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Extended Abstract**From Cognition to Emotion: An Extended Information Adoption Model***Xiumei Ma¹, Yongqiang Sun², Xitong Guo^{1*}*¹School of Management, Harbin Institute of Technology, Harbin, 150001, China²School of Information Management, Wuhan University, 430072, China

Abstract: Social media enables the public to learn first aid knowledge conveniently. However, factors facilitating individuals to adopt first aid knowledge on social media are unclear. The information adoption model (IAM) has been widely used as a theory to explain individuals' information/knowledge adoption behavior. Prior studies based on IAM focused on the effect of cognition but neglected the impact of emotion. This study aims to investigate both effects of cognition (e.g., perceived information usefulness) and emotion (e.g., arousal) on first aid knowledge adoption and examine their corresponding antecedents. The hypothesized model was validated with a structural equation modeling approach using data collected from 375 social media users in China. In addition to identifying the antecedents of arousal, the results confirmed the critical role of arousal and its interaction effect with perceived information usefulness in facilitating first aid knowledge adoption. This study can extend IAM and health literature and suggest practitioners consider emotion during health governance and first aid knowledge popularization.

Keywords: information adoption model, emotion, arousal, first aid knowledge, social media

1. INTRODUCTION

Social media has become a novel channel for the public to acquire all kinds of information and knowledge^[1], including first aid knowledge. Understanding individual's willingness to adopt first aid knowledge on social media will help educators and managers to facilitate first aid knowledge education, and further improve health conditions and health literacy of the public. The information adoption model (IAM) is one of the most widely used theories in information/knowledge adoption studies^[2]. However, most of the existing studies based on IAM only focus on the impact of individuals' cognition (i.e., perceived information usefulness) but neglect the impact of emotion. Arousal, an emotional response to stimulus, has been verified to influence individuals' information processing and behavior^[3]. We propose that arousal may play a vital role in facilitating first aid knowledge adoption on social media. Since no research has involved such emotion into the IAM, it is unknown that how emotion and cognition work together to determine individuals' adoption decisions. Moreover, it also remains unclear what information characteristics cause emotional arousal in a social media context. Thus, the objective of this study is to *explore the role of emotion in IAM, explaining individuals' first aid knowledge adoption and identifying the antecedents from an information characteristics perspective.*

2. THEORETICAL BACKGROUND

The information adoption model (IAM), also named the knowledge adoption model, was proposed by Sussman and Siegal^[4] to explain factors influencing individuals to adopt a particular message or information. The model consists of four core concepts (information adoption, information usefulness, argument quality and source credibility), which argues that for information with high argument quality and high source credibility, individuals are more likely to elaborate the information as useful and further adopt the information. Although the IAM has been extended in diverse aspects, it is limited to the principle that people's cognition on information usefulness determines adoption behavior. However, to our best knowledge, no research has incorporated cognition and

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emotion in the research model to examine the information adoption with a complete picture. As a state of emotional experience, arousal has been addressed playing an essential role in people's decision-making process [3]. From the perspective of information processing and communication, emotional expression plays a vital role in stimuli. Research indicated that emotional expression includes two dimensions, verbal cues and nonverbal cues, which are examined as antecedents of arousal [5].

3. METHODS AND RESULTS

The data were collected with an online survey delivered in a first aid knowledge learning community on Weibo. People who have first aid knowledge learning experience were encouraged to respond to the questionnaire. A total of 375 valid respondents were obtained finally. Both nonresponse bias and common method bias were examined. We employed the structural equation modeling (SEM) to test the research model and used the Smart PLS 3.0 to examine both measurement model and structural model.

The reliability, convergent validity, and discriminant validity of constructs are all good. Consistent with prior research, both argument quality ($\beta=0.264$, $t=4.792$, $p<0.001$) and source credibility ($\beta=0.516$, $t=9.941$, $p<0.001$) have a significant positive effect on perceived information usefulness. Message vividness ($\beta=0.382$, $t=10.303$, $p<0.001$) and emotional tone ($\beta=0.522$, $t=12.920$, $p<0.001$) are found to be positively related to arousal respectively. In addition, both perceived information usefulness and arousal have significant positive effects on knowledge adoption, with path coefficients at 0.432 ($t=8.820$, $p<0.001$) and 0.346 ($t=7.945$, $p<0.001$), respectively. Further, the synergistic effect of arousal and perceived information usefulness is proven to be positively significant ($\beta=0.164$, $t=2.677$, $p<0.01$). Particularly, we examine the mediating effect of arousal and found that arousal significantly mediates the effects of message vividness and emotional tone on knowledge adoption.

4. CONCLUSION AND DISCUSSIONS

This research has several important implications both in theory and in practice. Theoretically, this study extends the information adoption model by incorporating emotional factors (i.e., arousal) and revealing the influencing mechanism. Moreover, this study also identifies the antecedents of emotional arousal from the perspective of information characteristics, complementing prior research on arousal. Focusing on the issue of first aid knowledge learning on social media, this study enriches the existing Information Systems (IS) literature. From a practical perspective, the findings can provide specific partitioned suggestions on designing first aid knowledge on social media. For example, educators and disseminators on social media should notice that information usefulness may not be enough to motivate individuals to adopt first aid knowledge, and they should consider developing strategies to elicit individuals' emotions. In addition, the message conveying first aid knowledge is expected to contain emotional tones and appear vivid.

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