# **REVIEW**

# The impact of emoji use on self-disclosure on social media: a literature review

Jian Liu<sup>1,2</sup>, Wan Anita Wan Abas<sup>1,\*</sup>, Aini Azeqa Ma'rof <sup>3,4</sup>

#### **ABSTRACT**

This paper explores the multifaceted role of emojis in digital communication, particularly on social media platforms. Emojis, evolving from their inception in 1997 as pictorial symbols, have become integral to modern communication practices, transcending linguistic and cultural barriers. They facilitate nuanced expressions, emotional conveyance, and cultural representations, enriching interactions across diverse online environments. Drawing on the Uses and Gratifications Theory, this study examines how emojis fulfill specific user needs, enhance social interactions, and influence self-disclosure behaviors.

**Keywords:** emoji; self-disclosure; social media; Uses and Gratifications Theory(UGT); computer-mediated communication(CMC)

## 1. Introduction

Emojis, originating in Japan in 1997, have evolved into essential elements of digital communication, especially for the new-age Computer-Mediated Communication (CMC) context, transcending linguistic and cultural barriers to enrich online interactions<sup>[1,2]</sup>. Initially designed to enhance textual expressions, emojis have become a global phenomenon deeply embedded in social media discourse<sup>[2]</sup>. They serve as visual cues that enhance communication clarity and emotional depth in digital environments<sup>[3]</sup>.

Self-disclosure, defined as sharing personal information, thoughts, and emotions with others, is crucial in establishing intimacy and fostering connections in online interactions<sup>[4,5]</sup>. Emojis play a significant role in enhancing self-disclosure by providing tools to express emotions and convey nuanced meanings effectively, thereby enriching the authenticity of digital interactions<sup>[6]</sup>. Moreover, emojis also address the challenge of conveying emotional nuances in digital communication, where non-verbal cues are often absent<sup>[3]</sup>. Factors such as trust, audience characteristics, and cultural norms influence the extent and depth of self-disclosure

#### ARTICLE INFO

Received: 22 June 2024 | Accepted: 29 August 2024 | Available online: 20 September 2024

#### CITATION

Liu J, Abas WAW, Ma'rof AA. The Impact of Emoji Use on Self-Disclosure on Social Media: A Literature Review. *Environment and Social Psychology* 2024; 9(9): 2985. doi: 10.59429/esp.v9i9.2985

#### COPYRIGHT

Copyright © 2024 by author(s). *Environment and Social Psychology* is published by Arts and Science Press Pte. Ltd. This is an Open Access article distributed under the terms of the Creative Commons Attribution License (https://creativecommons.org/licenses/by/4.0/), permitting distribution and reproduction in any medium, provided the original work is cited.

<sup>&</sup>lt;sup>1</sup> Department of Communication, Faculty of Modern Languages and Communication, Universiti Putra Malaysia, Selangor 43400, Malaysia

<sup>&</sup>lt;sup>2</sup> Department of Radio and Television Director, Wuyi University, Wuyishan 354300, China

<sup>&</sup>lt;sup>3</sup> Faculty of Human Ecology, Universiti Putra Malaysia, Selangor 43400, Malaysia

<sup>&</sup>lt;sup>4</sup> Institute for Social Science Studies, Universiti Putra Malaysia, Selangor 43400, Malaysia

<sup>\*</sup> Corresponding author: Wan Anita Wan Abas, anita@upm.edu.my

online<sup>[7]</sup>. This capability not only enhances communication clarity but also enriches the emotional experience of online interactions.

This research explores how emojis fulfil users' demands for emotional expression and social engagement by using insights from the Uses and Gratifications Theory (UGT), which investigates how consumers actively seek and employ media to meet specific needs<sup>[8]</sup>. The theoretical framework provides a lens through which to understand the motivations behind emoji use and their gratifications in digital communication contexts.

Concisely speaking, emojis have revolutionized digital communication by providing expressive tools that facilitate emotional communication and enrich interpersonal relationships online. Understanding the interplay between emojis, self-disclosure, and digital communication dynamics is crucial for navigating and optimizing online interactions in the digital age.

