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Who is your Doctor and Why? The Role of Information Signaling in Physician Selection

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Abstract: Choosing a physician on Physician Review Websites (PRWs) is a process with high information asymmetry, making evaluation of physician quality difficult. PRWs contain information signals which may reduce the asymmetry and help select physicians for consultation. We thus study the joint effect of linguistic (patients' emotional involvement) and visual signals (patient impressions) on physician selection. We utilize machine learning and deep learning-based techniques to extract the signals: emotional content of reviews (linguistic), degree of eye contact (visual) and presence of smiling faces (visual) from a PRW. We employ a robust regression model to assess the impact of these signals. We find that while direct eye contact positively impacts physician selection, the presence of a smile has no effect. We also find that the negative emotional content of physician reviews affects physician selection negatively, while positive emotional content does not play any role. As the proportion of negative emotions in the reviews reduces, physicians with high ratings experience a sharper rise in selection compared to those with low ratings. We contribute to the healthcare information systems literature by studying the impact of joint signals on selection of a credence product (physicians). Our findings provide insight into the nonverbal behaviour of physicians. The moderating effect of physician ratings on the emotional content of reviews illustrates the interplay between ratings and reviews on PRWs. The results can help PRWs to modify their mechanisms for displaying physicians to patients by accounting for visual and linguistic signals as part of their display systems.

Keywords: Physician Review Websites (PRWs), online signaling, physician selection, healthcare analytics, credence goods