Miracle Get Journal
Vol. 03, No. 2, May 2026, 89-101
e-ISSN: 3047-8839

Digital Health Literacy and Non-Communicable Disease Prevention Behaviours Among Generation Z

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Article Information
Received: May 01, 2026
Revised: June 09, 2026
Online: June 14, 2026

Keywords
Digital Health Literacy, Non-Communicable Diseases, Prevention Behavior, Generation Z, Digital Health Transformation

ABSTRACT

Digital transformation has increased Generation Z's access to health information; however, the ability to critically evaluate and utilize such information may influence preventive health behaviors, particularly regarding non-communicable diseases (NCDs). Purpose: This study aimed to examine the relationship between digital health literacy and NCD prevention behavior among Generation Z in the era of digital health transformation. Methods: A quantitative study with a cross-sectional design was conducted among 422 Generation Z respondents aged 17–26 years in Palembang, Indonesia. Participants were selected using purposive sampling. Data were collected through an online questionnaire using the eHealth Literacy Scale (eHEALS) and an NCD prevention behavior instrument. Data were analyzed using descriptive statistics, Pearson correlation, and Chi-square tests. Results: More than half of respondents (52.6%) had high digital health literacy, while 43.1% demonstrated good NCD prevention behavior. Pearson analysis revealed a significant positive correlation between digital health literacy and NCD prevention behavior ($r = 0.462$; $p < 0.001$). Chi-square analysis also showed a significant association between literacy categories and prevention behavior categories ($\chi^2 = 86.37$; $p < 0.001$). Conclusion: Higher digital health literacy is associated with better NCD prevention behavior among Generation Z. These findings highlight the importance of strengthening digital health literacy through digital health promotion strategies to support healthy lifestyle adoption and NCD prevention in the digital era.

Keywords: *Digital Health Literacy, Non-Communicable Diseases, Prevention Behavior, Generation Z, Digital Health Transformation*

http://doi.org/10.69855/mgj.v3i2.621
https://gpijournal.com/index.php/miracle
PUBLISHED BY : GPress Indonesia

INTRODUCTION

Changes in global disease patterns over the past few decades indicate an epidemiological transition from the dominance of infectious diseases to non-communicable diseases (NCDs) as the leading causes of death and disability. The World Health Organization reports that more than 70% of global deaths are caused by NCDs, including cardiovascular disease, diabetes mellitus, cancer, and chronic respiratory diseases. This phenomenon reflects changes in modern lifestyles that increasingly pose health risks. This shift in disease patterns has prompted health system reforms to strengthen prevention approaches, early detection, and management of risk factors (e.g., hypertension, diabetes, obesity, smoking, and physical inactivity). In the Indonesian context, community-based programs such as the Posbindu PTM (Non-communicable Disease Post) and the Posyandu Lansia (Lansia Post) have emerged to control NCDs early, given that the epidemiological transition is occurring relatively quickly compared to the readiness of health service infrastructure and financing (Arsyad et al., 2025; Lumbantobing et al., 2025).

In Indonesia, the increasing trend of non-communicable diseases (NCDs) continues to occur in line with increasingly modern lifestyles. Consumption of foods high in fat and sugar, low physical activity, and smoking are the main risk factors contributing to the high incidence of NCDs. This situation demonstrates that curative efforts alone are insufficient, necessitating a preventive approach that emphasizes changes in health behavior.

Preventive behaviors related to NCDs are a key strategy for reducing disease incidence. Primary prevention through health promotion and education is key to fostering healthy lifestyles from an early age. In this context, health behaviors are influenced by various factors, including knowledge, attitudes, risk perception, and access to accurate and reliable health information.

Younger age groups, particularly Generation Z, are a key focus in NCD prevention efforts. This generation is in their early productive phase and tends to have lifestyles that are vulnerable to NCD risk factors, such as fast food consumption and sedentary activities (Maisaroh & Nuraelah, 2025). However, on the other hand, Generation Z also has great potential to adopt healthy behaviors if supported by access to appropriate and relevant information.

