



OPEN ACCESS

EDITED AND REVIEWED BY
Frontiers Editorial Office,
Frontiers Media SA, Switzerland

*CORRESPONDENCE

Diane Levin-Zamir
✉ dlevin-za@univ.haifa.ac.il

RECEIVED 28 June 2025

ACCEPTED 30 June 2025

PUBLISHED 06 August 2025

CITATION

Levin-Zamir D, Van den Broucke S, Bíró É, Bøggild H, Bruton L, De Gani SM, Søberg Finbråten H, Gibney S, Griebler R, Griesse L, Guttersrud Ø, Klochánová Z, Kucera Z, Le C, Link T, Mancini J, Miksova D, Schaeffer D, Ribeiro da Silva C, Sørensen K, Straßmayr C, Telo de Arriaga M, Vrdelja M and Pelikan J (2025) Correction: Measuring digital health literacy and its associations with determinants and health outcomes in 13 countries. *Front. Public Health* 13:1655721. doi: 10.3389/fpubh.2025.1655721

COPYRIGHT

© 2025 Levin-Zamir, Van den Broucke, Bíró, Bøggild, Bruton, De Gani, Søberg Finbråten, Gibney, Griebler, Griesse, Guttersrud, Klochánová, Kucera, Le, Link, Mancini, Miksova, Schaeffer, Ribeiro da Silva, Sørensen, Straßmayr, Telo de Arriaga, Vrdelja and Pelikan. This is an open-access article distributed under the terms of the [Creative Commons Attribution License \(CC BY\)](#). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.

Correction: Measuring digital health literacy and its associations with determinants and health outcomes in 13 countries

Diane Levin-Zamir^{1,2*}, Stephan Van den Broucke³, Éva Bíró⁴, Henrik Bøggild⁵, Lucy Bruton⁶, Saskia Maria De Gani^{7,8}, Hanne Søberg Finbråten⁹, Sarah Gibney⁶, Robert Griebler¹⁰, Lennert Griesse¹¹, Øystein Guttersrud^{12,13}, Zuzana Klochánová¹⁴, Zdenek Kucera¹⁵, Christopher Le^{9,16}, Thomas Link¹⁷, Julien Mancini¹⁸, Dominika Miksova¹⁷, Doris Schaeffer¹¹, Carlota Ribeiro da Silva¹⁹, Kristine Sørensen²⁰, Christa Straßmayr¹⁰, Miguel Telo de Arriaga^{19,21}, Mitja Vrdelja²² and Jürgen Pelikan¹⁰ on behalf of the HLS₁₉ Consortium of the WHO Action Network M-POHL

¹School of Public Health, University of Haifa, Haifa, Israel, ²Department of Health Education and Promotion, Clalit Health Services, Tel Aviv, Israel, ³Psychological Sciences Research Institute, Université Catholique de Louvain, Louvain-la-Neuve, Belgium, ⁴Department of Public Health and Epidemiology, Faculty of Medicine, University of Debrecen, Debrecen, Hungary, ⁵Public Health and Epidemiology, Department of Health Science and Technology, Aalborg University, Aalborg, Denmark, ⁶Department of Health, Dublin, Ireland, ⁷Careum Foundation, Careum Center for Health Literacy, Zurich, Switzerland, ⁸Careum School of Health, Kalaidos University of Applied Sciences, Zurich, Switzerland, ⁹Department of Health and Nursing Sciences, Faculty of Social and Health Sciences, University of Inland Norway, Elverum, Norway, ¹⁰Competence Centre Health Promotion and Healthcare, Austrian National Public Health Institute, Vienna, Austria, ¹¹School of Public Health, Bielefeld University, Bielefeld, Germany, ¹²Department of Nursing and Health Promotion, Faculty of Health Sciences, Oslo Metropolitan University, Oslo, Norway, ¹³The Norwegian Centre for Science Education Department, The Faculty of Mathematics and Natural Sciences, University of Oslo, Oslo, Norway, ¹⁴Department of Public Health, Faculty of Health Care and Social Work, Trnava University Trnava, Trnava, Czechia, ¹⁵Czech Health Literacy Institute, Prague, Czechia, ¹⁶Department of Community Health, The Norwegian Directorate of Health, Oslo, Norway, ¹⁷Department of Quality Measurement and Patient Survey, Austrian National Public Health Institute, Vienna, Austria, ¹⁸Aix Marseille University APHM INSERM, IRD, ISSPAM, SESSTIM, Cancer, Biomedicine & Society Group, Marseille, France, ¹⁹Direção-Geral da Saúde, Lisbon, Portugal, ²⁰Global Health Literacy Academy, Risskov, Denmark, ²¹Católica Research Centre for Psychological, Family and Social Well-Being, Universidade Católica Portuguesa, Lisbon, Portugal, ²²Communication Unit, National Institute of Public Health, Ljubljana, Slovenia

KEYWORDS

digital health literacy, eHealth literacy, HLS₁₉, digital health literacy measurement, measurement scale validation, health information technology literacy, M-POHL

