Author's response to reviews

Title: Prevention praised, cure preferred? Results of between-subjects experimental studies comparing (monetary) appreciation for preventive and curative interventions

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Author's response to reviews:

Dear Editor, dear Dr. Pala,

We thank you and the reviewers for the helpful comments and review of our paper
‘Prevention praised, cure preferred? Results of between-subjects experimental studies comparing (monetary) appreciation for preventive and curative interventions’ (MS: 1993082577910762). The reviews have contributed to the enhancement of the quality of the paper.

Below, we specify how we incorporated the reviewers’ comments and suggestions. Furthermore, we checked once more whether our manuscript follows the structure of the journal and article type, and whether make-up and order of, and reference to tables were all right. Furthermore, the multi-page Figure is now divided into two pages, and a statement on the ethics was included after e-mail consultation of Mrs. Pura (P9, r12-13:’According to Dutch law, this type of questionnaire study is exempt from ethics approval.’).

We hope that the revised version of our manuscript matches the quality criteria of your journal.

We look forward to receiving your decision on publication of this paper in BMC Medical Informatics and Decision Making.

Kind regards,

Dr. Ree M. Meertens & co-authors
‘Prevention praised, cure preferred? Results of between-subjects experimental studies comparing (monetary) appreciation for preventive and curative interventions’

Below we specify how we addressed the reviewers’ comments; we react to the comments in the same order as the comments were mentioned by the reviewers.

REVIEWER 1

1. We now split the data of the table with participant characteristics in treatment and prevention for all items (see Table 1). Furthermore, in both studies we included statements on the (non-significant) differences in background characteristics between both conditions: ‘Chi-square tests and a t-test (for age) showed that there were no significant differences in background characteristics of participants between the prevention and the treatment conditions (all p’s > .50).’ (P8, last full sentence), and: and also no significant differences in background characteristics of participants between the prevention and the treatment condition (all p’s > .09). (P16, r3-6)

2. We included these interesting suggestions of the reviewer in our paper, and added both references: ‘These findings are also in line with the Construal-level Theory of Psychological Distance (28): the time delay associated with prevention and the hypothetical nature of it (two dimensions that according to this theory promote psychological distance) may lead to a relatively abstract construal of prevention measures compared to treatment (that is relatively concrete), and also to more perceived social distance. The higher perceived social distance may lead to a low perceived urgency of prevention measures compared to treatment.’ (P21, r13-18).

REVIEWER 2

1. We rewrote the motivation for the studies in the abstract to make it more clear: ‘This may be because most health economic studies ask respondents to compare preventive measures with treatment, and thus prompt respondents to consider other uses of resources. However, psychological theorizing suggests that, when methods do not challenge subjects to consider other uses of resources, curative treatment is favored over prevention.’ (P2, r3-7)

2. We now state more clearly how comparison of interventions might lead to measured preferences for prevention over treatment interventions: ‘Evidently, in health economic studies, focus is primarily placed on what people choose when they are asked to compare the relevant facts of more interventions. In such a situation, people may see the advantages of prevention more clearly, and show a preference for prevention over treatment.’ (P5, r13-16)

Furthermore, after every description of a psychological mechanism we now concisely state how this could lead to preference for treatment interventions over
preventive interventions: ‘It is thus plausible that treatment, with its short-term results, is preferred over prevention with its long-term payoff, and therefore leads to a higher measured appreciation.’ (P6, r8-10 comparable sentences at P6, r16-17; P7, r6-7; P7, r12-13).

3. We think that the reviewer is right that objective-subjective is not the key issue in our studies. We now use the descriptions ‘comparative’ and ‘consider other use of resources’ throughout the text where a precise description is needed (as the reviewer suggests). We thank the reviewer for this useful suggestion.

4. We rewrote the section about the effects that the described psychological mechanisms could have on policy decisions:

‘However, in everyday life, people usually hear about one intervention at a time and assessments may be less objective, and this is not only the case for lay people but also for policymakers. When the general public and policymakers would have a preference for cure in these everyday situations, this might have far-reaching consequences for policy decisions, because policymakers may be guided by their own as well as the general public’s subjective appreciations (i.e. the public opinion).’ (P5, r17-22)

(NB: we do not claim that findings of earlier studies in part are artifacts of the study design, the findings of these studies are real, but only under certain conditions that are usually not the conditions in everyday life).

