Reviewer's report

Title: The Role of Action Planning and Plan Enactment for Smoking Cessation

Version: 2 Date: 17 October 2012

Reviewer: James Balmford

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Major compulsory revisions

1. The other reviewer made a very important point that I would like to take up in detail, because it hasn't been addressed at all in the revised manuscript. Simply put, it is inappropriate to conduct the analyses predicting abstinence using the entire sample – rather these analyses must be done only on the sub-sample that made a quit attempt. Using the whole sample conflates the two outcomes and probably has the effect of weakening the relationship between goal enactment and abstinence at follow-up. Addressing this point requires a number of changes:
   o First, please report the number and proportion that made a quit attempt by each follow-up, as this is the base sample for the analyses of whether action plans predict abstinence at follow-up.
   o Do not use the term 'smoking cessation' as a blanket term to refer to both making a quit attempt and abstinence (as it is, for example, in the results paragraph on p.11 beginning 'As can be noted from Table 2...'). Be very clear at all times which outcome you are referring to – the outcomes are either 'making a quit attempt' or 'abstinence at follow-up'.
   o All analyses predicting abstinence need to be re-done, if they were done on the entire sample.
   o Table 2 requires that all N's be provided for every analysis, which will probably involve adding 3 columns.

2. The distinction between 'the act of preparatory planning' and 'plan enactment' is confusing. Preparatory planning for a quit attempt involves actually doing such things as thinking about how to cope with tempting situations. Action planning seems to refer to 'planning to plan', which is a strange concept that requires better justification.

3. Table 3 suggests that action planning was measured at follow-up as well as at baseline, which is not stated in the methods. If so, this is highly problematic, because at follow-up many participants were quit, and many of the plans are things that one can only do before a quit attempt has begun (e.g. choose a quit date). That is, one can not form an action plan to do something that one has already done. Thus, the analyses presented in Table 3 are confounded with smoking status at follow-up, with the exception of the cross-sectional analysis of which baseline variables were associated with baseline action planning. I strongly suggest dropping it, as well as the second half of the paragraph headed
'Intention is related to action plan development'.

4. It appears from the results section that people were only asked whether they enacted plans that they had previously indicated they planned to do. However, in the methods it is stated that 'At both follow-ups, participants were asked which of the 12 stated action plans they had executed'. This seems to be incorrect. It should say something like 'At both follow-ups, participants were asked which of their action plans (as selected at baseline) they had executed'.

5. Furthermore, if people were only asked whether they enacted the plans that they had previously indicated they planned to do, then it is impossible to test Hypothesis 2B. Indeed I do not see a test of Hypothesis 2B in the results section. Of course action planning at baseline predicts number of plans executed at follow-up – the survey was structured in this way because people were only asked whether they had executed the plans they intended to do.

6. It is difficult to understand what the distinction is between 'Remove all smoking-related objects in your house' and 'Remove all ashtrays from the house'. Certainly no-one planning to do the former could not also be planning to do the latter. One of these needs to be dropped, probably the latter as it refers only to ashtrays.

7. Last paragraph of the results: 'Number of plans enacted' is a poor measure as it is confounded with the number of action plans made. Better would be to compare those who, for example, enacted >50% of their plans, compared with those who enacted <50%.

8. The English has improved but the paper is still rather difficult to read, and I would recommend further revision by a professional proofreader. I could give many examples, e.g. one does not say 'the intention-behavior gap is receiving increasingly more attention'; instead one says 'the intention-behavior gap is receiving increasing attention'. It is surprising that neither proofreader used so far picked up this and numerous other errors. A competent proofreader could greatly enhance the readability of the paper.

Minor essential revisions

1. Do not say 'strong intention to quit', as strictly speaking strength of intention was not measured. For example, the sentence on p.8 in the analysis section should read '…linear regression analysis was used to explore whether individuals who intended to quit within the next month would exhibit higher levels of action planning at baseline and execute more action plans at follow-up (both normally distributed) than individuals who intended to quit within the next year.'

2. P.8, analysis section: The percentage of formulated action plans is in Table 1, not Table 4.

3. The question assessing 'previous attempts to quit' is not described in the methods.
4. Coding participants as smokers who were lost to follow-up is a valid thing to do, but it is not 'intention-to-treat' and should not be described as such. It is a method of imputing the value of missing data. Intention to treat refers to the inclusion of all participants in an analysis regardless of the extent to which they complied with an intervention.

5. 'Plans and their enactment' section: Change the first sentence to 'Table 1 shows the extent to which plans were planned and executed'.

6. Do not say that plans were 'realized' – better words are carried out, executed, or done.

7. The paragraph headed 'Intention is related to plan enactment': Report the means analysis first. Then report the regression as it is a more sophisticated analysis as it allows for factors such as baseline action planning to be controlled for.

8. High self-efficacy is listed twice as a predictor of abstinence at 6 months, once as significant and once as borderline significant.

9. 'Positive intention to quit' is listed as a predictor of abstinence at 6 months, but this means nothing. What was measured, and how it should be described, is 'baseline intention to quit in the next month'.

10. Don't use the terms 'addiction' and 'nicotine dependence' interchangeably, they are not the same thing. Note that Fagerstrom would now like his test to be known as the test for cigarette dependence (Fagerstrom 2012, Nicotine and Tobacco Research).

11. First paragraph of the discussion – what does 'a smoke-free status' mean? Be consistent in your descriptions of the outcomes, which were either made a quit attempt or abstinence.

12. "We did not assess a differential impact of preparation and coping plans and their plan enactment": A better way of expressing and thinking about this is to say that you did not examine the timing of plan enactment, that is whether it is better to plan before or after the quit attempt has begun. This is an important future research question.

13. What does 'we assessed unconditional plans' mean?

**Level of interest:** An article of importance in its field

**Quality of written English:** Not suitable for publication unless extensively edited

**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.