A Correction on

Measuring digital health literacy and its associations with determinants and health outcomes in 13 countries

by Levin-Zamir, D., Van den Broucke, S., Bíró, É., Bøggild, H., Bruton, L., De Gani, S. M., Søbreg Finbråten, H., Gibney, S., Griebler, R., Griesse, L., Guttersrud, Ø., Klochánová, Z., Kucera, Z., Le, C., Link, T., Mancini, J., Miksova, D., Schaeffer, D., Ribeiro da Silva, C., Sørensen, K., Straßmayr, C., Telo de Arriaga, M., Vrdeja, M., and Pelikan, J., on behalf of the HLS₁₉ Consortium of the WHO Action Network M-POHL (2025). *Front. Public Health* 13:1472706. doi: 10.3389/fpubh.2025.1472706

In the published article, the article title was “HLS₁₉-DIGI - a new instrument for measuring digital health literacy: development, validation and associations with determinants and health outcomes in 13 countries”

The correct title is: “Measuring digital health literacy and its associations with determinants and health outcomes in 13 countries”

In the original published article the corresponding author's e-mail was diamos@zahav.net.il

The corrected e-mail is: dlevin-za@univ.haifa.ac.il

A correction has been made to **Abstract, Methods**

The term “HLS₁₉-DIGI” has been added and the sentence below has been added:

“The instrument is a modified and extended version of the Digital Health Literacy Instrument (DHLI).”

So that the section now reads:

“Methods: Using a concept validation approach, the aim of the study was to validate the digital health literacy measure HLS₁₉-DIGI, applied in the European Health Literacy Survey (2019–2021) of the WHO M-POHL network, analyzing data from 28,057 respondents from 13 countries. The instrument is a modified and extended version of the Digital Health Literacy Instrument (DHLI).”

In **1. Introduction, 1.1 Existing research and measures of digital health literacy**, paragraph 3, “(DHLI)” has been changed to “(Digital Health Literacy Instrument- DHLI)”.

In **1. Introduction, 1.2 Rational for a further developed digital health literacy measure**, the header “Rational for developing a new digital health literacy measure” has been changed to “Rational for a further developed digital health literacy measure”.

In **1. Introduction, 1.2 Rational for a further developed digital health literacy measure**, paragraph 2, “opportunity to develop and validate a new measure for DHL” has been changed to “opportunity to further develop and validate a further developed measure for DHL.”

In **1. Introduction, 1.2 Rational for a further developed digital health literacy measure**, paragraph 3, “This article is part of a series of papers, introducing new health literacy tools that have been developed, applied, and tested through the HLS₁₉ study (27–30)” has been changed to “This article is part of a series of papers, introducing health literacy tools that have been developed, applied and tested through the HLS₁₉ study (27–30)”.

In **1. Introduction, 1.2 Rational for a further developed digital health literacy measure**, paragraph 3, “The aim of this series is to use the data collected in HLS₁₉ to examine the psychometric properties of the newly developed health literacy tools and different aspects of their validity” has changed to “The aim of this series is to use the data collected in the HLS₁₉ to examine the psychometric properties of the newly or further developed health literacy tools and different aspects of their validity”.

In **2. Materials and methods, 2.1 The HLS₁₉-DIGI instrument**, the header has changed from “2.1 Development of the HLS₁₉-DIGI instrument” to “2.1 The HLS₁₉-DIGI instrument”.

In **2. Materials and methods, 2.1 The HLS₁₉-DIGI instrument**, paragraph 1, “The DHL instrument developed for the HLS₁₉ survey, named HLS₁₉-DIGI, is based on the DHLI measure (16) but aligned more strongly with the concept and model of general health literacy proposed by the HLS-EU study (27) and promoted by M-POHL” has changed to “The DHL instrument further developed for the HLS₁₉ survey, named HLS₁₉-DIGI, is based on the DHLI measure (16) but aligned more strongly with the concept and model of general health literacy proposed by the HLS-EU study (27), and promoted by M-POHL.”

In **2. Materials and methods, 2.1 The HLS₁₉-DIGI instrument**, paragraph 1, the citation (16) has been added, so that the sentence reads “Compared to the DHLI (16), the HLS₁₉-DIGI adds the dimension of understanding digitally accessed health information and eliminates the redundancy on the topic of applying health information.”

In **2. Materials and methods, 2.1 The HLS₁₉-DIGI instrument**, paragraph 3, the citation (16) has been added, so that the sentence reads “We have adapted, shortened and extended the content of the DHLI tool (16), translated it into several languages and tested it, and this paper reports on the psychometric testing.”

In **4. Discussion**, paragraph 2, “This article described the conceptual background, development, and validation of a new instrument to measure DHL at the population level and investigated its determinants and associations with health outcomes “ has changed to “This article described the conceptual background, development, and validation of a further developed instrument to measure DHL at the population level and investigated its determinants and associations with health outcomes.”

In **4. Discussion, 4.1 Limitations**, “For some countries, the non-response rates for several items were markedly higher than for other HLS₁₉ measures. this may be partly due to the fact that people cannot evaluate something they do not do in everyday life, namely if they do not use the Internet to search for health information.” has changed to “For some countries, the non-response rates for several items were markedly higher than for other HLS₁₉ measures, which may be partly due to the fact that people cannot evaluate something they do not do in everyday life, namely if they do not use the Internet to search for health information.”

In **5. Conclusions and implications**, “A compact, conceptually sound new instrument to measure DHL was validated for 13 languages in 13 countries, showing acceptable psychometric properties.” Has changed to “A compact, conceptually sound instrument to measure DHL was validated for 13 languages in 13 countries, showing acceptable psychometric properties.”

The original version of this article has been updated.

Publisher's note

All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated

organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.