# 2. Literature review

## 2.1 Evolution and functions of emojis

The history of emojis can be traced back to their creation in Japan in 1997 by Shigetaka Kurita, an employee of a Japanese telecom business. This gave rise to the term "emoji", which means "picture word" in Japanese<sup>[9]</sup>. Initially, emoji was developed as a distinct visual language separate from emoticons to enrich digital communication<sup>[1]</sup>. Over time, emojis have evolved into a global phenomenon, with their usage expanding in modern communication practices<sup>[10]</sup>. The introduction of emojis has significantly influenced how individuals express emotions, convey meanings, and navigate digital interactions<sup>[2]</sup>.

Emojis have proven to transcend linguistic barriers and cultural boundaries, acting as visual cues that facilitate cross-cultural communication on social media platforms<sup>[11]</sup>. Their adoption has revolutionized online interactions, providing users with a unique way to express emotions, convey messages, and establish connections<sup>[3]</sup>. Emojis have become essential to digital communication, allowing users to infuse humor, nuance, and context into their messages<sup>[12]</sup>.

Moreover, the popularity and usage of emojis have grown exponentially, with their functions extending beyond mere visual elements to convey complex emotions, concepts, and activities through the combination of multiple emojis<sup>[13]</sup>. Emojis have been employed in various contexts, such as social awareness advertising campaigns, health care communication, and political discussions, highlighting their versatility and adaptability in diverse settings<sup>[14,15]</sup>.

In addition, emojis aid communication for non-English speakers on English-dominated platforms like Twitter, Instagram, and Facebook, bridging language barriers and enhancing cross-cultural interactions<sup>[11]</sup>. They foster social relationships and play a crucial role in social facilitation within social media interactions<sup>[16]</sup>. Emojis function as both graphic and cultural signs, conveying nuanced meanings and cultural nuances in online interactions<sup>[17]</sup>. Emojis serve as tools for describing user emotions in various contexts, adding humor, euphemism, and implicit expressions to communication. They also enhance the depth and breadth of self-expression on social media platforms by representing complex emotions, concepts, or activities through multiple emoji combinations<sup>[13]</sup>. Studies on emoji usage in China emphasize their role in establishing emotional tones, reducing semantic ambiguity, and enhancing contextual appropriateness in communication<sup>[12]</sup>.

Empirical studies on the communication and usage psychology of emojis highlight their role in creating an active and emotionally expressive atmosphere in social media interactions<sup>[3]</sup>. Emojis serve as tools for

describing user emotions in various contexts, adding humor, euphemism, and implicit expressions to communication. They also enhance the depth and breadth of self-expression on social media platforms by representing complex emotions, concepts, or activities through multiple emoji combinations<sup>[13]</sup>. Cultural differences in emoji usage show that emojis serve as cultural tools, adapted and interpreted within specific cultural contexts<sup>[18]</sup>.

In a word, emojis play a multifaceted role in social media interactions, serving as tools for cross-cultural communication, self-expression, emotional conveyance, and cultural representation. The diverse functions of emojis underscore their significance in enhancing online communication and enriching digital interactions across various cultural and linguistic landscapes.

# 2.2 CMC and emoji use on social media

Computer-mediated communication (CMC) is a platform supports real-time chat, email, and instructional interactions, bridging geographical gaps, enabling interactive communication among individuals through networked computers and mobile devices<sup>[19]</sup>. Its utilization in various contexts like education, teamwork, and family dynamics underscores its impact on social interactions and relationship building<sup>[20,21,22]</sup>. It plays a pivotal role in shaping modern communication practices and societal dynamics.

Emojis have become an essential component of online communication, particularly on social media platforms, where they are widely employed to express feelings, emotions, and sentiments<sup>[23]</sup>. The use of emoji-based sentiments has become prevalent among social media users, being inserted within text messages, tweets, and posts to enhance communication<sup>[24]</sup>. This trend is further supported by the rapid increase in emoji utilization on social media, where emojis serve as tools to add tone and non-verbal context to daily interactions<sup>[25]</sup>. Emojis are now widely popular as a complementary means to express opinions and ideas visually in social media communication<sup>[26]</sup>.