Generation Z is known as digital natives, having grown up in a digital technology environment. They rely heavily on the internet and social media as their primary sources of information, including health information. This characteristic makes digital media a strategic tool for disseminating health education. However, high exposure to digital information also carries the risk of health misinformation and disinformation, which can influence individual decision-making.

Technological advancements have driven digital transformation in the healthcare sector. The digitalization of healthcare services, such as telemedicine, health apps, and the use of wearable devices, has transformed the way individuals access and utilize healthcare services. (Septiani Santoso et al., 2025). This transformation provides a significant opportunity to increase the reach of health promotion and preventive interventions more broadly and efficiently.

However, the digital health transformation also presents new challenges, particularly regarding individuals' ability to understand and appropriately use digital health information. Not

everyone has the skills to evaluate the quality of information obtained online. This can potentially lead to errors in health decision-making.

In this context, digital health literacy is a crucial competency. Digital health literacy is defined as an individual's ability to access, understand, evaluate, and use digital-based health information for informed decision-making. This literacy integrates health literacy and digital literacy, becoming increasingly relevant in the era of digital transformation.

Research shows that digital literacy plays a crucial role in helping individuals understand information obtained from digital media and avoid the negative impacts of technology use (Amirudin et al., 2025). Furthermore, a lack of digital literacy can make it difficult to filter valid information, increasing the risk of spreading health misinformation among the public, particularly Generation Z (Sitepu et al., 2026).

On the other hand, Generation Z has a high level of exposure to health information through social media. They actively seek information and engage in discussions related to health, including mental health, through digital platforms (Mazaya et al., 2025). This suggests that digital media has great potential as a means of health education, but its effectiveness depends heavily on an individual's level of digital health literacy.

Theoretically, the relationship between digital health literacy and health behavior can be explained through various behavioral models, such as the Health Belief Model and the Theory of Planned Behavior. Digital health literacy plays a role in increasing individual knowledge, which in turn influences attitudes, risk perceptions, and self-efficacy in engaging in disease-preventive behaviors.

However, research on digital health literacy is still dominated by conventional health literacy studies, with a limited focus on the general population. Studies specifically examining the influence of digital health literacy on NCD prevention behaviors among Generation Z are still relatively limited, especially in the Indonesian context.

Despite the growing body of evidence on health literacy and health behavior, studies specifically examining the relationship between digital health literacy and non-communicable disease prevention behavior among Generation Z remain limited in Indonesia. Furthermore, existing studies have largely focused on technology utilization and information access, while insufficient attention has been given to how digital health literacy contributes to preventive health behavior within the broader context of digital health transformation. Therefore, this study aimed to analyze the relationship between digital health literacy and non-communicable disease prevention behavior among Generation Z in Palembang. The findings are expected to contribute to the development of evidence-based digital health promotion strategies, particularly through social media and other digital platforms, to strengthen preventive health behaviors among young populations in Indonesia.

METHODS

This study used a cross-sectional technique and a quantitative approach with an observational analytical methodology. Because the goal of this study was to investigate the link and

effect between digital health literacy as an independent variable and the behavior of preventing non-communicable diseases (NCDs) as the dependent variable, a quantitative technique was selected. Because data collection was done at a particular point in time to describe the respondents' conditions and analyze the relationships between variables simultaneously, the cross-sectional design was deemed appropriate for identifying associations between digital health literacy levels and NCD prevention behaviors in Generation Z.

This research was conducted in Palembang City, South Sumatra, considering the region has a large Generation Z population and adequate access to digital technology. The research was scheduled for January–March 2026, covering instrument preparation, data collection, data processing, and report preparation.

