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Digital Health Literacy and Healthcare Utilization Behavior Among JKN Participants in Gowa Regency: A Preliminary Descriptive Study

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Abstract

Background: *Low Digital Health Literacy (DHL) and health misinformation on social media are believed to contribute to irrational primary healthcare utilization among JKN participants, yet empirical evidence from South Sulawesi remains limited.*
Aims: *To describe DHL levels, digital health information consumption patterns, and potentially inappropriate utilization behaviors among JKN participants in Gowa Regency.*
Methods: *A descriptive cross-sectional study was conducted in October–November 2025 at Klinik Nuhrintama, Gowa. Twenty-five active JKN participants were recruited via consecutive sampling. Data were collected using a structured questionnaire measuring DHL (adapted DHLI, 7 items), digital information consumption patterns, and healthcare utilization behaviors, and analyzed descriptively.*
Results: *Over half of respondents (52.0%) demonstrated moderate-to-low DHL (mean 20.8, SD=5.6), with the lowest scores in source reliability assessment (2.72) and verifying before acting (2.60). Most participants (80.0%) consulted social media prior to seeking care, predominantly via Google (44.0%) and TikTok (28.0%). Only 12.0% consistently verified information with a healthcare professional. Potentially inappropriate utilization behaviors were reported by 36.0% of respondents, most commonly requesting medications or supplements based on social media content (32.0%).*
Conclusion: *A critical gap exists between digital access and health literacy in Gowa Regency, underscoring the need for larger-scale studies with validated instruments and robust analytic designs.*

Keywords: *digital health literacy; healthcare utilization behavior; health misinformation; irrational healthcare utilization*

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INTRODUCTION

The National Health Insurance System (JKN), administered by BPJS Kesehatan, faces sustained financial and operational pressures that threaten the long-term sustainability of the program[1]. Among the documented challenges, fraudulent practices have received considerable scholarly attention; however, the majority of existing studies have focused on provider-side fraud, while irrational utilization behavior on the part of beneficiaries including overutilization, membership abuse, and requests for services without medical indication has received comparatively limited attention [2,3]. It is important to note that such behaviors exist on a spectrum ranging from irrational utilization and service overutilization to, at the more severe end, deliberate fraud; the present study focuses on the former rather than on fraud per se.

Digital transformation has fundamentally altered how individuals access health information. On one hand, this ease of access presents opportunities for improved health knowledge. On the other hand, an uncurated digital information ecosystem creates fertile ground for the spread of health misinformation[4]. The 2025 Indonesian Digital Society Index (*Indeks Masyarakat Digital Indonesia*/IMDI) Survey reported that 30.3% of Indonesians are unable to verify the credibility of digital health information sources[5]. Gowa Regency recorded an IMDI score of 51.12, higher than the South Sulawesi average of 44.41, yet this figure suggests that improved access does not necessarily translate into adequate critical health literacy[5].

Digital Health Literacy (DHL) defined as the ability to seek, comprehend, appraise, and apply health information obtained from digital sources represents a critical competency that shapes how individuals respond to health-related information [6]. Low DHL may drive irrational healthcare utilization decisions, which in the context of JKN could generate a disproportionate claims burden[7,8]. However, no study has specifically measured DHL and examined its relationship with primary care utilization behavior among JKN beneficiaries in South Sulawesi.

As a primary care physician at Klinik Nuhrintama, Gowa, the researcher routinely observes patients presenting with requests for services or medications based on information obtained from social media or other digital platforms. This phenomenon prompted a preliminary study to descriptively map the level of DHL, patterns of digital health information consumption, and potentially inappropriate utilization behaviors among JKN beneficiaries attending the clinic.

This study aimed to: (1) describe the distribution of DHL levels among JKN beneficiaries at Klinik Nuhrintama; (2) map the patterns of digital health information consumption and verification among respondents; (3) identify healthcare utilization behaviors that carry potential risk; and (4) explore the association between sociodemographic factors and DHL categories. The findings of this study are expected to provide an initial empirical foundation for future large-scale research.

