Reviewer’s report

Title: Predictors of hazardous drinking, tobacco smoking and physical inactivity in apprentices of vocational schools

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Review for BMC Public Health.

Article title: Predictors of hazardous drinking, tobacco smoking and physical inactivity in apprentices of vocational schools.

This is an interesting article about prevalence of tobacco smoking, heavy drinking, physical inactivity and related factors in a sample of vocational school students in Switzerland. Whilst I found the study interesting and well conducted for the most part I have two major comments, one concerning context and argument, and one about the sample, that would want to see addressed before recommending the article for publication. My comments follow the order of sections in the paper.

Introduction

Second sentence: “The prevalence of hazardous drinking…” states that alcohol use, smoking and physical inactivity have been on the rise in ages 12 to 17. This is somewhat problematic. First, there is a developmental sequence of likelihood for risk behaviors that increases with age. It is hardly a scientific discovery that kids are more likely to become smokers as the age from 12 to 17. It is simply the nature of existence in Western living that such behaviors increase in likelihood from childhood to adulthood. The argument is therefore not very strong and in my view, useless. This pseudo-criteria is repeated on several occasions in the paper. I would urge the authors to replace this argument with another more compelling that truly shows why we should worry about rates of risk behaviors among vocational school apprentices.

Sample

The biggest concern in the paper, in my view, is the nature of the sample. First, the sampling frame is not reported on, so there exists no true response ratio because the reader does not have an idea how many individuals where originally in the sample frame. Out of the 57 schools that where “invited” to partake in the study, less than half decided to do so. This bears some problems. 1) Do we know if those 24 schools are a true representative subsection of all the 57 schools?, 2) Was the sample of schools weighted in line with students numbers? That is, was the likelihood of involvement in the study not carried out proportionally to the student numbers across the schools? If not then large schools had the same change of being included in the sample as small schools, which creates a bias in the sample. Stating that 99.5% of students that agreed to participate in the study
represent the response rate, as is done in the discussion section, is simply wrong. This number represents the “completion ratio”. A response ratio would be based on the 57 schools that were invited to partake in the study initially.

The alcohol consumption measure is missing a time-span. I cannot understand how the reader will assess “hazardous drinking” if there is no indication of time span. Does this mean that the respondent drinks hazardously once per month, or usually, or has done so once or more often in his/her life? Or what?

Discussion
Middle of page 9: “These results indicate that both higher…. May contribute to an increased prevalence of health risk factors in apprentices”. This sort of interpretation overlooks the correlational nature of the study design. “Contribution” is not known about – these are factors that go hand in hand, that is all.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
I declare that I have no competing interests