



Mental Health Literate in the Context of Educational Technology: A Bibliometric Review of Instruments from 2014 to 2024

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Abstract

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This study aims to provide insight into the status of research, the mapping process, annual themes of mental health literacy research, and offer relevant references. There are three stages of research: first, descriptive statistical analysis for data collection using publish and perish analysis and bibliometric R application, second, using quantitative methods for citation analysis using bibliometric R, and third, using qualitative methods to identify key research streams. The data used was based on the Scopus database. Keywords 'mental health' and literacy. Year of publication between 2014-2024. There were 3,456 articles, 1,256 journals and books, the number of citations per year per document was 2,656. The highest number of publications was in 2023 with 606 publications. Further research is recommended to explore the development of mental health literacy research literature and conduct a comparative study between

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INTRODUCTION

Mental health literacy (MHL) research is needed today as it can improve public understanding of mental health issues and promote better mental health outcomes across diverse populations. Research shows that individuals with higher levels of mental health literacy can identify mental health problems and seek appropriate help (Tullius, 2024). This study explains MHL is important for adolescents to recognise and overcome mental health challenges, which can lead to better health outcomes (Tullius, 2024). The results of the study showed that students were physically and sexually abused where the students did not have good psychological well-being and could not overcome their problems. This is due to the lack of mental health literacy (Hidayah et al., 2016). Meanwhile, research applying MHL in educational settings can increase students' understanding of mental health, thereby reducing stigma and promoting help-seeking behaviour (Le, 2023; Kumar, 2024).

This is particularly important in the secondary school setting, where students are at a critical developmental stage and may face significant mental health challenges (Giosan et al., 2024). Adolescents are the most vulnerable group to mental health disorders due to the influence of technology (Muslihati et al., 2023). The impact of problematic social media leads to mental health trends experienced by adolescents. One of the skills initiated by adolescents in using social media is digital literacy skills. The tendency of low levels of the low level of digital literacy among adolescents is very likely to correlate with the



mental health conditions of adolescents. This is because adolescents tend to spend more time in the digital world which will have an impact on mental health. Implementation of prevention and intervention is carried out by school counsellors to prevent the impact of adolescent mental health problems (Saputra et al., 2024). Our research focuses on understanding and improving knowledge, attitudes, and behaviours related to mental health among various populations. In a study with the object of general practitioner trainees utilising the Mental Health Literacy Scale (MHLS) could evaluate general practitioners' knowledge and perceptions of mental health (Zammit et al., 2024). This study explains about measuring MHL to identify differences in knowledge in the field of medicine and improve the gap in accordance with the expected knowledge target in the field of medicine. The results of this study show that improving mental health literacy affects the ability of general practitioners to provide appropriate care and support to patients. Another important focus is that MHL knowledge implemented in secondary school students can provide significant improvements to their mental health related problems (Le, 2023).

Mental health has become a crucial issue in education, as students and educators face increasing academic, social, and technological pressures in the university environment. Over the past decade, awareness of the importance of mental health literacy has continued to grow as part of efforts to prevent and address psychological problems among the academic community. Mental health literacy encompasses not only knowledge about mental disorders but also the ability to recognize, manage, and seek help for mental health issues effectively.

Advancements in educational technology have also played a significant role in this dynamic. Online learning platforms, learning management systems (LMS), and other technology-based applications have revolutionized the teaching and learning process in higher education. However, the integration of technology in education also presents new challenges related to mental well-being, such as digital stress, anxiety about technology, and social isolation in online learning.

In this context, understanding mental health literacy in the field of educational technology has become increasingly relevant. The instruments or measurement tools used to assess mental health literacy in university settings, particularly those related to educational technology, need to be comprehensively examined. A bibliometric review of these instruments over the past decade (2014–2024) provides insights into research trends, knowledge gaps, and the direction for developing valid and contextually appropriate measurement tools.

Bibliometric analysis is a useful method to examine the development of science to evaluate the results of scientific work in the academic field (Ambhore & Ofori, 2023). Bibliometric analysis is widely used in examining new research fields, as it can provide an objective view of a particular research field without including subjective interpretations related to the researcher (Liu et al., 2015; Yan et al., 2015). Bibliometric analysis generates the intellectual structure of the scientific field under study by identifying trends in a particular research field by year, country, institution, citation, or theoretical approach (Donthu et al., 2021; Paul & Criado, 2020). Before presenting a detailed review of the field of MHL and knowing the position of the research developed, it is necessary to examine the mapping of the field in the form of a bibliometric analysis that presents the points and trends of research in the field of MHL that are closely related to the concept, which can be helpful for new researchers. The study results show that research on mental health needs to be explored in more depth (Muslihati et al., 2023).

Bibliometric studies in the field indicate that there is a bibliometric mapping of MHL (Sweileh, 2021) (Raj et al, 2021).

Mental health is a psychological state that shows a person's ability to make adjustments to the problems faced. Educators have a duty to develop mental health in all components of the school, such as learners, colleagues, and themselves (Hanurawan, 2012). Despite being one of the popular research topics in MHL, both studies have limited frameworks with bibliometric analysis methods. In the former, Sweileh (2021) examined studies that only focused on postgraduate students in the country of Turkey, while Raj et al, (2021) examined MHL studies related to youth development. The researchers agreed that the research area of this concept has grown, but there has been no bibliometric study that comprehensively covers the footprint of the trending MHL workspace, leading authors, journals, and studies. Therefore, in this article, we aim to contribute to future research by presenting a detailed overview of the distribution of publications and citations in the field by year, country, institution, journal, author, and most commonly used keywords as well as to examine publications across all data-driven research categories from scopus.com.

Our primary research is built around two keywords: 'literacy' and 'mental health'. In the basic research published between 2014 and 2024, we identified 1,256 publications. Considering these publications, we sought answers to the following research questions:

1. Which disciplinary categories have nurtured the field of MHL, and to what extent has it developed?
2. Which countries, sources and authors have contributed the most to the MHL field?
3. What are the most influential sources and publications in the field of MHL?
4. What themes and keywords stand out in the MHL field in recent years?

The development of the digital era has brought new challenges to the world of education, especially in terms of students' mental health. The increased use of technology, especially social media, has a direct impact on the psychological condition of adolescents, who are the age group most vulnerable to mental disorders. In this context, mental health literacy (MHL) has become an essential skill that needs to be instilled early on in the educational environment so that students are able to recognize, understand, and overcome mental health problems appropriately.

