Peer Review Report

Review Report on Smoking avoidance, physical activity and diet as preventative behaviours for lung, prostate and colorectal cancer -a comparison of the Extended Parallel Process Model Groups Cancer threat and efficacy of three preventive behaviours among Polish men -a comparison of the Extended Parallel Process Model Groups

Original Article, Int J Public Health

Reviewer: Reviewer 2
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EVALUATION

Q 1 **Please summarize the main findings of the study.**

The Authors employ the Extended Parallel Process Model to understand framework for changes in modifiable behavioural factors (smoking, diet, physical activity) in the context of cancer prevention (lung, prostate, collorectal) among men in Poland. Proactive and responsive groups likely to adopt the desired health behaviour according to the model (also confirmed in the study) constitute only half of the study respondents and even less (44%) for lung cancer/smoking avoidance model.

Q 2 **Please highlight the limitations and strengths.**

This is an innovative and interesting approach, however the paper needs important revisions in terms of presentation of results and discussion.

Q 3 **Please provide your detailed review report to the authors. The editors prefer to receive your review structured in major and minor comments. Please consider in your review the methods (statistical methods valid and correctly applied (e.g. sample size, choice of test), is the study replicable based on the method description?), results, data interpretation and references. If there are any objective errors, or if the conclusions are not supported, you should detail your concerns.**

Major comments
Methods
Sample size calculation is not clear. What was the hypothesis or the parameter to be estimated in the study, which was the basis for the sample size estimation? What was the assumption about the parameters under which the sample size was calculated?
Authors assign groups based on below/above average score. There is not explanation why. Why not take below/above score 3 that is more or less neutral of Likert scale? I suggest to explain the choice and may be also provide the resulting cut-off used.
Results

I would suggest expanding table 1 with information on smoking freq, health diet freq, physical activity freq (see below).
Why Tables 4-6 have different factors considered? Selection of these factors should be explained in the methods (strategy) and results (which factors excludes and why).

Minor comments
Introduction

The introduction focuses a lot on cancer mortality, while the focus of the paper is on primary prevention. Differences in mortality (e.g. with respect to other EU countries) are largely due to the delayed diagnosis (so rather more relevant to secondary prevention), so while mentioning the impact on survival it would be good to focus on incidence and possibly include more details on the impact of health behaviours on the incidence reduction.
There are clearly some mistakes in the statistics presented – e.g. lung cancer is responsible for a larger share of deaths than cases while prostate cancer on the opposite and the introduction provides reverse figures.

Results
Tables 4–6 should be better described – what are the numbers presented? Mean score with sd? What were the scales for each of the factors? Also 1 to 5? Post-hoc analysis would also be more clear if the notation was explained. For example P>I in Health status – does it mean significantly better health status in grup P with respect to group I? It is difficult to interpret not knowing the scale for health status. What it losses? No data is presented on this variable.
Discussion
The key finding is not specified at the beginning – what it really is? The sizes of the EPPM groups that need different prevention messaging?
Discrepancy between susceptibility and severity and between effectiveness and feasibility for lung cancer is highlighted but there is not comment or interpretation why such finding matters?
Smoking frequency and the % of smokers in the sample is not presented in the results and it seems an important finding according to discussion. Perhaps it could be added to the sample characteristics (Table 1). Also healthy diet and physical activity should be added.
I do not understand why the results point to the "need for interventions aimed at increasing the perceived risk of smoking in the context of lung cancer" if there was apparently no correlation between smoking frequency and the perceived risk (some tendency to lower smoking frequency in high efficacy groups)?

As correctly mentioned in the introduction the health behaviours in the study also contribute to other chronic conditions. Thus the correlation between groups and the frequency of behaviours can be also impacted by the threat of other conditions.

PLEASE COMMENT

Q 4 **Is the title appropriate, concise, attractive?**

appropriate, summarizes the main message

Q 5 **Are the keywords appropriate?**

yes

Q 6 **Is the English language of sufficient quality?**

yes

Q 7 **Is the quality of the figures and tables satisfactory?**

No.

Q 8 **Does the reference list cover the relevant literature adequately and in an unbiased manner?)**

yes

QUALITY ASSESSMENT

Q 9	Originality	■■■■■
Q 10	Rigor	■■■□□
Q 11	Significance to the field	■■■■□
Q 12	Interest to a general audience	■■■□□
Q 13	Quality of the writing	■■■□□
Q 14	Overall scientific quality of the study	■■■■□

REVISION LEVEL

Q 15 Please make a recommendation based on your comments:

Major revisions.