Author's response to reviews

Title: Prevalence and determinants of tobacco use amongst junior collegiates in twin cities of western Nepal: A cross-sectional, questionnaire-based survey

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Author's response to reviews: see over
Prevalence and determinants of tobacco use amongst junior collegiates in twin cities of western Nepal: A cross-sectional, questionnaire-based survey

To

The editor
BMC Series Journals
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Thank you for the speedy and a favorable review of the manuscript in BMC Public Health. Now we have answered to the questions and comments raised by the reviewers. We have answered mainly to the issues raised by reviewer ‘ART NICOLAAS MUDDE’ and also to ‘ROB MCGEE’. We believe that we have given satisfactory replies.

We did not provide specific replies to reviewer ‘Murray Laugesen’s comments as they were discretionary. The comments are mainly recommendations which we think are already covered in appropriate sections of the manuscript.

We are submitting the revised manuscript for further consideration.

Best regards

On behalf of all the authors

Chandrashekhar T Sreeramareddy

Title: Prevalence and determinants of tobacco use amongst junior collegiates in twin cities of western Nepal: A cross-sectional, questionnaire-based survey
Version: 1 Date: 25 October 2007
Reviewer: Rob Mcgee
Reviewer’s report:
General
Overall, I think this is a well-written paper presenting important information on smoking among junior college students in Nepal. The justification for the study is well-made. The review of the existing literature on smoking in developing countries is appropriate.
The methods used in collecting the survey data are well-described and appropriately chosen. The data are "up-to-the-minute" providing a current snapshot of smoking which can be used to advocate for appropriate policy change and perhaps provision of quit services at the college level. The discussion sets out the needed policy changes that might help address smoking in Nepal.

The issue of student knowledge is an important one. Even if providing knowledge of the dangers of smoking doesn't necessarily stop students from smoking, I think there is a strong case that people have a right to know the health risks associated with consumer products they are using. I think there is a case to be made for health education about smoking.

The response rate is excellent and gives a high degree of confidence to the findings.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

I think there is one major change that the authors need to make to the analysis of the results which is critical. The sampling frame for the survey relies in the first instance on classes in colleges. Consequently the initial sampling units are clusters of individuals, not individual students. That means that the data are "multi-level" and this needs to be accounted for in the prevalence estimates and other analyses. This is because it might be expected that participants from the same college would be more alike than participants from different colleges. My understanding from talking to a biostatistician here is that SPSS does have the facility to allow for such a multi-level analysis. It may well be that such an analysis will not markedly change the results. However, it is possible that some significant findings may change when these "dependencies" among the data are accounted for.

*We did anticipate “multi-level” data during our analysis. Being a resource poor setting we are not aware of or have any statistical package which can be used for such an analysis. We believe that the findings may not change markedly by not carrying out multi-level data analysis. We are also aware of published studies of similar design which did not use multi-level analysis. We apologize for our inability.*

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

I could not quite follow the scoring procedure for the measure of assets. Each of 7 items attracted a score from 5 to 40. Its not clear how the actual score was arrived at; the range of scores does suggest that it is not simply the presence or absence of the asset. The maximum score is 180 if all 7 items were present; this should be 280? This score needs just a bit more description.
We apologize for not being clear enough and an error. There were eight, not seven items. We have clarified that in the revised version with examples as to how much score was given if an item was indicated as present.

“We used household asset score as proxy to the economic status of the students. Eight items: radio, bicycle, television, fridge, motor-bike, washing machine, computer and car present at their homes were indicated in the demography section of the questionnaire. Each item was given a score ranging from 5 to 40 giving a maximum total score of 180 if all the seven items were present (For example radio was given least score of 5 and car was given the highest score of 40). For each student the total score was calculated and divided into one of the three categories i.e. low (0-60) middle (61-120) and high (121-180).”