The significance of emojis in social media is underscored by their role in describing user emotions in various situations through funny, humorous, euphemistic, and implicit forms, attracting users to incorporate them consciously or unconsciously due to their quick and convenient nature<sup>[3]</sup>. Moreover, statistics reveal that a substantial percentage of internet users in the United States have utilized emojis in their social media interactions, highlighting the widespread adoption of these digital icons<sup>[27]</sup>. Emojis, such as facial expressions and symbols, have become indispensable tools for creating an active atmosphere and conveying meaningful emotional expressions in social media contexts<sup>[3]</sup>.

The use of emojis extends beyond personal communication to include their application in various research domains, such as sentiment analysis, opinion mining, and irony detection<sup>[24,25,27]</sup>. Emojis play a crucial role in enhancing sentiment analysis on platforms like Twitter, where user-generated content rich in sentiments is prevalent, making emojis and emoticons extensively utilized<sup>[28]</sup>.

Furthermore, emojis are not only tools for expressing emotions but also serve as elements that enliven online conversations by displaying humor and emotion, contributing to the overall fun and playfulness experienced by users<sup>[29]</sup>. Moreover, emojis have been recognized for their role in emotion work, enabling individuals to communicate affect in text messages effectively<sup>[30]</sup>.

Emojis have evolved to become essential components of digital communication, particularly on social media platforms, where they serve diverse functions ranging from expressing emotions and sentiments to enhancing marketing campaigns and influencing user engagement. The widespread adoption of emojis underscores their significance in modern communication practices, shaping how individuals interact and express themselves in the digital age.

### 2.3 Self-disclosure on social media

Self-disclosure on social media involves sharing personally relevant information, thoughts, and feelings with others, which is crucial for building intimacy and connection<sup>[4]</sup>. The motivations behind self-disclosure vary based on different social media affordances, shaping the level of intimacy in online interactions<sup>[31]</sup>. Privacy concerns are closely linked to self-disclosure decisions, highlighting the importance of maintaining boundaries while sharing personal information online<sup>[32]</sup>.

While self-disclosure can enhance intimacy and well-being, it also comes with risks, such as the potential for negative reactions or breaches of privacy<sup>[33]</sup>. The level of intimacy in self-disclosure is influenced by factors like emotional support, trust, and the depth of disclosure in online interactions<sup>[7]</sup>. Self-disclosure plays a significant role in relationship intimacy, affecting how individuals perceive and connect with each other<sup>[5]</sup>. The process of self-disclosure is dynamic, involving partner responsiveness, mutual disclosure, and the interpretation of disclosures, all of which contribute to the depth of connection between individuals<sup>[34]</sup>.

Additionally, it has been established that self-disclosure breadth and self-disclosure depth are two interconnected aspects of online self-disclosure. Specifically, self-disclosure depth influences the development of online intimacy, particularly in relation to intimacy with a social networking site<sup>[7]</sup>. CMC's anonymity is believed to expedite intimacy as partners engage in more personal inquiries and a higher degree of self-revelation compared to face-to-face interactions<sup>[35]</sup>. This further supports the notion that online environments empower individuals to be more, rather than less, candid and forthcoming about various aspects of themselves.

In short, self-disclosure on social media is a complex process that involves sharing personal information to build intimacy and connection with others. While self-disclosure can enhance relationships and well-being, it is essential to consider factors like privacy, trust, and emotional support to ensure positive outcomes. By understanding the dynamics of self-disclosure and its influence on intimacy, individuals can navigate online interactions effectively and cultivate meaningful relationships in the digital age.

## 2.4 Impact of emoji use on self-disclosure

There has been an increasing interest in studying the influence of emoji usage on self-disclosure in different situations in recent years. Xu et al.<sup>[36]</sup> conducted research that examined how social media environments affect online emotional disclosure. The study emphasised the impact of tie strength, network size, and self-reference on individuals' intents to disclose their emotions online. In their study, Choi et al.<sup>[37]</sup> investigated the impact of a leader's use of positive emojis on the creativity of group members during computer-mediated communication (CMC). They highlighted the potential of positive emojis to augment creativity in group interactions.

