Author’s response to reviews

Title: Risk factors and psychosocial characteristics of problematic and potential problematic internet use among adolescents: A cross-sectional study

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Version: 2 Date: 21 February 2011

Author’s response to reviews: see over
February 21, 2011

Dear Prof Sigfusdottir,

Thank you for considering the manuscript entitled “Risk factors and psychosocial characteristics of problematic and potential problematic internet use among adolescents: A cross-sectional study” (Manuscript ID: 2070053076491516) for publication in the Journal of BMC Public Health following the incorporation of the proposed revisions and changes. We greatly appreciate the Reviewer Comments and hope that we have addressed each comment adequately. Please find below a detailed point-by-point response (in bullets and italics) to all Reviewer Comments regarding the changes incorporated in the revised manuscript.

On behalf of my co-authors, I sincerely hope that you find the revisions made adequate and deem our revised work worthy of publication in your journal.

Sincerely,

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Reviewer's report
Title: At-risk dependent internet use and internet addiction among Greek adolescents: A cross-sectional study
Version: 1 Date: 7 January 2011
Reviewer: Fenglin Cao

Reviewer's report:
Comments to authors:
The text is well arranged and the logic is clear. Except English writing, there are many mistakes in the manuscript and the results do not show good. The following are the questions and some mistakes in this manuscript:

1. It is noted that your manuscript needs careful editing by someone with expertise in technical English editing paying particular attention to English grammar and sentence structure so that some ambiguities can be avoided.
   - Thank you for your comment. Please find that to best of our knowledge we have corrected any grammatical errors and sentence structure throughout the revised manuscript and with particular attention to the abstract. However, please note that in order to ease the legibility of the manuscript the changes adopted have not been highlighted.

2. The title didn’t accurately convey what has been found. From your title, I can only get the participants, but can’t gain what you have conducted among these people.
   - Thank you for commenting on the title. Please note that we have changed the title to convey both the participants as well as the study design as indicated in the BMC guidelines.

3. The number of decimal places should be consistent through the entire article.
   - Thank you for noting this. Please find that due to the limited study sample size in the sub-group analyses, 1 decimal place has been retained for all percentage values presented in the text and 2 decimal places have been presented for all Odds Ratios and 95% Confidence Interval values as conventionally applied.

4. Pay attention to the end of line 2, page 9. I’m not sure why a p-value was presented here. Maybe the authors want to compare the mean YIAS score between internet addicts and normal internet users. Please make it clear.
   - Thank you for making note of this. Please find that it is now specified that the p-value reported corresponds to the comparison of mean YIAT scores between adolescents with PIU and those with normal internet use.

5. The interpretation of OR value was not proper. An OR value can’t be expressed with a percent sign after it. For example, “2.77%” should be changed to “2.77”, in paragraph 2, line 1, page 9. The same problem can be find in page 10, 11 and so on. Please check the whole paper carefully.
Thank you for this comment. Please find that all interpretations of the OR values have been changed accordingly at the aforementioned sections of the manuscript.

6. The findings of the study were not explained adequately in the “Result” part, especially the data in Table 3.
   - Thank you for making note of this. Please find that the results of the comparisons of the SDQ component and total scores are now detailed in the Results section (Potential problematic internet use, paragraph 4, and Problematic internet use, paragraph 4).

7. The gender percentage of normal internet user was not correct. See Table 1, row 5, column 2. Also in this table, the “N” should be changed to “n” (row 2, column 2).
   - Thank for your comment. Please note that the “N” has been changed to “n”. However, to the best of our knowledge we are unable to detect the incorrect gender percentage. We would greatly appreciate if you could specify this so that we may make the necessary change to which you referred.

8. The data in Table 3 do not support the statement “…neither…nor internet addiction among adolescents were associated with emotional maladjustment.” From this table, I can see that the internet addicts were 3.15 times more likely to be emotional abnormal. See paragraph 2, line 1 to 2, page 14.
   - Thank you for your insightful comment. Please note that according to the results presented in Table 3, while adolescents with problematic internet use were observed to be 3.15 times more likely to have an abnormal emotional score according to the SDQ, the associated 95% confidence interval (95% CI: 0.61-16.30) indicated that this association was non-significant. In order to avoid any confusion, please find that on p.14, paragraph 2, lines 1-2, we have now specified that neither potential problematic internet use nor problematic internet use were significantly associated with emotional maladjustment among adolescents.

Reviewer's report
Title: At-risk dependent internet use and internet addiction among Greek adolescents: A cross-sectional study
Version: 1 Date: 19 January 2011
Reviewer: Lawrence Lam

Reviewer's report:
Major Compulsory Revisions
There are some conceptual issues needed to be addressed. More importantly, there are methodological issues that may affect the scientific merit of the study.

Conceptual issues:
1. “Internet Addiction” is still a controversial term and is not yet a clinical diagnosis accepted in the current version of DSM-IV-TR nor the ICD-10. It was correct for the authors to note that there is no uniformly accepted definition on “Internet Addiction” (2nd paragraph, Introduction). Whether the Problematic Internet Use (PIU) behaviour
should be considered as a disorder or not is still debatable. Hence, “Internet Addiction” is still a term loosely used in the field representing the problematic use or misuse of the Internet. Although it has been noted that “Internet Addiction” has been accepted as a disorder in some countries or being advocated by some researchers, however, it has not been recognized internationally. For a proper diagnosis as a disorder or part of the spectrum of obsessive-compulsive disorders or impulse control disorders with clearly defined clinical diagnostic criteria, one has to wait for the DSM-V. Before then, it would be prudent to refrain from using the term “Addiction” for describing the kind of behaviour under study. An alternative possible term to be used is “Problematic Internet Use” (PIU) as suggested by some researchers with the same “signs and symptoms” quoted by the authors in the Introduction section for “addiction”.

