Reviewer’s report

Title: Pharmacy and injection practices among community pharmacies in Pokhara sub-metropolitan city, western Nepal

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Reviewer: Amani Thomas Mori

Reviewer’s report:

I read the article by Gyawali et al, with title: “Pharmacy and Injection Practices among Community Pharmacies in Pokhara sub-metropolitan city, Western Nepal”, with a lot of enthusiasm. The findings are very interesting although not unexpected since Nepal seems to be in critical shortage of pharmaceutical personnel’s as most sub-Saharan countries. I have raised a number of issues which the authors must address to improve the article.

Major Compulsory Revisions

1. Title: It is not very clear especially “Injection practices”, I therefore suggest the authors to consider the following title: “Pharmacy Practice and Injection Use in Community Pharmacies in Pokhara City, Western Nepal”.

2. Abstract: It is not well written, especially on the results. For example the 1st and 2nd sentences the way they are written does not convey the right message the authors wanted to send. A sentence like this one will serve the purpose “About three-quarters of the community pharmacies studied were operated by people who have only received a basic orientation course in pharmacy and the rest were run by pharmacists and assistant pharmacists”.

In the 3rd line the authors wrote “Fourteen (25.93%) pharmacies were providing dispensing…, but did not show what kinds of services were being offered by the remaining premises. Also instead of “Fourteen (25.93%)”, authors can simply write “About a quarter of “ since its already mentioned in the methods that 54 premises were studied.

Instead of “Mean (SD) number of prescriptions filled or refilled…… etc” the authors should write “On average X prescriptions were filled and refilled per day, Y injections were dispensed etc

Instead of “The difference between mean number of prescriptions filled/refilled and patients getting medicines…” the authors should provide more meaningful information using non technical language. For example they could write “Majority of patients were dispensed with medicines without prescriptions”.

On page 4 “ These wastes were segregated by waste handlers at municipal landfill….“ This information in my opinion is not within the scope of pharmacy practice.
3. Introduction: It is too long with a lot of information which makes it difficult to follow. Consider shortening this section and use sub-headings so that readers can understand the organization of the pharmaceutical system in Nepal, levels of the pharmaceuticals personnel’s, how pharmacy premises operates, regulatory system etc.

The objective/aim of the study is not well written. The authors should state this in one or two sentences like this “The present study aims to provide information on pharmacy practice and injection use in community pharmacies in Pokhara, Nepal.”

4. Methods:

Study area: What were the rationale for doing the study in Pokhara i.e Why was Pokhara chosen for this study?

Study design and procedure: This was a mixed-method research. First paragraph, the authors stated that a sample of 54 pharmacies, three from each of the 18 wards were selected but did not state the total number of pharmacies from which these premises were selected from. The authors should also state how they arrived to this sample size. This is important to judge whether the sample was representative.

The authors also stated that pharmacies were selected randomly without providing more details which random sampling method was used and how the sampling was done. Are these pharmacies equally distributed in the wards such that they sampled 3 from each?

Authors should include a subsection about inclusion and exclusion criteria for the premises. On paragraph 3 last line, it is stated “It was estimated that approx. 275 medical shops (pharmacies) met our inclusion criteria [Reference 7], why was this sentence referenced? To me this raise doubts if the authors really conducted the assessment of the premises. How comes they are not sure about the number of premises which met the inclusion criteria and from which they selected their sample!

Data collection tools: Very limited information has been provided about the interviews. What guided the interviews? How many in-depth interviews were held with the in-charges? What is the difference between in-depth interviews and investigative interviews as stated in page 10? How long did it take to finish one interview? Did the authors also audio record the in-depth interviews? What were the reasons for the refusal to participate? Authors can consider using the RATS or COREC check-lists for the qualitative part of the study

I am not sure whether interviews with “waste handlers” is within the scope of this study. Is waste handling at landfill site of the city still part of pharmacy practice? I hope no.

Add a sub-section about data analysis and explain how qualitative data was processed and analysed? Which methodological approach was used? Did you
use qualitative data analysis software to do the analysis? Who transcribed and coded the data?