Young daily smokers in Western countries would usually report smoking more than 3 or 4 cigarettes a day as reported in this study (see section on "Smoking pattern and access to tobacco products"). Is this an unusual finding? It would suggest that perhaps many of these daily smokers are not dependent. Also, do the students use either cigarettes or chewable tobacco products, or do the smokers tend to use chewable tobacco too. Table 1 seems to suggest that latter is the case. What are the harms associated with chewable tobacco? A brief mention might be appropriate: are they cancers of the mouth throat etc.?

We are not sure if it is true that smokers in our sample reported correctly. We suspect some under reporting as it was a self report. As said smokers tend to be tobacco chewers also. Harms of chewable tobacco was mentioned in the knowledge section of the questionnaire.

There are a few minor changes that need to be made eg. data were coded (first line of data analysis section).

The suggested changes were made in the section of data analysis which was commented other reviewer also.

Version: 1 Date: 19 November 2007
Reviewer: Aart Nicolaas Mudde
Reviewer's report:
General
The MS reports a study into the prevalence and some of the possible determinants of tobacco use in Nepalese youth between about 15 and 20 years of age. The fact that not much comparison can be found in the literature adds to the relevance of the study.
Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

1. It is a pity that the comparable Nepalese studies are rather old. This reduces the power of the comparisons. Moreover, the special situation of Nepal makes the results interesting: a developing Asian country has very specific characteristics which are different from other developing countries (Africa, South America). The total lack of restrictive legislation makes the comparison with countries with such legislation also relevant. However, the MS misses chances in the area of these latter contrasts.

Un fortunately comparable studies from Nepal are old. However comparison with other countries where restrictive legislation is totally lacking is made. We have discussed this issue in the discussion. Our study population was college students whereas comparable studies from similar setting were among high school students. Lack of studies among college students and correlates of smoking behavior using Green’s model makes our study interesting and new.

2. The determinants measured are limited to the ones included in WHO’s Global Youth Tobacco Survey. This has the advantage that results are comparable with similar surveys in other settings, but might not be the most appropriate combination of concepts for a country as Nepal. Critical remarks concerning the instrument are missing now in the discussion. Moreover, it seems that not the total GYTS was used, I miss questions about tobacco related school curriculum and about environmental tobacco smoke.

Our survey, aimed to estimate prevalence of smoking among college students. We used core GYTS questionnaire and also the Greens model as used in referred world bank study from Indonesia. We believe that questionnaire modified and adapted to local cultural sensitivity of Nepal. We have mentioned about missing questions from GYTS questionnaire in the revised version of the Manuscript.

3. What puzzles me, and what is not discussed now, is the fact that prevalence of tobacco use among young people is much lower in Nepal than in Western countries with strict legislation, heavy taxes and massive information campaigns. I would like to see this matter discussed. The conclusion that Nepal needs information campaigns and strict legislation seems to be undermined by this comparison.
Yes, we do agree with your comment. Western Countries have massive anti-smoking campaigns instead of which smoking is higher than that found in Nepal. We have discussed this in early part of discussion in this revised version of the manuscript. Such difference in prevalence of smoking we believe is due to socio-cultural differences between populations.

4. A major flaw in the presentation is the representativeness of the research group. The age distribution is not presented, nor is the lowest and highest age. It is not explained why five publicly and eight private colleges were drawn, Moreover, school sizes seem to differ greatly and may have from one to five streams. Was all that taken in to account in the sampling procedure? Finally, the higher tobacco use prevalence in the younger and older groups in the sample worries me. It might be related to the sampling procedure, but because this procedure remains unclear, I cannot judge this.

We agree with reviewer’s comment about the representativeness of the study population.

The Junior colleges are located in district head quarters or cities. The college system is very diverse in Nepal public/private, residential/non-residential, one Sanskrit college, one women’s campus etc. We took measures to represent different types of colleges to be present in the sample. Public-funded colleges drew students from outstation rural areas, private colleges drew students from higher social strata of urban areas.

