Digital Health Literacy and Its Role in Promoting Health Lifestyle Behaviors Among University Student: A Literature Study

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Abstract: The development of digital technology has changed the pattern of access to health information, especially among students who live as digital natives. This situation requires Digital Health Literacy (DHL) so that students are able to sort through information, avoid exposure to hoaxes, and adapt a healthy lifestyle. This study aims to examine the role of DHL in three main dimensions such as strengthening students' critical abilities to evaluate health information, the role of DHL to reduce the spread of hoaxes through education-based literacy practices, and its contribution to encourage the implementation of healthy lifestyles. The study is based on a literature study method, drawing on scientific sources from 2019 to 2025 that were relevant to the research theme. The findings suggest that students with high DHL levels tend to stick consistently to healthy habits, more selective before sharing health-related content, and demonstrate sharper to think critically, thereby contributing to both academic quality and health. In short, DHL is not only a technical skill, but also intellectual and social capital that shapes the digital health ecosystem on campus. Future studies are recommended to included empirical research across diverse socio-cultural contexts to deepen the understanding of DHL's role.

1 INTRODUCTION

The development of digital technology in the last decade has brought significant changes in the way the younger generation access and utilizes information, including information about health. University students, who are in the productive age group and were born as digital natives, are connected to the internet almost every day for academic and persona purposes (Jiang et al., 2024). The intensity of technology use makes university students a strategic group in the implementation of a healthy lifestyle based on digital literacy. Nevertheless, the abundance of health information available in the digital space does not entirely provide positive benefits. The uncontrolled flow of information faces serious challenges, including an increased risk of misinformation, limited critical analysis skills regarding content validity, and low awareness of the importance of maintaining digital privacy (Mayukh, 2024).

In this context, Digital Health Literacy (DHL) has become a highly relevant competency. Several research findings show that students with high DHL levels tend to stick consistently to implement promotive heathy lifestyle, including regular exercise, maintaining a balanced diet, and managing stress with adaptive strategies (Rivera-Romero et al., 2022). DHL has also been shown to contribute to increased psychological resilience while reducing anxiety caused by exposure to invalid health information (Wenas & Arsastha, 2025). On the contrary, university students with low DHL levels showed vulnerability to unhealthy lifestyles, non-compliance with disease prevention measures, and a decline in academic outcomes (Kang, 2019). This confirms that DHL is not only a technical skill, but

also an important dimension in shaping the quality of life of students in the digital era.

The role of DHL in students' lives can be examined through three main dimensions. First, DHL serves to hone students' critical skills in sorting through health information. University students good digital literacy do not immediately trust the information that circulates, but are accustomed to verifying sources, comparing content from various references, and assessing its relevance with scientific evidence (Tsukahara et al., 2020). Second, DHL plays a role in curbing the spread of hoaxes through education-based literacy practices (Htay et al., 2022). University students who are accustomed to verifying the accuracy of information will be more cautious in sharing content, especially on social media, thereby contributing to the creation of a healthier information environment (Valentim et al., 2024). Third, DHL encourages students to adopt a healthy lifestyle based on valid information (Purwanti et al., 2025). With greater access to nutritional guidelines, proper exercise practices, and correct use of medication, students have a greater opportunity to develop consistent and sustainable healthy lifestyle behaviors.

Although many studies emphasize the importance of DHL, empirical findings still show diversity. Social, economic, and academic context factors are reported to influence the relationship between DHL and student health behaviors (Tsukahara et al., 2020). In addition, measurement instruments which commonly uses, such as eHEALS, have limitations in capturing the complexity of digital literacy in the era of social media. This situation highlights the need to develop conceptual frameworks and evaluation tools that are more suited to today's digital dynamics (Chen et al., 2025).

Based on the above description, this study aims to review the latest literature on the role of DHL in promoting a healthy lifestyle among students and to identify its implications for the development of digital-based health intervention strategies. The research analysis focuses on three main aspects, such as the role of DHL to encourage the adoption of a healthy lifestyle, the role of DHL in honing university students' critical skills to sort information, and the role of DHL to surpress the spread of hoaxes through education-based health literacy. This study is expected to offer conceptual and practical contributions, both in enhancing academic understanding of digital health literacy and in promoting technology-based health promotion strategies among university students.

