Reviewer's report

Title: A retrospective survey study of mobile phone use and its effects on daytime sleepiness in California high school students

Version: 3 Date: 27 May 2013

Reviewer: Mary Redmayne

Reviewer's report:

The study is an interesting one. The authors have provided a thoughtful interpretation of their findings, but the analytical method is not reported clearly enough.

- Major Compulsory Revisions

1. The second paragraph of the results is confusing. It gives EES results, then describes the variables in the “iterative multivariate regression analyses”, but follows this with ANOVA results. Multivariate regression results are not given. It appears the word “regression” may need removing or regression results provided. This needs to be clarified.

- Minor Essential Revisions

1. The title of the paper refers to a retrospective survey study. It is a cross-sectional survey (as it says in the background).
2. The title does not reflect the findings
3. There is no statement on which body provided the ethics consent.
4. I have some queries about the questionnaire that need addressing or commenting on. (There are others in the discretionary revisions section.)
   - Q 4 & 5 read ‘...how many ... have you made OR received per day’. The word OR is unclear and may elicit responses referring to sending, receiving or both
   - Q 14 & 18 could refer to being either a passenger or the driver. The way this is interpreted may well affect the response
   - Q3 excludes those who borrow a phone. Did any non-owners report using a phone in Q 4 & 5?

5. The following need to have information or some comment provided:
   - the very low participation rate (about 10%) and the possible impact of this
   - when the survey was undertaken
   - the age range of the students at the school (only the age range of participants is given),
   - what percentage of respondents answered all the questions in the model and
were such values imputed or were those respondents excluded?
- Were the variables in the model tested for collinearity?

6. What were the determinants for choosing the best model?
7. Why were non-phone owners excluded (they may have borrowed)?
8. The last paragraph of the Background does not provide a logical reason for undertaking the research.
9. The means and SD of the reported amount of texting and phone calling indicate a heavy positive skew which is typical of cellphone studies. This means that the median and range are more suitable for reporting than the mean and SD.

10. Proof reading, bold print is the correct version:
- 1st line of abstract methods: “containing an Epworth…”
- Results, para 1, line 13 “7.5% reported that they needed to be accessible…”
- Results, para 2, line 11 “relationship between the number of estimated texts…”
- Results, para 2, line 17 “those who felt they needed to be accessible…”
- Results, para 2, line 19 would read better as: “reporting having tried, but failed, to reduce…” (Remove the first “to” which is after the word ‘tried’)

- Discretionary Revisions

1. Questions 12-18 in the questionnaire don’t provide a ‘not applicable’ choice. This is unlikely to have been needed for most questions, but Q15 could do with some comment.
2. The last sentence of the background is strangely worded. How about “There has been limited examination of how mobile phone usage affects the behaviour of young children and adolescents”?
3. The last but one line of the paper suggests limiting phone use during prescribed sleeping hours. It seems that eliminating phone use during sleeping hours is likely to be far more effective at “alleviating some degree of daytime sleepiness”.
4. The first citation is quite an old one. More up-to-date information is readily available.
5. A table of ANOVA results would be helpful

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

**Quality of written English:** Acceptable

**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