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# EL ROL DEL VOCABULARIO EMOCIONAL Y LA EDAD EN EL ETIQUETADO DE EMOJIS

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## RESUMEN

Los emojis son ampliamente utilizados en la comunicación digital para amplificar emociones y sentimientos que normalmente se expresarían por medio de elementos prosódicos. En psicología, se han empleado en técnicas psicométricas y se ha investigado qué factores influyen en su uso y comprensión. Este trabajo buscó explorar si el vocabulario emocional -el conocimiento que tenemos acerca de palabras emocionales y su significado- incide en el etiquetado emocional de emojis. 102 participantes (88 mujeres, edad promedio = 25.42, DE = 7.55) completaron una tarea de vocabulario emocional y un cuestionario elaborado ad-hoc para evaluar qué emoción mejor representan 51 emojis. Los resultados de un modelo de regresión lineal [ $F(3,96) = 5.15$ ,  $RMSE = 7.57$ ,  $p = .002$ ,  $AIC = 698.73$ ,  $r^2 = .14$ ] sugieren que tanto la edad como el vocabulario emocional influyen en el etiquetado de emojis, pero no así el género del participante o la frecuencia de uso de emojis. Asimismo, se encontró elevada variabilidad en las respuestas al cuestionario, por lo que se sugiere tener precaución a la hora de usar emojis en la investigación sobre emociones. El posible sesgo de selección en la muestra es una gran limitación en este trabajo.

## Palabras clave

Emojis - Emoción - Vocabulario emocional - Edad

## ABSTRACT

### THE ROLE OF EMOTIONAL VOCABULARY AND AGE ON EMOJI LABELING

Emojis are widely used in digital communication to amplify emotions or feelings that would normally be expressed through prosodic elements. In psychology, emojis have been used in psychometric tests and researchers have explored which factors influence their use and comprehension. This project aimed to explore if emotional vocabulary -the knowledge that we have about emotional words and their meanings- plays a role in the emotional labeling of emojis. 102 participants (88 women, average age = 25.42, SD = 7.55) completed an emotional vocabulary task and a questionnaire developed to evaluate which emotion is better represented by 51 emojis. Results from a linear regression model [ $F(3,96) = 5.15$ ,  $RMSE = 7.57$ ,  $p = .002$ ,  $AIC = 698.73$ ,  $r^2 = .14$ ] suggest that both age and emotional vocabulary influence emoji labeling, but participants' gender and frequency of emoji use do not. We also found high variability in the

responses. Based on these results, we suggest caution before using emojis as a tool to conduct research on emotion. Sample selection bias is a major limitation of this project.

## Keywords

Emojis - Emotion - Emotional vocabulary - Age

## BIBLIOGRAFÍA

- Aldunate, N., & González-Ibáñez, R. (2017) An Integrated Review of Emoticons in Computer-Mediated Communication. *Frontiers in Psychology*, 7(JAN). <https://doi.org/10.3389/FPSYG.2016.02061>
- Bai, Q., Dan, Q., Mu, Z., & Yang, M. (2019) A Systematic Review of Emoji: Current Research and Future Perspectives. *Frontiers in Psychology*, 10. <https://doi.org/10.3389/FPSYG.2019.02221>
- Barrett, L. F. (2012) Emotions are real. *Emotion*, 12(3), 413-429. <https://doi.org/10.1037/A0027555>
- Barrett, L. F. (2014) The Conceptual Act Theory: A Précis: *Http://Dx.Doi.Org/10.1177/1754073914534479*, 6(4), 292-297. <https://doi.org/10.1177/1754073914534479>
- Circelli, K.S., Clark, U.S., & Cronin-Golomb, A. (2013) Visual scanning patterns and executive function in relation to facial emotion recognition in aging. *Aging, Neuropsychology, and Cognition*, 20, 148 - 173. <https://doi.org/10.1080/13825585.2012.675427>
- Das, G., Wiener, H. J. D., & Kareklas, I. (2019) To emoji or not to emoji? Examining the influence of emoji on consumer reactions to advertising. *Journal of Business Research*, 96, 147-156. <https://doi.org/10.1016/J.JBUSRES.2018.11.007>
- Delgado, A. R., Burin, D. I., & Prieto, G. (2018) Testing the generalized validity of the Emotion Knowledge test scores. *PLOS ONE*, 13(11), e0207335. <https://doi.org/10.1371/JOURNAL.PONE.0207335>
- Delgado, A.R., Prieto, G., & Burin, D.I. (2017) Constructing three emotion knowledge tests from the invariant measurement approach. *PeerJ*, 2017(9), e3755. <https://doi.org/10.7717/PEERJ.3755/SUPP-1>
- Derks, D., Fischer, A.H., & Bos, A.E.R. (2008) The Role of Emotion in Computer-Mediated Communication: a Review. *Computers in Human Behavior*, 24(3), 766-785. <https://doi.org/10.1016/J.CHB.2007.04.004>
- Emogi Research Team (2015) *Emoji Report*.
- Felbo, B., Mislove, A., Søgaard, A., Rahwan, I., & Lehmann, S. (2017) Using millions of emoji occurrences to learn any-domain representations for detecting sentiment, emotion and sarcasm. *EMNLP 2017 - Conference on Empirical Methods in Natural Language Processing, Proceedings*, 1615-1625. <https://doi.org/10.18653/V1/D17-1169>

