Reviewer's report

Title: Patient knowledge and behaviour regarding driving under the influence of medicines: a multi-country survey.

Version: 1 Date: 6 May 2011

Reviewer: Hardy Holte

Reviewer's report:

Review of the article „Patient knowledge and behaviour regarding driving under the influence of medicines: a multi-country survey” by Hardy Holte.

Reviewer's report

(1) The question posed by the authors is well described.
(2) There are some comments on the description of the methods (see C).
(3) It seems that the data are sound.
(4) The manuscript adheres to the relevant standards for reporting and data deposition.
(5) There are some comments on the discussion and conclusion (see A and C).
(6) Limitations of the work are clearly stated. There are some additional aspects to consider (see C).
(7) The authors clearly acknowledge all work upon which they are building, both published and unpublished.
(8) There are some comments on the title and abstract (see C).
(9) The writing is acceptable.

A Major Compulsory Revisions

(The author must respond to these before a decision on publication can be reached. For example, additional necessary experiments or controls, statistical mistakes, errors in interpretation.)

There are some aspects to consider:

(a) Choice of theory: It is not clear why the authors have chosen the theory of planned behavior for the study. There are no intentions and no subjective norms or perceived behavior control variables in the study. The reader is expecting a model to be tested including these concepts. If the authors want to point out just the importance of attitudes, there are many other models and theories which could be mentioned and discussed. And there is no definition of attitudes.

(b) Lack of theory discussion in the discussion or conclusion section: It is not mentioned, if the results support the theoretical approach.
(c) The authors could build an own model which consists of knowledge, attitudes, experience, information received etc. derived from different theoretical approaches.

(d) Reference No 13 concerning the theory of planned behavior is not correct. It is not Fishbein, it is only Ajzen. Fishbein introduces the theory of reasoned action.

(e) In the abstract (part “Results”) it is not clear (even wrong) to write “Patients who … have a strong attitude towards driving under the influence of impairing medicine are more prone to change their driving frequency behavior …” It is the negative attitude that leads to an increase of the likelihood to change. A similar sentence is written in the conclusion part.

B Minor Essential Revisions (Minor issues not for publication)

(The author can be trusted to make these. For example, missing labels on figures, the wrong use of a term, spelling mistakes.)

(a) The authors should not speak of “behavior”. It is important to mention that it is reported behavior.

(b) I think the expression “educational” level is better than “education” level.

(c) In “methods” of the abstract: there is an “s” missing in the word “Factor”.

C Discretionary Revisions

(These are recommendations for improvement which the author can choose to ignore. For example clarifications, data that would be useful but not essential.)

• There are two aspects to mention concerning “Title and abstract”:

(a) The title could be “Predictors of patient knowledge and behavior ….”

(b) In part “background” of the abstract the authors used the expression “intended behavior”. As I understood the design of the study intentions haven’t been part of the questionnaire.

(c) In the abstract (part “method”) it is not clear what “… of multivariate and logistic regression analysis” means. Does it mean: multivariate regression analysis and logistic regression analysis? I think not.

(d) The focus is set on “change” of patients’ knowledge and behavior. But it is also important to “stabilize” existing knowledge and correct behavior.

• There are two aspects to mention concerning “Methods”

Pharmacies

(a) It should be mentioned that questionnaires had been sent out pharmacies as it is shown in table 2.
Data-analysis:
(a) It is not clear what multivariate analysis means. I think it is not a multivariate regression analysis but a multiple regression analysis.
(b) It should be mentioned that interactions haven’t been considered in the analysis.

Dependant variables construction:
(a) It is not clear, what is shown in table 1. What is the sum score of different statements that were asked to patients? For example: What does number 41 mean in table 1 concerning statement “It was not feasible for me to change my frequency of driving”.

• There is one aspects to mention concerning “Results”
(a) It is not clear what multivariate analysis means. I think it is not a multivariate regression analysis but a multiple regression analysis. It should be mentioned in table 4 what kind of statistical analysis it is.

• There are three aspects to mention concerning “Discussion and conclusion”:
(a) The focus in this study is set on “change of patients’ knowledge”. But information is not only communicated to change behavior but also to stabilize behavior. In this case it is useful to communicate the information to give a feedback to patients, that their behavior is correct and adequate.
(b) How will the results about predictors of knowledge and behavior (e.g. socio-demographic parameter) be implemented in a communication strategy? How do you implement the new results about the target group into communication strategies?
(c) It is said that future research should focus on more effective ways of informing and communicating with patients in order to prevent them from driving under the influence of medicines. And it is said that future research should focus on information campaigns for health care providers and interventions. Is this really only a task for researcher? Don’t the authors want to say, that is also an important task for implementers? It is both a matter of research and of implementation of new results (e.g. campaigns).
(d) It should be mentioned that interactions, which haven’t been considered in the analysis, might have an effect on knowledge or behavior. Maybe there is a significant influence of the interaction between age and educational level.
(e) It should be mentioned that the explained variance of (10.6 %) knowledge is quite low, which means, there are other influencing factors.
(f) It is not mentioned how much variance of behavior is explained by the independent variables.
(g) The authors wrote that younger and higher education patients had better
knowledge. Better than …?

(h) Limitations: Another limitation is given by the set of variables. Other variables might have an important additional effect.

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

**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.