2 METHOD

Research Strategies

This study uses a literature study approach with the aim of critically examining scientific works that discuss Digital Health Literacy (DHL) among students, focusing on three main aspects such as the role of DHL in honing university students' critical skills to sort information, the role of DHL to surpress the spread of hoaxes through education-based health literacy and the role of DHL to encourage the adoption of a healthy lifestyle. The literature search was conducted using the academic databases PubMed, PLoS, and Google Scholar, covering publications from 2019 to 2025, as this period reflects the latest developments in digital health literacy in the era of social media and post pandemic. The search was conducted using a combination of keywords such as digital health literacy, eHealth literacy, university students, critical thinking, misinformation, healthy lifestyle, dan social media.

Data Selection Criteria

Literature selection was based on applying strict inclusion and exclusion criteria. The selected articles are peer-reviewed publications from 2019-2025 that explicitly examine the relationship between DHL and the three research focuses, namely students' critical ability to sort through health information, efforts to prevent the spread of hoaxes through education-based literacy, and the application of healthy lifestyles based on valid information. Articles

published before 2019, non-peer-reviewed publications, or literature not relevant to the three focuses were excluded from the analysis. However, several classical works, such as the Lily Model develop by Norman and Skinner (2006), continue to

be used as a conceptual basis to strengthen the theoretical framework of this study.

3   RESULTS

The following results were obtained from the literature study:

Table 1. Literature Study Results

No	The Role of Digital Health Literacy (DHL) in Promoting Healthy Lifestyle Behaviors Among University Students.	Literature
1.	The role of Digital Health Literacy (DHL) to promote healthy lifestyles.	(Zhou et al., 2025),(Saputra & Dr. FaridaNurul Rakhmawati, 2025), (Mayukh, 2024) ,(Kim & Oh, 2021),(Valentim et al., 2024), (Chen et al., 2025), (Huang et al., 2020), (Rivera-Romero et al., 2022), (Jiang et al., 2024), (Dağ et al., 2025).
2.	The role of Digital Health Literacy (DHL) to suppress the spread of hoaxes through education-based literacy.	(Göçeretal.,2021),(Mousazadeh et al., 2025), (Tsukahara et al., 2020), (Zhao et al., 2024), (Chao, 2024), (Li et al.,2021)(Htay etal.,2022)(Bonaccorsietal.,2023),(Syafei, 2023) , (Frings etal.,2022), (Patanapu et al., 2022), (Zhou et al., 2022), (Algorani & Gupta, 2025), (Sørensen, 2024)
3.	The role of Digital Health Literacy (DHL) in honing students' critical skills to sort information.	(Shiferaw et al., 2020),(Lee et al., 2021), (Talitha et al., 2025), (Vrdelja et al., 2021), (Rahman et al., 2021), (Kang, 2019),(N. Kasımoğlu, P. Karakurt, dan S. Atalıkoğlu Başkan, n.d.), (Syafei, 2023), (Anisahetal.,2021), (Purwantietal.,2025), (Fatihah &Wicaksono, 2025), (Mousazadeh et al., 2025)

4   DISCUSSION

Digital Health Literacy (DHL) and Review of Healthy Lifestyle of University Students

Digital Health Literacy (DHL) is an increasingly essential competency in the post-pandemic era, when the digital space is no longer just a means of entertainment or communication, but also the main arena for students to gather and interpret health information (Htay et al., 2022). This concept is rooted in eHealth literacy, which was introduced Norman and Skinner (2006) Lily Model, which initially emphasized basic skills for finding, understanding, and using electronic health information (Norman & Skinner, 2006). However, technological developments, social media algorithms, and the current flood of health content demand a reinterpretation of DHL. DHL now covers critical skills in sorting information, ethical awareness related to digital privacy, and the capacity to use digital space as a means of health advocacy (Wenas & Arsastha, 2025).

