Author's response to reviews

Title: School difficulties in immigrant adolescent students and roles of socioeconomic factors, unhealthy behaviours, and physical and mental health

Authors:

Kénora Chau (c.kenora@yahoo.fr)
Michèle Baumann (michele.baumann@uni.lu)
Bernard Kabuth (kabuth_b@yahoo.fr)
Nearkasen Chau (Nearkasen.Chau@wanadoo.fr)

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Author's response to reviews: see over
Reviewer's report

Title: School difficulties and role of social, material, behavioural, physical and mental resources among multi-cultural students

Version: 4 Date: 12 March 2012
Reviewer: MeLisa Creamer

Reviewer's report:

Many thanks for the pertinent comments which allowed us to improve the manuscript. All changes in the paper are in red colour.

Minor Essential Revisions
1. Throughout the paper the word "heath" is used instead of "health" Please correct all of these, including in tables.
Many thanks. We apologize for this mistake.

2. Page 6: Associations of school difficulties with various factors are show in Table 3. grammatically incorrect; should be "Associations of school difficulties with various factors are shown in Table 3.
Yes.

3. Be consistent, at points the response rate is reported as 95% and other times as 94%.
Yes. In fact, 1575/1666 = 94.54%. We replace the rate by "94.5%".

4. Discussion needs a careful reading for grammatical errors.
Yes, it is checked.

5. Table 2; replace Age : Mean (SD) (yr) with Age (yr): Mean (SD)
Yes.

6. Table 2; replace Age at initiation for users: Mean (SD) (yr) with Age at initiation for users (yr): Mean (SD)
Yes.

Discretionary Revisions
7. Page 5: ‘Do you have repeated school year(s) at primary school and middle school?’ grammatically incorrect; should be ‘Have you repeated school year(s)...?’
Yes.
**Level of interest:** An article whose findings are important to those with closely related research interests
Many thanks for the encouragement.

**Quality of written English:** Needs some language corrections before being Published
Yes. The manuscript is checked.

**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

**Other modifications:**
- Throughout the paper, repeating a school-year is replaced by grade repetition, low-school-performance by low school performance, and quitting-school-thinking by school dropout ideation.
- Tables 1 and 3: One line is added for insufficient income.
Reviewer's report

Title: School difficulties and role of social, material, behavioural, physical and mental resources among multi-cultural students

Version: 4 Date: 10 April 2012

Reviewer: Lars Lien

Reviewer's report:

Many thanks for the pertinent comments which allowed us to improve the manuscript. All changes in the paper are in red colour.

Discretionary Revisions (which are recommendations for improvement but which the author can choose to ignore)

None

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

Title: difficult to read and do not really cover the aim of the article which is ethnic differences.

Yes, the title is change according to your suggestion. It becomes:

“School difficulties in immigrant adolescent students and roles of socioeconomic factors, unhealthy behaviours, and physical and mental health.”

The background chapter is very difficult to read, partly because you get the feeling that the text is translated, esp the first para.

The text is checked.

Correlation analysis between the outcome and unhealthy behavior variables should be performed.

In fact, we do not understand your remark as this seems to have been made in Table 3 for all confounders. It may be noted that our study focused on the associations between school difficulties and nationality, by considering unhealthy behaviours and other factors as confounders.

Table 3 mid column second line has an error.

Yes, it is corrected. The 95% CI is 0.52-3.45 (instead of 1.52-3.45).

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

There is mixing of terms like covariates, risk factors and mediators. This should be cleared since different ways of analysis will be used. According to the interpretation of the analysis all variables (except outcome and exposure (ethnicity)) are treated as mediators. I will doubt if that is correct and would think that most of the variables might also be confounders. A more serious analysis of this should be reflected in the method section.

Yes, the term “confounders” is more appropriate. Covariates may also mean confounders, but they are now also replaced by confounders.
In the material and methods section there is too little on the material and some of which is described in the results (first para) should be moved to the material. We need to know much more about the different schools. How many of non-Europeans went to private school?

Your remarks are pertinent.

Some sentences of first paragraph of the results section is moved to the material and methods section as you have suggested.

The sentences in the discussion about WHOQoL are also moved to the material and methods section.

As stated in page 4, contrarily to studies we have participated on the whole France [10, 26-27] we choose to focus the present survey on the exhaustive population from a north-eastern French urban area so that the subjects are in the same socioeconomic context, free of variations across regions.

As the number of immigrant students is rather small, the knowledge of some data such as age, gender, school grade, grade repetition, can identify the subjects. According to the national review board it is important to guarantee direct and indirect anonymity. Furthermore, it is also important to do not allow comparison between public and private schools. Consequently, the school is unknown for all students. The study protocol was made so that it is impossible to identify the school after data collection (even with the identification numbers). This anonymity is very important for the schools, students, their parents, Nancy-Metz regional education authority and the Commission Nationale de l’Informatique et des Libertés (national review board).

So, we regret that we cannot respond to give information on various schools.

There is also a need of more info on the different instruments. Have they been validated among adolescents and are they reliable for this study. Also here there is need to move text from the discussion part to the method section. I would strongly urge the authors to collapse some of the instruments used like family structure and fathers’ occupation. There are sometimes around five subjects in each cell making the CI wide and uncertainty high. In addition some pupils might the able to trace risking the anonymity.