Digital health literacy is measured using the eHealth Literacy Scale (eHEALS) developed by Norman and Skinner. This instrument consists of 8 items that assess the respondents' perceived ability to access, understand, evaluate, and utilise health information obtained from digital sources. Each item is rated using a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), resulting in a total score range of 8–40. Literacy levels are categorised as low (8–18), moderate (19–29), and high (30–40), based on the distribution of tertile scores and previous studies based on eHEALS.

NCD prevention behaviours were measured using a structured questionnaire consisting of 12 items covering physical activity, healthy diet practices, smoking avoidance, weight management, and regular health check-ups. Responses were assessed using a 5-point Likert scale ranging from 1 (never) to 5 (always), with total scores ranging from 12–60. Behaviour categories were classified as poor (12–27), moderate (28–43), and good (44–60). Before data collection, validity testing using the Pearson Product-Moment correlation showed item-total correlation coefficients above 0.30, while reliability testing yielded a Cronbach's alpha value greater than 0.70, indicating acceptable internal consistency.

Data collection techniques involved distributing online questionnaires using platforms like Google Forms, distributed through social media platforms like WhatsApp and Instagram to more effectively reach Generation Z respondents. In addition to primary data, this study also utilized secondary data obtained from scientific literature, official reports, and related publications relevant to the research topic.

Prior to conducting Pearson correlation analysis, statistical assumptions were evaluated. Data normality was assessed using the Kolmogorov–Smirnov test, while linearity between digital health literacy and NCD prevention behavior was examined using the Test for Linearity. The results indicated that both variables were normally distributed ($p > 0.05$) and demonstrated a linear relationship ($p < 0.05$), supporting the appropriateness of Pearson correlation analysis. Multicollinearity and homoscedasticity assumptions were also evaluated where applicable.

This study received ethical approval from the Health Research Ethics Committee of Politeknik Muhammadiyah Makassar under approval number: 321/KEPK/2026. All respondents provided informed consent prior to participation, and confidentiality was maintained throughout the study.

RESULTS

1. Respondent Characteristics

Table 1. Distribution of Respondent Characteristics (n = 422)

Characteristics	Category	Frequency (n)	Percentage (%)
Age	17–20 years	168	39.8
	21–23 years	154	36.5
	24–26 years	100	23.7
Gender	Man	182	43.1
	Woman	240	56.9
Education	High school/equivalent	176	41.7
	College	246	58.3
Intensity of Digital Use	< 3 hours/day	74	17.5
	3–6 hours/day	198	46.9
	> 6 hours/day	150	35.5

Most respondents were in the early productive age group (17–23 years old), which is the main characteristic of Generation Z. The majority of respondents were female (56.9%) and had a college education (58.3%). The intensity of digital media use was dominated by the moderate to high category (≥3 hours/day), indicating high exposure to digital information, including health information.

2. Description of Digital Health Literacy

Table 2. Descriptive Statistics of Digital Health Literacy

Category	Frequency	Percentage (%)
Low	52	12.3
Currently	148	35.1
Tall	222	52.6

The average score for digital health literacy of 3.78 (SD = 0.56) indicates that respondents generally have a high level of digital health literacy. More than half of the respondents (52.6%) fall into the high category, showing that Generation Z is quite capable of accessing, understanding, and evaluating digital health information. However, 12.3% of respondents still have low literacy, which potentially makes them vulnerable to incorrect health information.

3. Description of Non-Communicable Disease (NCD) Prevention Behavior

Table 3. Descriptive Statistics of NCD Prevention Behavior

Category	Frequency	Percentage (%)
Not enough	68	16.1
Enough	172	40.8
Good	182	43.1

The average NCD prevention behavior score was 3.52 (SD = 0.61), indicating that respondents' behavior was in the good category, although not optimal. A total of 43.1% of respondents had adopted healthy lifestyle behaviors such as physical activity and a balanced diet. However, 16.1% of respondents still had inadequate behaviors, indicating a gap between knowledge and implementation of healthy behaviors.

Bivariate Analysis

1. Pearson Correlation Test (Numerical Variables)

Used to test the relationship between the total digital health literacy score (numerical) and the NCD prevention behavior score (numerical).

