Stop! No More Health Information Needed: Conceptualizing Health Information Overload

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Purpose

Why do some patients shut down, stop listening, and ignore health information? At least part of the reason is that they feel overwhelmed and overloaded with the information they are receiving. Why does this happen? We simply do not know. We do know that more health information is not always helpful, especially for patients who are confused by options for treatment or who have a difficult time adhering to recommendations for care. Patients with low health literacy are even more susceptible to experiencing overload given that they are likely to have a hard time understanding medical jargon (Nutbeam, 2000), adhering to medication regimens (Schillinger, Bindman, Wang, Stewart, & Piette, 2004), and lack the communication skills necessary for asking questions in health care settings (Berkman & Davis, 2010). The purpose of this study is to carefully distinguish health information overload as a phenomenon distinct from existing types of information and communication overload. Existing work on health information overload suggests that there are multiple components to this concept, but little has been done to integrate these features into a theoretical model. Our study provides this first step toward understanding important nuances concerning what makes people overloaded in a health context.

To accomplish this goal, these are the research questions we address in this study:

RQ1: What are the dimensions of health communication overload?
RQ2: What are the unique features of health information overload that distinguish it from other conceptualizations of information overload?

Background and Rationale

The implementation of electronic medical records (Singh, Spitzmueller, Petersen, Sawhney, & Sittig, 2013), security concerns related to patient data (Li, Yu, Ren, & Lou, 2010), and the pervasiveness of social media and online health information (McGowan, Wasko, Vartabedian, Miller, Freiherr, & Abdolrasulnia, 2012), all represent recent changes that warrant a
need for reexamining what contributes to health information overload in the modern era. In this study, we focus on conceptualization as a path toward theory development (see Jensen, 2013 as another example). Conceptualization and reconceptualization occur when researchers identify and refine indicators that reflect what a concept means (Babbie, 2013). In our study, the concept is health information overload. Conceptualization is an important first step because it “opens the field for empirical inquiry and sustained argument” (Jensen, 2013, p. 205).

The study of health information overload has been grounded in such areas as information-seeking (Cline & Haynes, 2001; Crook, Stephens, Pastorek, Mackert, & Donovan, 2016), patient-provider communication (McMullan, 2006), and health literacy (Peerson & Saunders, 2009). But currently the literature is scattered and there is no unified theoretical perspective to guide empirical studies of health information overload.

Recently, Stephens and colleagues (in press) took a multi-faceted approach to theory-building with the purpose of carefully defining—or conceptualizing communication overload. Their research found that communication overload is composed of things we might expect to find like poor message quality, feeling overwhelmed with information, and having messages pile up. But they also found several components that suggested technology might influence communication overload. Those dimensions were having many distractions, using many information and communication technologies (ICTs), feeling responsible to respond to others, and being pressured for decisions. See Figure 1 for the model they developed in that study.

Our current study uses these findings as a starting point to explore health information overload. We suspect that several of these dimensions will be present in our reconceptualization of health information overload, but we also expect to find dimensions associated with ambiguous policies surrounding care (e.g., insurance), the use of medical jargon, the challenge of coordinating visits and recommendations for care among multiple providers, and managing the pressure to respond to individual and others’ (e.g., family members, romantic partners) health care concerns.

Existing measurement scales that could inform our study focus on such constructs as uncertainty (Mishel, 1981), anxiety and stress (Cushway, Tyler, & Nolan, 1996), burnout (Weng et al., 2011), coping (Aldwin & Revenson, 1987), and health information technology use (Cresswell, Bates, & Sheikh, 2013), but there currently is no instrument designed specifically to measure health information overload. We do not know how to recognize it, avoid it, work around it, or even define this pivotal concept.

Given that past research has shown that overload has serious consequences for decision-making and burnout, focusing on the definitional aspect of this construct is an important first step in understanding health information overload. These realizations lead to the following research questions: RQ1: What are the dimensions of health communication overload? RQ2: What are the unique features of health information overload that distinguish it from other conceptualizations of information overload?

**Method and Analysis**

Our method and analysis capitalizes on a Q-methodology (Brown, 1980; Stephenson, 1936; Watts & Stenner, 2005) designed to measure subjective experiences of study participants. This is a similar approach used by Stephens and colleagues (in press) in their conceptualization of communication overload. In this method, we use a combination of literature reviews and expert opinions of health scholars to derive a list of terms related to a broad understanding of
health information overload. Each term will be written down on a card. Experts from multiple health research areas (e.g., communication, information studies, public health, and nursing) will be asked to sort through the cards and order them based on the concepts they perceive as most indicative of health information overload. Gathering input from representatives of multiple fields will allow us to develop a more comprehensive conceptualization of health information overload. Collecting their perspectives will also allow us to narrow our list of terms.

Once our list of terms has been finalized to approximately 50, we will ask non-professionals to first, think of what “health information overload” means to them, and second, to rank order the terms (cards) based on how closely each aligns with their definition of their concept. This will allow us to statistically analyze these card sorts and draw conclusions about how individuals think of health information overload. This approach combines the study participants’ experiences to gain a sense of how the constructs rank in importance when compared against one another. In addition, we will collect demographic data and use The Newest Vital Sign (Weiss, 2005) to assess health literacy. We are currently working on this phase of our research project and expect to have our findings by early March, 2017.

Discussion of Anticipated Findings, Contributions, and Future Directions

The McCombs Healthcare Initiative Call for Submissions suggests, “there are far-reaching implications for innovation.” Yes, that is true, but the innovation needs to be seamless for the patient, not overwhelming or confusing. Carefully defining health information overload can help care providers identify specific strategies that patients use to manage the information they seek and receive in their daily lives. Whether patients are managing their own care or working directly with a provider, having an awareness of health information overload is the first step to tailoring health messages and healthcare approaches for patients. For example, some patients may not be as responsive to recommendations from their care providers, but may be very engaged with the motivational messages and reminders they receive from health apps.

The findings from our study will also help us create an instrument that could be used by patients and healthcare workers to assess types of overload and in turn how to use health information to help patients reach their goals. There should be a distinction between patient health information overload and care provider health information overload. For instance, with the increase in use of patient messaging portals, providers may feel the burden of being too available and feel pressured to respond to patients’ questions as soon as they are received electronically. Navigating this balance between being available, but not too available, may become even trickier in the future. The pressure to respond to others’ requests along with feeling decision pressures were two factors that Stephens and colleagues found when they reconceptualized communication overload (see Figure 1). With the expanding ubiquity of electronic medical records and patient messaging systems, there is a growing norm in healthcare that care providers can be reached all of the time, through multiple channels. Descriptions of health information technology as both helpful and harmful, depending on the context, create a more nuanced understanding of the role that technology plays in feeling overloaded in healthcare contexts.

References

Figure 1: Dimensions of Communication Overload from Prior Research (Stephens et al., in press)