Choosing the Human- or the AI-Doctor?
How Subconscious and Reflective Cognition Relates to Risk and Benefit Perceptions of AI in Healthcare

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Given that the successful adoption of AI in healthcare strongly depends on people’s risk and benefit perceptions, it is essential to understand better what factors relate to these perceptions. In this study, we draw on research from the public perception and technology acceptance literature to investigate how cognitive associations relate to risk and benefit perceptions of AI in healthcare, and ultimately to people’s preferences about the use of these technologies. Specifically, we propose that implicit (i.e., subconscious) and explicit (i.e., reflective) trust associations with AI are positively related to people’s choice to integrate AI into healthcare decisions via risk and benefit perceptions. Based on survey data (N = 378), we specified a path model which revealed that both types of trust associations were indirectly related to how people chose to integrate AI into healthcare decisions. However, for implicit associations, this path was only significant through risk perceptions. Theoretical implications of our findings are discussed in relation to research on trust heuristics, and practical implications for risk communication about the use of AI in healthcare are outlined.

Keywords: AI in healthcare, public perceptions, trust heuristics