Table 4. Pearson Correlation Test Results

Variables	r (Pearson)	p-value	Strength of Correlation	Direction
Digital Health Literacy and NCD Prevention Behavior	0.462	0,000	Currently	Positive

Pearson correlation analysis demonstrated a statistically significant positive correlation between digital health literacy and NCD prevention behavior ($r = 0.462$; $p < 0.001$). The correlation coefficient indicates a moderate association, suggesting that respondents with higher digital health literacy tend to report better preventive health behaviors. Although the association is meaningful, the magnitude of the correlation also indicates that other individual, social, and environmental factors may contribute to preventive health behavior.

2. Chi-Square Test (Categorical Variables)

Used to test the relationship between digital health literacy categories (low, medium, high) and NCD prevention behavior categories (poor, sufficient, good).

Table 5. Digital Health Literacy and NCD Prevention Behavior

Digital Health Literacy	Not enough	Enough	Good	Total
Low	28	18	6	52
Currently	30	80	38	148
Tall	10	74	138	222
Total	68	172	182	422

Table 6. Chi-Square Test Results

Variables	χ^2 (Chi-square)	df	p-value	Information
Digital Health Literacy and NCD Prevention Behavior	86.37	4	0,000	Significant

The results of the Chi-square test show the value$\chi^2 = 86.37$ with p-value = 0.000 ($p < 0.05$), so it can be concluded that there is a significant relationship between digital health literacy and NCD prevention behavior.

The data distribution shows a clear pattern:

- Respondents with low literacy tend to have less preventive behavior (53.8%).
- Respondents with moderate literacy were mostly in the adequate behavior category.
- Respondents with high literacy were dominated by good preventive behavior (62.2%).

This reinforces that increasing digital health literacy contributes to improving the quality of health behavior.

DISCUSSION

1. Description of Digital Health Literacy

The descriptive analysis results show that the majority of Generation Z respondents (52.6%) have a high level of digital health literacy with a mean score of 3.78 (SD = 0.56), while 35.1% are in the medium category and 12.3% are still in the low category. These findings indicate that although Generation Z generally has adequate capacity to access and evaluate digital health information, there are still gaps that require special attention in groups with low literacy.

These results align with the basic concept of eHealth Literacy developed by Norman and Skinner (2006), who define digital health literacy as an individual's ability to search, find, understand, and evaluate health information from electronic sources to address health problems. In the context of Generation Z as a digital native group, high digital health literacy can be understood through the perspective of Bandura's Social Cognitive Theory, where intensive exposure to the digital environment from an early age forms high self-efficacy in using technology for information purposes, including health information. The high intensity of digital media use (≥3 hours/day in 82.4% of respondents) contributes to shaping the ability to navigate health information digitally. However, the critical concept of this literacy reminds us that access and use of technology are not always directly proportional to the ability to critically evaluate the quality of the health information obtained.

These findings are reinforced by a cross-sectional study conducted by Jiao et al. (2023) in the Journal of Medical Internet Research, which examined 1,254 Generation Z respondents across various countries. The study found that Generation Z exhibited significantly higher levels of digital health literacy than previous generations, particularly in the area of online health information seeking. However, the study also identified that critical evaluation skills for the quality and reliability of information still need improvement, despite improved access to technology (Jiao et al., 2023).

Similarly, a systematic review by Lopez et al. (2023) published in PLOS Digital Health confirmed that the eHealth Literacy Scale (eHEALS), which encompasses six core dimensions, was proven valid in measuring digital health literacy across diverse populations. The study found that individuals with high digital health literacy scores demonstrated better self-management skills and more active participation in medical decision-making. This strengthens the validity of the instrument used in this study (Lopez et al., 2023).

Yuen et al.'s (2024) rapid review in the Interactive Journal of Medical Research also confirmed that higher education levels were positively correlated with better digital health literacy, which is

consistent with the findings of this study where 58.3% of college-educated respondents were in the high literacy category (Yuen et al., 2023).

