When does presenting incremental risks improve medical decision making compared to presenting separate total risks?

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Introduction

- When judging medications, it is important to know how many more benefits and risks the treatment causes compared to a placebo
- To improve the understanding of these incremental benefits and risks of treatments, the incremental risk format (RF) has been introduced
- The incremental RF highlights the incremental benefits and risks

Method

Study 1 (N = 99)
- between-subjects experiment
- comparison of 3 medications
- IV:
  - risk format (total vs. incremental)
- DVs:
  - subjective attractiveness and accessibility

Study 2 (N = 222)
- between-subjects experiment
- 8 comparisons of medications
- IVs:
  - risk format (total vs. incremental)
- DVs:
  - verbatim and gist knowledge

Hypotheses

- H1: no general difference in knowledge between risk formats
- H2: incremental RF is superior to total RF if people have the chance to get used to it
- H3: incremental RF is superior to total RF in more complex judgments

Results

Study 1
- total RF led to higher knowledge (F(1,65) = 18.69, p < .001)
- total RF was rated as more attractive and more accessible (F(1,95) = 4.79, p = .03 and F(1,95) = 20.84, p < .001, respectively)

Study 2
- DV: Knowledge
  - Risk format (H1): no main effect of RF (F(1,212) = 0.34, p = .56)
  - Type of knowledge: the incremental RF led to better gist knowledge, but not to better verbatim knowledge (F(1,214) = 17.05, p < .001)
- Learning (H2): if people had the chance to get used to the format, the incremental RF led to better knowledge (F(1,214) = 7.76, p = .01)
- Complexity (H3) and feedback did not moderate the effect of RF (F(1,214) = 0.20, p = .66 and F(1,214) = 2.30, p = .13)

DV: Attractiveness and Accessibility
- no main effect of RF (F(1,212) = 0.89, p = .35; F(1,212) = 0.60, p = .44)
- moderation of time: incremental RF was rated more favorably after getting used to it (F(1,214) = 9.94, p < .01; F(1,214) = 11.65, p < .001)

Knowledge scores (Study 2)

- incremental RF led to higher knowledge (F(1,65) = 18.69, p < .001)
- incremental RF was rated as more attractive and more accessible (F(1,95) = 4.79, p = .03 and F(1,95) = 20.84, p < .001, respectively)

Conclusion

- Study supports recommendation of incremental risk format only partially
- Incremental risk format is superior only if a) gist knowledge is relevant and/or b) people have the chance to get used to it
- Study encourages future research to consider learning and conditions of the judgment ecology when investigating risk communication

Contact

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