Unfortunately, mental health literacy among students remains low. This lack of understanding leads to an inability to identify symptoms of mental disorders and a reluctance to seek help. Meanwhile, low digital literacy exacerbates the situation, as students are increasingly exposed to unhealthy information through technology without the ability to filter or understand its impact on mental health. This is where the role of educational technology becomes crucial. Technology can be strategically utilized as an educational medium capable of instilling mental health understanding in an interactive, personalized, and data-driven manner. Digital learning, app-based platforms, and technology-based interventions designed with appropriate pedagogical approaches can help improve MHL among students.

However, to date, there has been little research mapping the development of mental health literacy studies comprehensively, particularly those linking the dimensions of mental health, education, and technology. Thus, this research is important for: Providing a comprehensive mapping of trends and contributions of MHL research in the context of education, Serving as a foundation for the development of technology-based mental health education programs, and support the development of educational policies that are more responsive to mental health challenges in the digital age.

Through bibliometric analysis of publications related to MHL from 2014 to 2024, this study contributes to providing a strong scientific foundation for planning technology-based educational interventions to improve mental health literacy in school environments, particularly at the secondary level.

METHODS

Bibliometric analysis summarises the intellectual structure and current trends of research in a particular field with a large research area that cannot be examined manually (Donthu et al., 2021). The mapping in bibliometric analysis is suitable for large research areas where there are many studies in unclear fields. Bibliometric analysis is widely used to examine new and complex research areas because it provides an objective view of a particular research area without including subjective interpretations on the part of the researcher ((Liu et al., 2015; Yan et al., 2015).

Research Questions

To answer the objectives of bibliometric research, this study proposes four research questions namely:

RQ1: What is the development map of the number of publications that examine mental health literacy?

RQ2: Which scientific articles have the highest number of citations?

RQ3: What is the development map of scientific publications based on keywords?

RQ4 : Which institutions, countries, journals, and authors are prominent in the domain?

and RQ5 : Which articles and topics are the most influential and trending?

RQ6 : Which disciplinary categories have nurtured the field of Mental health literacy, and to what extent has the field evolved?

RQ7 : Which countries, sources and authors have contributed the most to the field of Mental health literacy?

RQ8 : What are the most influential sources and publications in the field of Mental health literacy?

RQ9 : What themes and keywords stand out in the field of Mental health literacy in recent years?

Selection of Inclusion and Exclusion Criteria

This study determines the criteria for excluded articles are those related to articles that are not in English will be excluded, articles that are not related to the field of Mental health literacy research will be excluded, articles outside the agreed publishing year will be excluded. Meanwhile, to determine the criteria for articles used and relevant for Systematic Literature Review are those related to the selected research field of Mental health literacy, articles in English, articles that match the agreed research year.

Inclusion Criteria

The types of documents included were articles, review articles, proceedings papers, early access, book chapters, editorial material, data papers, books, and retracted publications. We excluded non-English publications from 2014. The reason we excluded them was that they still needed to be translated and could potentially have an adverse impact on the bibliometric analysis. The study covered publications between 2014 and

2024. At the end of all processes, we included 3,456 documents in the study (as of 1 November 2024). Figure 1 shows the search strategy. We saved the data obtained in the search strategy in the appropriate folder by selecting the plain text format and marking the custom full editing of the content part of the record

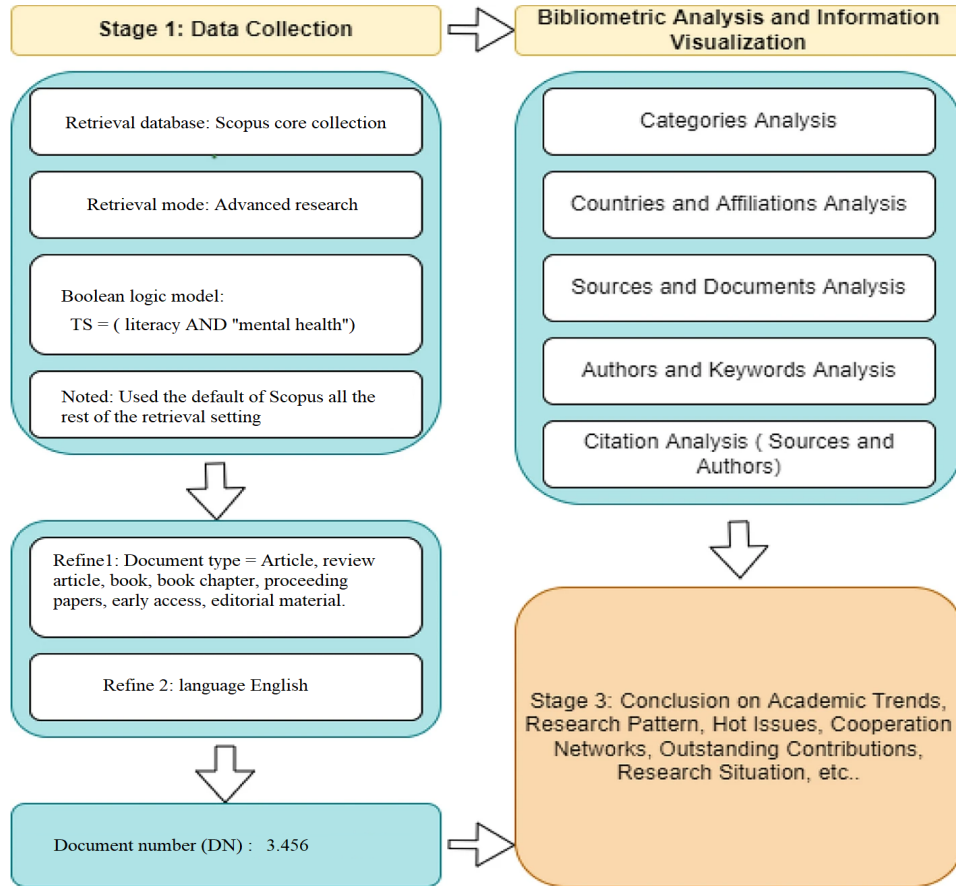


Figure 1. Search strategy

RESULTS

This research produces basic statistical analysis related to the number of literature found of 3,456 articles, with publication time between 2014 and 2024, with the number of references of 147,926 references, the number of data sources of 1,256 as in table 1.