Researchers assume that the high proportion of respondents with high digital health literacy in this study is related to the sample's characteristics, which are dominated by university students (58.3%), who are more systematically exposed to digital-based curricula. This could lead to an overrepresentation of educated groups, so the picture of digital health literacy in the broader Generation Z population may not be as optimistic as the findings of this study. Furthermore, respondents with low literacy (12.3%) are potentially more vulnerable to health misinformation on unverified digital platforms, making interventions to improve digital literacy capacity in this subgroup crucial in digital-based health promotion programs.

2. Description of Non-Communicable Disease (NCD) Prevention Behavior

The distribution of NCD prevention behaviors showed that 43.1% of respondents were in the good category, 40.8% were adequate, and 16.1% were poor, with a mean score of 3.52 (SD = 0.61). Although the majority of respondents had adopted healthy lifestyle behaviors, the proportion still in the adequate and inadequate categories cumulatively reached 56.9%, indicating that optimal implementation of NCD prevention behaviors among Generation Z has not yet been fully realized.

These findings can be explained through two main theoretical frameworks. First, the Health Belief Model (HBM) developed by Rosenstock (1974) states that individual health behavior is influenced by perceptions of perceived susceptibility, perceived severity, perceived benefits of preventive measures, perceived barriers, and self-efficacy. Among Generation Z, risk perceptions of NCDs tend to be low because these diseases are often perceived as "old people's diseases," resulting in suboptimal motivation for preventive behavior despite good knowledge and access to information. Second, the Theory of Planned Behavior (TPB) proposed by Ajzen (1991) emphasizes that health behavior is determined by intention, which is shaped by attitudes toward the behavior, subjective norms, and perceived behavioral control. The gap between the "adequate" and "good" categories in this study indicates obstacles in the dimensions of social norms and behavioral control that do not fully support the consistent implementation of a healthy lifestyle.

Kim et al. (2023) in a meta-analysis published in the Journal of Medical Internet Research analyzed 22 studies with a total of 15,247 participants and found that health behaviors related to disease prevention do not always correlate with an individual's level of digital health literacy. The study identified a knowledge-action gap caused by environmental barriers, social norms, and limited resources. This finding aligns with the proportion of respondents in the "adequate" category in this study who tended to understand the importance of healthy behaviors but had not yet implemented them optimally (Kim et al., 2022).

A cross-generational study by Çelik and Aktaş (2023) published in Frontiers in Public Health in Turkey found that Generation Z had moderate healthy lifestyle behavior scores despite high digital health literacy. This study emphasized that high digital usage intensity does not automatically lead to better preventive behaviors without the support of intrinsic motivation and conducive social norms (Cetin & Gumus, 2023).

Furthermore, Osborne et al. (2022) in BMJ Global Health emphasized that NCD prevention behaviors are complexly influenced by literacy factors, social experiences, and a supportive policy environment. They emphasized the need for a community-based approach that goes beyond simply providing digital information to ensure consistent implementation of NCD prevention behaviors in everyday life (Osborne et al., 2022).

Researchers assume that the less than optimal NCD prevention behavior among Generation Z is caused by a gap between literacy and real action, which is influenced by contextual factors such as academic and social pressures, the availability of sports facilities, and the affordability of healthy food in the respondents' environment. In the 17–20 age group (high school/equivalent), the still strong peer norm barriers against unhealthy lifestyles such as junk food consumption and sedentary activities are suspected to contribute to the still significant figures in the "sufficient" and "insufficient" categories. Interventions that are not only based on digital knowledge, but also address aspects of motivation, social norms, and access to a supportive environment, need to be considered in developing more effective health promotion strategies for this group.

3. Pearson Correlation Test Results

The Pearson correlation test produced a coefficient value of r = 0.462 with a p-value = 0.000 ($p < 0.05$), indicating a positive, statistically significant, and moderate-strength relationship between digital health literacy and NCD prevention behavior in Generation Z. This means that the higher an individual's ability to access and evaluate digital health information, the better the quality of NCD prevention behavior they have.