University students, as digital natives, occupy a strategic position in this context. They are not merely passive users, but actors who shape and are shaped by the digital ecosystem. Sufficient DHL supports students not only to maintain their personal health, but also to act as agents who spread healthy living practices in their communities (Mousazadeh et al., 2025). Thus, DHL can be seen as a new capital in academic life: a skill that not only influences individual choices, but also strengthens the social structure of the campus in building a healthy technology-based culture (Chao, 2024).

The Role of Digital Health Literacy (DHL)

Based on the literature study conducted, several roles of Digital Health Literacy (DHL) were identified. These roles include:

- **The role of Digital Health Literacy (DHL) to promote healthy lifestyles.**

Literature findings indicate that DHL has a direct impact on the quality of students' decisions in managing their daily lives (Zhao et al., 2024). Students with high DHL are better able to select accurate health information to apply, ranging from balanced diets to sleep management (Kim & Oh, 2021). Interestingly, DHL works not only on an informational level, but also on a motivational level. Information packaged in digital applications often triggers reflective awareness: university students start to see healthy living not as an obligation, but as part of the identity they wish to build (Saputra & Dr. Farida Nurul Rakhmawati, 2025). Yet, the variability of socioeconomic contexts confirms that DHL is not a "neutral ability". Access to technology, cultural openness to scientific information, and institutional support from universities are determining factors that either strengthen or limit the influence of DHL to promote healthy lifestyles (Huang et al., 2020). Thus, DHL should be understood as a social practice that does not stand alone, but is always negotiated with the structural conditions of university students.

- **The role of Digital Health Literacy (DHL) to suppress the spread of hoaxes through education-based literacy.**

One of DHL's most strategic contributions is its ability to reduce the spread of health hoaxes (Patanapu et al., 2022). Research findings indicate that students with high DHL levels are more selective in sharing information, accustomed to cross-checking, and aware that every "share" click has social consequences. At this point, DHL is no longer just an individual skill, but a collective mechanism that reorganizes the information ecosystem (Dağ et al., 2025). University students with good DHL have the potential to become "digital citizenship", whose presence determines whether misleading information will remain in private spaces or spread widely in public spaces (Sørensen, 2024). This role makes university students not only consumers, but also producers and curators of health information. The challenge is that the literacy gap still leaves a gap: some students remain vulnerable to misinformation, which can spread into an "infodemic". Therefore, integrating DHL into higher education strategy is not only an investment in health, but also an effort to build the resilience of the digital society (Frings et al., 2022).

- **The role of Digital Health Literacy (DHL) in honing students' critical skills to sort information.**

DHL also serves as an intellectual laboratory for university students to practice critical thinking skills. University students with high DHL are accustomed to testing claims, tracing the origins of sources, and comparing data from different perspectives (Vrdelja et al., 2021). This process does not end at health alone but shapes a mindset that can be transferred to other academic fields, including research and scientific writing (Göçer et al., 2021). In the other words, DHL not only trains university students to become healthy individuals, but also sharp thinkers and careful researchers. The findings of Purwanti et al. (2025) even show that students with good DHL tend to have more consistent academic performance, because the critical skills they use in sorting health information carry over into academic activities. As a results, DHL can be positioned as a transdisciplinary skill that connects the fields of health, education, and intellectual capacity building for university students (Mousazadeh et al., 2025).

5 CONCLUSIONS

This study confirms that Digital Health Literacy (DHL) is not only a technical skill to search for health information, but rather intellectual capital that determines the quality of life of students in the digital era. Literature findings show that DHL has three strategic roles: sharpening students' critical thinking skills in sorting information, reducing the spread of health hoaxes through education-based literacy, and encouraging the consistent implementation of a healthy lifestyle based on valid data. Thus, building a healthy and resilient generation requires not only individual literacy but also supportive educational systems and public policies. Future studies are recommended to included empirical research across diverse socio-cultural contexts to deepen the understanding of DHL's role.

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