

Abstract

Improving Patient Comprehension: A Delphi Technique-Driven Approach to Visualizing Self-Reported Patient Data

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doi: [10.61936/themind/2024121216](https://doi.org/10.61936/themind/2024121216)

Background: Reviewing one's personal health data can increase patients' self-efficacy; however, data should be conveyed in a way that is comprehensible and meaningful to the end user. Visually synthesizing raw and/or complex data can help improve patients' understanding and information retention, and maximize subsequent benefits. Patients' preferences for visualization of self-reported data should be considered prior to implementing visualization tools in primary care settings.

Methods: We will use the Delphi technique to select a method for visualizing the self-reported pre- and post-intervention results of patients participating in an 8-week mind-body-medicine-based intervention focusing on behavior, exercise, relaxation, and nutrition (BERN course). Ten course completers will be recruited as experts. First, we will use open-ended questions to assess initial preferences and suggestions for data visualizations; qualitative analyses will be used to identify common themes. Second, findings will inform a questionnaire; patients will rate the proposed

data visualization options based on clarity, ease of comprehension, and effectiveness using Likert scales. Third, the summarized findings will be re-evaluated; we will aim for consensus among the experts.

Results: Reaching consensus among experts with direct experience with the intervention for which a visual tool is to be created will lead to the selection of the data visualization tool deemed most relevant, comprehensible and helpful when presented to future BERN course participants.

Discussion: Selecting a visual tool found helpful by BERN course completers will allow us to synthesize complex self-reported data in a way that is meaningful and comprehensible to future course participants. Visualization of BERN course participants' self-reported changes in health behavior may boost their goal setting ability, motivation to initiate and maintain positive health behaviors, and self-efficacy.

Keywords: Delphi technique, data visualization, patient comprehension