About different streams private colleges had only a small number (single digits of students in each stream). Moreover during the first year of study some lessons are taught in common.
So we attempted to select a representative sample only on the basis of public/private and college enrollment size.

In the age distribution some students were young (14 years) some older than 20 years. Age distribution was slightly skewed.

We have provided the age distributions in the results in the revised version. The results on prevalence in age groups may be due to sampling error from this diverse group of students.

To be clear about it is the college but not school we carried out the survey. Less than 15 years was only one student. Only 3.5% were > 20 years. It is possible that some students joined the college late after graduating from high school.
5. Finally, the data analysis section is not specific enough. I assume that logistic regression is used. It is not specified how missing values were to be handled. Comparing table 1 and 2 leads to the conclusion that $1590 - 1561 = 29$ respondents were missing in the logistic regression as a result of missings, but on which variable(s)? Could these missings not be imputed by group means?

_We have clarified regarding the data analysis. i.e logistic regression analysis was carried out. As foot note to the table 2 it is mentioned in the previous version that data for some independent variables were missing. Therefore not included in the analysis. No, these missings were not imputed by the group means._

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

1. Not being a native speaker myself, I cannot fully judge the quality of the English language in the MS. In places articles seem to be missing.

_We have made a re check and made corrections in the manuscript._

2. Abstract: because the study is cross-sectional, no causal conclusions can be drawn. It would therefore be better to speak of related variables or correlates than of determinants.

_We agree with your comment that no casual conclusions can be made by cross-sectional design. Therefore we have replaced correlates instead of determinants._

3. Background, 7th line: the link between certain chronic non-communicable diseases and tobacco use is not made and therefore the line of argument is not clear.

_The line of argument has been made clear by modifying the statement._

4. Background: the very high prevalence among adults and the relatively low prevalence among youngsters makes one wonder what the critical age of onset might be.

_We also wonder about this point. However no literature available about his point._

5. Background: a reference to Green & Kreuter could be made here.

Reference has been made here.
6. Background: is anything known about the level of awareness/knowledge of the risks of smoking among the general public in Nepal?

There have been no studies documented about this. The same has been mentioned in the revised manuscript.

7. Study area: the information could be limited to figures about population density.

We feel that this background information is necessary for the context of the paper instead of just limiting population density.

8. Study area: 7th line: a young mean age could also be the result of low life Expectancy

Yes, it could be so.

9. Section ‘Definition of variables’ can be integrated in section ‘Questionnaire’, in which all measured concepts have to be dealt with. Now the section about definition is not complete.

The suggested change has been made and item household asset score has been explained in more detail.

10. Data collection: absenteeism can be high in developing countries. That might affect the representativeness. Moreover, how can ages differ from below 15 to over 20 in 11th and 12th grades? Some clarification of the school system is needed.

The reply to this point has been provided in the reply to major compulsory revision 4.

11. Smoking pattern and access to tobacco: please calculate all prices mentioned into USD. Last sentence: was this question only asked to smoking respondents (only 200)? Then we cannot see whether the price of tobacco is a barrier for use.

All the prices were given in USD. Yes, this question was asked only to the students who were using tobacco.

12. Cessation: the percentage of smoking or chewing respondents who sought help is very high. Is there an explanation? What type of help could that be?

We believe that the proportions are high. The response was only for one question without probing further. As it was self reported the students who
felt that they wanted quit might have reported as sought help. As it is reported the help sought was mostly from a friend.

13. Discussion: I assume that there is also no legislation concerning sampling and sponsoring by the tobacco industry?

*This point has been mentioned in the discussion section.*

14. Discussion: the fact that tobacco users see report having more users in their environment (family, friends) can also be caused by selective perception. This mechanism has been shown in the literature.

*This item has been mentioned in the discussion. However we could not find the literature relevant to this point.*

15. Figure 1: these are two figures, and their lay-out is not similar.

*We feel that figure 1 need not be separated.*