A study conducted by Gesselman et al.<sup>[38]</sup> proposes that text-based communication often lacks the sensory cues present in face-to-face interactions, which are crucial for expressing emotions and facilitating meaningful communication. However, emojis, with their various visual elements such as colors, shapes, actions, and facial expressions, can compensate for this limitation by enabling communication partners to more easily convey emotions and incorporate them into computer-mediated communication (CMC). Therefore, the use of emojis may serve as a reliable indicator of conveying emotions and can be a helpful tool in revealing personal information and fostering closeness.

From this, it can be seen that there are so many studies on online self-disclosure behavior and the gratification of emoji use respectively, and a certain number of references to each other in the literature, yet

very few scholars have combined the two for correlational studies. These studies collectively contribute to understanding the nuanced relationship between emoji use and self-disclosure, encompassing emotional disclosure, creativity, forgiveness, suicidal disclosures, and peer interactions. By synthesizing these empirical findings, a comprehensive understanding of how emoji use influences the depth, breadth, and frequency of self-disclosure, considering cultural differences and the types of emojis used, can be achieved.

# 2.5 Theoretical framework of uses and gratifications theory

A paradigm known as Uses and Gratifications Theory (UGT) offers important insights into comprehending why people use media and the gratifications they hope to derive from it. According to Whiting & Williams<sup>[39]</sup>, an essential aspect of this concept is the utilisation of social media to acquire knowledge and engage in self-education, resulting in continuous engagement and satisfaction. Wong & Chung<sup>[40]</sup> further emphasize that UGT suggests that individuals may also obtain social gratification by engaging in online discussions on social media platforms. This suggests that people deliberately choose and utilize social media to meet specific needs, and the social interactions that take place on these platforms are crucial in meeting users' social needs and wants.

Katz et al.<sup>[41]</sup> summarized a 5-needs on the use of mass media which may also be applied to the motives of using emoji on social media, presenting as: 1) cognitive needs pertain to the desire for information, knowledge, and understanding; 2) affective needs involve seeking aesthetic, pleasurable, and emotional experiences; 3) integrative needs are associated with enhancing credibility, confidence, stability, and status; 4) social integrative needs aim to strengthen connections with family, friends, and the wider world; 5) tension-release needs involve finding escapism or enjoyment through the use of emojis on social media.

On the other hand, the concept of online self-disclosure, which involves sharing personal information on digital platforms, is closely linked to the uses and gratifications theory. The use of self-disclosure for relief and reciprocal social support may be enhanced by offline social support, as discussed by Ahmed<sup>[42]</sup>, who also shows how this might hasten online self-disclosure and boost confidence in conversations. Bazarova & Choi<sup>[31]</sup> extend the functional theory of self-disclosure to social media, highlighting that different social media platforms offer varying affordances that influence individuals' disclosure goals and intimacy levels. This implies that the features of a platform can shape how individuals choose to disclose information online.

Furthermore, the motivations behind self-disclosure in online environments are influenced by various factors. Varnalı and Toker<sup>[43]</sup> point out that when individuals engage in online communication tasks, a sense of trust is developed, leading to different norms of self-disclosure compared to face-to-face interactions, which means trust emerges as a critical factor influencing the depth and extent of self-disclosure in digital spaces. Additionally, a study presented by Park et al.<sup>[44]</sup> showed that self-disclosure could be closely related to the level of amount, honesty, intent and positiveness.

The Uses and Gratifications Theory can be applied to understand the motivations behind emoji use in different contexts. Individuals may use emojis to fulfill specific needs, such as self-expression, emotional communication, or social interaction. Emojis can serve as tools for emotion work, helping individuals convey affect and maintain social relationships<sup>[8]</sup>. The popularity and evolving patterns of emoji use, influenced by factors like age, gender, and cultural norms, highlight the dynamic nature of emoji communication and its influence on digital interactions. In this way, in the context of emoji use and self-disclosure, UGT can be applied to understand how individuals utilize emojis on social media platforms to fulfill specific needs and derive gratifications.