Thank you for presenting this important issue. Please find that the term “Internet addiction” has been substituted with “problematic internet use” throughout the manuscript as recommended.

2. The next conceptual issue is the measurement and assessment of the construct which has an impact on the main study thesis that distinction between severe and less severe users may exist. Applying the conventional thinking and theoretical assumptions of measurement and clinical assessment in areas of psychiatry and psychology, there is a gradient or a degree of severity or seriousness in the problematic behaviour or condition under study. This gradient or a degree of seriousness is assumed to follow a certain underlying probabilistic distribution, such as a Normal distribution. In terms of the categorisation or “cut-off” for sub-groups of severity, it could be based on extensive clinical experience and verifications or to be determined empirically using psychometric methodologies. The Young Internet Addiction Scale (YIAS) has been designed based on a conceptual framework similar to gambling addiction. In terms of the validation of the scale, there are only four studies reported in the literature so far. These include one on the original test in the English language, one in French, one in Italian, and another in Chinese. Three of the four studies reported factor structural and convergent validity as the main focus. However, different factorial structures were reported ranging from 1 factor to 6 factors. In terms of “cut-offs” for sub-group classifications, sensitivity and specificity analyse were not reported in any of these studies. As a result, there is insufficient evidence to say that a certain cut-offs can be used definitively to classify a sub-group of problematic Internet users. The scores on the YIAS could be used as a broad categorisation indicatively for certain potential problems as suggested by Young on the Website. Hence, sub-classifications of “at-risk dependent Interest use” and “Internet Addiction” may not be implied by the YIAS. However, broader groupings such as “potential problematic user” and “normal user” may be a more appropriate approach in terms of categorisation of Internet users with various degrees of usage.

Thank you for your insightful critiques. Please find that broader groupings have been applied to categorized internet users with various degrees of usage. Specifically, we have used the terms: potential problematic internet use (potential PIU) to refer to at-risk use and problematic internet use (PIU). In addition, maladaptive internet use has been applied to include both of the aforementioned groups. The novel results regarding adolescents with maladaptive internet use are
Methodological issues:
Few methodological issues have been identified for the improvement of the study. These include:

1. The study design. According to the descriptions in the Methods section, grade 9 and 10 students were recruited from schools randomly selected from the sample frame. Hence, students are nested or clustered in schools, and the study design was not a simple random sample survey. It was a survey using a random cluster sampling technique for generating subjects. Therefore, analyses of data should take into consideration of the clustering effect of schools disregarding how small the effect could be.

   Thank you for making this very important comment. We do agree that clustering of schools should be considered in similar analyses. However, due to limitations in the recording of classes (i.e. sampling unit) such analyses could not be conducted. Even so, we would like to uphold that the potential effect of this parameter is expected to be minimal due to the proximity of schools within the urban district of Athens evaluated for the purposes of the present investigation. However, in our novel study to be conducted regarding potential PIU and PIU this parameter will be taken into account following your valued suggestion.

2. Other potential risk factors not considered. Information collection from students included demographics, Internet access, usage and experience, the SDQ, and YIAS only. Many other potential risk factors for PIU have been reported in the literature and have also been reviewed by Chen et al. (Euro J Psychi, in press). These identified potential risk factors should be included as part of this study.

   Thank you for this insightful comment. We agree that research regarding the potential risk factors, including psychiatric conditions, have been rapidly accumulating during the recent developments in the related scientific literature. However, at the time of study the assessment of such risk factors were disallowed by the IRB. Following your kind and scientifically sound suggestion, it is aspired that the assessment of such assessments will be allowed in our future research efforts in the field.

3. Data analysis. The authors used multivariate logistic regression technique to examine the associations between Internet, SDQ variables and “at-risk dependent Internet use”, as well as “Internet addiction” separately. Since the outcome of study was a categorical variable with three levels, for the economy of model fitting, why not using the multinomial logistic regression for fitting the multinomial logit model?

   Thank you for noting this. Please find that the multinomial logistic regression analyses has now been added in the Results section under the heading “Determinants of potential PIU and PIU” and in Table 4.
4. Given the low estimated prevalence of “Internet addiction” (n=13, 1.5%), the results obtained on the parameter estimate were grossly imprecise as shown by the large 95% C.I.. Increasing the sample size is one remedial action, however, not practical. Combining these cases with the “at-risk” group is another alternative. However, in doing so, the research question will inevitably changed to examining potential risk factors of problematic Internet use among adolescents. Unfortunately, there have already been many well-designed studies in the literature reporting more comprehensive results.

- Thank you for this important comment. Please find that we have combined the potential PIU and PIU groups into the maladaptive problematic internet use group. Details are reported in the Results section under the heading “Overall maladaptive internet use”.

References
7. Chang MK, Law SPM. Factor structure for Young’s Internet Addiction Test: A

- Thank you for suggesting references. Please find that we have incorporated most of those references in the manuscript.