Table 1. Analyses statistics related to documents linked to the research topic for the publication year 2014 - 2024

Description	Result
MAIN INFORMATION ABOUT DATA	
Timespan	2014: 2024
Sources (journal, Books, etc)	1256
Document	3456
Annual Growth Rate%	1826
Document Average Rate	3,19
Average citations per doc	13,94

Average citation per year per doc	2,656
Reference	147926
DOCUMENT TYPES	
Article	3456
DOCUMENT CONTENT	
Key words Plus (ID)	6820
Author Keywords (DE)	6388
AUTHOR	
Authors	14731
Author Appearances	18924
Author of single authored docs	177
AUTHOR COLABORATION	
Single authored doc	190

Table 1 presents the trend in the number of publications per year, between 2014 and 2023. The findings of the trend analysis in Table 1 show that the number of publications increased gradually over time related to the research topic Mental health literacy, starting in the early 2014s and peaking in 2023. The high year for the number of publications is 2023 with 606 publications. The low year of the number of publications is in 2015 with 109 publications.

Table 2. The Number Of Publication between 2014 - 2023

Year	Article
2014	114
2015	109
2016	152
2017	174
2018	183
2019	224
2020	335
2021	417
2022	532
2023	606

Influential Countries

Tabel 3 shows a table related to the ten countries that produce the most articles in the field of MHL research, the USA is the first with 722 articles, the second is Australia with 475 articles, and the third is the United Kingdom with 265 articles

Table 3. Table corresponding to the ten countries that produce the most articles

No	country	Article	freq	SCP	MCP	MCP Ratio
1	USA	722	0,2283	611	111	0,154
2	AUSTRALIA	475	0,1502	379	96	0,202
3	UNITED KINGDOM	265	0,0838	184	81	0,306

4	CHINA	222	0,0702	158	64	0,288
5	CANADA	203	0,0642	155	48	0,236
6	GERMANY	127	0,0402	92	35	0,276
7	IRAN	95	0,03	80	15	0,158
8	INDIA	89	0,0281	61	28	0,315
9	PORTUGAL	61	0,0193	42	19	0,311
10	JAPAN	49	0,0155	36	13	0,265

Most Influential Journals

Table 4 shows a table related to the ten journals that produce the most articles in the field of MHL research, the Internasional

Table 4. Histograms corresponding to the ten institutions that produced the most articles

No	Source	Article
1	INTERNATIONAL JOURNAL OF ENVIRONMENTAL RESEARSH AND PUBLIK HEALT	136
2	BMC PUBLIC HEALT	79
3	BMC PSYCHIATRY	73
4	FRONTIER IN PSYCHIATRY	67
5	PLOS ONE	63
6	BMJ OPEN	57
7	FRONTIERS IN PUBLIC HEALTH	49
8	INTERNATIONAL JOURNAL OF HEALTH SYSTEMS	38
9	FRONTIERS INPSYCHOLOGY	37
10	JOURNAL OF MENTAL HEALTH	32

Most Influential Authors

Table 5 shows the histogram related to the authors who produced the most articles in the field of MHL research, author Jorm AF is the first with 42 articles, the second is author Reavley NJ with 33 articles, and the third is author Wei Y with 25 articles.

Table 5. With the most influential authors in the study

No	Author	Article	Author	Article fractionalized
1	JORM AF	42	JORM AF	11,56
2	REAVLEY NJ	33	FURHAM A	9,58
3	WEI Y	25	REAVLEY NJ	8,19
4	FUNHAM A	23	WEI Y	6,72
5	WANG Y	21	KUCHER S	4,4
6	KUCHER S	19	LI Y	3,91
7	BATTERHAM PJ	18	BATTERHAM PJ	3,87
8	WANG C	17	CORCYNSKI	3,59
9	MORGAM AJ	15	WANG C	3,59
10	OKAN O	15	ROSETTE A	3,59

Co-authoring Network

To get a network of collaborative authors with the vosviewer application. From 3,456 articles there are 3,404 authors set collaborative articles with a minimum of 2 authors per document so that 57 authors are found, collaborative publications based on 57 documents can be described in the form of a co-authoring network, from 57 collaborative authors no collaborative authors are formed, as in Figure 2.

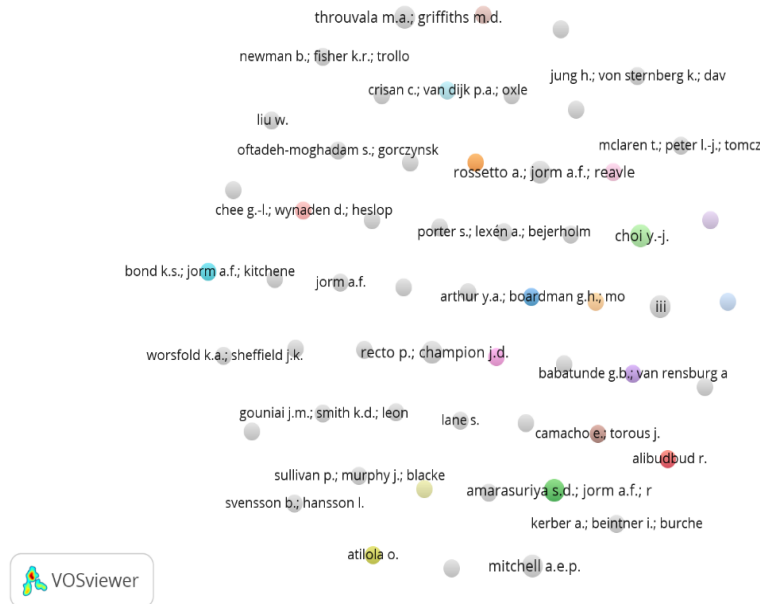


Figure 2. Writing network

In the figure the collaborative authors who have the most citations are (Fonseca et al., 2016) has 2 articles with a total of 148 citations. (Fonseca et al., 2016). The second is (Jung et al., 2017) has 2 articles with 136 citations, Jung, H., Von Sternberg, K., & Davis, K. (2017). (Jung et al., 2017). The third most (Svensson & Hansson, 2016) has 2 articles with 126 citations,