METHODS

Research Design and Setting

This study employed a descriptive cross-sectional design and was conducted at Klinik Nuhrintama, Gowa Regency, South Sulawesi, during the period of October–November 2025. Klinik Nuhrintama is a primary-level clinic affiliated with the National Health Insurance program (BPJS Kesehatan), serving more than 3.800 active JKN beneficiaries from the Somba Opu District and surrounding areas. This clinic was selected as the research site for two reasons: first, the lead researcher serves as a primary care physician at this facility, ensuring direct access to the study

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population; and second, Somba Opu is the most densely populated and urbanized district in Gowa Regency, providing a sociodemographically diverse sample of JKN beneficiaries. It is acknowledged, however, that the use of a single-site setting may not fully represent the heterogeneity of JKN beneficiaries across the entire regency, particularly in more rural sub-districts.

Population, Sample, and Sampling Technique

The target population comprised all active JKN beneficiaries utilizing services at Klinik Nuhrintama. Participants were recruited using a consecutive sampling technique, whereby every patient meeting the inclusion criteria was enrolled during the data collection period until the required sample size was achieved. Based on a proportion estimation formula with a 95% confidence level, a 10% precision margin, and an estimated low DHL proportion of 50%, the minimum sample size was set at 25 respondents for a preliminary study. Inclusion criteria were as follows: active JKN membership, age ≥18 years, utilization of Klinik Nuhrintama services during the study period, access to a digital device, and willingness to participate (documented by written informed consent). Exclusion criteria included patients presenting with acute or emergency conditions, cognitive impairment, and inability to read or write.

Research Instruments

The instrument consisted of a structured questionnaire comprising: (1) sociodemographic data; (2) a Digital Health Literacy (DHL) scale adapted from the short version of the Digital Health Literacy Instrument (DHLI) (7 items, Likert scale 1–4, total score range 7–28), categorized as low (7–14), moderate (15–21), and high (22–28) [6]; (3) digital health information consumption patterns; and (4) potentially inappropriate utilization behaviors (8 yes/no items). The adaptation of the DHLI followed a standardized process: the original English instrument was translated into Bahasa Indonesia by a bilingual health professional, followed by back-translation into English by an independent translator to verify conceptual equivalence. The translated items were then reviewed by a panel of experts in public health and health communication to assess cultural appropriateness for the South Sulawesi context. To the authors' knowledge, this represents one of the first applications of the DHLI short version among JKN beneficiaries in Indonesia. Content validity of the questionnaire was assessed through expert panel review (Content Validity Index, CVI = 0.89) and a readability test. Reliability of the DHL scale was evaluated using Cronbach's alpha coefficient ($\alpha = 0.81$).

Data Collection and Analysis

Data were collected in the clinic waiting area after patients had completed their visits, with an average completion time of 12–15 minutes. Data were analyzed using IBM SPSS Statistics version 25. Descriptive analysis was performed to characterize the sociodemographic profile of participants, describe the distribution of DHL scores, examine digital health information consumption patterns, and determine the prevalence of potentially inappropriate utilization behaviors.

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RESULTS

Sociodemographic Characteristics of Respondents

A total of 25 respondents were successfully recruited. The distribution of sociodemographic characteristics is presented in **Table 1.**

Table 1. Sociodemographic Characteristics of Respondents

Characteristic	n	%
Age		
18–30 years	14	56.0
31–45 years	4	16.0
46–60 years	7	28.0
>60 years	0	0.0
Sex		
Female	17	68.0
Male	8	32.0
Last Education		
Primary School	1	4.0
Junior High School	1	4.0
Senior High School	16	64.0
Diploma/Bachelor's Degree or above	7	28.0
Occupation		
Homemaker/Unemployed	9	36.0
Private Sector Employee	9	36.0
Self Employed/Trader	3	12.0
Other (contractual worker, retiree, etc.)	3	12.0
Student	1	4.0
Healthcare Facility Visit Frequency (Past 12 Months)		
1–2 times	9	36.0
3–5 times	8	32.0
6–10 times	5	20.0
>10 times	3	12.0
Digital Device Ownership		
Smartphone	25	100.0
Laptop/Computer	5	20.0
Tablet	1	4.0

