

Communication Effectiveness and Format Effects in Consumer Healthcare Decision Making

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Abstract

This paper examines the importance of the context in which a medical alternative is presented to individuals. It raises a number of questions about the presentation of risk information in a healthcare leaflet. In line with prior research, risk format may influence healthcare decisions (Stone et al., 1997; Feldman-Stewart, 2000; Schapira, et al., 2001). The main aim of this research was to the impacts of attribute framing, statistical format of risk information and visual representation effect from graphical display on the persuasiveness of a health communication, by measuring the likelihood of adopting the doctor's recommendation. Attribute framing, graphical display and statistical formats of risk probabilistic information were examined to explain the conditions under which messages would be more effective in a health communication.

Study 1 demonstrated the interaction between framing and graphical display: in the conditions with graphical display, positive frames were more effective than negative frames, whereas in the conditions without graphical display, positive and negative frames were equally persuasive. Study 2 extended the idea of frequency representation to investigate how people respond to messages based on different but equivalent forms of relative frequency information, and found that the enhancing effect of visual representation from graphical display disappeared when the messages were presented in a large rote of frequency.

Partially replicating the results of previous research (e.g., Marteau, 1989; O'Connor et al., 1996; Levin et al., 1998), the results showed that positive framing led to higher persuasion than negative framing in the context of a new medical treatment. The provision of a chart representing the outcome rate further increased the persuasiveness of the health communication in the case of positive framing. However, one should not discount the effectiveness of statistical risk information presentation with different rotes of frequency because of the strong main effect of message framing in the large rote of frequency, which suggested that statistical information in the large rote of frequency did increase the persuasiveness of positively framed messages. It made little mathematical difference whether statistics expressed as small or large rote of frequencies. It did, however, make a psychological difference. The results were similar to the suggestions from three studies that the effects of attribute framing might not be statistically significant when other communication variables were combined. (Jacoby et al., 1993; Llewellyn-Thomas et al., 1995; O'Connor et al., 1996). Further research should solve inconsistency by considering more moderating communication formatting factors.

The findings of this study constitute a first step toward understanding how health information can be communicated with maximal compliance. This research provided a good beginning and served for the practical applications for improving effective communication of healthcare information.

Reference

- Feldman-Stewart, D., Kocovski, N., McConnell, B. A., Brundage, M. D., & Mackillop, W. J. (2002). Perception of quantitative information for treatment decisions. *Medical Decision Making*, 20: 228-238.
- Jacoby, A. Baker, G., Chadwick, D., & Johnson, A. (1993). The impact of counseling with a practical statistical model on patients' decision-making about treatment of epilepsy: Findings from pilot study. *Epilepsy Research*, 16: 207-214.
- Levin, L. P., Schneider, S.L., & Gaeth, G. J. (1998). All frames are not created equal: A typology and critical analysis of framing effects. *Organizational Behavior and Health Decision Processes*, 76(2): 149-188.
- Llewellyn-Thomas, H. A. (1995). Patients' Health Care Decision-Making: A Framework for Descriptive and Experimental Investigations. *Medical Decision Making*, 15: 101-106.
- Marteau, T. M. (1989), Framing on Information: Its Influence upon Decisions of Doctors and Patients. *British Journal of Social Psychology*, 28: 89-94.
- O'Conner, A. M., Pennie, R. A., & Dales, R. E. (1996). Framing effects on expectations, decisions and side-effects experienced—the case of influenza immunization. *Journal of Clinical Epidemiology*, 49: 1271-1276.
- Schapira, M. M., Nattinger, A. B., and McHorney, C. A. (2001). Frequency or probability? A qualitative study of risk communication formats used in health care. *Medical Decision Making*, 21(6): 459-467.

Stone, E. R., Yates, J. F., and Parker, A. M. (1997). Effects of numerical and graphical displays on professed risk-taking behavior. Journal of Experimental Psychology: Applied, 3: 243-256.

Endnotes

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