this subject. The authors write: “there is no law requiring a medical prescription in order to purchase antibiotics” (lines 71-72); and further: “there is currently no law in Guatemala requiring the continual presence of a pharmacist in the pharmacy” (line 356). So the reader may wonder: does it mean that people manage to get antibiotics as the pharmacist is not present, or is the law explicitly saying that antibiotics are not prescription drugs? These clarifications should be welcome because it is not quite clear for the reader if people may acquire antibiotics easily because there is no legal obligation for the presence of the pharmacist (who could check the appropriateness of dispensing the antibiotics), or if the law permits the antibiotics being sold without a prescription. In the latter case, does the notion of "drugs available on prescription only" even exist in Guatemala? So it should be made clear what the law on the subject is exactly, to help the reader understand the
significance of the authors' point when, in conclusion, they suggest a regulation of the sales of antibiotics.

2. A question: In the references cited on lines 135-139, about the fact that patients are often unaware of potential problems, risks, side effects, resistance, etc., which types of patients do these studies refer to? Are they patients from all social milieus?

3. Some figures in table 3 are strange.
1°) the total of percentages concerning the "frequency of self-medication" amounts to more than 100%
2°) these figures do not correspond to those on line 228.

4. The analysis made from the figures about risk perception is a bit quick: the authors say that people perceive little or no risk. Yet, when they are asked how self-medication can effect one's health (1 negative effect, 10 positive effect), the figures show, for the first group, that 17% respond 2-4 (on a scale of 10), and 20% respond 5. This shows mixed feelings. Can one reasonably conclude that people see the effects of self-medication only as positive, when 37% have a mixed opinion? Besides, the fact they perceive a positive effect of self-medicating on their health doesn't imply they do not perceive any risks. It may be precisely to avoid risks that they seek advice near other people. People may experience side effects of antibiotics or be conscious of their negative effects without renouncing self-medicating with this drug. Their decision to self-medicate with antibiotics may result from a personal assessment of the benefit/risk balance, but it doesn't mean they have no awareness of the risks of self-medication. (On this subject, though this study is a quantitative one, the discussion might benefit from including some references on qualitative data on the subject. For instance, the study about “Managing Medicinal Risks in Self-Medication”, Drug Safety). So, it would appear to be prudent to say that these answers do not imply people have no awareness of the risk associated with self-medication, as studies have shown the feeling of this risk doesn't prevent people from self-medicating.

Evaluation:
The results are clearly presented. Publishable with minor revisions.