Source: Primary Data, 2025

The respondents were predominantly in the 18–30 age group (56.0%), female (68.0%), and had completed senior high school as their highest level of education (64.0%). All respondents (100.0%) owned a smartphone, indicating that access to digital information was already widespread among users of this clinic's services. The majority (68.0%) had visited a healthcare facility between 1 and 5 times in the preceding 12 months.

Distribution of Digital Health Literacy Levels

Respondents' DHL scores ranged from 7 to 28 (Mean = 20.8; SD = 5.6). The distribution of DHL levels is presented in **Table 2.**

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Table 2. Distribution of Respondents' Digital Health Literacy Levels

DHL Category	Score Range	n	%	Mean Score (SD)
Low	7–14	3	12.0	9.3 (3.5)
Moderate	15–21	10	40.0	18.8 (2.1)
High	22–28	12	48.0	25.1 (1.9)
Total	**7–28**	**25**	**100.0**	**20.8 (5.6)**

Source: Primary Data, 2025

Table 3. Mean Item Scores of the Digital Health Literacy Instrument

Item	DHL Dimension	Mean	SD
B1	Ability to search for digital health information	3.08	0.86
B2	Assessing the relevance of retrieved information	3.00	0.87
B3	Evaluating the reliability of information sources*	2.72	1.06
B4	Verifying information prior to taking action*	2.60	0.96
B5	Determining the quality of digital health information	3.08	0.91
B6	Applying acquired health information	3.20	0.96
B7	Critically sharing digital health information	3.16	1.07

*Subscales with the lowest mean scores. *Source: Primary Data, 2025*

A total of 52.0% of respondents, comprising those in the low and moderate DHL categories demonstrated suboptimal digital health literacy capacity (Table 2) The subscales yielding the lowest mean scores were *verifying information prior to taking action* (Mean = 2.60; SD = 0.96) and *evaluating the reliability of information sources* (Mean = 2.72; SD = 1.06), indicating that critical evaluation of digital health information represents the weakest DHL dimension within this population **(Table 3).**

Digital Health Information Consumption Patterns and Information Verification

Table 4 presents the distribution of respondents based on their patterns of using digital platforms to seek health information and their information verification behaviors. Google/search engines (44.0%) and TikTok (28.0%) were the most widely used platforms, followed by WhatsApp groups (24.0%) and Instagram/Facebook (20.0%). Only 12.0% of respondents utilized official sources as their primary reference. Of concern, merely 12.0% of respondents verified health information with healthcare professionals, while the majority (52.0%) sought confirmation solely from other digital sources. Furthermore, 80.0% of respondents reported having searched for information on social media prior to deciding whether to seek care at a health facility.

Potentially Inappropriate Utilization Behaviors

Table 5 presents the prevalence of eight potentially potentially inappropriate utilization behaviors, categorized into three typologies. The classification of these behaviors as potentially risk-prone is grounded in the Indonesian Ministry of Health Regulation No. 16 of 2019 on Fraud Prevention in the National Health Insurance Program, which delineates specific beneficiary behaviors that may contribute to irrational or inappropriate service utilization [9]. Within this framework, behaviors were grouped into: (1) overutilization service use exceeding clinical need; (2) identity or membership misuse use of another person's insurance card; and (3) requests for medically unindicated services demands for specific treatments or referrals not clinically justified. It is acknowledged that some behaviors in this classification, such as requesting a

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referral or switching physicians may not always be inappropriate in isolation, and their classification as risk-prone is contextual rather than absolute.