- Gao, B., & Vanderlaan, D. P. (2020) Cultural Influences on Perceptions of Emotions Depicted in Emojis. *Cyberpsychology, Behavior and Social Networking*, 23(8), 567-570. <https://doi.org/10.1089/CYBER.2020.0024>
- Hall, J. A. (1978) Gender effects in decoding nonverbal cues. *Psychological Bulletin*, 85(4), 845-857. <https://doi.org/10.1037/0033-2909.85.4.845>
- Hall, J. A., & Pennington, N. (2013) Self-monitoring, honesty, and cue use on Facebook: The relationship with user extraversion and conscientiousness. *Computers in Human Behavior*, 29(4), 1556-1564. <https://doi.org/10.1016/J.CHB.2013.01.001>
- Herring, S. C., & Dainas, A. R. (2018) Receiver interpretations of emoji functions: a gender perspective. *1st International Workshop on Emoji Understanding and Applications in Social Media*.
- Hoemann, K., Devlin, M., & Barrett, L. F. (2020) Comment: Emotions Are Abstract, Conceptual Categories That Are Learned by a Predicting Brain: <https://doi.org/10.1177/1754073919897296>, 12(4), 253-255. <https://doi.org/10.1177/1754073919897296>
- Izard, C.E., Woodburn, E.M., Finlon, K.J., Krauthamer-Ewing, E.S., Grossman, S.R., & Seidenfeld, A. (2011) Emotion Knowledge, Emotion Utilization, and Emotion Regulation: <http://dx.doi.org/10.1177/1754073910380972>, 3(1), 44-52. <https://doi.org/10.1177/1754073910380972>
- Jaeger, S. R., Jin, D., Ryan, G. S., & Schouteten, J. J. (2021) Emoji for Food and Beverage Research: Pleasure, Arousal and Dominance Meanings and Appropriateness for Use. *Foods (Basel, Switzerland)*, 10(11). <https://doi.org/10.3390/foods10112880>
- Jibril, T. A., & Abdullah, M. H. (2013) Relevance of Emoticons in Computer-Mediated Communication Contexts: An Overview. *Asian Social Science*, 9(4), p201. <https://doi.org/10.5539/ASS.V9N4P201>
- Khandekar, S., Ryu, C. W., Higgs, J., Talton, J. O., Bian, Y., & Kumar, R. (2019) OPICO: A study of emoji-first communication in a mobile social app. *The Web Conference 2019 - Companion of the World Wide Web Conference, WWW 2019*, 450-458. <https://doi.org/10.1145/3308560.3316547>
- Kutsuzawa, G., Umemura, H., Eto, K., & Kobayashi, Y. (2022) Classification of 74 facial emoji's emotional states on the valence-arousal axes. *Scientific Reports*, 12(1). <https://doi.org/10.1038/s41598-021-04357-7>
- Lecompte, T., & Chen, J. (2018) Sentiment Analysis of Tweets Including Emoji Data. *Proceedings - 2017 International Conference on Computational Science and Computational Intelligence, CSCI 2017*, 793-798. <https://doi.org/10.1109/CSCI.2017.137>
- Li, W., Chen, Y., Hu, T., & Luo, J. (2018) Mining the relationship between emoji usage patterns and personality. *Twelfth International AAAI Conference on Web and Social Media*.
- Ljubešić, N., & Fišer, D. (2016) A global analysis of emoji usage. *Proceedings of the 10th Web as Corpus Workshop*. <https://doi.org/10.18653/v1/W16-2610>
- Luangrath, A. W., Peck, J., & Barger, V. A. (2017) Textual paralanguage and its implications for marketing communications. *Journal of Consumer Psychology*, 27(1), 98-107. <https://doi.org/10.1016/J.JCPS.2016.05.002>