To sum up, the integration of emoji use and UGT provides a comprehensive framework for analyzing the role of emojis in modern communication, as well as offering a robust theoretical framework for exploring

the functions of emoji use on social media and its relationship to self-disclosure. Thus, by considering the gratifications individuals seek from emoji use, researchers can gain insights into how emojis fulfill specific needs, enhance communication, and influence self-disclosure behaviors in digital interactions.

# 3. Conceptual framework

**Figure 1** shows the conceptual framework of this study. The conceptual framework illustrated in the diagram focuses on the impact of emoji use on online self-disclosure, considering both the gratifications sought and obtained. The independent variables as cognitive needs, affective needs, integrative needs, social integrative needs, and tension-release needs drive emoji use on social media. Each of these variables represents different motivations behind users' engagement with emojis. The dependent variables, depth, amount, honesty, intent and positively of online self-disclosure, are influenced by the gratifications obtained from emoji use.

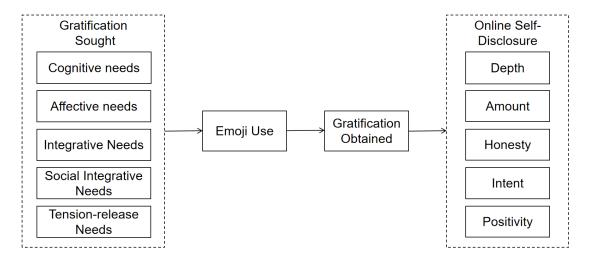


Figure 1. Conceptual framework of this study

## 4. Conclusions

The present work on the usage of emojis in social media and its relationship to self-disclosure behavior has discovered various gaps. Although previous research has examined the communicative roles of emojis in different settings, such as self-presentation on platforms like Weibo and Twitter<sup>[45]</sup>, there is still a requirement for additional investigation into the impact of emojis on social interactions and self-disclosure behaviors. Furthermore, there is a need for further research to explore the influence of emojis on relationship-focused digital communication and their function as emotional cues<sup>[38]</sup>. Additionally, a useful approach is to leverage the time dimension to carry out a longitudinal study to examine how the use of emojis affects self-disclosure.

In order to fill these gaps, future research should prioritise investigating the intricacies of emoji usage in various social media contexts and their impact on self-disclosure behaviors. Research might explore the precise processes by which emojis impact social interactions, such as their ability to express emotions, foster empathy, and alter relationship commitments<sup>[46]</sup>. Moreover, doing research on the influence of emojis on intentions to make sustainable purchases, influencer advertising, and environmental messaging might yield significant knowledge on the perception and usage of emojis in various situations<sup>[29,6,47]</sup>.

The topic of emoji research has intriguing opportunities for inquiry due to the emergence of new trends and technology. The use of emojis in healthcare-related behaviors, such as advocating for hand cleanliness in

healthcare settings, offers a new and unexplored field for research<sup>[48]</sup>. Moreover, the utilisation of emojis to publicly expose hygienic infractions in food outlets might provide valuable insights on the efficacy of visual signals in transmitting information and shaping behavior<sup>[49]</sup>. Additionally, the incorporation of emojis in educational environments, such as using emojis for feedback to improve English language acquisition, presents opportunities to investigate the impact of emojis on promoting self-efficacy attitudes and learning outcomes<sup>[28]</sup>.

The findings from the literature study have significant implications, as they highlight the significance of emojis as a means of nonverbal communication that surpasses language boundaries and enriches online relationships. Researchers can enhance our understanding of digital communication dynamics and self-disclosure behaviors by exploring how emojis are used and understood in social media situations. This paper also provides directions for subsequent researchers to conduct relevant empirical studies by applying experiments, surveys or in-depth interviews. For example, researchers can develop propositions that link the gratifications and emoji use to specific self-disclosure behaviors which can examine that how different types of emojis like emotional or social affect depth, breadth and frequency of self-disclosure. As well as that researchers can also use this framework to do comparative studies on the different effects of emoji use on self-disclosure in different countries' linguistic and social environments. Furthermore, the ramifications of studying emojis have far-reaching effects in several domains like psychology, marketing, healthcare, and education. Emojis have a substantial impact on changing attitudes, behaviors, and perceptions in these sectors.