Table 4. Digital Health Information Consumption Patterns and Verification Behaviors Among Respondents

Variable	n	%
Primary platform for seeking health information**		
Google/Search engine	11	44.0
TikTok	7	28.0
WA (Family/Community Groups)	6	24.0
Instagram/Facebook	5	20.0
Health applications (Alodokter, Halodoc, etc.)	3	12.0
YouTube	3	12.0
Official websites (Ministry of Health/BPJS/IDI)	3	12.0
Never seek information digitally	2	8.0
Frequency of seeking digital health information		
Almost every day	5	20.0
Several times a week	2	8.0
Several times a month	11	44.0
Rarely/never	7	28.0
Method of verifying digital health information		
Seeking confirmation from other internet sources	13	52.0
Asking family members or close friends	7	28.0
Verifying with a physician/healthcare professional	3	12.0
Other	2	8.0
Ever searched for information on social media BEFORE deciding to visit a health facility		
Yes	20	80.0
No	5	20.0
Most trusted source of health information		
Physician/Healthcare professional (in person)	15	60.0
Family members or friends considered knowledgeable	4	16.0
Official health websites/applications	3	12.0
Social media (WA, TikTok, Instagram, YouTube)	2	8.0
Google/Search engine	1	4.0

**A single respondent may select more than one platform. Source: Primary Data, 2025

Google/search engines (44.0%) and TikTok (28.0%) were the most widely used platforms, followed by WhatsApp groups (24.0%) and Instagram/Facebook (20.0%). Only 12.0% of respondents utilized official sources as their primary reference. Of concern, merely 12.0% of respondents verified health information with healthcare professionals, while the majority (52.0%) sought confirmation solely from other digital sources. Furthermore, 80.0% of respondents reported having searched for information on social media prior to deciding whether to seek care at a health facility.

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To operationalize this distinction, each item in the questionnaire was deliberately framed to capture the context in which the behavior occurs rather than the behavior itself in isolation. For instance, switching physicians (Item 7) was framed specifically as switching because the previous physician did not prescribe the requested medication, a context associated with doctor-shopping behavior driven by social media-influenced expectations rather than by clinical dissatisfaction [10]. Similarly, requesting a specialist referral (Item 8) was framed as requesting referral despite the attending physician determining that the condition had resolved, which departs from the clinical gatekeeping function of primary care under the JKN referral system. Requesting specific medications (Item 6) was framed as requesting medication that the physician did not recommend, thereby implicating social media content as the driver rather than clinical judgment. These contextual framings are consistent with the behavioral indicators outlined in Permenkes No. 16/2019 and align with the concept of demand-side moral hazard in health insurance literature, wherein insurance coverage may inadvertently incentivize utilization beyond clinical necessity [8,11].

Table 5. Prevalence of Potentially Inappropriate Utilization Behaviors

No.	Behavior	Yes n (%)	No n (%)
Typology 1: Overutilization			
1	Ever requested medications/supplements based on social media information without a physician's recommendation	8 (32.0%)	17 (68.0%)
2	Ever made repeated visits to healthcare facilities to obtain the same medication from different physicians	3 (12.0%)	22 (88.0%)
3	Ever visited a healthcare facility solely to obtain a medical certificate despite feeling healthy	4 (16.0%)	21 (84.0%)
Typology 2: Identity/Membership Misuse			
4	Ever lent a BPJS card to another person who is not a registered member	0 (0.0%)	25 (100.0%)
5	Ever used another person's BPJS card to access healthcare services	0 (0.0%)	25 (100.0%)
Typology 3: Requests for Medically Unindicated Services			
6	Ever asked a physician to prescribe a specific medication read about online, despite the physician not recommending it	2 (8.0%)	23 (92.0%)
7	Ever switched to another physician because the first physician did not provide the requested medication or treatment	1 (4.0%)	24 (96.0%)
8	Ever requested a specialist referral without experiencing improvement, despite the physician indicating that the condition had resolved	2 (8.0%)	23 (92.0%)

Source: Primary Data, 2025

The most frequently reported potentially inappropriate utilization behaviors was requesting medications or supplements based on social media information (32.0%), followed by obtaining a medical certificate without being ill (16.0%) and making repeated visits to obtain the same medication (12.0%). No respondents reported identity or membership misuse (Typology

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2). Overall, 9 of 25 respondents (36.0%) reported engaging in at least one potentially inappropriate utilization behaviors across the eight items assessed.