Writing network table

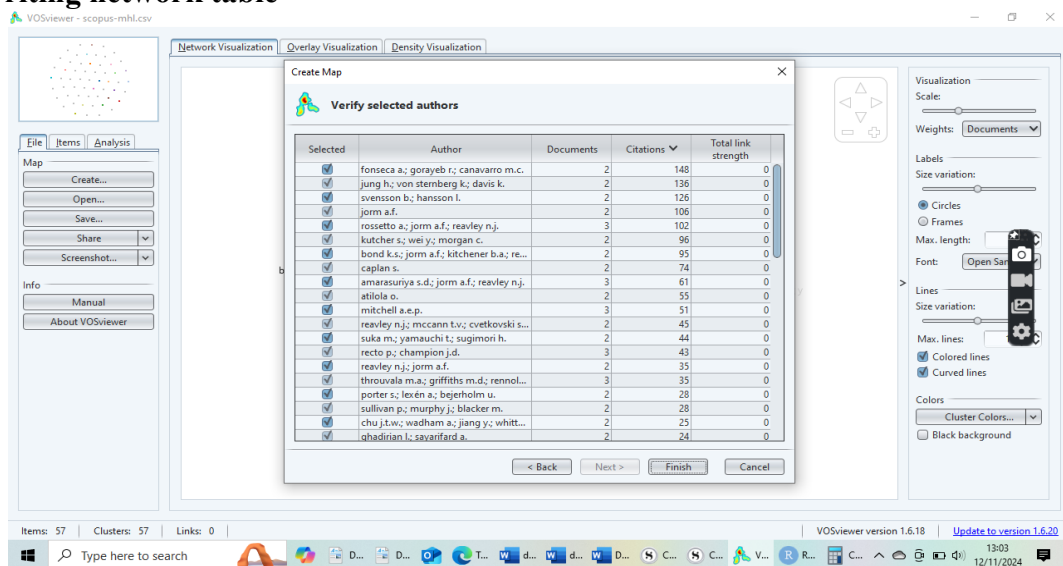


Figure 3. Writing network table

Influential and Trending Articles

Table 6 shows the ranking of citations indicated by the TC (Total Citations) value in the research field of using Machine Learning for credit card fraud detection, the article with the title ‘Alzheimer's disease facts and figures’ with the author (‘2023 Alzheimer's Disease Facts and Figures’, 2023) has the first largest TC value with a value of 1,076, 2023 Alzheimer's disease facts and figures. (2023).

The article with the title ‘Mental health consequences during the initial stage of the 2020 Coronavirus pandemic (COVID-19) in Spain’ with the authors (González C et al., 2020) has the second largest TC value with a value of 993. The article with the title ‘The Impact of Mental Illness Stigma on Seeking and Participating in Mental Health Care’ with the authors (Corrigan et al., 2014) has the third largest TC value with a value of 934 (Corrigan et al., 2014).

Table 6. Ranking of articles based on citations

Author	Title	Tahun	TC
(‘2023 Alzheimer’s Disease Facts and Figures’, 2023)	Alzheimer’s disease facts and figures	2023	1076
(González-Sanguino et al., 2020) Mental health consequences during the initial stage of the 2020 Coronavirus pandemic (COVID-19) in Spain	Mental health consequences during the initial stage of the 2020 Coronavirus pandemic (COVID-19) in Spain	2020	993
(Corrigan et al., 2014) The Impact of Mental Illness Stigma on Seeking and Participating in Mental Health Care	The Impact of Mental Illness Stigma on Seeking and Participating in Mental Health Care	2014	934
(Blake et al., 2020) Mitigating the Psychological Impact of COVID-19 on Healthcare Workers: A Digital Learning Package.	Mitigating the Psychological Impact of COVID-19 on Healthcare Workers: A Digital Learning Package.	2020	806
(Andrade et al., 2014) Barriers to mental health treatment: Results from the WHO World Mental Health survey	Barriers to mental health treatment: Results from the WHO World Mental Health survey	2014	399

(Blake et al., 2020: Andrade et al., 2014)

Keyword analysis

The minimum co-occurrence scale chosen for a keyword is 267. Of the 58,834 keywords used by the author, only 72 met the threshold (criteria). Of the 72 selected, 100% were taken which were said to be relevant as many as 72 keywords.