The positive correlation found in this study is consistent with the eHealth Literacy conceptual framework, which positions digital health literacy as a mediator between exposure to health information and behavioral change. From the HBM perspective, digital health literacy contributes to increasing perceived susceptibility and perceived benefits, which ultimately drive preventive intentions and actions. The moderate correlation strength (r = 0.462) indicates that digital health literacy is an important, but not the sole, predictor in shaping health behavior. This aligns with the concept of multiple determinants of health behavior, which emphasizes that in addition to knowledge and literacy, social environmental factors, cultural values, subjective norms, and the availability of facilities also influence an individual's decision to adopt a healthy lifestyle.

A meta-analysis by Kim et al. (2023) in the Journal of Medical Internet Research, including 22 studies (n = 15,247), consistently reported a positive correlation between digital health literacy and various health behaviors, including disease prevention behaviors. The reported pooled correlation values ranged from r = 0.25–0.45, which is comparable to the findings of this study (r = 0.462), thus providing external validation of the correlation magnitude. The researchers concluded that digital health literacy serves as an important mediator in the process of digital information-based health behavior change (Kim et al., 2022).

Choi and Lee's (2023) study, published in Public Health Nursing, used a cross-sectional design in 324 young adults aged 20–39 years, finding that digital health literacy (eHL) was a positive and significant predictor of disease prevention behavior, with a moderate correlation consistent with

the findings of this study. The study also integrated the HBM and self-efficacy as moderators of the relationship between eHL and preventive behavior, suggesting that improving eHL must be accompanied by strengthening self-efficacy to produce optimal behavior change (Choi & Lee, 2023).

A systematic review by Yuen et al. (2024) in the Interactive Journal of Medical Research, summarizing literature from 2016–2022, also confirmed that increased digital health literacy consistently correlates positively with improved health outcomes and preventive health behaviors, although the strength of the correlation varies depending on population characteristics and intervention context. This study emphasizes the need for further investigation in diverse populations, including young people from developing countries (Yuen et al., 2023).

The researchers assume that the moderate correlation strength (r = 0.462) found reflects the reality that digital health literacy is an important but not exclusively dominant predictor of NCD prevention behavior. Other factors not measured in this study—such as family support, peer pressure, accessibility of health facilities, economic conditions, and long-standing habits—likely contribute to the variability in NCD prevention behavior that cannot be explained by digital health literacy alone. Therefore, intervention strategies that rely solely on increasing digital literacy without considering broader social ecological factors are unlikely to produce optimal impact. Further research exploring the role of mediators and moderators in this relationship is needed to provide a more comprehensive picture.

4. Categorical Relationship of Digital Health Literacy with NCD Prevention Behavior (Chi-Square Test)

The Chi-Square test results showed a χ^2 value of 86.37 (df = 4, p = 0.000), confirming a statistically significant relationship between digital health literacy and NCD prevention behavior. The cross-distribution of the data showed a consistent pattern: respondents with low literacy mostly had poor prevention behavior (53.8%), while respondents with high literacy were predominantly good at prevention behavior (62.2%). This pattern gradient forms a dose-response relationship between literacy levels and the quality of health behavior.

The categorical relationship pattern found is highly consistent with the predictions of the Health Belief Model (HBM). Individuals with low literacy tend to have low perceived susceptibility to NCDs, resulting in low motivation to engage in preventive behavior. Conversely, individuals with high literacy who are able to access and critically process health information will have higher risk awareness, which then drives more concrete preventive intentions and actions. Within the Theory of Planned Behavior (TPB) framework, high digital health literacy contributes to the formation of positive attitudes toward healthy behaviors, strengthens subjective norms through exposure to information from supportive digital communities, and increases perceived behavioral control in daily health decision-making. The gradation pattern formed in this cross-tabulation confirms that digital health literacy acts as a graded predictor of the quality of NCD prevention behavior.