Relationship Between Sociodemographic Factors and DHL Categories

Table 6. Distribution of DHL Categories by Sociodemographic Variables

Variable	Low DHL n (%)	Moderate DHL n (%)	High DHL n (%)	Total n
Education				
Elementary/Junior High School	1 (50.0%)	1 (50.0%)	0 (0.0%)	2
Senior High School/Equivalent	2 (12.5%)	7 (43.8%)	7 (43.8%)	16
Diploma/Bachelor's Degree or Above	0 (0.0%)	2 (28.6%)	5 (71.4%)	7
Frequency of social media use for health information				
Almost every day	0 (0.0%)	3 (60.0%)	2 (40.0%)	5
Several times/week	0 (0.0%)	0 (0.0%)	2 (100.0%)	2
Several times/month	1 (9.1%)	4 (36.4%)	6 (54.5%)	11
Rarely/never	2 (28.6%)	3 (42.9%)	2 (28.6%)	7

Note: The sample size was too small to permit valid chi-square testing; data are presented descriptively. Source: Primary Data, 2025

Table 6 presents the distribution of DHL categories based on selected sociodemographic variables. Descriptively, there was a tendency for respondents with higher educational attainment to demonstrate higher DHL levels 71.4% of respondents with a diploma or bachelor's degree and above fell into the high DHL category, compared with 43.8% among those with senior high school education and 0% among those with elementary or junior high school education. Regarding social media usage patterns, respondents who used social media for health information several times per week tended to exhibit higher DHL levels (100% in the high category), whereas those who rarely or never used social media showed a more varied distribution across categories. It should be noted that the small sample size (n=25) precluded valid chi-square analysis; therefore, the observed trends are descriptive in nature and should be confirmed in future studies with larger samples.

DISCUSSIONS

This preliminary study provides the first empirical overview of DHL levels and health service utilization behavior patterns among JKN participants in Gowa Regency, based on real data from 25 respondents. Although the DHL distribution in this study was better than anticipated — with 48.0% of respondents achieving the high category — the fact that 52.0% remain in the moderate-to-low categories nevertheless confirms the existence of a gap warranting attention.

The DHL subscale with the lowest mean was *verifying information before acting* (2.60), followed by *assessing source reliability* (2.72), consistent with the findings of Yoon et al. (2025), who identified critical evaluation ability as the lowest DHL subscale even in populations with good digital access [12]. These findings also align with the 2025 IMDI data, which identified verification ability and source credibility evaluation as the weakest dimensions of digital literacy among the Indonesian population.[5] The issue lies not in information access, all respondents owned smartphones but rather in their capacity for critical evaluation of the information received. A particularly striking finding was that 80.0% of respondents had sought health

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information on social media prior to deciding to visit a healthcare facility. Google (44.0%) and TikTok (28.0%) emerged as the dominant platforms, diverging from the initial assumption that WhatsApp would be the primary channel.

The prominence of TikTok warrants contextual explanation. At the structural level, TikTok's recommendation algorithm prioritizes content based on engagement signals — views, shares, and completion rate, rather than medical accuracy, making it inherently prone to amplifying emotionally compelling but clinically unverified health content.[13] At the demographic level, the majority of this sample (56.0%) belonged to the 18–30 age group, for whom TikTok is the primary digital information environment, consistent with national consumption trends among Indonesian youth [5].