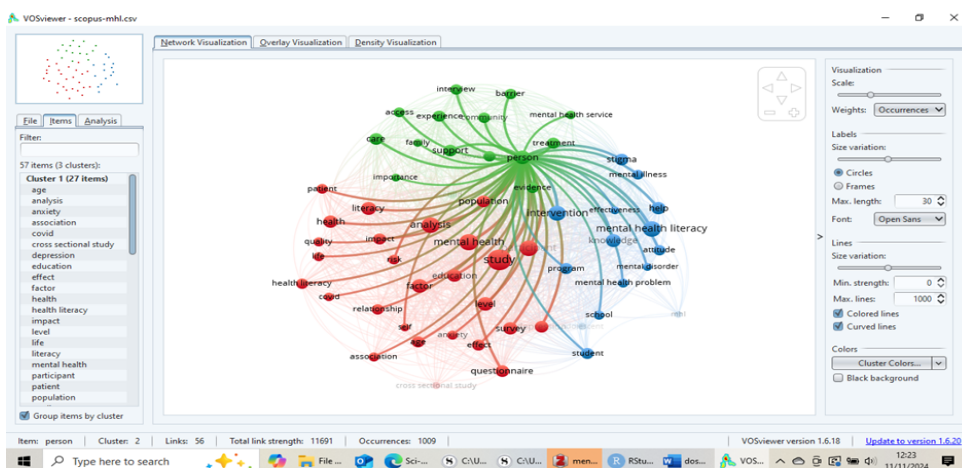
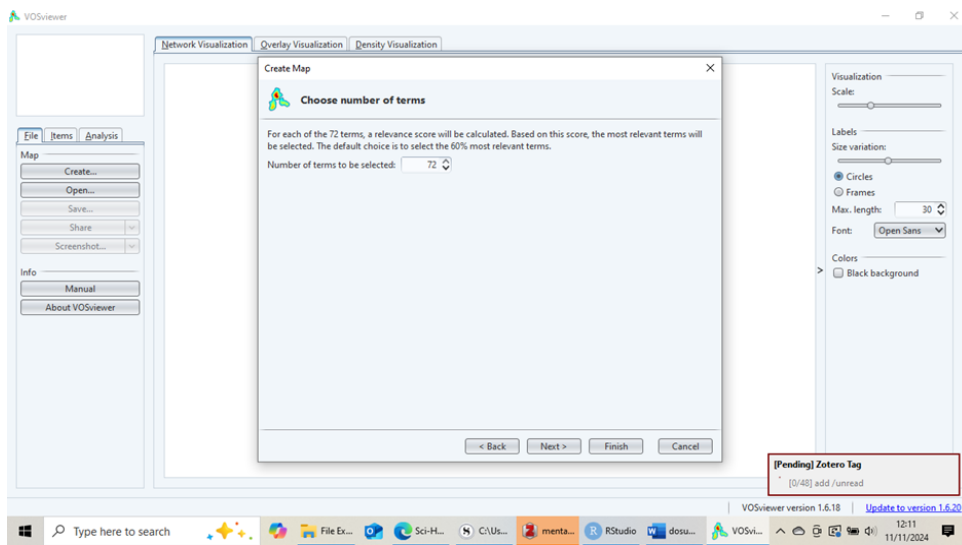
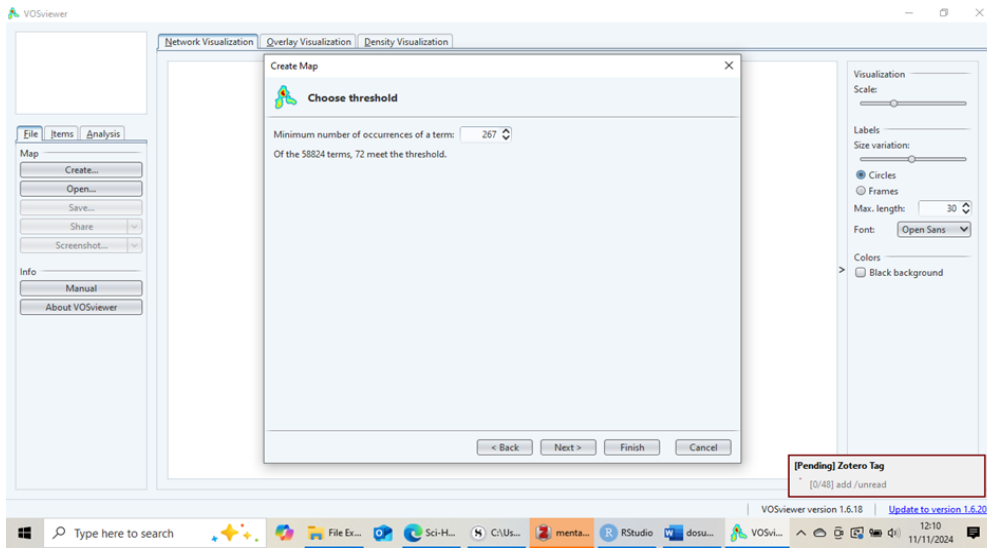


Figure 4. Keywords

Figure 4 explain about from 72 keywords we still eliminate keywords that are not relevant to research on mental health letracy as many as 15. From these 72 keywords the

VosViewer application describes into 3 main groups. Each colour represents a group with association links between keywords. The first largest group, coloured red has 27 keywords namely age, analysis, anxiety, association, covid, cross sectional study, depression, education, effect, factor, health, health literacy, impact, level, life, literacy, mental health, participant, patient, population, quality, questionnaire, relationship, risk, self, study, survey.

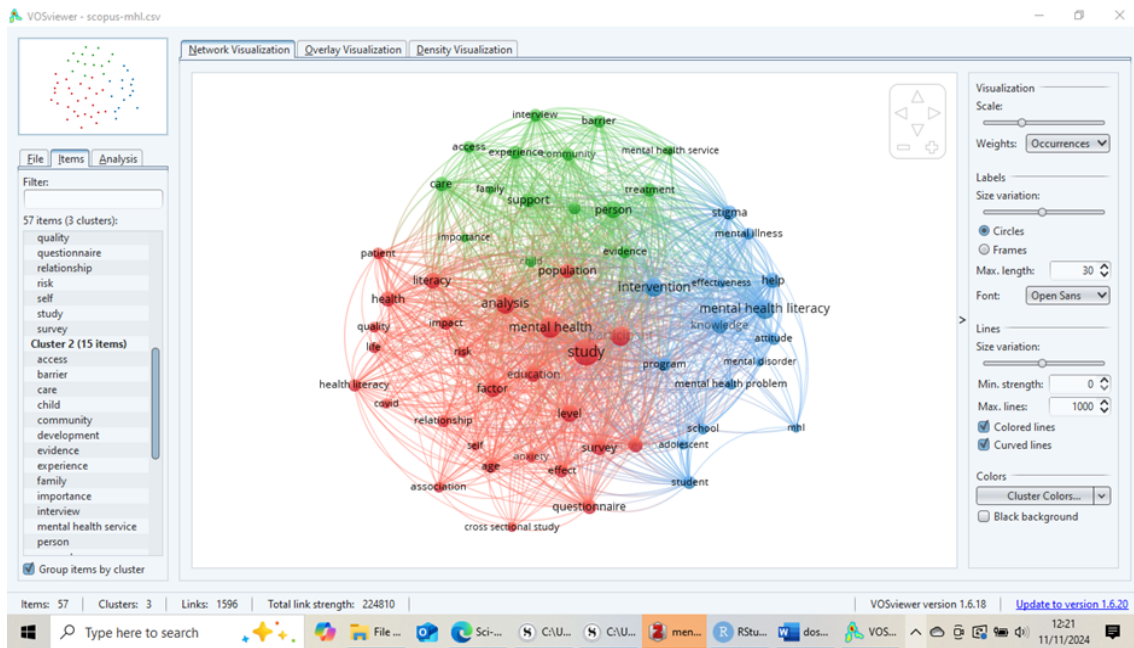


Figure 5. Second largest group in green colour

Figur 5, meanwhile, the second largest group in green colour has 15 keywords, namely access, barrier, care, child, community, development, evidence, experience, family, importance, interview, mental health service, person, support, treatment.