Statistical analysis: Considering the nature of the study and the sample size, I wonder whether it was important to do the ANOVA and chi-square tests and if at all the results emanating from such analyses can be trusted.

How verbal informed consent as was presented on paragraph 1 last sentence documented? Interviews were tape or digitally recorded?

Add a sub-section where all ethical issues such as study approval and consent application should be described.

5. Results
The authors claimed the study used a mixed-method design but unlike the quantitative data, only two quotes are presented to represent the qualitative findings. I expected to see more quotes to complement the quantitative data.

Similar to the introduction section, the results section is unnecessarily too long and can be shortened without affecting the results. For example on page 11, the information about HA and CMAs was supposed to be in the introduction part where the authors wrote about Pharmaceutical personnel’s.

The results section has two sub-headings i.e dispensing practice and waste disposal practices. This is not sufficient, I suggest the authors to add more subheadings about the types of services offered in the pharmacies, injection use and pharmacy infrastructures and then place all the findings under their respective subheadings.

The study is descriptive, in my opinion reporting the SD is not necessary. The authors should report the mean values and percentages instead.

I am not sure whether results from the interviews with “waste handlers” is within the scope of this study.

6. Discussion: It is too long. Study limitations not well presented

Minor Essential Revisions
1. Abstract

Background: Line 2, Start the 2nd sentence with the word “However”
Line 3, add the word “practice” after pharmacy, replace “practices” with “use”, replace “among” with “in”
Line 4, State the study aim as a separate sentence after the word “pharmacy”.

The study aim should be stated as “This study aims to provide information about pharmacy practice and injection use in Pokhara city, Western Nepal.”

Materials and Methods: Rephrase the first line about the study design to read: This was a mixed-method cross-sectional study which was conducted in 54...
Data were collected using pre-tested semi-structured questionnaires, in-depth interviews, observation and inspection of pharmacy premises. In one or two lines explain how you analysed the qualitative and quantitative data.

Conclusion: Edit this section to read as follows: “Community Pharmacies in Pokhara offer a wide range of services, including but not limited to drug dispensing, counselling, dressing of wounds and administration of injections. However, lack of qualified staffs and adequate infrastructures compromise the quality of these services. Therefore, health authorities should take necessary measures to upgrade the qualifications of the pharmacy personnel’s and improve pharmacy infrastructure for counselling, administration of injections and waste disposal.

2. Introduction

Page 5, 2nd line: Replace “should” with “also have a responsibility to”
Page 5, 3rd line: Replace “These” with “Community”
Page 5, line7-8: Replace “obtain medicines and may provide medicines even without prescription” with “buy both prescription-only and non-prescription medicines”
Page 5, line 10 (2nd paragraph): Replace “a lack of qualified” with “insufficient”
Page 5, line 11: Replace “manpower in pharmacy profession” with “pharmaceutical personnel’s”.
Page 5, from line 15-20: The sentences which describes groups of pharmaceutical personnels can be summarized as follows: “Three levels of pharmacy personnels exists in Nepal; Pharmacists who have a 4 year Bachelor degree, assistant pharmacists who have three year diploma in pharmacy and professionals who only receives a short orientation course. Only the Pharmacists and assistant pharmacists are registered by the pharmacy council of Nepal.”
Page 6, line 10: Replace “since the last” with “over the past”
Page 6, line 18: are these the WHO regions? If yes clarify. Replace “has” with “have”
Page 6, line 23: Replace “is” with “are”
Page 8, line 9: The study aim should be stated as I suggested in the abstract
Page 8, line 12-18: Delete the study objectives.

3. Methods

Study area, page 9, line 1: Replace “among” with “in”
Line 2: Replace “According to” with “Based on”
Line 4: Delete “of Nepal”
Line 5: Replace “approximately 256 thousand” with “about 256,000 people”
Line 6: Add “also” in between is and divided.

Study design and procedure, page 9, line 1: Replace “descriptive” with “mixed-method”

Line 1: Delete “mixed type (qualitative and quantitative)”

Line 2: Rephrase to read “Three pharmacies were randomly selected from each of the 18 wards to make a sample size of 54 pharmacies”.