At the local level, the sociocultural context of Gowa Regency is equally relevant. Gowa is a predominantly collectivist society in which health decisions are frequently shaped by peer influence, family networks, and community opinion leaders rather than by individual critical appraisal.[5] In this context, health content shared virally on TikTok or within WhatsApp family groups carries implicit social endorsement, which may substitute for or override professional medical advice. The relatively high proportion of respondents who verified information by asking family members or close friends (28.0%), compared with only 12.0% who consulted healthcare professionals, is consistent with this pattern. Furthermore, Gowa's IMDI score of 51.12, while above the South Sulawesi provincial average, still reflects a population in digital transition: widespread device access has outpaced the development of critical digital health literacy skills [5]. These dynamics have concrete implications for primary care delivery. Physicians at first-contact facilities such as Klinik Nuhrintama increasingly encounter patients whose clinical expectations have been pre-formed by social media content manifesting as requests for specific medications, demands for specialist referrals, or resistance to diagnoses that contradict online sources. This phenomenon lengthens consultation time, strains the physician-patient relationship, and may generate unnecessary downstream utilization within the JKN system.[10] Addressing this requires not only patient-level health literacy interventions, but also platform-level accountability and primary care communication strategies tailored to a digitally active but critically under-equipped population.

The prevalence of potentially inappropriate utilization behaviors identified in this study (36.0% reporting at least one behavior) was lower than the previous illustrative figure of 76.6%, yet remains clinically meaningful. The most frequently reported behavior was requesting medications or supplements based on social media information (32.0%), a pattern more accurately characterized as irrational utilization influenced by digital misinformation rather than intentional fraud. The absence of membership identity misuse (Typology 2) in this sample may reflect social desirability bias inherent to self-reporting, or may genuinely indicate a low prevalence of this behavior at this particular clinic.

The descriptive tendency suggesting an association between higher education and better DHL is consistent with the international literature.[14,15] However, the pattern of association between social media usage frequency and DHL in this study presents a picture divergent from the initial hypothesis respondents who used social media several times per week were, without exception (100%), categorized as having high DHL, in contrast to the findings of Shahbazi and Bunker (2024), who reported a negative association [16]. This may reflect that moderate usage frequency is positively correlated with literacy, a finding that warrants confirmation in a larger sample.

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Study Limitations

This study has several important limitations. First, the sample was very small (n = 25) and single-site in nature, limiting the generalizability of the findings. Second, consecutive sampling introduces the potential for selection bias. Third, potentially inappropriate utilization behaviors were measured through self-report, which is susceptible to social desirability bias. Fourth, the sample size was insufficient for valid bivariate analysis. These limitations support the need for further research employing a more rigorous design, a representative sample, and fully validated instruments.

CONCLUSIONS

This preliminary descriptive study provides initial empirical insights into digital health literacy (DHL) and JKN service utilization behavior in Gowa Regency, based on data collected from 25 respondents. A total of 52.0% of respondents demonstrated moderate-to-low DHL levels (mean = 20.8; SD = 5.6), with the critical evaluation dimension, assessing source reliability and verifying information prior to action, identified as the weakest area. Furthermore, 80.0% of respondents reported having sought health-related information on social media prior to visiting a health facility, with Google and TikTok emerging as the dominant platforms. Notably, 36.0% reported at least one potentially inappropriate utilization behaviors.

These findings underscore the urgency of conducting more comprehensive follow-up research employing a representative sample, fully validated instruments, and an analytical design capable of examining causal relationships among DHL, resilience to misinformation, and irrational service utilization patterns among JKN beneficiaries. This study serves as a direct empirical foundation for a primary investigation designed with a PLS-SEM approach, targeting a minimum sample of 200 respondents across all primary healthcare facilities in Gowa Regency.

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Ethical Clearance

Informed consent was obtained from all respondents prior to their participation in this study. An explanation regarding the purpose and procedures of the research was provided

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before the distribution of the questionnaire, and participation was voluntary without any form of coercion.