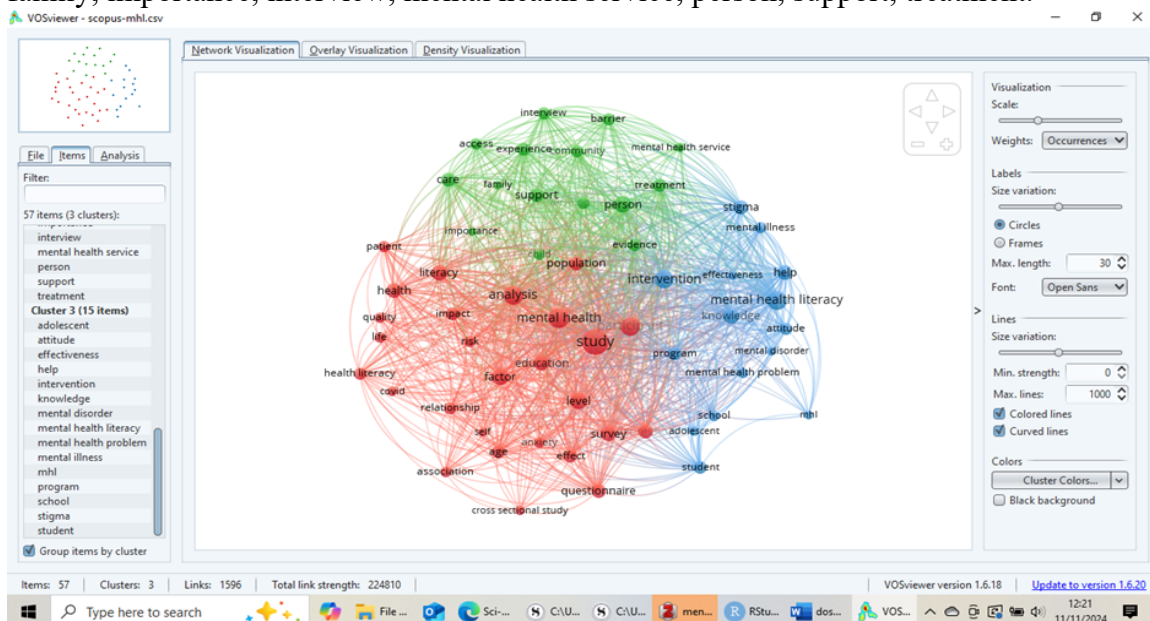


Figure 6. The third largest group

Figure 8, While the keywords currently discussed (Year 202.9) are Study, student, school, addolence, level, age, association, factor, education, risk, healt literacy, life, quality, healt, literacy, participant, intervention, effectiveness, mental healt service, barrier, interview, support, development, which are shown in green as many as 23.

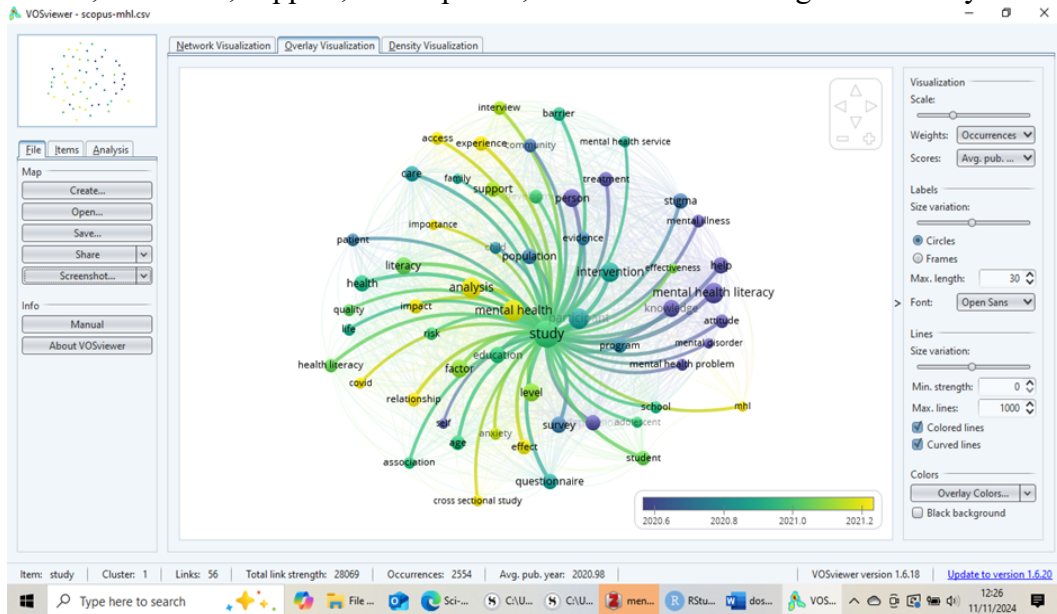


Figure 9. Keywords that were discussed

Figure 9,10,11: Then the keywords that were discussed (Year 2020.6) were Mental healt literacy, knowledge, attitude, mental disorder, mental healt problem, survey, self, expretion, programme, help, mental illness, stickma, population, child, evidence, patient, family, care, community, which is shown in blue colour as many as 17.

