Reviewer’s report

Title: Predictors of smoking among Swedish adolescents

Version: 1
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Reviewer: Severin Haug

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General comments

The paper is concisely written and addresses an important issue, namely predictors of smoking in adolescents. The introduction provides a comprehensive overview of previous studies addressing this topic.

Unfortunately, the study population is rather small for a predictor analyses and the selective dropout further reduces the importance of the results reported – however both issues are addressed in the limitations section.

Major compulsory revisions

Particularly in the methods section, there are some points which might be further elaborated:

1. The authors do not mention the period, when the study was conducted. Figure 1 displays that the first survey started in 2003 and probably the fourth and final survey was conducted in 2008. Are these data still up to date? Which changes in legislation since 2003 might affect the results presented?

2. Smoking, the outcome variable, was defined as smoking every day, at least once per week or less than one time per week. This is a rather vague definition as adolescents smoking a puff once a month might also be classified as smokers. I would suggest to use a more conservative definition of smoking or to run separate analyses for occasional smokers (categories 2 and 3) and daily smokers (category 1).

3. The multivariate regression model was created using the “enter” method considering all predictors simultaneously. However, multicollinearity and suppressor effects might have affected the results of this model. I would suggest to use more sophisticated methods for variable selection, e.g. a stepwise backward procedure followed by a stepwise forward procedure as described in “Purposeful selection of variables in logistic regression from Zoran Bursac, C Heath Gauss, David Keith Williams and David W Hosmer”.

Minor essential revisions

The discussion section is rather lengthy and could be written more concisely. Particularly the second paragraph on page 11 starting with “Modelling and social reinforcement...” and the second paragraph on page 12 startign with “School
health education…” might be omitted or the authors should clarify how their connection to the results of the study.

**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