Reviewer’s report

Title: Consumer-Perceived Risks and Choices About Pharmaceuticals in the Environment: A Cross-Sectional Study

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Reviewer: Corinne Moser

Reviewer’s report:

This is an interesting study about people’s trade-offs between benefits for health and risks for the environment. In particular, I liked that the authors go beyond the assessment of risk perception for different situation (application of pharmaceuticals for different diseases, application of pharmaceuticals in agriculture) but also put people in a choice situation where they need to make trade-offs. The idea of the study as well as the applied method is very straightforward. However, I do have some suggestions for improvement.

Major Compulsory Revisions:

a) The chapter “objectives of the present study” describes the different goals of the study in detail and gives a good overview. The stated hypothesis seems quite straightforward intuitively, but it does not follow directly from the introduction. The authors might include a respective passage about the influence of seriousness of an illness on drug choices in the introduction.

b) The authors provide very detailed information about the applied methods. Reading the scenarios and looking at tables 3, 4, and 5, I was wondering about the rationales behind the percentages indicating benefits for health/agriculture and risks for the environment (e.g., decline in reproduction rate of rainbow trout). How were these values defined? Are these “realistic” values (e.g., from a medical/chemical/toxicological perspective)? Is 0% environmental impact a realistic assumption for a drug that should cure cancer?

c) In the discussion, the authors write that people were using the affect heuristic when they had to “balance health and environmental considerations”. Do you have any evidence for this, e.g., data on negative affect elicited by the different scenarios?

Minor Essential Revisions:

d) In the chapter “objectives of the present study”, the authors write “two different scenarios were compared”. This is a bit misleading since participants were presented with three scenarios (later it becomes clear that these two scenarios both refer to human health but you could clarify that pharmaceuticals used in agriculture was an additional scenario).

e) I was also wondering why you used three different scenarios, could you please
include a respective explanation in your paper?

f) In the case of common cold, one drug was called “Getaway” (which could be interpreted by participants in the sense that the disease should “get away” or maybe, participants did not take this drug seriously because of its name) while the other two drugs do not have such “meaningful” names. Could the names of the drugs have had an impact on choices?

g) In addition to the reported analyses, you could also include ANOVA tables in your manuscript.

h) Figure 1 is a bit difficult to interpret since the reader needs to go back to the methods section to find out about the different versions. Maybe you could include this information in the table (or the respective risk/benefit values).

i) The authors write in the discussion that price is an important factor for people’s food choices. I can imagine, that this might also be the case for buying drugs (at least for OCT drugs for diseases that are not very serious). What changes would you have expected if price had been included as an additional factor in the different scenarios (common cold, cancer, agriculture)?

**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