

MISQ Archivist

Go to YouTube and Call Me in the Morning: Use of Social Media for Chronic Conditions

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Abstract

Video sharing social media platforms, such as YouTube, offer an effective way to deliver medical information. Few studies have identified evidence-backed digital therapeutics with technology-enabled interventions to improve the ease with which patients can retrieve medical information to manage chronic conditions. We propose an interdisciplinary lens that synthesizes deep learning methods with themes emphasized in Information Systems (IS) and Healthcare Informatics (HIS) research to examine user engagement with encoded medical information in YouTube videos. We first use a bidirectional long short-term memory (BLSTM) method to identify medical terms in videos and then classify videos based on whether they encode a high or low degree of medical information. We then employ principal component analysis on aggregate video data to discover three dimensions of collective engagement with videos: non-engagement, selective attention-driven engagement, and sustained attention driven engagement. Videos with low medical information result in non-engagement; at the same time, videos with a greater amount of encoded medical information struggle to maintain sustained attention-driven engagement. Our study provides healthcare practitioners and policymakers with a nuanced understanding of how users engage with medical information in video format. Our research also contributes to enhancing current public health practices by promoting normative guidelines for educational video content enabling management of chronic conditions.

Keywords: Visual social media, healthcare informatics, patient self-care, chronic diseases, deep learning, digital therapeutics, bidirectional long short-term memory (BLSTM)