5. A definition of appreciation and how this concept was measured is added on P10, r3-5: ‘Appreciation in this study is defined as the ‘understanding of the nature or meaning or quality or magnitude of something’ (www.vocabulary.com). General appreciation was measured by eight items, monetary appreciation was measured by five items (see Figure 2).’

6. We now state more clearly in what way we asked participants to compare the preventive and treatment interventions: ‘Participants were subsequently asked to directly compare the operation to the quitting smoking course with a simple question (see Figure 2, Part 1, ‘comparison between preventive and treatment intervention’).’ (P10, r5-7). And: ‘On the variable operation versus quitting smoking course (see Figure 2, Part 1, under ‘Comparison between preventive and treatment intervention’), data were recoded such that, for both questionnaires, a score of 1 indicated a preference for prevention and a score of 5 a preference for treatment.’ (P11, r10-13).

7. The clarification of why Study 2 was needed is given at the end of the section ‘Discussion Study 1 and introduction Study 2’. We rephrased it somewhat to make it clearer why Study 2 was needed: ‘Many preventive methods exist and this study only presented a quitting smoking course, which is an intervention rooted in behavioral science. Because the treatment (an operation) was an intervention rooted in medical science, differences in appreciation might also be attributed to a different appreciation of these sciences. So it is possible that, had our prevention scenario described a preventive intervention rooted in medical rather than behavioral science (e.g., drug treatment), other results could have been produced. As a result, our second study replicates the first, but rather than proposing a quitting smoking course as the prevention intervention, it proposes
prevention through an anti-smoking pill. (P15, r11-19).

8. We now include several suggestions for future research: ‘An interesting line for future research would be to further investigate whether indeed differences in perceived psychological distance lead to differences in appreciation between prevention and treatment.’(P21, r18-21), and: ‘The relative influence of these factors could be disentangled in follow-up studies.’(sentence starting at the end of P22), in addition to the suggestion that we already gave in the previous version of the manuscript: ‘At the same time, we strongly suggest replicating this study with other diseases and with other study populations.’ (P 20, r5-7).

9. We included some quantitative results in our abstract: ‘Differences in appreciation of treatment over preventive treatment were shown to be .59 (Study 1) and .45 (Study 2) on a 5-point scale. Furthermore, participants thought that health insurance should compensate more for the treatment than for preventive measures, differences of 16 % (Study 1), and 22 % (Study 2).’ (P2, r16-19)

10. We rephrased the claim that more people are treated ‘in vain’ in preventive programs than in treatment to make it more accurate: ‘In preventive interventions, usually more individuals are treated ‘in vain’ than in treatment interventions, as the number of people at risk for a disease is higher than the number of people who actually get the disease.’ (P7, r9-11).

11. This suggestion is interesting because it leads to the opposite conclusion of the reasoning of the authors. The reviewer argues that preventive measures may be appreciated more because these measures have a higher reach than treatment, the authors argue, based on Jenni and Loewenstein (1997) that preventive measures are appreciated less because with preventive measures usually more people get the intervention ‘in vain’. Although we acknowledge that the reviewer’s suggestion is interesting and the opposite effects may neutralize each other, we did not integrate this suggestion in the text, as it would lead in our view to too much text with too much speculation.

12. We clarified this point, see reaction to comment 6.

13. We now include the key quantitative results: ‘The results showed participants to have significantly greater general appreciation for the treatment intervention than for the preventive intervention, a difference of .59 on a 5-point scale.’ (P11, r2)

And: ‘The results showed participants to have significantly greater general appreciation for the treatment intervention than for the preventive intervention, a difference of .45 on a 5-point scale.’(P16, last sentence)

14. We included a statement on the (non-significant) differences between subjects in each study: ‘Chi-square tests and t-tests (age) showed there were no significant differences in background characteristics between participants of Study 1 and Study 2 (all p’s > .25).’(P16, r3-5)

15. The assertion that p = .08 ‘indicates a trend’ is removed: ‘However, given the p-value, we conducted a MANCOVA…’ (P19, r4-5)

16. We introduced more separate paragraphs and subheadings the text, e.g. ‘Psychological mechanisms that may affect preferences for treatment and
17. We now present both scenarios in a figure to facilitate comparison (see Figure 1).

18. We now use ‘comparative’ instead of objective in most instances, it is indeed a better description (see also reaction to comment 3).

19. We included this suggestion: ‘The relative influence of these factors could be disentangled in follow-up studies.’ (sentence starting at the end of P22).