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Emotions

Imagining life with an ostomy: Does a video intervention improve quality-of-life predictions for a medical condition that may elicit disgust?☆

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ABSTRACT

Objective: To test a video intervention as a way to improve predictions of mood and quality-of-life with an emotionally evocative medical condition. Such predictions are typically inaccurate, which can be consequential for decision making.
Method: In Part 1, people presently or formerly living with ostomies predicted how watching a video depicting a person changing his ostomy pouch would affect mood and quality-of-life forecasts for life with an ostomy. In Part 2, participants from the general public read a description about life with an ostomy; half also watched a video depicting a person changing his ostomy pouch. Participants' quality-of-life and mood forecasts for life with an ostomy were assessed.
Results: Contrary to our expectations, and the expectations of people presently or formerly living with ostomies, the video did not reduce mood or quality-of-life estimates, even among participants high in trait disgust sensitivity. Among low-disgust participants, watching the video *increased* quality-of-life predictions for ostomy.
Conclusion: Video interventions may improve mood and quality-of-life forecasts for medical conditions, including those that may elicit disgust, such as ostomy.
Practice implications: Video interventions focusing on patients' experience of illness continue to show promise as components of decision aids, even for emotionally charged health states such as ostomy.

1. Introduction

Imagine a patient deciding whether to have surgery to create an ostomy to resolve his unresponsive ulcerative colitis. His decision probably depends on whether he thinks life with an ostomy (with which his bodily waste would pass out of his body from an opening created in his abdomen) would be better or worse than his present life with ulcerative colitis (which involves several painful bowel movements a day).

People trying to estimate the quality-of-life (QOL) with an ostomy typically make predictions that are significantly lower than the QOL actually reported by people who have ostomies [1,2]. Indeed, extensive research has shown that people often mispredict how they would feel after a variety of events [3]. Particularly, people tend to predict that new circumstances will have more intense and longer-lasting effects on emotions and/or QOL than they actually do. This tendency to overestimate the emotional impact of events has been dubbed the impact bias and has been shown in diverse medical [1,4–6] and non-medical domains [7–9].

Interventions that improve these emotional predictions have been rare, especially in the medical domain. One intriguing avenue to explore for debiasing such predictions is video. A video, compared to a verbal or written description, provides more information, which may be more concrete, vivid, and/or emotionally evocative [10–12]. It is plausible that people learning about a medical condition through a video, in addition to or instead of a verbal/written description, would make less biased predictions.

Recent work using video, while not looking directly at emotion or QOL predictions, demonstrated significant changes in preferences for end-of-life care. In a study by Volandes et al. [13], participants who watched a video about a patient with advanced dementia (compared to those who received only a verbal description of life with dementia) were more likely to prefer comfort care over life-prolonging care in the event that they themselves developed advanced dementia. One reasonable interpretation of this result is that people who saw the video imagined a lower QOL with advanced dementia than those receiving the verbal

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description alone, and were thus less interested in prolonging life at all costs.

Because people with advanced dementia cannot report their present QOL, we cannot know if the forecasts implied by participants' care preferences were made less biased by watching the video. We suspect that this particular video intervention was debiasing, and some evidence supports this. Specifically, participants in the video group showed better knowledge of dementia and had more consistent care preferences over time. If the implied higher QOL predictions were indeed less biased, dementia is an unusual case where people tend to *overestimate* QOL. However, there are good reasons to suspect that in a more typical domain where patients' QOL is underestimated, especially when the medical condition of interest elicits strong emotions, a video intervention may make QOL forecasts even worse.

First, research suggests when people predict how a future event will make them feel, they first assess how they feel about that event in the present moment. Ultimate predictions are then anchored on this initial emotional assessment [14]. Thus, if a video (compared to a written description) were to evoke more negative emotion at the time the forecast is made, the forecasts themselves might be more negative.

Second, watching a video could increase focalism, the tendency to neglect consideration of other life events that would impact QOL (e.g., dining with friends, reading books) while focusing solely on the impact of the event of interest. Focalism has been proposed to be a key contributor to the impact bias [15]. A video may increase focalism because the video would focus on the health state rather than on other aspects of a person's life.