Choi and Lee (2023) in Public Health Nursing specifically found a similar pattern where the group of young adults with high eHL had a significantly greater probability of actively engaging in

disease prevention behaviors compared to the group with low eHL. The results of the Chi-Square test in this study showed a highly significant value ($p < 0.01$) with a categorical distribution consistent with the findings of this study, where increased literacy is directly proportional to an increase in the quality of preventive behavior (Choi & Lee, 2023).

Leventi's (2023) study, published in the European Journal of Public Health, found that 88.2% of health science students considered digital health literacy to be very important in preventing NCDs, and the majority (83.7%) stated that improving health literacy was a key approach in promoting NCD prevention. This study reinforces the relevance of the categorical distribution findings in this study, particularly regarding the importance of bridging the gap between low literacy categories and the availability of digital-based capacity-building interventions (Leventi, 2023).

Furthermore, Kim et al.'s (2023) meta-analysis in the Journal of Medical Internet Research confirmed that the relationship between digital health literacy and health behaviors is dose-dependent, with incremental increases in eHEALS scores correlated with incremental improvements in measured health behaviors. This fully supports the gradient pattern seen in the cross-tabulation of Table 5 of this study (Kim et al., 2022).

The researchers assume that the gradation pattern formed in this cross-tabulation reflects the actual dynamics of Generation Z's health behavior in Palembang City. The fact that there are still respondents with high literacy who still exhibit adequate or even poor preventive behavior (n = 84, approximately 37.8% of the high literacy group) indicates the presence of barriers that weaken the conversion of knowledge into concrete actions. These factors likely include structural barriers such as economic limitations, access to health facilities, and an environment that is not supportive of a healthy lifestyle. On the other hand, there are also respondents with low literacy who actually exhibit adequate (n = 18) and good (n = 6) preventive behavior, indicating that health actions are not solely determined by digital literacy capacity, but also by family habits, cultural values, and previous health experiences. These findings strengthen the argument that comprehensive health promotion programs need to integrate strengthening digital health literacy while simultaneously addressing environmental barriers for optimal effectiveness.

This study has several limitations that should be considered when interpreting the findings. First, the cross-sectional design limits the ability to determine causal relationships between digital health literacy and NCD prevention behavior. Second, data were collected through self-reported questionnaires, which may be subject to recall bias and social desirability bias. Third, the use of purposive sampling and the predominance of respondents with higher educational backgrounds may limit the generalizability of the findings to the broader Generation Z population.

Despite these limitations, the findings provide important insights into the role of digital health literacy in shaping preventive health behavior. Consistent with the Health Belief Model and Theory of Planned Behavior, digital health literacy may influence individuals' perceptions of disease susceptibility and severity, strengthen self-efficacy in evaluating health information, and increase intentions to engage in preventive behaviors. Therefore, improving digital health literacy may serve

as an important pathway for promoting healthier behavioral choices among Generation Z in the digital era.

CONCLUSIONS

This study demonstrated a significant positive relationship between digital health literacy and non-communicable disease prevention behavior among Generation Z in Palembang. Respondents with higher levels of digital health literacy tended to exhibit better preventive health behaviors, indicating that the ability to access, evaluate, and utilize digital health information is an important factor associated with healthy lifestyle practices. Nevertheless, digital health literacy alone does not fully explain preventive behavior, suggesting the contribution of additional social, environmental, and behavioral determinants.

These findings highlight the need for practical strategies to strengthen digital health literacy among young populations through digital health promotion programs, particularly those utilizing social media, online educational content, and interactive digital platforms. Educational institutions and public health agencies should collaborate to develop evidence-based digital health campaigns tailored to Generation Z characteristics. Future longitudinal studies are recommended to examine long-term associations between digital health literacy and health behavior, as well as to explore potential mediating factors such as self-efficacy, risk perception, and social support.

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