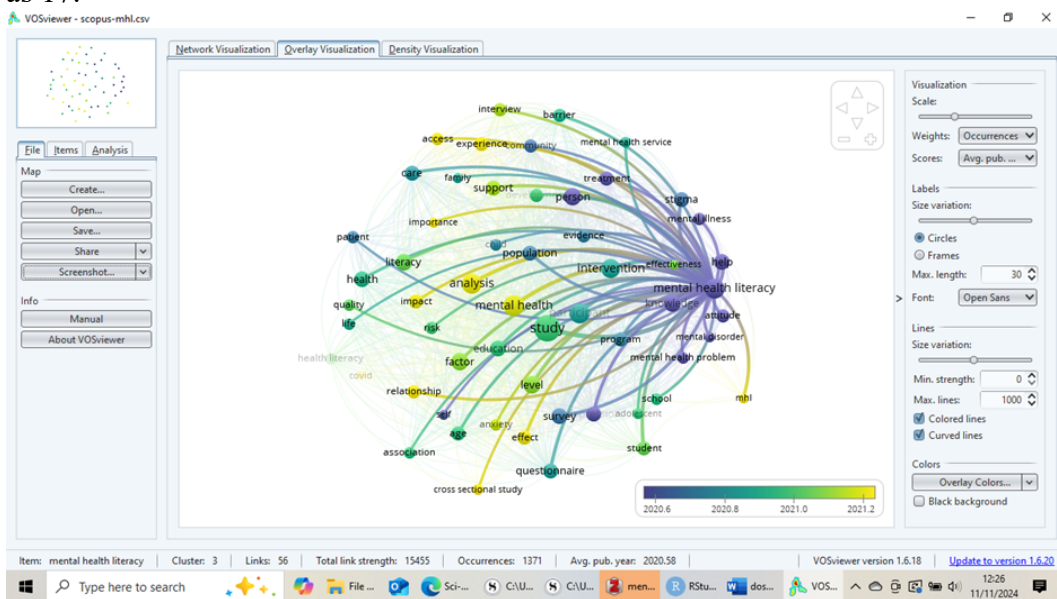


Figure 10. Keywords that were discussed

study explained the need to provide psychosocial support and create a psychologically safe environment. This is in line with mental health education and resources can manage stress and anxiety effectively.

The main stream of this research is based on the keywords age, analysis, anxiety, association, covid, cross sectional study, depression, education, effect, factor, health, health literacy, impact, level, life, literacy, mental health, participant, patient, population, quality, questionnaire, relationship, risk, self, study, survey.

The second research stream is to understand the importance of family support in improving mental health literacy in growing children. Family support has an important role in improving mental health literacy in child development, because the family environment is the basic foundation in shaping children's understanding and attitudes.

Research by Jung et al., (2017) shows that mental health literacy is a knowledge of mental health disorders and the ability to seek help in their resolution is influenced by family and environmental interactions. As family members can act as the primary educators, they can provide the necessary information and emotional support to the child so as to provide a better understanding of mental health. Family involvement is important as it is the initial stage for children to form perceptions about mental health literacy.

In a study by Corrigan et al., (2014) explained that mental health literacy can be improved through family support, as family members can encourage open discussions related to mental health literacy issues. This study explains that family involvement can significantly reduce negative stigma towards mental health problems in children.

Svensson & Hansson, (2016) research explains that family support has been shown to correlate with increased mental health literacy. This study showed that the development of children who received strong family support tended not to be negative towards individuals with mental health problems, so that these children had a more inclusive and empathetic personality. The main stream of this research is based on the keywords access, barrier, care, child, community, development, evidence, experience, family, importance, interview, mental health service, person, support, treatment.

The third research stream is to determine the role of Mental Health Literacy programme in Promoting Mental Health Awareness in Schools. The Mental Health Literacy (MHL) programme can help promote mental health awareness in schools, as it equips students with the knowledge and skills needed to understand, recognise and respond to mental health problems. The integration of MHL programmes into the school curriculum has been shown to significantly improve students' understanding of mental health, thus fostering an environment that supports mental well-being (Le, 2023).

By providing students with accurate information about mental health disorders, their symptoms, and the importance of seeking help, these programmes can effectively reduce stigma and promote positive attitudes towards mental health care (Jung et al., 2017). The main stream of this research is based on the keywords adolescent, attitude, effectiveness, help, intervention, knowledge, mental disorder, mental health literacy, mental health problem, mental illness, mhl, programme, school, stigma, student.

CONCLUSION

This study emphasizes the importance of mental health literacy (MHL) as a key competency that must be developed in educational settings, particularly at the secondary school level. Amidst the growing challenges of mental health among adolescents due to the influence of technology and social media, MHL serves as a foundation for equipping students with the understanding, attitudes, and skills necessary to recognize and address mental health issues.

The study results indicate that the application of MHL in an educational context not only increases student awareness but also reduces stigma and encourages help-seeking behavior. On the other hand, low digital literacy and high uncontrolled digital exposure exacerbate mental health conditions, making the integration of educational technology an important strategy in intervention and prevention.

Through a bibliometric analysis of 1,256 publications from 2014 to 2024, this study provides a comprehensive overview of trends, figures, institutions, and dominant themes in MHL research. These findings can serve as a basis for designing policies, curricula, and technology-based learning media that are more adaptive to students' psychosocial needs. This research also opens opportunities for interdisciplinary collaboration between educators, mental health practitioners, and educational technology developers to improve the mental well-being of the younger generation. Thus, investing in strengthening mental health literacy through an educational technology approach is not only relevant but also urgently needed to create a psychologically healthy educational ecosystem ready to face the challenges of the digital age.

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REFERENCES

- Ambhore, S., & Ofori, E. K. (2023). Exploring psychological well-being in business and economics arena: A bibliometric analysis. *Health Science Reports*, 6(1). <https://doi.org/10.1002/hsr2.1044>
- Andrade, L. H., Alonso, J., Mneimneh, Z., Wells, J. E., Al-Hamzawi, A., Borges, G., Bromet, E., Bruffaerts, R., De Girolamo, G., De Graaf, R., Florescu, S., Gureje, O., Hinkov, H. R., Hu, C., Huang, Y., Hwang, I., Jin, R., Karam, E. G., Kovess-Masfety, V., ... Kessler, R. C. (2014). Barriers to mental health treatment: Results from the WHO World Mental Health surveys. *Psychological Medicine*, 44(6), 1303–1317. <https://doi.org/10.1017/S0033291713001943>
- Blake, H., Bermingham, F., Johnson, G., & Tabner, A. (2020). Mitigating the psychological impact of covid-19 on healthcare workers: A digital learning package. *International Journal of Environmental Research and Public Health*, núm 17. Recuperado el 16 de