Because of video's likely effect on emotions at the time of prediction and its potential exacerbation of focalism, we hypothesized that while a video intervention might provide more detailed and accurate information, it will cause people to make QOL forecasts that are more negative (and thus, in most cases, more discrepant with actual patient QOL reports) compared to a written or verbal description. Furthermore, if the condition of interest tended to be emotionally evocative, we expected that people who are relatively more prone to experience certain medically relevant negative emotions, such as disgust, would be more affected by a video because they would tend to experience a more intense negative emotional reaction.

To explore the effect of video interventions on QOL estimates, we focused on an emotionally evocative condition, ostomy. Research shows that healthy people appear to significantly underestimate patients' QOL for ostomy, making it an excellent test case for the theory outlined above [1,2]. We hypothesized that a video depicting life with an ostomy would reduce QOL estimates. Moreover, to supplement our own hypotheses, we elicited theories from a population of people who both have a great deal of experience with ostomies, and who may be called upon to advise potential ostomy patients: namely, people who have lived with an ostomy.

Then, in order to test our theory about the effect of video interventions on QOL estimates – and the theory of ostomy patients themselves – we performed a video intervention experiment modeled on the dementia study of Volandes et al. [13], but explicitly examining QOL and mood forecasts. Half of our participants only read a description of life with an ostomy before making QOL and mood estimates, while the other participants also watched a video of a person with an ostomy explaining and demonstrating how he changes his ostomy pouch. We examined the effect of the video on QOL and mood predictions for life with an ostomy.

2. Method

2.1. Part 1: Survey of ostomy population

2.1.1. Participants

With the permission of the United Ostomy Associations of America (UOAA) board of directors, we recruited participants with a post on a discussion forum hosted at the UOAA website, ostomy.org. People who currently or previously had an ostomy, as well as people in a relationship with someone with an ostomy, were eligible to participate in a brief, unpaid, anonymous survey. Respondents were required to be 18 or older. Forty-eight people completed the survey; 47 were eligible to participate and were included in analysis.

2.1.2. Materials

Ostomy description. A description of life with an ostomy was adapted from Smith et al. [2] and elaborated using information from the United Ostomy Associations of America, Inc. [16] and the American Pediatric Surgical Nurses Association [17]. We also included the steps for changing an ostomy pouch as demonstrated in the video we used, so that people in the No Video condition would, at least on an abstract level, have the same information as people who saw the video. The description is reproduced in Appendix A.

Ostomy video. We used a video created by a person with an ostomy that was intended to educate new ostomy patients. In the video, a man in his mid-twenties demonstrates how he changes his ostomy pouch, explaining the steps as he performs them. He removes his ostomy pouch and adhesive ring to reveal his stoma, cleans the area around the stoma, prepares a new adhesive wafer, adheres the wafer around his stoma, and attaches the ostomy pouch. The man is otherwise healthy-looking and presents the information in a matter-of-fact manner.

The video was publically available online and we obtained the creator's permission to use it in this study. In the interest of time, we edited the 7-min video down to 2 min, 54 s by removing some extraneous content (e.g., adjusting the camera, waiting for an adhesive to dry) and the skin-cleaning step. Informal pilot testing showed near-universal strong disgust reactions to the video, particularly when the stoma was visible. The video is available at http://www.vimeo.com/decisionmaking/ostomycare.

2.1.3. Procedure

The survey asked participants to imagine a situation in which some people were provided with either the written description of life with an ostomy, or both the description and a video of a man demonstrating how he changes his ostomy pouch. The description of life with an ostomy and the video as described in Section 2.1.2 were provided in the survey.

Survey respondents were asked, "Compared to people who did not watch the video, I think that people who watched the video would predict that the quality of life with an ostomy would be:" and responded using a 7-point scale (1 = "Much worse" to 7 = "Much better"). Respondents then made similar judgments for two different subgroups: "people who are more easily disgusted than average" and "people who are less easily disgusted than average." Finally, respondents provided some information about their own ostomy and answered demographic questions.

2.1.4. Analysis

One-sample *t*-tests were used to compare mean scale responses to the scale midpoint.