Reviewer's report

Title: An association between seeing incidents of alcohol or drug use in films and young Scottish adults’ own alcohol or drug use: cross sectional study

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Reviewer: Dirk Baier

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Major Compulsory Revisions

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Minor Essential Revisions

1. The title should better be formulated as a question: “Is there an association …”. This seems necessary because after controlling different backround factors (gender etc.) there is no significant association between alcohol/drug consumption seen in films and own alcohol/drug consumption.

2. The subtitle “cross sectional study” should be deleted because the data are longitudinal (data of respondents age 11 and age 15 are used, not only data of age 19).

3. In the method section of the summary should be mentioned how many cases are analyzed (“N < 1002”?) and in which years the surveys were conducted (“between 1994 and 2003”?)

4. The Introduction part should additionally deal with the following questions/remarks:

a) Can drug use be affected in the same manner by films like alcohol consumption? Imitating alcohol consumption is much easier because alcohol is better available than illegal drugs. From a theoretical point of view drug use is more deviant than alcohol consumption.

b) Up to now there is nothing said about why some control variables are integrated in the multivariate analyses, others not. For instance leisure time activities or ethnic background are no control variables. Why are social class, parental structure and especially time spend with television controlled? And are there any reasons, why some of the control variables are measured at time 1 (age 11), others at time 2 (age 15) or time 3 (age 19)?

c) Mentioning trends in smoking behavior does not help to introduce the research question. It is said that in different countries there is a decline in smoking prevalence (in Germany, too), but at the same time in many films smoking behavior is still often shown, so the one (decline) could not be attributed to the other (films); the association between contents of films and smoking behavior of adults should be week or even in a reverse direction.
5. Only 1002 out of 2586 persons are at the end analyzed. It is questionable if weighting the data is the best way of dealing with the selective attrition the authors describe; some of the cases in the sample may get very high or very low weights (value above 2 or under 0.5). From a methodological point of view weighting is not necessary because (theoretical plausible) associations are analyzed. Another way of dealing with missing data is (multiple) imputation. Did the authors consider this strategy?

6. The authors used a rather complex way of constructing indices of film alcohol/drug use. A question is if the different lists of 50 films they handed out to the respondents differed significantly in time the films showed alcohol/drug consumption. Maybe the authors used ten lists with 50 films on each: Did the time of showed alcohol/drug use in the 50 films differed significantly between the ten lists?

7. Using lifetime prevalence for drug consumption as a dependend variable is problematic because of the question of cause and effect. The authors discuss this problem. One argument for including these prevalences in the analyses could be that time of first consumption is perhaps around age 17; so it can be assumed that watching different drug films happened earlier in life then using drugs. Do the authors have data on first drug consumption?

8. The significance levels shown in table 2 do not correspond with the significance levels mentioned in the text. The authors write “There were linear trends in the percentage of heavy drinkers (p=.018) and binge drinkers (p=0.12) by film alcohol exposure quartiles”. In table 2 no linear trend can be found (only the quartile 4 differs from the three other quartiles) and the significance levels are p=.054 (heavy drinking) and p=.079 (binge drinking). The same discrepancies can be found for drug use. Which informations are right?

9. Looking at table 3, an impact of alcohol/drug use in movies can be found only in three of the four dependend variables (heavy drinking, binge drinking, cannabis use; not: hard drug use). In two of these three cases a significant difference can only be found for the last quartile (this is not surprising having results of table 2 in mind). All significant differences disappear after controlling other variables. So all in all the effect of media consumption is completely mediated by some other factors. These are important results. But the authors should be more cautious in evaluating these results. They should not write that they “have demonstrated an association between film exposure to alcohol and both bing and heavy drinking […] and […] between film exposure to illicit drugs and ever use of cannabis”.

10. Maybe the association between movies seen and own alcohol/drug consumption could be better analyzed if, in the logistic regression, only two groups (quartile 1 to 3 vs. quartile 4) would be differentiated. Maybe in the last models there would be still significant differences.

11. An important risk-factor for alcohol/drug consumption as well as for media
consumption is gender. Did the authors analysed whether there are interaction effects between gender and media consumption on drug use?

12. The discussion section should in part be rewritten. Up to now a big part of it deals with a study on smoking that is not reported before (and smoking behavior is not analysed before). In the discussion part it seems necessary to deal with two important results of the analyses:

a) Why does only seeing much of alcohol/drug use in films (quartile 4) has an impact on own behavior? So why are quartiles 2 and 3 not affected by the media?

b) In which step of the multivariat analyses the significant effect of quartile 4 disappear? Discussing that helps to find the “real” causes of consume styles (these are gender, personal characteristics, friends behavior). It should also be discussed how media consumption influence these “real” causes.

Discretionary Revisions

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.