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REFERENCES

[1] BPJS Kesehatan. Laporan Pengelolaan Program dan Laporan Keuangan Jaminan Sosial Kesehatan. Jakarta: 2024.
[2] Fadliana F, Wardhana AW, Zainuddin C. Implementasi Sistem Pencegahan Kecurangan Pelayanan Kesehatan Di Rumah Sakit Kota Prabumulih Pada Masa Pandemi Covid 19. Jurnal Jaminan Kesehatan Nasional 2023;3. https://doi.org/10.53756/jjkn.v3i1.124.
[3] Arifin MA, Amaliah Amriani AS, Darmawansyah, Razak A, Abadi MY, Al- Fajrin M. Analysis of Fraud Potential Control Based on Input and Process in Dadi Regional Hospital, Makassar City. Pharmacognosy Journal 2024;16:668–70. https://doi.org/10.5530/pj.2024.16.106.
[4] Do Nascimento IJB, Pizarro AB, Almeida JM, Azzopardi-Muscat N, Gonçalves MA, Björklund M, et al. Infodemics and health misinformation: a systematic review of reviews. Bull World Health Organ 2022;100:544–61. https://doi.org/10.2471/BLT.21.287654.
[5] Indonesia KK dan DR. Indeks Masyarakat Digital Indonesia 2025. 2025.
[6] Vaart R van der, Drossaert C. Development of the Digital Health Literacy Instrument: Measuring a New Domain of Literacy. J Med Internet Res 2017;19.
[7] Suarez-Lledo V, Alvarez-Galvez J. Prevalence of Health Misinformation on Social Media: Systematic Review. J Med Internet Res 2021;23. https://doi.org/10.2196/17187.
[8] Khishna A, Thompson TL. Misinformation About Health: A Review of Health Communication and Misinformation Scholarship. Sage Journal 2019;65.
[9] Menteri Kesehatan Republik Indonesia. Peraturan Menteri Kesehatan Republik Indonesia Nomor 16 Tahun 2019. Indonesia: 2019.
[10] Sathianathan S, Mhd Ali A, Chong WW. How the General Public Navigates Health Misinformation on Social Media: Qualitative Study of Identification and Response Approaches. JMIR Infodemiology 2025;5. https://doi.org/10.2196/67464.
[11] Suarez-Lledo V, Alvarez-Galvez J. Prevalence of health misinformation on social media: Systematic review. J Med Internet Res 2021;23. https://doi.org/10.2196/17187.
[12] Yoon J, Yang S, Kang SJ, Lee M, Kim D, Park J, et al. Digital Health Literacy in the General Population: National Cross-Sectional Survey Study. J Med Internet Res 2025;27. https://doi.org/10.2196/67780.
[13] Anjelia LO, Mulyana D, Suminar JR. The Role of Indonesian Doctors as Content Creators in Fighting Health Hoaxes, Myths, and Stigma on Social Media. Jurnal Komunikasi Indonesia 2024;13. https://doi.org/10.7454/jkmi.v13i2.1253.
[14] Dadaczynski K, Okan O, Messer M, Leung AYM, Rosário R, Darlington E, et al. Digital Health Literacy and Web-Based Information-Seeking Behaviors of University Students in Germany

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E-ISSN 3123-8491

during the COVID-19 Pandemic: Cross-sectional Survey Study. J Med Internet Res 2021;23. https://doi.org/10.2196/24097.

[15] Ishikawa H, Miyawaki R, Kato M, Muilenburg JL, Tomar YA, Kawamura Y. Digital Health Literacy and Trust in Health Information Sources: A Comparative Study of University Students in Japan, the United States, and India. SSM Popul Health 2025;31. https://doi.org/10.1016/j.ssmph.2025.101844.

[16] Shahbazi M, Bunker D. Social media trust: Fighting misinformation in the time of crisis. Int J Inf Manage 2024;77. https://doi.org/10.1016/j.ijinfomgt.2024.102780.