To summarize, the study of emoji usage in social media and its impact on self-disclosure behavior is a promising area for future research. Researchers can enhance our comprehension of the complex function of emojis in modern communication practices by rectifying the observed deficiencies, exploring developing patterns, and integrating insights from many fields. By embracing the nuanced and diverse nature of emoji communication, researchers may lead the way in discovering new and insightful understandings of how visual symbols, emotions, and social relationships interact in the digital age.

### Conflict of interest

The authors declare no conflict of interest.

# References

- 1. McCulloch G. Because internet: understanding how language is changing. Random House; 2019.
- 2. Berard B. I second that emoji: the standards, structures, and social production of emoji. First Monday. 2018; 23(9). doi: 10.5210/fm.v23i9.9381
- 3. Gao B, Wang X, Liu H. An empirical study on the communication and usage psychology of emoji in WeChat. Obm Neurobiology. 2022; 06(04): 1–18. doi: 10.21926/obm.neurobiol.2204142
- 4. Laurenceau J-P, Barrett LF, Pietromonaco PR. Intimacy as an interpersonal process: The importance of self-disclosure, partner disclosure, and perceived partner responsiveness in interpersonal exchanges. Journal of Personality and Social Psychology. 1998; 74(5): 1238–1251. doi: 10.1037/0022-3514.74.5.1238
- 5. Manne SL, Kashy DA, Zaider T, Lee DI, Kim IY, Heckman CJ, Penedo FJ, Kissane DW, Virtue SM. Interpersonal processes and intimacy among men with localized prostate cancer and their partners. Journal of Family Psychology. 2018; 32(5): 664–675. doi: 10.1037/fam0000404
- 6. Baek TH, Kim S-E, Yoon S, Choi YK, Choi D, Bang H. Emojis and assertive environmental messages in social media campaigns. Internet Research. 2021; 32(3): 988–1002. doi: 10.1108/intr-11-2020-0638
- 7. Lin Y-H, Chu MG. Online communication self-disclosure and intimacy development on Facebook: The perspective of uses and gratifications theory. Online Information Review. 2021; 45(6): 1167–1187. doi: 10.1108/oir-08-2020-0329