Line 8: Replace “gender” with “sex”

Data collection and techniques, page 10 line 1: Add “a pre-tested”, replace “having” with “with”, replace “type of” with “ended”

4. Results

Page 11: Delete the first 5 sentences of the 1st paragraph.

Page 11: Description of the study participant, time of interview, participant who were not available in the premises etc should be reported on the methods section.

Report the mean values only without the (SD+-x)

Page 11, line 12-20: Information presented about HA and CMA should have been presented in the introduction.

Page 12; 1st paragraph: I think this can also be incorporated in the introduction.

Page 13; line15-18: The authors claimed they “observed”, however in the methods section observation was not mentioned as one of the data collection methods. Was the in-charge aware that he/she was being observed? How did the authors know that the patient was having severe throat infection?

Page 15, 2nd paragraph: Avoid using tables unnecessarily, that information can be presented in few sentences. Again I am not sure whether the use of chi-square is warranted in this study. The authors should only describe the data by reporting mean values and percentages.

Page 16, last line: The authors could use histograms to present information in Table 4.

Page 17, last paragraph: I doubt whether the study should have gone that far to the waste handlers since this is not part of pharmacy practice at all. Consider deleting.

5. Discussion

Line 1, page 19: Replace “In our study” with “In this study”

Page 19, first paragraph: Edit and combine the first two sentences to read as follows: In this study we found that majority of pharmacies were run by professionals as it has been reported by other studies, however the proportion of community pharmacists run by assistant pharmacists was higher than the one reported in six main cities of Nepal.

Line 6, page 19: Replace the word “less” with small.

Line 6, page 19: Edit the following sentence “This might be due to the
discouraging….” To read as follows “This might be due to the discouraging provision in the Drug Act, 1978 which permits both the Pharmacists, Assistant Pharmacists and Professionalists to run pharmacies without taking into consideration their different levels of qualifications [Reference]”

Line 9, page 19: Replace “issue” with “problem”

Line 10, page 19: Replace “ways” with “approaches”

Line 11, page 19: Replace “pharmacy” with “pharmacies” and “some extra” with “more”

Page 19, 2nd paragraph: Edit the first sentence to read as follows: We also found that the number of customers visiting community pharmacies without prescriptions was significantly larger than those with prescriptions”

Page 19, 2nd paragraph: Edit the second sentence to read as follows: “Even though more than 48% of pharmacies were offering physician consultation services, more than half of the dispensers acknowledged to have tried to treat patients on their own before referring them to the physicians”

Page 19, line 6 of the 2nd paragraph: Delete “The”, line 7, delete the second “sell”, line 8, add “s” to prescription.

Page 20, 2nd paragraph, edit the first sentence to read as follows: All dispensers claimed to counsel their patients but only about half of them showed a separate space set aside for counselling purposes”

Page 20, last paragraph: Delete the 2nd sentence since it repeats what is written in sentence 1. Last line: Replace “However” with “Surprisingly”

Page 21, 1st paragraph: The last sentence is not clear.

Page 21, paragraph 2, 2nd sentence: Replace “twenty six (48.15%)” with “about half of the”

Page 21, 2nd paragraph, line 8: Edit to read as…adherence to therapy which contributes to better treatment outcomes.”

Page 21, edit the last sentence of paragraph two to read as follows: “Adoption of these roles will help to clear the tarnished image of pharmacists as drug dispensers”

Limitations

Page 25, 2nd paragraph: The authors wrote that the questionnaire was not validated, however on the methods section they said it was pre-tested. Clarify what you mean by validation in this context.

Conclusion, page 26.

Edit the first and 2nd sentences to read as follows: Community Pharmacies in Pokhara offer a wide range of services, including but not limited to drug dispensing, counselling, dressing of wounds and administration of injections.
However, lack of qualified staffs and adequate infrastructures compromise the quality of these services.

Discretionary Revisions
Page 20: Delete the 3rd paragraph which begins with “Although the pharmacies…”. This paragraph seems ectopic or out of space.

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

Quality of written English: Not suitable for publication unless extensively edited

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