The different instruments used were reliable and used in previous studies on wide samples of adolescents in France, the United Stated, and a number of other countries [10, 26, 28, 32]. This is important for comparison with a study in France using the same measurements. This sentence is added according to your remark (page 11).

Your comment concerning family structure and fathers’ occupation is very pertinent. It led us to group family structure in 3 groups and father’s occupation in 5 groups (instead of 5 and 7 groups previously). The results are better. But, they changed little as a whole. Thus our findings appeared to be robust.

I would also ask to gut down on number of outcome variables. Quitting school thinking is unreliable and very few in the two ethnic groups do have answered yes to that question.

Your remark is pertinent. But quitting school thinking is the most dramatic school issue as young students suffer from it for a long time leaving them to a very strong higher risk for suicide attempt (26.7% vs. 9.2%, p<0.001) (see also page 9, 3rd paragraph). Among the students with quitting school thinking suffering from suicide attempt, this occurred at a very young age (mean age 9.2, SD 2.7 yr). Suicide attempt and age at occurring are available in our study but they were not considered in the present paper as the occurring date is unknown for certain factors such as WHOQoL.

So, we also preferred to investigate quitting school thinking. This item seems reliable as we found the same prevalence among a wide representative sample of French adolescents all aged 17 years (sample studied in the reference [10]) for whom school dropout had just occurred. Quitting school with no qualification is a major public health problem on which too few studies have been conducted.
One fundamental problem is the lack of interaction analysis on gender. According to analysis in table 3 girls and boys had very different results on the outcome measures and if there were interactions the results should be analysed separately for boys and girls.

Gender disparities are an important problem of public health and are a research area of our research team. Several papers have been focused on them for a number of health-related issues, depressive symptoms, injuries, mortality, and social inequalities. We agreed thus with you about the interest to study gender differences. However, the number of immigrants is small and does not allow us to analyse boys and girls separately.

In fact, Table 3 shows that the risk for quitting school thinking was 3.45-fold higher in boys than in girls only. Analysis for boys and girls separately reveals that they had similar associations between non-European nationality (vs. French) and quitting school thinking:

- For boys: age-adjusted odds ratio = 4.82, p<0.001, 95% CI 1.84-12.60.
- For girls: age-adjusted odds ratio = 4.19, p=0.067, 95% CI 0.89-19.60 (non-significant because of small number of subjects).

So, the risk is similar but it was close to significance only for girls. This is added in page 10.

The paragraph on gender disparities is modified and becomes:

"Regarding gender disparities, only school dropout ideation was more frequent among boys than girls with an age-adjusted odds ratio of 3.45. We conducted further analysis to explore the roles of confounders. Further adjustment for family structure and ethnic group did not change the odds ratio (3.56, 95% CI 1.93-6.58). Further adjustment for father’s occupation increased the odds ratio to 3.81 (2.05-7.08, by 15%). Finally, taking into account all confounders increased the odds ratio to 4.78 (2.45-9.33, by 54%). The gender difference for school dropout ideation was thus higher when controlling for all confounders. However, the risk for school dropout ideation was similar for non-European boys (age-adjusted odds ratio vs. French counterparts 4.82, p<0.001, 95% CI 1.84-12.60) and girls (4.19, p=0.067, 95% CI 0.89-19.60)."

We also found similar risks for different outcomes and factors. Consequently and because of small number of subjects, it would be better to limit our analysis to the two sexes combined and consider gender as a confounder.

Another fundamental problem is lack of information and controlling for school or class variables. If like in other countries ethnic groups tend to be in the same class this might have been a very important confounding variable. This should at least have been discussed. As stated above, the school is unknown to guarantee indirect anonymity. To also guarantee indirect anonymity the precise class was excluded from the questionnaire and the study. The public school for each student was determined by his/her residence place and the precise class is attributed by the school. Ethnic groups may not be in the same class as there were 54 European and 54 non-European immigrants distributed in a total of 63 classes. We observed this during data collection.

However, your remark is pertinent. It led us to add the following sentence in the discussion (page 10):

"Second, ethnic groups may tend to be in the same class and this may play a confounding role. But this was not observed during data collection. The European and non-European immigrants were well distributed in the 63 classes. The public school for each student was determined by its residence place and the precise class was attributed by the school".
Also the grouping of ethnicity should be discussed. Is it really possible to treat all non-Europeans in one group? Are they similar?

As stated in page 8, non-European immigrants are mostly from Africa and Turkey. In France, the national review board does not allow to study specific ethnic groups. But studying wide groups of several ethnic origins is authorized. So we considered only in the questionnaire three wide groups: Frenchs, European and non-European immigrants. The last two groups are clearly different in terms of socioeconomic and cultural characteristics. So we cannot distinguish various specific ethnic groups. It should be noted that the small number of subjects suggests that non-European group could not be divided into several subgroups.

Your comment led us to add the following sentence in the discussion (page 10):
“Third, as previously stated, most non-European immigrants are from Africa and Turkey. In France, it is not allowed to investigate specific ethnic groups. So we considered only three wide groups: French, European, and non-European immigrants which are clearly different in terms of socioeconomic and cultural characteristics”.

Other modifications:
- Throughout the paper, repeating a school-year is replaced by grade repetition, low-school-performance by low school performance, and quitting-school-thinking by school dropout ideation.
- Tables 1 and 3: One line is added for insufficient income.