- Agosto del 2020. *International Journal of Environmental Research and Public Health*, 17(2997), 1–15. <https://www.mdpi.com/1660-4601/17/9/2997>
- Büyükkidik, S. (2022). A bibliometric analysis: a tutorial for the bibliometrix package in R using irt literature. *Eğitimde Ve Psikolojide Ölçme Ve Değerlendirme Dergisi*, 13(3), 164-193. <https://doi.org/10.21031/epod.1069307>
- Corrigan, P. W., Druss, B. G., & Perlick, D. A. (2014). The impact of mental illness stigma on seeking and participating in mental health care. *Psychological Science in the Public Interest, Supplement*, 15(2), 37–70. <https://doi.org/10.1177/1529100614531398>
- Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., & Lim, W. M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. *Journal of Business Research*, 133(May), 285–296. <https://doi.org/10.1016/j.jbusres.2021.04.070>
- Fonseca, A., Gorayeb, R., & Canavarro, M. C. (2016). Women's use of online resources and acceptance of e-mental health tools during the perinatal period. *International Journal of Medical Informatics*, 94, 228–236. <https://doi.org/10.1016/j.ijmedinf.2016.07.016>
- Giosan, C., Pană, A., Cosmoiu, A., Chira, A. M., Toma, A. M., Papasteri, C. C., Nedelcea, C., & Popoviciu, C. (2024). Mental health literacy and academic performance (MHLAP) in high school students: a randomized clinical trial protocol. *Trials*, 25(1), 1–8. <https://doi.org/10.1186/s13063-024-08270-y>
- González C, Ausín B, Castellanos M, Saiz J, López A, Ugidos C, & Muñoz M. (2020). *Mental health consequences during the initial stage of the 2020 Coronavirus pandemic (COVID-19) in Spain. Brain, Behavior, and Immunity [revista en Internet] 2020 [acceso 09 de junio de 2021]; 87(2020): 172-176. January.* <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7219372/pdf/main.pdf>
- Hanurawan, F. (2012). Strategi Pengembangan Kesehatan Mental Di Lingkungan Sekolah. *PSIKOPEDAGOGIA Jurnal Bimbingan Dan Konseling*, 1(1). <https://doi.org/10.12928/psikopedagogia.v1i1.2572>
- Hidayah, N. H., Pali, M., Ramli, M., & Hanurawan, F. (2016). Students' Well-Being Assessment at School. *Journal of Educational, Health and Community Psychology*, 5(1), 62. <https://doi.org/10.12928/jehcp.v5i1.6257>
- Jung, H., von Sternberg, K., & Davis, K. (2017). The impact of mental health literacy, stigma, and social support on attitudes toward mental health help-seeking. *International Journal of Mental Health Promotion*, 19(5), 252–267. <https://doi.org/10.1080/14623730.2017.1345687>
- Kumar, M., Arulvendan, H., Sanjana, G., Priyadharshni, B., Arumugam, C., Durairaj, J., ... & Thara, R. (2024). Effectiveness of mental health literacy intervention and contact-based education on knowledge, attitude, and stigma towards mental health among secondary school students in chennai, south india: a cluster randomized controlled trial. *Asian Journal of Psychiatry*, 102, 104248. <https://doi.org/10.1016/j.ajp.2024.104248>
- Le, S. Q., Bui, D. T. T., Hoang, H. T., Le, D. T., & Lu, H. T. T. (2023). Experimental mental health understanding program for high school students. *Multidisciplinary Science Journal*, 6(12), 2024253. <https://doi.org/10.31893/multiscience.2024253>
- Li, H., Hafeez, H., & Zaheer, M. A. (2021). COVID-19 and pretentious psychological well-being of students: A threat to educational sustainability. *Frontiers in Psychology*, 11, 628003.
- Liu, Z., Yin, Y., Liu, W., & Dunford, M. (2015). Visualizing the intellectual structure and evolution of innovation systems research: a bibliometric analysis. *Scientometrics*, 103(1), 135–158. <https://doi.org/10.1007/s11192-014-1517-y>
- Muslihati, M., Hotifah, Y., Hidayat, W. N., Sobri, A. Y., Valdez, A. V., Ilmi, A. M., &

- Saputra, N. M. A. (2023). How to Prevent Student Mental Health Problems in Metaverse Era? *Jurnal Kajian Bimbingan Dan Konseling*, 8(1), 33–46. <https://doi.org/10.17977/um001v8i12023p33-46>
- Paul, J., & Criado, A. R. (2020). The art of writing literature review: What do we know and what do we need to know? *International Business Review*, 29(4), 101717. <https://doi.org/10.1016/j.ibusrev.2020.101717>
- Raj, A., Ashok, L., Rao, C., Kamath, V., Kamath, A., & Soman, B. (2021). A scopus based bibliometric analysis on mental health literacy research among the youth: a global perspective. *Journal of Indian Association for Child and Adolescent Mental Health*, 17(2), 162-177. <https://doi.org/10.1177/0973134220210210>
- Saputra, M. A., Ramli, M., Yusuf Sobri, A., Madihie, A., & Khoirul Fitriyah, F. (2024). Digital Literacy as an Indicator of Adolescent Mental Health and Implementation for the Role of School Counselor: A Systematic Literature Review. *SEEJPH: South Eastern European Jurnal of Public Health*, 23(3).
- Svensson, B., & Hansson, L. (2016). How mental health literacy and experience of mental illness relate to stigmatizing attitudes and social distance towards people with depression or psychosis: A cross-sectional study. *Nordic Journal of Psychiatry*, 70(4), 309–313. <https://doi.org/10.3109/08039488.2015.1109140>
- Sweileh, W. (2021). Global research activity on mental health literacy. *Middle East Current Psychiatry*, 28(1). <https://doi.org/10.1186/s43045-021-00125-5>
- Tullius, J. M., Geboers, B., Stewart, R. E., Wei, Y., Reijneveld, S. A., & de Winter, A. F. (2024). Psychometric properties of the knowledge and attitudes to mental health scales in a dutch sample (kamhs-nl): a comprehensive mental health literacy measure in adolescents. *BMC Public Health*, 24(1). <https://doi.org/10.1186/s12889-024-19371-3>
- Van Eck, N. J., & Waltman, L. (2010). Software survey: VOSviewer, a computer program for bibliometric mapping. *Scientometrics*, 84(2), 523–538.
- Yan, B. N., Lee, T. S., & Lee, T. P. (2015). Mapping the intellectual structure of the Internet of Things (IoT) field (2000–2014): A co-word analysis. *Scientometrics*, 105, 1285–1300.
- Zammit, D., Grech, J., Abela, P., & Mamo, D. (2024). Mental health attitudes in Malta: a cross-sectional survey exploring the knowledge and perceptions of general practitioner trainees. *BJPsych Bulletin*, 48(3), 168–172. <https://doi.org/10.1192/bjb.2023.56>