- 8. Hossain Md M, Islam K, Masud AA, Hossain Md A, Jahan N. Antecedents and consequences of self-disclosure in subjective well-being: a facebook case with a social support mediator. Sage Open. 2023; 13(2). doi: 10.1177/21582440231179925
- 9. Ji E, Son LK, Kim MS. Emotion perception rules abide by cultural display rules: Koreans and Americans weigh outward emotion expressions (emoticons) differently. Experimental Psychology. 2022; 69(2): 83. doi: 10.1027/1618-3169/a000550
- 10. Bromberg M, Welmans L, Lee C. Reading between the text(s): interpreting emoji and emoticons in the Australian criminal law context. New Criminal Law Review. 2020; 23(4): 655–686. doi: 10.1525/nclr.2020.23.4.655
- 11. Bai Q, Dan Q, Mu Z, Yang M. A systematic review of emoji: Current research and future perspectives. Frontiers in Psychology. 2019; 10. doi: 10.3389/fpsyg.2019.02221
- 12. Liu C, Tan X, Zhou T, Zhang W, Liu J, Lu X. Emoji use in China: Popularity patterns and changes due to COVID-19. Applied Intelligence. 2022; 52(14): 16138–16148. doi: 10.1007/s10489-022-03195-y
- 13. Lin F. Positive or negative: emoji usage in online social media. 4th International Conference on Humanities Science, Management and Education Technology. 2019; 512–516.
- 14. Fakhry NAM. Employment of emoji in social awareness advertising campaigns. International Design Journal. 2021; 11(5): 49–60. doi: 10.21608/idj.2021.191678
- 15. Kannasto E, Laaksonen SM, Knuutila A. I You!-emojis as emotional-political signifiers in finnish election campaign discussion online.
- 16. Daniel TA, Camp AL. Emojis affect processing fluency on social media. Psychology of Popular Media. 2020; 9(2): 208–213. doi: 10.1037/ppm0000219
- 17. Pei J, Cheng L. Deciphering emoji variation in courts: A social semiotic perspective. Humanities and Social Sciences Communications. 2022; 9(1): 1–8. doi: 10.1057/s41599-022-01453-5
- 18. Yusoff Y, Hassan H. The impact of emoji on communication: An empirical study. International Journal of Communication. 2021; 15(1): 123–145.
- 19. Ifukor P. Linguistic marketing in "...a marketplace of ideas": language choice and intertextuality in a Nigerian virtual community. Pragmatics and Society. 2011; 2(1): 110–147. doi: 10.1075/ps.2.1.06ifu
- 20. Sandell KL, Stewart RK, Stewart CK. Computer-mediated communication in the classroom: Models for enhancing student learning. To Improve the Academy. 1996; 15(1): 59–74. doi: 10.1002/j.2334-4822.1996.tb00302.x
- 21. Hathorn LG, Ingram AL. Cooperation and collaboration using computer-mediated communication. Journal of Educational Computing Research. 2002; 26(3): 325–347. doi: 10.2190/7MKH-QVVN-G4CQ-XRDU
- 22. Favotto L, Michaelson V, Pickett W, Davison C. The role of family and computer-mediated communication in adolescent loneliness. Plos One. 2019; 14(6): e0214617. doi: 10.1371/journal.pone.0214617
- 23. Santos LC d, Alencar NM M, Rodrigues JF, Gonçalves AC A, Trombete FM. Proposal of two facial scales using emojis as tools to understand emotions in research with Brazilian consumers. Acta Scientiarum Technology. 2022; 44: e56610. doi: 10.4025/actascitechnol.v44i1.56610
- 24. Shaikh NP, Mahar MH. Deep learning framework for classification of emoji based sentiments. Computers, Materials & Continua. 2022; 72(2): 3145–3158. doi: 10.32604/cmc.2022.024843
- 25. Illendula A, Manohar K, Yedulla MR. Which emoji talks best for my picture? IEEE/WIC/ACM International Conference on Web Intelligence (WI). 2018. doi: 10.1109/wi.2018.00-44
- 26. Al-Azani S, El-Alfy E-SM. Early and late fusion of emojis and text to enhance opinion mining. IEEE Access. 2021; 9: 121031–121045. doi: 10.1109/access.2021.3108502
- 27. Hayati SA, Chaudhary A, Otani N, Black AW. Dataset analysis and augmentation for emoji-sensitive irony detection. 2019. doi: 10.18653/v1/d19-5527
- 28. Chen S-C, Hsu C-L. Effects of uses and gratifications on social media use: the Facebook case with multiple mediator analysis. European Journal of Information. 2022; 31(3): 211–228. doi: 10.1108/EJIS-07-2021-0117
- 29. Kim Y, Jun JW. Factors affecting sustainable purchase intentions of SNS emojis: modeling the impact of self-presentation. Sustainability. 2020; 12(20): 8361. doi: 10.3390/su12208361
- 30. Riordan MA. Emojis as tools for emotion work: Communicating affect in text messages. Journal of Language and Social Psychology. 2017; 36(5): 549–567. doi: 10.1177/0261927x17704238
- 31. Bazarova NN, Choi YH. Self-disclosure in social media: Extending the functional approach to disclosure motivations and characteristics on social network sites. Journal of Communication. 2014; 64(4): 635–657. doi: 10.1111/jcom.12106
- 32. Ni S. How do privacy concerns affect consumers' self-disclosure on social media? Proceedings of the 2023 7th International Seminar on Education, Management and Social Sciences (ISEMSS 2023)2023: 953–962. doi: 10.2991/978-2-38476-126-5\_105
- 33. Poucher J, Prager KJ, Shirvani FK, Parsons J, Patel J. Intimacy, attachment to the partner, and daily well-being in romantic relationships. Journal of Social and Personal Relationships. 2022; 39(6): 1574–1601. doi: 10.1177/02654075211060392