- Marengo, D., Settanni, M., & Giannotta, F. (2019) "Development and preliminary validation of an image-based instrument to assess depressive symptoms." *Psychiatry Research*, 279, 180-185. <https://doi.org/10.1016/J.PSYCHRES.2019.02.059>
- Oleszkiewicz, A., Karwowski, M., Pisanski, K., Sorokowski, P., Sobrado, B., & Sorokowska, A. (2017) Who uses emoticons? Data from 86 702 Facebook users. *Personality and Individual Differences*, 119, 289-295. <https://doi.org/10.1016/J.PAID.2017.07.034>
- Park, J., Baek, Y. M., & Cha, M. (2014) Cross-Cultural Comparison of Nonverbal Cues in Emoticons on Twitter: Evidence from Big Data Analysis. *Journal of Communication*, 64(2), 333-354. <https://doi.org/10.1111/JCOM.12086>
- Paulmann, S., Pell, M. D., & Kotz, S. A. (2008) How aging affects the recognition of emotional speech. *Brain and language*, 104(3), 262-269. <https://doi.org/10.1016/j.bandl.2007.03.002>
- Phan, W. M. J., Amrhein, R., Rounds, J., & Lewis, P. (2017) Contextualizing Interest Scales With Emojis: Implications for Measurement and Validity: <https://doi.org/10.1177/1069072717748647>, 27(1), 114-133. <https://doi.org/10.1177/1069072717748647>
- Prada, M., Rodrigues, D. L., Garrido, M. V., Lopes, D., Cavalheiro, B., & Gaspar, R. (2018) Motives, frequency and attitudes toward emoji and emoticon use. *Telematics and Informatics*, 35(7), 1925-1934. <https://doi.org/10.1016/J.TELE.2018.06.005>
- Riordan, M. A. (2017) Emojis as Tools for Emotion Work: Communicating Affect in Text Messages. *Journal of Language and Social Psychology*, 36(5), 549-567. <https://doi.org/10.1177/0261927X17704238>
- Robus, C. M., Hand, C. J., Filik, R., & Pitchford, M. (2020) Investigating effects of emoji on neutral narrative text: evidence from eye movements and perceived emotional valence. *Computers in Human Behavior*, 109(106361). <https://doi.org/10.1016/j.chb.2020.106361>
- Settanni, M., & Marengo, D. (2015) Sharing feelings online: Studying emotional well-being via automated text analysis of Facebook posts. *Frontiers in Psychology*, 6(JUL), 1045. <https://doi.org/10.3389/FPSYG.2015.01045/BIBTEX>
- Sick, J., Monteleone, E., Pierguidi, L., Ares, G., & Spinelli, S. (2020) The Meaning of Emoji to Describe Food Experiences in Pre-Adolescents. *Foods (Basel, Switzerland)*, 9(9). <https://doi.org/10.3390/FOODS9091307>
- Tauch, C., & Kanjo, E. (2016) The roles of emojis in mobile phone modifications. *UbiComp 2016 Adjunct - Proceedings of the 2016 ACM International Joint Conference on Pervasive and Ubiquitous Computing*, 1560-1565. <https://doi.org/10.1145/2968219.2968549>
- Weiß, M., Bille, D., Rodrigues, J., & Hewig, J. (2020) Age-Related Differences in Emoji Evaluation. *Experimental Aging Research*, 46(5), 416-432. <https://doi.org/10.1080/0361073X.2020.1790087>
- WhatsApp LLC. (2022) *WhatsApp 2.22*. Meta Platforms, Inc.
- Wingenbach, T., Ashwin, C., & Brosnan, M. (2018) Sex differences in facial emotion recognition across varying expression intensity levels from videos. *PloS one*, 13(1), e0190634. <https://doi.org/10.1371/journal.pone.0190634>
- Zedge Inc. (2022) *Emojipedia*. <https://emojipedia.org/>