- 34. Jiang L, Bazarova NN, Hancock JT. The disclosure-intimacy link in computer-mediated communication: An attributional extension of the hyperpersonal model. Human Communication Research. 2010; 37(1): 58–77. doi: 10.1111/j.1468-2958.2010.01393.x
- 35. Tidwell LC, Walther JB. Computer-mediated communication effects on disclosure, impressions, and interpersonal evaluations: Getting to know one another a bit at a time. Human communication research. 2002; 28(3): 317–348. doi: 10.1111/j.1468-2958.2002.tb00811.x
- 36. Xu X, Liu J, Liu JH. The effect of social media environments on online emotional disclosure: Tie strength, network size and self-reference. Online Information Review. 2023; 48(2): 390–408. doi: 10.1108/oir-04-2022-0245
- 37. Choi JM, Shim S-H, Kim S. The power of emojis: the impact of a leader's use of positive emojis on members' creativity during computer-mediated communications. Plos One. 2023; 18(5): e0285368. doi: 10.1371/journal.pone.0285368
- 38. Gesselman AN, Ta VP, Garcia JR. Worth a thousand interpersonal words: Emoji as affective signals for relationship-oriented digital communication. Plos One. 2019; 14(8): e0221297. doi: 10.1371/journal.pone.0221297
- 39. Whiting A, Williams DL. Why people use social media: A uses and gratifications approach. Qualitative Market Research an International Journal. 2013; 16(4): 362–369. doi: 10.1108/qmr-06-2013-0041
- 40. Wong A, Chung S. Retaining consumer engagement in online retail brand communities. International Journal of Retail & Distribution Management. 2022; 51(8): 1010–1026. doi: 10.1108/ijrdm-09-2021-0413
- 41. Katz E, Haas H, Gurevitch M. On the use of the mass media for important things. Am Sociol Rev. 1973: 164–181.
- 42. Ahmed AAM. "Sharing is caring": online self-disclosure, offline social support, and social network site usage in the UAE. Contemporary Review of the Middle East. 2015; 2(3): 192–219. doi: 10.1177/2347798915601574
- 43. Varnali K, Toker A. Self-disclosure on social networking sites. Social Behavior and Personality: an international journal. 2015; 43(1): 1–13. doi: 10.2224/sbp.2015.43.1.1
- 44. Park N, Jin B, Jin SA-A. Effects of self-disclosure on relational intimacy in Facebook. Computers in Human Behavior. 2011; 27(5): 1974–1983. doi: 10.1016/j.chb.2011.05.004
- 45. Ge-Stadnyk J. Communicative functions of emoji sequences in the context of self-presentation: A comparative study of Weibo and Twitter users. Discourse Communication. 2021; 15(4): 369–387. doi: 10.1177/17504813211002038
- 46. Jeon HJ. The mechanism of empathy and relationship commitment through emojis: Path to perspective taking, inner imitation, emotional empathy, and relationship commitment. Sage Open. 2020; 10(4): 2158244020969675.
- 47. Kader MS, Kim S-E, Huang X. The effects of emoji on influencer advertising and temporal orientation on purchase intentions keywords: influencer advertising, emoji, temporal orientation, construal level. International Textile and Apparel Association Annual Conference Proceedings. 2020. doi: 10.31274/itaa.11948
- 48. Lotfinejad N, Tartari E, Sauser J, Fankhauser-Rodriguez C, Pires D, Pittet D. Are emojis ready to promote the WHO 5 moments for hand hygiene in healthcare? Antimicrobial Resistance & Infection Control. 2022; 11(1): 127. doi: 10.1186/s13756-022-01164-1
- 49. Patel PC, Rietveld CA. The impact of the public disclosure of curved inspection scores using emojis on hygiene violations in food establishments. Cornell Hospitality Quarterly. 2021; 62(4): 455–467. doi: 10.1177/1938965520935398